6TH IRCMB

Jakarta, 26 - 27 July 2025

Sixth International Research Conference on Management and Business

Hybrid Conference

EVENT LOCATION

101 Urban Hotel
Rawamangun, Jakarta

PROCEEDINGS

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HOSTS

Proceedings
The Sixth International Research Conference on Management and Business (6th IRCMB)

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WELCOMING SPEECH

Assalamualaikum Warahmatullahi Wabarakatuh, Good morning,

Warm greetings to all distinguished guests, respected colleagues, and esteemed participants,

It is a great honor and privilege for me to open the Sixth International Research Conference on Management and Business (6th IRCMB 2025). Today, we are united by a shared commitment to knowledge and collaboration, bringing together over scholars and practitioners from Australia, Turkey, Singapore, Taiwan, Oman, Pakistan, Macau, the Philippines, Thailand, Malaysia, and Indonesia.

This conference is not only a gathering of minds, but a celebration of global partnerships, academic excellence, and research-driven progress. It provides a dynamic platform to explore pressing issues in business and management and foster meaningful exchange across borders and disciplines.

I would like to express my deepest gratitude and special thanks to Professor Suherman, the Conference Chair and President of the Indonesian Financial Management Association (IFMA), for his exceptional leadership, dedication, and vision. Pak Suherman, your tireless work and unwavering commitment are the heart of this conference. We sincerely thank you.

I also wish to extend a special appreciation to all the collaborative universities and institutions who have co-organized this event and made this international forum possible. Your collective effort reflects the true spirit of academic unity and cooperation. Thank you to:

- FBEA Universiti Malaysia Sabah
- FEB Universitas Nasional
- FEB Universitas Cenderawasih
- FEB Universitas Islam Malang
- FEB Universitas Jenderal Achmad Yani
- FEB Universitas Pakuan
- FEB Universitas Trunojoyo Madura
- FEB Universitas Pelita Bangsa
- FEB Universitas Tadulako
- FB IBI Kesatuan
- STIE YKPN
- STIE Trisakti
- STIAB Jinarakkhita
- Institut Shanti Bhuana

This network of collaboration is what makes the IRCMB special and impactful year after year. As we begin today's program, I encourage you all to participate actively, share your insights generously, and take this opportunity to build relationships that will extend beyond the duration of the conference.

May this event inspire innovation, foster dialogue, and spark new ideas that contribute meaningfully to our respective fields and societies.

Once again, welcome to the 6th IRCMB 2025. Thank you very much, and I wish us all a productive and successful conference.

Wassalamualaikum Warahmatullahi Wabarakatuh.

Assoc. Prof. Dr. Mohd. Rahimie Abd. Karim
Dean of FBEA Universiti Malaysia Sabah

CONFERENCE COMMITTEE

Keynote Speakers:
Assoc. Prof. Jo-Ann Suchard (University of New South Wales Business School, Australia)
Assoc. Prof. Omer Faruk Rencber (Faculty of Economics and Administrative Sciences Gaziantep University, Turkiye)
Mr. Asda J. Pandiangan (The Sustainable and Green Finance Institute National University of Singapore)

Hosts:
Indonesian Financial Management Association
FBEA Universiti Malaysia Sabah, Malaysia
FEB Universitas Pelita Bangsa, Bekasi, Jawa Barat
FEB Universitas Pakuan, Bogor, Jawa Barat
FEB Universitas Nasional, Jakarta
FEB Universitas Jenderal Achmad Yani, Bandung, Jawa Barat
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FEB Universitas Islam Malang, Malang, Jawa Timur
FEB Universitas Trunojoyo Madura, Jawa Timur
FEB Universitas Tadulako, Sulawesi Tengah
FB Institut Bisnis dan Informatika Kesatuan, Bogor, Jawa Barat
STIE YKPN, Yogyakarta
Trisakti School of Management, Jakarta
STIAB Jinarakkhita, Lampung
Institut Shanti Bhuana, Bengkayang, Kalimantan Barat

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Dr. Aloysius Hari Kristianto (Institut Shanti Bhuana, Indonesia)
Afifudin SE, MSA, Ak (Universitas Islam Malang, Indonesia)

CONFERENCE PROGRAM

July 26, 2025

07.15-08.15: Registration

08.15-08.20: National anthem

08.20-08.30: Welcoming and opening speeches

08.30-09.00: Keynote speech "Charting Indonesia's Climate Future - Aligning Resilience, Integrity, and Investment" by Mr. Asda J. Pandiangan (SGFIN National University of Singapore)

09.00-09.30: Keynote speech "Venture Capital and the Internationalization of Innovation in Entrepreneurial Firms" by Associate Professor Jo-Ann Suchard (UNSW Business School, Australia)

09.30-10.00: Keynote speech "AI Agents and the Transformation of Business: Innovation Management, Opportunities, Threats and the Vision for the Future" by Associate Professor Omer Faruk Rencber (Faculty of Economics and Administrative Sciences Gaziantep University, Turkiye)

10.00-13.00: Concurrent session

July 27, 2025

Half day tour

PRESENTATION SCHEDULE

Room: Jasmine, 101 URBAN Hotel, Jakarta Timur, Hours: 10 AM – 1 PM, July 26, 2025	
No	Moderator: Dr. Mohammed Ahmar Uddin (Dhofar University, Oman)
1	BRAND PERCEPTION AND ADVOCACY IN POP MART INDONESIA: EMOTIONAL ATTACHMENT AND PERCEIVED VALUE AS KEY DRIVERS Vanisha Silky (BINUS Business School), Lasmy (BINUS Business School)
2	ANALYSES OF MARKET ANOMALY TESTING TO THE EFFECT OF DAY OF THE WEEK, AND FOUR WEEK EFFECT ON LQ-45 COMPANIES SHARE IN THE INDONESIA STOCK EXCHANGE Tonny Maringka (Eben Haezar School of Economics Manado), Sweetly Mumu (Eben Haezar School of Economics Manado), Johanes Tutu (Eben Haezar School of Economics Manado)
3	STRATEGIES TO IMPROVE THE PRODUCTIVITY OF ENTERPRISE MANAGEMENT PREVENTIVELY IN SOME COMPANIES IN INDONESIA Budi Hartoyo (Universitas Putra Indonesia YPTK Padang), Sarjon Devit (Universitas Putra Indonesia YPTK Padang), Elfiswandi (Universitas Putra Indonesia YPTK Padang)
4	PROFITABILITY OF TECHNICAL TRADING RULES WITH SENTIMENT AND ECONOMIC POLICY UNCERTAINTY INDEX VALUES IN CRYPTOCURRENCIES Karthee Krishna Moorthi (National Cheng Kung University, Taiwan), Min-Hsien Chiang (National Cheng Kung University, Taiwan), Longchar Imcha (National Cheng Kung University, Taiwan)
5	THE IMPACT OF STORE ATMOSPHERE ON REPURCHASE INTENTION: THE MEDIATING ROLE OF TRUST Menhard (Universitas Putra Indonesia YPTK Padang), Syafwandi (Universitas Putra Indonesia YPTK Padang), Yulasmi (Universitas Putra Indonesia YPTK Padang)
6	THE ROLE OF TRUST IN MEDIATING THE EFFECT OF SERVICE QUALITY AND E-SERVICE ON CUSTOMER LOYALTY IN AUTOMOTIVE SERVICES Rahmadani Hidayat (Universitas Putra Indonesia YPTK Padang), Sarjon Defit (Universitas Putra Indonesia YPTK Padang), Yulasmi (Universitas Putra Indonesia YPTK Padang)
7	FREQUENCY OF MOBILE PAYMENTS USAGE: THE ROLE OF DEMOGRAPHICS HERD BEHAVIOR AND RISK AVERSION Dr. Mohammed Ahmar Uddin (Dhofar University, Oman)
8	BUILDING BRAND EQUITY IN INDONESIAN PRIVATE UNIVERSITIES: THE ROLE OF STRATEGIC ATTRIBUTES AND THE MEDIATING POWER OF BRAND TRUST Tri Lestira Putri Warganegara (Universitas Bandar Lampung), Andala Rama Putra Barusman (Universitas Bandar Lampung), M Yusuf S Barusman (Universitas Bandar Lampung), Luke Suciyati Amna (Universitas Bandar Lampung), Wenny Permata Sari (Universitas Bandar Lampung)
9	ESG AND CAPITAL STRUCTURE DYNAMICS: EXAMINING THE MODERATING EFFECT OF CEO CHARACTERISTICS Suherman (State University of Jakarta), Titis Fatarina Mahfirah (State University of Jakarta), Rosle Mohidin (Universiti Malaysia Sabah)
10	ANALYSIS OF THE IMPACT OF DIGITAL TRANSFORMATION ON LOGISTICS PERFORMANCE INDEX USING MACHINE LEARNING METHODS Zehra Çelik (Gaziantep University), Omer Faruk Rencber (Gaziantep University)
11	DESIGN-BASED RESEARCH AS A CONTEXT-RESPONSIVE INQUIRY METHOD: RETHINKING INNOVATION IN QUALITATIVE RESEARCH Zehra Keser Özmantar (University of Gaziantep)
12	COMMERCIALIZATION OF EDUCATION ON SOCIAL MEDIA: THE CASE OF TURKISH EDUCATIONAL CHANNELS ON YOUTUBE Mehmet Fatih Özmantar (Gaziantep University), Leman Konukoğlu (Gaziantep University)

Room: 1 (Zoom), Hours: 10 AM – 1 PM Jakarta Time, July 26, 2025	
No	Moderator: Monica Dewi (Universitas Negeri Jakarta)
1	THE FACTORS INFLUENCING CONSUMERS' PURCHASE DECISIONS ON FOREIGN-BRAND SMARTPHONES AND TABLETS IN SICHUAN PROVINCE, CHINA Chen Xian (Lampang Rajabhat University, Thailand), Nittaya Wongyos (Lampang Rajabhat University, Thailand), Phahol Sakkatat (Maejo University, Thailand)
2	THE RELATIONSHIP BETWEEN DISCOUNT STRATEGIES AND CONSUMER PURCHASING DECISIONS AT SUPERMARKETS Mega Julianti (Jinarakkhita Buddhist College of Lampung), Partama Nagatirtha (Jinarakkhita Buddhist College of Lampung), Mega Afrilia Gautami (Jinarakkhita Buddhist College of Lampung).
3	THE ROLE OF LEADERSHIP STYLE AND WORK MOTIVATION IN THE HR BENEFITS DIVISION IN IMPROVING EMPLOYEE PERFORMANCE PT COMMINFRALINK JAKARTA Natalia Pramita Avila (Shanti Bhuana Institute), Helena Anggraeni Tjondro Sugianto (Shanti Bhuana Institute), Aloysius Hari Kristianti (Shanti Bhuana Institute), Blasius Manggu (Shanti Bhuana Institute).
4	THE RELATIONSHIP BETWEEN BRAND TRUST AND CUSTOMER RETENTION ON DIGITAL STREAMING SERVICES Wulan Satyawati (Jinarakkhita Buddhist College of Lampung), Mega Julianti (Jinarakkhita Buddhist College of Lampung), Dito Apriyono (Jinarakkhita Buddhist College of Lampung).
5	THE INFLUENCE OF ECONOMIC BACKGROUND, LIFESTYLE, LITERACY, AND ACCESS ON ONLINE LOAN INTEREST IN GEN-Z Regina Clara Audrey (Shanti Bhuana Institute), Aloysius Hari Kristianto (Shanti Bhuana Institute).
6	THE EFFECT OF INFLUENCER-BASED ADVERTISING ON BRAND AWARENESS AND CONSUMER PURCHASE INTENTION Heru Dwi Kardana (Jinarakkhita Buddhist College of Lampung), Guna Dharma (Jinarakkhita Buddhist College of Lampung), Mega Julianti (Jinarakkhita Buddhist College of Lampung).
7	PREDICTION OF CNY/IDR EXCHANGE RATE USING MOVING AVERAGE, EXPONENTIAL SMOOTHING, AND REGRESSION FAMILY MODELS Gloria Christina Sunny (Trisakti School of Management), Naflah Rahmatunnisa (Trisakti School of Management), Cheren Lois Wowor (Trisakti School of Management), Regi Muzio Ponziani (Trisakti School of Management)
8	AN INTEGRATIVE MODEL OF THE IMPACT OF CUSTOMER ENGAGEMENT ON SOCIAL MEDIA USAGE INTENTION: THE MEDIATING ROLE OF VALUE CO-CREATION, RELATIONSHIP QUALITY, AND CUSTOMER INVOLVEMENT Fachmi Tamzil (Esa Unggul University), Arief Kusuma AP (Esa Unggul University), Lia Amalia (Esa Unggul University)
9	UNDERSTANDING ENTREPRENEURIAL INTENTION IN EMERGING ECONOMIES: A STUDY OF MSME ACTORS IN INDONESIA. Indra Gunawan (Esa Unggul University), Rhian Indradewa (Esa Unggul University), Unggul Kustiawan (Esa Unggul University).
10	THE EFFECT OF FIRM SIZE, INSTITUTIONAL OWNERSHIP, AND COMPETITIVE ADVANTAGE ON ENVIRONMENTAL DISCLOSURE Berliana Putri Fatika Sari (National University), Zumratul Meini (National University)
11	THE INFLUENCE OF ENVIRONMENTAL, SOCIAL, AND GOVERNANCE (ESG), CASH HOLDING, AND RETENTION RATIO ON FIRM VALUE: THE MODERATING ROLE OF FIRM SIZE IN INDONESIA'S ENERGY SECTOR (2019-2023). Evia Sundari (University of Jenderal Achmad Yani), V. Santi Paramita (University of Jenderal Achmad Yani)
12	ANALYSIS OF DIGITAL ADVERTISING AND LOCATION ON BUYING INTERTEST IN ANAMI COFFEE Aldy Rizki Ghiffari (Pakuan University), Sri Hidajati Ramdani (Pakuan University), Abel Gandhy (Pakuan University)
13	THE RELATIONSHIP BETWEEN ELECTRONIC SERVICE QUALITY AND CUSTOMER SATISFACTION FOR PLN MOBILE UP3 BOGOR APPLICATION USERS Maulidia Zahra (Pakuan University),Yetty Husnal Hayati (Pakuan University), Abel Gandhy (Pakuan University), Jevani Emelda (Pakuan University)
14	IMPROVING THE QUALITY OF SERVICES OF THE TIRTA PAKUAN REGIONAL DRINKING WATER COMPANY IN BOGOR CITY: A PRINCIPAL COMPONENT ANALYSIS Ananda Tory Diandra (Pakuan University), Fitria Virgantari (Pakuan University), Dion Achmad Armadi (Pakuan University), Fitra Syafaat (Pakuan University)
15	PENDETEKSIAN FRAUDULENT FINANCIAL STATEMENT BERDASARKAN PERSPEKTIF FRAUD PENTAGON THEORY Indah Wulan Sari (IBI Kesatuan), Nilda Tartilla (IBI Kesatuan), Hadi Sutomo (IBI Kesatuan)

Room: 2 (Zoom), Hours: 10 AM – 1 PM Jakarta Time, July 26, 2025	
No	Moderator: Wahyu Wastuti (Universitas Negeri Jakarta)
1	THE MODERATING ROLE OF SEARCH ENGINE OPTIMIZATION ON THE INFLUENCE OF ONLINE WORD OF MOUTH, SOCIAL STATUS, AND LIFESTYLE ON THE PURCHASE DECISION OF DIGITAL PRODUCTS IN GAME Faizil Akmal Ersyam (National University), Suadi Sapta Putra (National University).
2	THE EFFECT OF BRAND AMBASSADOR AND WORD OF MOUTH ON REPURCHASE INTENTION THROUGH BRAND IMAGE MINERAL WATER AQUA IN DKI JAKARTA Griselda Elsyia Nabilla (National University), Resti Hardini (National University).
3	THE IMPACT OF DIGITAL TAX SYSTEM IMPLEMENTATION ON TAXPAYER COMPLIANCE MODERATED BY DIGITAL LITERACY Dwi Ifani (University of Islam Malang), Eny Zuhrotin Nasyi'ah (University of Islam Malang), Naimatul Hasanah (University of Islam Malang).
4	INFLUENCE OF KNOWLEDGE, EASE AND RISK ON INTEREST IN INVESTING IN THE SYARIAH CAPITAL MARKET (CASE STUDY OF UNISMA FACULTY OF ECONOMICS AND BUSINESS STUDENTS IN 2021-2023) Elfa Putri Rahmadanti (University of Islam Malang), M. Cholid Mawardi (University of Islam Malang), Siti Aminah Anwar (University of Islam Malang).
5	THE EFFECT OF ENVIRONMENTAL, SOCIAL, AND GOVERNANCE (ESG) ON FIRM VALUE IN GREEN AND NON-GREEN INDUSTRY COMPANIES Elly Lutfiana (University of Islam Malang), Noor Shodiq Askandar (University of Islam Malang), Erfan Efendi (University of Islam Malang).
6	THE EFFECT OF AUDITOR COMPETENCE AND INDEPENDENCE ON AUDIT QUALITY: THE MODERATING ROLE OF AUDIT FEES (A CASE STUDY OF PUBLIC ACCOUNTING FIRMS IN BANDUNG) Manurung Miranda Lidya Nursaid (Jenderal Achmad Yani University), Ali Rahman Reza Zaputra (Jenderal Achmad Yani University).
7	ANALISIS BEBAN KERJA TERHADAP ORGANIZATIONAL CITIZENSHIP BEHAVIOR PADA GURU HONORER SD NEGERI PASIRIPIS Monica Anija Elizabeth Sihombing (Jenderal Achmad Yani University), Khaerul Rizal Abdurrahman (Jenderal Achmad Yani University).
8	GREEN ENTREPRENEURSHIP IN COASTAL ECOTOURISM: STRATEGIC INNOVATIONS FOR SUSTAINABLE LOCAL DEVELOPMENT IN INDONESIA Dimas F. A. (University of Trunojoyo Madura), M. Giga Ali S. (University of Trunojoyo Madura), Darul I. (University of Trunojoyo Madura).
9	THE EVOLUTION OF EQUALITY IN THE WORKPLACE: A SYSTEMATIC ANALYSIS OF FACTORS AFFECTING FAIR AND INCLUSIVE EMPLOYMENT OPPORTUNITIES Fatimah (University of Trunojoyo Madura), Muhammad Aditya Kamandanu (University of Trunojoyo Madura), Mochammad Setio Nugroho (University of Trunojoyo Madura), Helmi Buyung Aulia Safrizal (University of Trunojoyo Madura).
10	THE EFFECT OF *GOOD CORPORATE GOVERNANCE* AND PROFITABILITY ON PROFIT MANAGEMENT (CASE STUDY ON PHARMACEUTICAL SECTOR COMPANIES LISTED ON THE IDX FOR THE PERIOD 2019 - 2023) Imelda Yuliana (University of Jenderal Achmad Yani), Usman Sastradipraja (University of Jenderal Achmad Yani)
11	THE INFLUENCE OF FLASH SALES AND FEAR OF MISSING OUT ON IMPULSIVE BUYING BEHAVIOR OF LAZADA USERS (A STUDY ON GENERATION Z IN BOGOR CITY) Wulan Maudi Rahmadani (Pakuan University), Oktori Kiswati Zaini (Pakuan University), Arie Wibowo Irawan (Pakuan University)
12	ANALYSIS OF E-COMMERCE POSITIONING BASED ON E-SERVICE QUALITY (STUDY ON PAKUAN UNIVERSITY MANAGEMENT STUDENTS) Julian Cahyahadinomo (Pakuan University), Sri Hidajati Ramdani (Pakuan University), Hasrul (Pakuan University), Alya Apriliyani (Pakuan University)
13	POVERTY ALLEVIATIONS STRATEGIES: A CASE STUDY IN MINING AREAS IN CENTRAL SULAWESI Suparman (Tadulako University), Muzakir (Tadulako University), Wahyuningsih (Tadulako University), Indra Basir (Tadulako University), Fadlun (Tadulako University)
14	PENGARUH GOOD CORPORATE GOVERNANCE DAN UKURAN PERUSAHAAN TERHADAP KINERJA KEUANGAN PERUSAHAAN Siti Zahrotussa'idah (IBI Kesatuan), Kamalia (IBI Kesatuan), Tri Marlina (IBI Kesatuan)

Room: 3 (Zoom), Hours: 10 AM – 1 PM Jakarta Time, July 26, 2025	
No	Moderator: Destria Kurnianti (Universitas Negeri Jakarta)
1	EMPLOYEE WELL-BEING AND EMPLOYEE RETENTION: AN EMPIRICAL STUDY IN INDONESIAN COMPANIES Hendri Ardianto (Jinarakkhita Buddhist College Of Lampung), Gunawan Gusnadi (Jinarakkhita Buddhist College Of Lampung), Indra Dharma (Jinarakkhita Buddhist College Of Lampung)
2	THE ROLE OF LEADERSHIP STYLE AND WORK MOTIVATION ON EMPLOYEE DISCIPLINE AND LOYALTY AT PT. XYZ PONTIANAK. Amai (Institut Shanti Bhuana), Helena Anggraeni (Institut Shanti Bhuana), Aloysius Hari Kristianto (Institut Shanti Bhuana), Eligia Monixa Salfarini (Institut Shanti Bhuana)
3	EMPLOYEE BRANDING AND RETENTION: INVESTIGATING STRATEGIC IMPLICATIONS IN THE WORKPLACE Nadila Asmanisa (Universitas Esa Unggul), Juni Suryanadi (Jinarakkhita Buddhist College Of Lampung), Intan Panya Lita Teri (Jinarakkhita Buddhist College Of Lampung)
4	ANALYSIS OF WORK MOTIVATION ON EMPLOYEE PERFORMANCE AT THE SAVINGS AND LOAN COOPERATIVE CU KELUARGA KUDUS IN BENGKAYANG SERVICE PLACE Aprilia Noviyani (Institut Shanti Bhuana), Eligia Monixa Salfarini (Institut Shanti Bhuana), Dedy (Institut Shanti Bhuana)
5	THE ROLE OF SPIRITUAL CAPITAL IN IMPROVING EMPLOYEE PERFORMANCE OF MSMEs NUR BAKSO BENGKAYANG Felilia Karmela Kalara (Institut Shanti Bhuana), Helena Anggraeni Tjondro Sugianto (Institut Shanti Bhuana), Aloysius Hari Kristianto (Institut Shanti Bhuana)
6	THE DETERMINANTS OF CASH HOLDING: EVIDENCE FROM PROPERTY AND REAL ESTATE COMPANIES LISTED ON THE INDONESIA STOCK EXCHANGE Aditya R. Sujana (Trisakti School of Management), Beny (Trisakti School of Management)
7	THE EFFECT OF SELF CONGRUENCE ON BRAND LOYALTY IN FASHION PRODUCTS IN INDONESIA: THE ROLE OF FUNCTIONAL CONGRUENCE MEDIATION AND CONSUMER INVOLVEMENT MODERATION Unik Dwi Lestari (Esa Unggul University), Tantri Yanuar Rahmat Syah (Esa Unggul University), Triyono Arief Wahyudi (Esa Unggul University), Mohammad Hamsal (Bina Nusa University)
8	THE INFLUENCE OF FOMO (FEAR OF MISSING OUT) ON IMPULSIVE PURCHASE DECISIONS IN GENERATION Z Gabrielle Christiena Petra (Soegijapranata Catholic University), M.Y Dwi Hayu Agustini (Soegijapranata Catholic University)
9	THE EFFECT OF FINANCIAL LITERACY, PERCEIVED EASE OF USE, AND PERCEIVED USEFULNESS ON THE INTENTION TO USE SHARIA FINTECH LENDING (A STUDY ON SMEs IN MALANG CITY) Achmad Yoga Rifandi Andriansyah (Universitas Islam Malang), Afifudin (Universitas Islam Malang), Galih Ramadhan Febrianto (Universitas Islam Malang)
10	BRAND AWARENESS AND BRAND IMAGE ON REPURCHASE INTENTION WITH CUSTOMER SATISFACTION AS A MEDIATING VARIABLE AT AMBOINA RESTAURANT BANGKALAN Arya Satya Pratama (Universitas Trunojoyo Madura), Nurita Andriani (Universitas Trunojoyo Madura), Deykha Aguilika (Universitas Trunojoyo Madura)
11	THE EFFECT OF CYBERLOAFING ON EMPLOYEE PERFORMANCE AT GUNUNG MAS ANGROTOURISM Siti Cahya Nabila (Pakuan University), Tutus Rully (Pakuan University), Dewi Taurusyanti (Pakuan University), Agustina Raharjo (Pakuan University)
12	THE INFLUENCE OF CORPORATE SOCIAL RESPONSIBILITY (CSR), FIXED ASSET INTENSITY AND PROFITABILITY ON TAX AVOIDANCE IN HEALTH SECTOR COMPANIES LISTED ON THE INDONESIA STOCK EXCHANGE 2019–2023 TAHUN 2019–2023 Fenny Almira (Pakuan University), Ketut Sunarta (Pakuan University), Siti Maimunah (Pakuan University)
13	BITCOIN VS FINANCIAL SECTOR STOCKS IN THE INDONESIA STOCK EXCHANGE: A SYSTEMATIC RISK COMPARISON Failur Rahman (Tadulako University), Suparman (Tadulako University), Muhammad Akbar Massalara (Tadulako University)
14	PENGARUH UKURAN PERUSAHAAN DAN RASIO KEUANGAN TERHADAP AUDIT DELAY Christina Aprillia (IBI Kesatuan), Dessy Evianti (IBI Kesatuan)

Room: 4 (Zoom), Hours: 10 AM – 1 PM Jakarta Time, July 26, 2025	
No	Moderator: Rahmi (Universitas Negeri Jakarta)
1	THE EFFECT OF DIGITAL MARKETING STRATEGIES ON CONSUMER LOYALTY IN FASHION PRODUCTS IN E-COMMERCE Luwiha (Jinarakkhita Buddhist College), Bayu Wijaya (Jinarakkhita Buddhist College), Diyah Lestari (Jinarakkhita Buddhist College)
2	THE RELATIONSHIP BETWEEN SOCIAL MEDIA USAGE INTENSITY AND PURCHASE SATISFACTION OF MILLENNIAL CONSUMERS Munjiatul Ngailia (Jinarakkhita Buddhist College), Luwiha (Jinarakkhita Buddhist College), Dimas Adi Saputra (Jinarakkhita Buddhist College)
3	THE INFLUENCE OF CUSTOMER ENGAGEMENT ON CUSTOMER LOYALTY IN MARKETPLACE PLATFORMS Ketut Septiani (Jinarakkhita Buddhist College), Hari Mudjiarto (Jinarakkhita Buddhist College), Luwiha (Jinarakkhita Buddhist College)
4	HUMAN RESOURCE DEVELOPMENT STRATEGY IN THE CREATIVE VILLAGE OF JAGOI BABANG, SEKIDA VILLAGE Maisela (Shanti Bhuana Institute), Eligia Monixa Salfarini (Shanti Bhuana Institute), Dedy (Shanti Bhuana Institute)
5	THE INFLUENCE OF BRAND IMAGE, PRODUCT QUALITY AND PRICE ON CONSUMER BUYING INTEREST IN JIMS HONEY PRODUCTS (CASE STUDY OF CONSUMERS IN BENGKAYANG CITY) Mia Ovani Lala (Shanti Bhuana Institute), Blasius Manggu (Shanti Bhuana Institute)
6	THE FACTORS AFFECTING BRAND LOYALTY OF CONSUMER ELECTRONICS PRODUCTS IN THE COMPUTER COMMUNICATION CATEGORY IN CHENGDU, SICHUAN PROVINCE, CHINA Zhe Wang (Lampang Rajabhat University), Thanakorn Sirisugandha (Lampang Rajabhat University, Thailand), Surachai Kungwon (Maejo University, Thailand)
7	THE RESPONS OF GOVERNMENT BONDS YIELD ON THE INTEREST RATE, CONSUMER PRICE INDEX, AND EXCHANGE RATE Ellena Cristina (STIE Trisakti), Vanesa Kiungista (STIE Trisakti), Regi Muzio Ponziani (STIE Trisakti)
8	VALUE CO-CREATION IN DIGITAL PLATFORMS: IMPACT ON CUSTOMER SATISFACTION AND WELL-BEING Puspita Chairun Nisa (Esa Unggul University)
9	MARKETING HIGHER EDUCATION THROUGH EXPERIENCE: EXPLORING THE IMPACT OF BRAND LOVE AND CO-CREATION ON STUDENT LOYALTY Ritta Setiyati (Esa Unggul University), Rina Anindita (Esa Unggul University), Unggul Kustiawan (Esa Unggul University)
10	THE EFFECT OF CURRENT RATIO, SALES GROWTH, AND DEBT TO EQUITY RATIO ON RETURN ON ASSET IN INFRASTRUCTURE COMPANIES LISTED ON THE INDONESIA STOCK EXCHANGE FOR THE PERIOD 2019-2023 Hapsyah Nur Karimah (National University), Subur Karyatun (National University)
11	THE INFLUENCE OF PARASOCIAL RELATIONSHIPS AND INFLUENCER MARKETING ON INCREASING CONSUMER CONSUMPTIVE BEHAVIOR Ayunda Pradini (Universitas Trunojoyo Madura), Nematullo Halimov (Universitas Trunojoyo Madura), Mohammed Ibrahim (Universitas Trunojoyo Madura), Fathor AS (Universitas Trunojoyo Madura), Nurita Andriani (Universitas Trunojoyo Madura)
12	THE EFFECT OF INFLATION, INTEREST RATES AND EXCHANGE RATES ON THE FINANCIAL SECTOR STOCK PRICE INDEX FOR THE PERIOD 2019-2023 Khafifah Pajrianti (Pakuan University), Herdiyana (Pakuan University), Abel Gandhy (Pakuan University), Vira Anggraini (Pakuan University)
13	THE EFFECT OF CAPITAL INTENSITY, PROFITABILITY, AND COMPANY SIZE ON TAX AVOIDANCE IN ENERGY SECTOR COMPANIES LISTED ON THE INDONESIA STOCK EXCHANGE IN THE 2019-2023 PERIOD Annisa Citra Lestari (Pakuan University), Siti Maimunah (Pakuan University), Mutiara Puspa Widyowati (Pakuan University)
14	DETERMINANTS OF INITIAL RETURN IN IPO FIRMS: 2020–2024 Moh. Alwi (Tadulako University), Muliati (Tadulako University), Muhammad Din (Tadulako University), Ilham Pakawaru (Tadulako University)
15	PENGARUH PERPUTARAN MODAL KERJA, LEVERAGE DAN LIKUIDITAS TERHADAP PROFITABILITAS Apriliani Rahmatu Nisa (IBI Kesatuan), Wulan Wahyuni R.P. (IBI Kesatuan)

Room: 5 (Zoom), Hours: 10 AM – 1 PM Jakarta Time, July 26, 2025	
No	Moderator: Puji Yuniarti (Universitas Negeri Jakarta)
1	APPLICATION OF ARTIFICIAL INTELLIGENCE-BASED TECHNOLOGIES IN THE CORPORATE INDUSTRY: OPPORTUNITIES AND CHALLENGES Annielyn C. Ariola (Polytechnic University of the Philippines), Ma. Lordes Mikaela M. Abalos (Polytechnic University of the Philippines), Elaisha M. Andres (Polytechnic University of the Philippines), Hanna Beatriz B. Barrion (Polytechnic University of the Philippines), Mary Lourdes T. Caasi (Polytechnic University of the Philippines), Assoc. Prof. Jessie I. Quierrez (Polytechnic University of the Philippines)
2	WORKPLACE CONFLICT AS A PREDICTOR OF EMPLOYEE PERFORMANCE DECLINE: A CORRELATIONAL STUDY ON RELIGION BASED ORGANIZATIONS Su Dyana Ram (Jinarakkhita Buddhist College of Lampung), Ginarsih (Jinarakkhita Buddhist College of Lampung), Juni Suryanadi (Jinarakkhita Buddhist College of Lampung)
3	FACTORS INFLUENCING FIRM VALUE IN THE PROPERTY AND REAL ESTATE SECTOR LISTED ON THE INDONESIA STOCK EXCHANGE (IDX) DURING THE 2019–2023 PERIOD Dea Adelia Dwi Agustina (Pakuan University), Siti Maimunah (Pakuan University), Mutiara Puspa Widyowati (Pakuan University)
4	SPIRITUAL LEADERSHIP AND EMPLOYEE LOYALTY: EVIDENCE FROM FAITH-BASED SOCIAL INSTITUTIONS Taridi (Jinarakkhita Buddhist College of Lampung), Lia Gotami (Jinarakkhita Buddhist College of Lampung), Putri Dewi Maya (Jinarakkhita Buddhist College of Lampung)
5	THE EFFECT OF E-SERVICE QUALITY, E-TRUST ON CONSUMER LOYALTY AS SHOPEE MARKETPLACE USERS IN BENGKAYANG REGENCY Lena Safitriani (Institut Shanti Bhuana), Blasius Manggu (Institut Shanti Bhuana)
6	ETHICAL LEADERSHIP, ORGANIZATIONAL CULTURE, AND INNOVATIVE BEHAVIOR: AN INTEGRATED ANALYSIS Puspita Sari (Jinarakkhita Buddhist College of Lampung), Taridi (Jinarakkhita Buddhist College of Lampung), Ditha Kurniawan (Jinarakkhita Buddhist College of Lampung)
7	THE RESPONS OF GOVERNMENT BONDS YIELD ON THE INTEREST RATE, CONSUMER PRICE INDEX, AND EXCHANGE RATE Ellena Cristina (Trisakti School of Management), Vanesa Kiungista (Trisakti School of Management), Regi Muzio Ponziani (Trisakti School of Management)
8	A QUANTITATIVE APPROACH WAS CONDUCTED WITH MEDICAL STAFF IN TYPE C AND D HOSPITALS, AND DATA WERE ANALYZED USING PARTIAL LEAST SQUARES STRUCTURAL EQUATION MODELING (PLS-SEM) Siswanto (Universitas Esa Unggul)
9	SUPPLY CHAIN COLLABORATION AND COLLABORATIVE ADVANTAGE DRIVERS OF HOSPITAL PERFORMANCE: THE MODERATING ROLE OF GOVERNMENT SUBSIDIES Syahdani Uli (Universitas Esa Unggul), Rina Anindita (Universitas Esa Unggul), Aprilita Rina Yanti Eff (Universitas Esa Unggul), Tantri Yanuar Rahmat Syah (Universitas Esa Unggul)
10	PENGARUH BRAND IMAGE, KUALITAS PRODUK ,DAN HARGA TERHADAP MINAT BELI KONSUMEN PADA BRAND PUMA Rizki Amirullah (Universitas Nasional), Olivia Yolanda (Universitas Nasional)
11	FROM INFORMATION OVERLOAD TO ACTION: BEHAVIORAL BIASES AND GEN Z'S EQUITY INVESTMENT BEHAVIOR Bintang Ari Suwardi (Universitas Atma Jaya Yogyakarta), Dwitya Aribawa (Universitas Atma Jaya Yogyakarta)
12	THE EFFECTIVENESS OF SKINTIFIC PRODUCT ADVERTISING THROUGH TIKTOK SOCIAL MEDIA USING THE EPIC METHOD (CASE STUDY IN BOGOR CITY) Widya Zahra Syafutri (Pakuan University), Oktori Kiswati Zaini (Pakuan University), Abel Gandhy (Pakuan University)
13	THE RELATIONSHIP BETWEEN WORK ENVIRONMENT AND EMPLOYEE JOB SATISFACTION AT THE TIRTA PAKUAN REGIONAL PUBLIC COMPANY IN BOGOR CITY Novena Putrianti (Pakuan University), Tutus Rully (Pakuan University), Dewi Taurusyanti (Pakuan University)
14	ASSESSING USER SATISFACTION WITH THE REGIONAL GOVERNMENT INFORMATION SYSTEM (SIPD) THROUGH THE EUCS MODEL IN PUBLIC FINANCIAL MANAGEMENT: A CASE STUDY IN CENTRAL SULAWESI PROVINCE Abdul Hakim M (Tadulako University), Muhammad Din (Tadulako University), Rahayu Indriasari (Tadulako University), Erwinsyah (Tadulako University), Arif Gunarsa (Tadulako University)
15	PENGARUH PROFITABILITAS DAN INTENSITAS MODAL TERHADAP TAX AVOIDANCE DENGAN KOMITE AUDIT SEBAGAI PEMODERASI Febriyan (IBI Kesatuan), Kusuma Dewi (IBI Kesatuan)

Room: 6 (Zoom), Hours: 10 AM – 1 PM Jakarta Time, July 26, 2025	
No	Moderator: M. Edo S. Siregar (Universitas Negeri Jakarta)
1	IMPACT OF DIGITAL LEADERSHIP AND OPEN INNOVATION ON ORGANIZATIONAL PERFORMANCE Hafiz Ghufran Ali Khan (International Islamic University Islamabad Pakistan)
2	THE INFLUENCE OF MANAGEMENT INFORMATION SYSTEM (MIS) INTEGRATION AND ENTERPRISE RESOURCE PLANNING (ERP) ON EMPLOYEE WORK PRODUCTIVITY Hari Mudjiarto (STIAB Jinarakkhita Lampung), Karsinah (STIAB Jinarakkhita Lampung), Adya Putri Kusumaningrum (STIAB Jinarakkhita Lampung)
3	BURNOUT AND EMPLOYEE PRODUCTIVITY: A STUDY OF OCCUPATIONAL STRESS IN THE WORKPLACE Henny Meyliana (STIAB Jinarakkhita Lampung), Widi Astuti (STIAB Jinarakkhita Lampung), Viola (STIAB Jinarakkhita Lampung)
4	THE RELATIONSHIP BETWEEN EMPLOYEE RECOGNITION AND ORGANIZATIONAL LOYALTY IN BANDAR LAMPUNG INDUSTRIES Partama Nagatirtha (STIAB Jinarakkhita Lampung), Elivinsia (STIAB Jinarakkhita Lampung), Widi Astuti (STIAB Jinarakkhita Lampung)
5	THE LEADERSHIP ROLE OF THE VILLAGE HEAD IN IMPROVING VILLAGE PHYSICAL DEVELOPMENT (UNTANG VILLAGE, BANYUKE HULU SUB-DISTRICT) Zaklin (Institute Shanti Bhuana), Eligia Monixa Salfarini (Institute Shanti Bhuana), Dedy (Institute Shanti Bhuana)
6	SUSTAINABLE TOURISM DEVELOPMENT OF PURI ANYAR HERITAGE AS ONE OF THE FIRST HOTELS IN UBUD BALI WITH THE CONCEPT OF LOCAL WISDOM Elma Is Adiyah (National University), Ramang Husin Demolingo (National University).
7	DETERMINANTS OF CAPITAL STRUCTURE IN INFRASTRUCTURE COMPANIES LISTED IN INDONESIA Richo Wivilano (Trisakti School of Management), Stella (Trisakti School of Management)
8	THE INFLUENCE OF NARCISSISM ON E-WOM, SELF-ESTEEM, AND VIRTUE SIGNALING AND ITS IMPACT ON PURCHASE INTENTION OF PREMIUM ELECTRIC CAR PRODUCTS IN INDONESIA Frima Derris (Esa Unggul University), Rhian Indradewa (Esa Unggul University), Triyono Arief Wahyudi (Esa Unggul University), Edi Hamdi (Esa Unggul University)
9	FROM CONNECTION TO CONVERSION: THE ROLE OF PERSUASION KNOWLEDGE Andi Hidayat Muhmin (Esa Unggul University), Tantri Yanuar Rahmat Syah (Esa Unggul University), Adilla Anggraeni (Bina Nusantara University)
10	THE INFLUENCE OF TAX REGULATIONS AND POLICIES, COMPANY SIZE, AND ECONOMIC CONDITIONS ON THE CAPITAL STRUCTURE OF FOOD AND BEVERAGE COMPANIES LISTED ON THE INDONESIA STOCK EXCHANGE (2018 – 2023) Abraham Bernard Rudolf Gabriel (Universitas Nasional), Irma Setyawati (Universitas Nasional)
11	LOCUS OF CONTROL, MACHIAVELLIAN CHARACTER, TURNOVER INTENTION, DYSFUNCTIONAL AUDIT BEHAVIOR AND INDIVIDUAL MORALITY Adelia Ritma Fitriani (Universitas Nasional), Padri Achyarsyah (Universitas Nasional)
12	THE INFLUENCE OF STORE ATMOSPHERE AND WORD OF MOUTH ON PURCHASING DECISIONS AT COGER KUJANG COFFEE & RESTO BOGOR Ira Maesty Ashari (Pakuan University), Oktori Kiswati Zaini (Pakuan University), Nizam M. Andrianto (Pakuan University)
13	THE EFFECT OF WORK MOTIVATION ON EMPLOYEE PERFORMANCE IN THE NETWORK DIVISION AND THE SUBSTATION OF PT. PLN (PERSERO) ULTG BOGOR Ovie Indah Sarry (Pakuan University), Tutus Rully (Pakuan University), Dewi Taurusyanti (Pakuan University), Nuruddin Kamil (Pakuan University)
14	THE IMPACT OF LOCAL GOVERNMENT INFORMATION SYSTEM QUALITY AND USER PROFICIENCY ON THE QUALITY OF LOCAL GOVERNMENT FINANCIAL REPORTING Sri Hartatiek (Tadulako University), Abdul Pattawe (Tadulako University), Femilia Zahra (Tadulako University), Jurana (Tadulako University), Ni Made Suwitri Parwati (Tadulako University), Muhammad Din (Tadulako University), Erwinsyah (Tadulako University)
15	PENGARUH PERPUTARAN KAS, PERPUTARAN PIUTANG, PERPUTARAN PERSEDIAAN, DAN PERPUTARAN ASET TETAP TERHADAP PROFITABILITAS Yuliana Kamanjaya (IBI Kesatuan), Desi Efrianti (IBI Kesatuan)

Room: 7 (Zoom), Hours: 10 AM – 1 PM Jakarta Time, July 26, 2025	
No	Moderator: Andrian Haro (Universitas Negeri Jakarta)
1	TO BE OR NOT TO BE? IS THE EMERGING STABLECOINS REGIME OF 2025 IN HONG KONG SAR END OF THE PREDICAMENT ON LEGALIZATION AND EFFICIENT REGULATION OF CRYPTO ASSET MARKET M. P. Ramaswamy (University of Macau)
2	THE EFFECT OF PROFITABILITY, SOLVENCY, AND THE SIZE OF PUBLIC ACCOUNTING FIRMS ON AUDIT DELAY WITH FIRM SIZE AS A MODERATING VARIABLE (EMPIRICAL STUDY ON ENERGY SECTOR COMPANIES LISTED ON THE INDONESIA STOCK EXCHANGE FOR THE 2021 - 2023 PERIOD) Diah Septiani Dwi Pramesti (Universitas Nasional), Arni Karina (Universitas Nasional)
3	THE ROLE OF FAMILY IN ENHANCING FINANCIAL CAPABILITY AMONG YOUTH: A STUDY OF FAMILY MODERATION IN FINANCIAL LITERACY AND FINANCIAL DECISION-MAKING Sheilla Putri Agustin (Universitas Cenderawasih), Agustinus Numberi (Universitas Cenderawasih)
4	THE INFLUENCE OF PRODUCT REVIEWS AND PRODUCT KNOWLEDGE ON GENERATION Z CONSUMER PURCHASING DECISIONS: A STUDY ON SOMETHINC PRODUCTS AT TIK TOK SHOP Angelina Ersandy (Soegijapranata Catholic University), Berta Bekti Retnawati (Soegijapranata Catholic University)
5	THE APPEAL OF SKINCARE IN THE EYES OF STUDENTS: THE INFLUENCE OF INFLUENCERS, BRAND IMAGE, PRICE, AND PRODUCT QUALITY OF SOMETHINC IN LOWOKWARU DISTRICT, MALANG CITY Calista Mina Pandora (Universitas Islam Malang), Rois Arifin (Universitas Islam Malang), Sulthon Sholehuddin (Universitas Islam Malang)
6	ONLINE COSMETICS PURCHASING STRATEGY: A STUDY OF THE INFLUENCE OF BRAND AWARENESS, PRICE PERCEPTION, AND REVIEWS ON PINKFLASH PRODUCTS AT SHOPEE Cholifatul Aishyah (Universitas Islam Malang), Budi Wahono (Universitas Islam Malang), Rahmawati (Universitas Islam Malang)
7	THE IMPACT OF THE IMPLEMENTATION OF DIGITALIZATION AND TAX ADMINISTRATION SYSTEMS ON TAX COMPLIANCE Cindy Isnanul Choiriah (University of Malang), Dyah Arini R (University of Malang), Arini Fitria Mustapita (University of Malang)
8	SKINTIFIC ATTRACTIVENESS: ANALYSIS OF FACTORS AFFECTING MOISTURIZER PURCHASING DECISIONS BY UNISMA 2021 STUDENTS Devina Anggraini Putri (Universitas Islam Malang), Abd Qodir Djailani (Universitas Islam Malang), Alfian Budi Primanto (Universitas Islam Malang)
9	THE EFFECT OF FINANCIAL TCHNOLOGY, DIGITALIZATION OF TAX SERVICES, DIGITAL-BASED TAX LITERACY ON TAXPAYER COMPLIANCE IN MALANG CITY Umi Ratna Zuliyanti (University Islam Of Malang), Jeni Susyanti (University Islam Of Malang), Ahsani Taqwiem (University Islam Of Malang)
10	COMPETENCE OF SQUADRON 12/AJY PERSONNEL TO SUPPORT THE SUCCESS OF DISASTER RESPONSE OPERATIONS USING HELICOPTERS Dedi Sepriyansah (Universitas Jenderal Achmad Yani), Elis Dwiana Ratnamurni (Universitas Jenderal Achmad Yani)
11	STRENGTHENING GREEN LOYALTY: HOW GREEN MARKETING, GREEN PERCEIVED VALUE, AND ENVIRONMENTAL CONCERN DRIVE GREEN SATISFACTION A STUDY OF UNIQLO'S CONSUMER IN BANDUNG METROPOLITAN Eka Septiarini (Universitas Jenderal Achmad Yani), Horas Djulius (Universitas Pasundan Bandung), Dudung Juhana (Sekolah Tinggi Ilmu Ekonomi Pasundan)
12	PREVENTING FRAUD IN ACHIEVING UNIVERSAL HEALTH COVERAGE: WHAT DO VERIFIERS ACTUALLY DO? Hizkia Hazael Bezaliel Bawias (Tadulako University), Rolland M. Yusuf (Tadulako University), Selmita Paranoan (Tadulako University), Tifani Keren Hapuk Weyha (Tadulako University), Nina Yusnita Yamin (Tadulako University), Rahayu Indriasari (Tadulako University)
13	THE INFLUENCE OF THE NUMBER OF BRAND AMBASSADOR ON PURCHASING DECISIONS FOR SCARLETT WHITENING PRODUCTS FOR MANAGEMENT STUDY PROGRAM STUDENTS Abel Gandhy (Pakuan University), Bayu Dwi Prasetyo (Pakuan University), Lieca Arsky Andali (Pakuan University), Esa Nur Shabrina (Pakuan University)
14	THE INFLUENCE OF PROMOTION AND PRODUCT QUALITY ON THE PURCHASING DECISIONS OF SCREAMOUS BOGOR DISTRO CONSUMERS Agung Rahmatullah (Pakuan University), Abel Gandhy (Pakuan University), Yetty Husnul Hayati (Pakuan University), Ikhfa Aulia Aska (Pakuan University)
15	ANALYSIS OF THE EFFECT OF INSTAGRAM SOCIAL MEDIA PROMOTION, PRICE, LOCATION AND FACILITITES ON INTEREST IN VISITING ET AL COFFEE BOGOR Raynaldy Gunawan (IBI Kesatuan), Charles Parnauli Saragi (IBI Kesatuan)

Room: 8 (Zoom), Hours: 10 AM – 1 PM Jakarta Time, July 26, 2025	
No	Moderator: Ananda Kayla Rizqalina (Universitas Negeri Jakarta)
1	BUILDING ORGANIZATIONAL LOYALTY: A STUDY OF LEADERSHIP STYLE, MOTIVATION, AND COMMUNICATION IN HIMAPRODI MANAGEMENT Alfian Dimas Firmansyah (Universitas Islam Malang), Nurhidayah (Universitas Islam Malang), Dita Roosemella Paramadina (Universitas Islam Malang)
2	SOCIAL MEDIA OPTIMISATION AND PRODUCT INNOVATION IN PROMOTING THE DEVELOPMENT OF MSMES (A STUDY OF BUSINESS ACTORS IN BULULAWANG SUBDISTRICT, MALANG REGENCY) Alya Tamara Balqish (Universitas Islam Malang), Ronny Malavia Mardani (Universitas Islam Malang), Fahrurrozi Rahman (Universitas Islam Malang)
3	THE EFFECT OF FIRM SIZE, INSTITUTIONAL OWNERSHIP, AND COMPETITIVE ADVANTAGE ON ENVIRONMENTAL DISCLOSURE Berliana Putri Fatika Sari (Universitas Nasional), Zumratul Meini (Universitas Nasional)
4	THE ROLE OF TAX VOLUNTEER MODERATION IN THE INFLUENCE OF E-FILING ON INDIVIDUAL TAXPAYER COMPLIANCE (STUDY ON LECTURERS AND EMPLOYEES OF THE UNIVERSITY OF ISLAM MALANG) Risma Ayu Febrianti (Universitas Islam Malang), Arista Fauzi Kartika Sari (Universitas Islam Malang), Umi Nandiroh (Universitas Islam Malang)
5	THE INFLUENCE OF LECTURER COMPETENCE, QUALITY OF WORK LIFE, AND PERCEIVED ORGANIZATIONAL SUPPORT ON AFFECTIVE COMMITMENT AND ITS IMPLICATIONS ON THE LECTURER PERFORMANCE AT PRIVATE UNIVERSITY IN THE BANDUNG METROPOLITAN AREA Trisnia Manggiasih (Universitas Jenderal Achmad Yani)
6	THE EFFECT OF PROFITABILITY AND LIQUIDITY ON DIVIDEND POLICY IN REGISTERED PRIVATE COMMERCIAL BANKS ON THE INDONESIA STOCK EXCHANGE 2020-2024 PERIOD Virgia Putri Bhayangkari (Universitas Jenderal Achmad Yani)
7	THE EFFECT OF ESG DISCLOSURE ON THE FINANCIAL PERFORMANCE OF COMPANIES LISTED ON THE INDONESIA STOCK EXCHANGE IN PERIOD 2021–2023 Yan Paresae Tiranda (Universitas Jenderal Achmad Yani), Ferikawita Magdalena Sembiring (Universitas Jenderal Achmad Yani)
8	DOES THE AUDIT COMMITTEE MODERATE THE IMPACT OF AUDITOR REPUTATION AND TENURE ON FINANCIAL STATEMENT FRAUD? Muhammad Rizky Ainurrakhman (University Pakuan), Hendro Sasongko (University Pakuan), Enok Rusmanah (University Pakuan)
9	THE EFFECT OF FINANCIAL LITERACY AND LIFESTYLE ON FINANCIAL BEHAVIOUR WITH FINTECH AS A MODERATING VARIABLE AMONG STUDENTS RECEIVING KIP KULIAH SCHOLARSHIPS AT UNIVERSITAS TRUNOJOYO MADURA Regina Erlychasna Br Surbakti (Universitas Trunojoyo Madura), Aprilina Susandini (Universitas Trunojoyo Madura)
10	FROM FRUGAL LIVING TO FINANCIAL FREEDOM: A CASE STUDY OF WORKERS IN INDONESIA Rengga Aditya (Universitas Trunojoyo Madura), M. Boy Singgih Gitayuda (Universitas Trunojoyo Madura)
11	ECO-FINANCE SYNERGIES: HOW GREEN BANKING INITIATIVES AFFECT FINANCIAL PERFORMANCE METRICS IN INDONESIAN BANKS Karen Angelica (Universitas Atma Jaya Yogyakarta), Dwitya Aribawa (Universitas Atma Jaya Yogyakarta)
12	THE EFFECT OF CORPORATE SOCIAL RESPONSIBILITY (CSR) DISCLOSURE ON PROFITABILITY RATIOS IN FOOD AND BEVERAGE SUB-SECTOR COMPANIES LISTED ON THE INDONESIA STOCK EXCHANGE (IDX) FOR THE 2019–2023 PERIOD Dinda Yuniar (Pakuan University), Hari Gursida (Pakuan University), Amelia Rahmi (Pakuan University)
13	WHEN SCALE EMPOWERS INNOVATION: A RESOURCE-BASED VIEW OF DIGITALIZATION AND FINANCIAL PERFORMANCE IN ISLAMIC BANKING Mohammad Hatta Fahamsyah (Pelita Bangsa University), Listian Indriyani Ahmad (Pelita Bangsa University), Muhammad Najamuddin Dwi Miharja (Pelita Bangsa University), Dian Sulistyorini Wulandari (Pelita Bangsa University), Muhammad Novan (Pelita Bangsa University), Iqbal Tri Utomo (Pelita Bangsa University)
14	CORRUPTION IN INDONESIA'S HIGHER EDUCATION SECTOR Haryono Pasang Kamase (Tadulako University), Jamaluddin (Tadulako University), Muhammad Ikbal (Tadulako University), Muhammad Ansar (Tadulako University), Tenripada (Tadulako University), Arif Gunarsa (Tadulako University), Nurul Fadillah (Tadulako University), Wahyuni (Tadulako University), Asrabiya (Tadulako University)
15	DESIGN AND DEVELOPMENT OF A MOBILE-BASED DIGITAL CREDIT SCORING INFORMATION SYSTEM (CASE STUDY: TADBIIRUL UMMAH SHARIA SAVINGS AND LOAN COOPERATIVE) Muhamad Ivan Fadillah (IBI Kesatuan), Yanto Hermawan (IBI Kesatuan), Rohmad (IBI Kesatuan), Bambang Hengky Rainanto (IBI Kesatuan), Lee Te Chuan (IBI Kesatuan)

Room: 9 (Zoom), Hours: 10 AM – 1 PM Jakarta Time, July 26, 2025	
No	Moderator: Dodi Ria Atmaja (Universitas Esa Unggul)
1	WHAT DETERMINES UNAS JAKARTA'S MASTER OF MANAGEMENT STUDENTS IN LIVING THEIR CALLING IN WORK? Abdul Fathir (National University), Lisa Sarinah (National University)
2	THE EFFECT OF COMPETENCE AND PERFORMANCE APPRAISAL OF INTERNAL AUDITORS ON THE EFFECTIVENESS OF THE INTERNAL CONTROL SYSTEM WITH AUDITOR INDEPENDENCE AS A MODERATING VARIABLE (CASE STUDY AT BANK RAKYAT INDONESIA TBK) Maria Volline Emilnico Siga Nanga (National University), Erwin Indriyanto (National University)
3	THE EFFECT OF INCOME LEVEL, TAX KNOWLEDGE, AND TAX AUTHORITIES' SERVICES ON EMPLOYEE TAXPAYER COMPLIANCE WITH TAX POLICY AS A MODERATING VARIABLE Muhammad Adam Zahran (National University), Halimah Nasmi National University), Heni Suryanti (National University)
4	THE EFFECT OF SOCIAL MEDIA MARKETING, PRODUCT QUALITY AND ONLINE CUSTOMER REVIEWS ON PURCHASING DECISIONS (CASE STUDY AT ONLINE SHOP SYAMILLAHIJAB) Iedilia Izza Nalurita (Islamic University of Malang), M.Ridwan Basalamah (Islamic University of Malang), Nanik Wahyuningtiyas (Islamic University of Malang)
5	ANALYSIS OF THE BASIC PRINCIPLES OF THE INTERNAL AUDIT PROFESSION IN IMPROVING THE QUALITY OF IJE AUDITORS (STUDY TO THE STATE GENERAL INSPECTORATE (IJE), DILI, EAST TIMOR) Lidia Tilman Dos Santos (Islamic University of Malang), Maslichah (Islamic University of Malang), Nuril Badria (Islamic University of Malang)
6	READING THE CONSUMPTION PATTERNS OF COLLEGE STUDENTS TOWARDS SOMETHINC LOCAL PRODUCTS: THE INFLUENCE OF E-PROMOTION, PRICE, AND PRODUCT QUALITY IN THE OFFICIAL STORE Lidya Dwi Oktorica (Islamic University of Malang), Khalikussabir (Islamic University of Malang), Kartika Rose Rachmadi (Islamic University of Malang)
7	THE EFFECTIVENESS OF SOCIAL MEDIA PROMOTION ON PURCHASING DECISIONS OF DAVIENA COSMETICS: BRAND IMAGE AS A BRIDGE OF INFLUENCE (CASE STUDY ON FEB UNISMA STUDENTS) Melly Isnulsari (Islamic University of Malang), Nur Hidayati (Islamic University of Malang), M. Tody Arsyianto (Islamic University of Malang)
8	ANALYSIS OF THE PHYSICAL WOROK ENVIRONMENT AND COMPETENCE ON EMPLOYEE PERFORMANCE IN THE MOTORCYCLE INSTRUCTOR SECTION OF THE CIANJUR PRIMA WORK TRAINING INSTITUTE Aliva Desviana (General Achmad Yani University), Khaerul Rizal Abdurahman (Jendral Achmad Yani University)
9	ANALYSIS OF MPX II OIL PRODUCT INVENTORY CONTROL USING ECONOMIC ORDER QUANTITY (EOQ) AND FISHBONE METHODS AT PSJ OIL DISTRIBUTOR IN CIMAHI CITY Nisa A'inun Zariah (Jendral Achmad Yani University)
10	QUALITY CONTROL ANALYSIS OF BABYTERRY FABRIC AT CV. MENUJU SUKSES MANDIRI Nurul Cahyani (Jendral Achmad Yani University), Eka Ludiya (Jendral Achmad Yani University)
11	CONTINGENCY STUDY OF FINANCIAL FRAUD IN VILLAGES: THE ROLE OF LOVE OF MONEY, RELIGIOSITY, AND MORALITY Sesika Liise (Tadulako University), Nina Yusnita Yamin (Tadulako University), M. Ikbal Abdullah (Tadulako University), Selmita Paranoan (Tadulako University), Latifah Sukmawati Yuniar (Tadulako University)
12	THE EFFECT OF GREEN ACCOUNTING, CAPITAL STRUCTURE, AND PROFITABILITY ON FIRM VALUE IN PROCESSED FOOD AND BEVERAGE SUBSECTOR COMPANIES LISTED ON THE INDONESIAN STOCK EXCHANGE FROM 2019 - 2023 Anita Nur Fadila (Pakuan University), Hari Gursida (Pakuan University), Amelia Rahmi (Pakuan University)
13	THE ROLE OF DIGITAL MARKETING SOCIAL MEDIA TIKTOK, INSTAGRAM, TWITTER ON PURCHASING DECISIONS ON GACOAN NOODLES Cut Farrah Selene Aurelia (Pelita Bangsa University), Desma Alsheka Widyastuti (Pelita Bangsa University), Sarjaya (Pelita Bangsa University), Indra Permana (Pelita Bangsa University)
14	ACCOUNTABILITY OF GOODS AND SERVICE PROCUREMENT Nuryatni Kasim (Tadulako University), Ikbal Bakry (Tadulako University), Femilia Zahra (Tadulako University), Ernawati Usman (Tadulako University), Jurana (Tadulako University), Abdul Pattawe (Tadulako University)
15	THE INFLUENCE OF PRICE, ATTRACTION, AND PROMOTION OF THE BUCKETLIST INDONESIA MUSEUM ON VISIT DECISIONS Vanessa Natalia Sidharta (IBI Kesatuan), Tarida Marlin Surya Manurung (IBI Kesatuan), Bambang Hengky Rainanto (IBI Kesatuan), Jan Horas Veryady Purba (IBI Kesatuan), Jonathan Van Melle (IBI Kesatuan), Abdul Talib bin Bon (IBI Kesatuan), Victor Meledge-Ade5 (IBI Kesatuan)

Room: 10 (Zoom), Hours: 10 AM – 1 PM Jakarta Time, July 26, 2025	
No	Moderator: Andy (Universitas Negeri Jakarta)
1	THE INFLUENCE OF WORLD OF MOUTH AND BRAND IMAGE ON THE DECISION TO PURCHASE ROOM SERVICES AT THE GRAND MERCUE JAKARTA KEMAYORAN HOTEL Siti Rohmah Agustin (Universitas Nasional), Rachmad Rizky Trianto (Universitas Nasional), Gagih Pradini (Universitas Nasional)
2	THE ROLE OF TRUST IN MODERATING THE INFLUENCE OF SERVICE QUALITY, BRAND IMAGE, AND PRICE PERCEPTIONS ON GROUP INSURANCE REPURCHASE DECISIONS AT PT ASURANSI ABC INDONESIA Vandi C. Pradikta (Universitas Nasional), Elwisam (Universitas Nasional)
3	THE MEDIATING ROLE OF E-SERVICE QUALITY IN THE RELATIONSHIP BETWEEN MOBILE APP USAGE AND E-SATISFACTION: EVIDENCE FROM PLN JAYAPURA, INDONESIA Uturestantix (Universitas Cenderawasih), Agustinus Numberi (Universitas Cenderawasih)
4	ANALYSIS OF THE INFLUENCE OF CAPITAL ADEQUACY RATIO, NON PERFORMING FINANCING, FINANCING TO DEPOSIT RATIO, ZAKAT PERFORMANCE RATIO ON RETURN ON ASSETS OF ISLAMIC COMMERCIAL BANKS IN INDONESIA (2021-2023) Muhammad Alfayad (Universitas Islam Malang), Harun Alrasyid (Universitas Islam Malang), Abdullah Syakur Novianto (Universitas Islam Malang)
5	THE EFFECT OF BI RATE, CAPITAL ADEQUACY RATIO AND OPERATING EXPENSES OPERATING INCOME ON THE PROFITABILITY OF ISLAMIC COMMERCIAL BANKS IN 2020-2023 Nabila Syifa Azzahra (Universitas Islam Malang), Nur Diana (Universitas Islam Malang), Dewi Diah Fakhriyyah (Universitas Islam Malang)
6	THE EFFECT OF E-REGISTRATION AND E-FILING SYSTEM IMPLEMENTATION ON INDIVIDUAL TAXPAYER COMPLIANCE WITH INTERNET LITERACY AS A MODERATING VARIABLE IN RANDUAGUNG VILLAGE Nur 'Abidah (Universitas Islam Malang), Moh. Amin (Universitas Islam Malang), Junaidi (Universitas Islam Malang)
7	FROM SPIRITUALITY TO DIGITALIZATION, STRATEGIES FOR INCREASING CUSTOMER LOYALTY AT INDONESIAN ISLAMIC BANK (BSI) Nur Hasanah (Universitas Islam Malang), Muhammad Rizal (Universitas Islam Malang), Restu Millaningtyas (Universitas Islam Malang)
8	THE INFLUENCE OF INTELLECTUAL CAPITAL ON FINANCIAL PERFORMANCE: EVIDENCE FROM FINANCE COMPANIES IN THE HOLDING AND INVESTMENT SUB-SECTORS LISTED ON THE INDONESIA STOCK EXCHANGE 2019-2023 PERIOD Armela Amalia (Universitas Jenderal Achmad Yani), Sofia Windiarti (Universitas Jenderal Achmad Yani), Siti Kustinah (Universitas Jenderal Achmad Yani)
9	ANALYSIS OF THE USE OF ARTIFICIAL INTELLIGENCE (AI) ON PRODUCTION EFFECTIVENESS AND EMPLOYEE PERFORMANCE Sapto Ari Prabowo (Universitas Jenderal Achmad Yani)
10	THE EFFECT OF WORK STRESS, PHYSICAL WORK ENVIRONMENT, AND ORGANIZATIONAL CITIZENSHIP BEHAVIOR (OCB) ON WORK PERFORMANCE IN THE PRODUCTION DEPARTMENT OF PT. GENTA TRIKARYA SUMEDANG Shintia Maharani (Universitas Jenderal Achmad Yani), R.M. Juddy Prabowo (Universitas Jenderal Achmad Yani)
11	PROFITABILITY UNDER PRESSURE: THE INTERPLAY OF FINANCIAL RISKS AND CORPORATE AGE IN INDONESIAN BANKING AND MULTIFINANCE SECTORS Stella Tania (Universitas Atma Jaya Yogyakarta), Dwitya Aribawa (Universitas Atma Jaya Yogyakarta)
12	THE EFFECTIVENESS OF SOCIAL MEDIA ADVERTISING FOR FASHION PRODUCTS THIS IS APRIL Rohiqim Makhtum (Pakuan University), Sri Hidajati Ramdani (Pakuan University), Bayu Dwi Prasetyo (Pakuan University)
13	THE INFLUENCE OF INFLUENCER MARKETING AND PRODUCT INNOVATION ON PURCHASING DECISIONS AT E-COMMERCE SHOPEE Desma Alsheka Widyastuti (Pelita Bangsa University), Cut Farrah Selene Aurelia (Pelita Bangsa University), Murni Rahayu (Pelita Bangsa University), Erna Apriani (Pelita Bangsa University)
14	DETERMINANTS OF CLOUD-BASED ACCOUNTING ADOPTION IN MSMES: A BIBLIOMETRIC ANALYSIS AND SYSTEMATIC LITERATURE REVIEW Abdul Razik Luneto (Tadulako University), Annastry Widyakusuma (Tadulako University), I Putu Edi Darmawan (Tadulako University), Phatra Anggana Djuri (Tadulako University), Muhammad Bashri Bas (Tadulako University), Rika Febby Ramadhani (Tadulako University), Husnul Hatimah (Tadulako University), Andi Muhammad Rizqan (Tadulako University)
15	PENGARUH KUALITAS PELAYANAN, KUALITAS PRODUK, DAN INOVASI PRODUK TERHADAP KEPUTUSAN PEMBELIAN (STUDI KASUS PADA NANDA CHICKEN & BURGER CABANG KATULAMPA KOTA BOGOR) Sekar Suci Nugraha Dewata (IBI Kesatuan), Febry Lodwyk (IBI Kesatuan), Henry Sumurung (IBI Kesatuan), Gen Gen Gendalasari (IBI Kesatuan), Nani Cahyani (IBI Kesatuan)

Room: 11 (Zoom), Hours: 10 AM – 1 PM Jakarta Time, July 26, 2025	
No	Moderator: Ika Miftahul Janah (Universitas Negeri Jakarta)
1	COMPARISON OF THE INFLUENCE OF MARKETING MIX ON ONLINE PURCHASE DECISIONS IN MARKETPLACES AND SOCIAL COMMERCE AMONG MILLENNIALS Deveni Aziz Gumelar (University Of Techonology Yogyakarta), Gia Rizky (University Of Techonology Yogyakarta).
2	INCREASING PROFITABILITY THROUGH LIQUIDITY AND BANK SIZE IN INDONESIA BANKS Ignatz Novrian Fayliencent (STIE YKPN Business School Yogyakarta), Ferdinando Solissa (STIE YKPN Business School Yogyakarta).
3	ADOPTION OF AI TOOLS AND ITS IMPACT ON LEARNING BEHAVIOR AND ETHICAL CONDUCT: A STUDY OF FUTURE WORKFORCE READINESS AMONG UNIVERSITY STUDENTS Misnanto (Tuban Institute of Technology & Business)
4	THE EFFECTIVENESS OF CORPORATE SOCIAL RESPONSIBILITY IN EVALUATING CORPORATE SOCIAL PERFORMANCE: A SYSTEMATIC LITERATURE REVIEW Shely Dinar Thamara (Universitas Trunojoyo Madura), Fauziah Mubaarokah Septiyanti (Universitas Trunojoyo Madura), Irna Sulistiarini (Universitas Trunojoyo Madura), Nuriya Fadilah (Universitas Trunojoyo Madura), Nurita Andriani (Universitas Trunojoyo Madura)
5	UNDERSTANDING DIGITAL TRANSFORMATION AND EMPLOYEE WELL-BEING: A BALANCE OF OPPORTUNITIES AND CHALLENGES Nuviah Herawati (University of Technology Yogyakarta), Nur Wening (University of Technology Yogyakarta), Christianto (University of Technology Yogyakarta), Sulistiono (STIE Tourism API Yogyakarta)
6	EXPLORATION OF A HYBRID CRM APPROACH IN BUILDING LONG-TERM RELATIONSHIPS WITH STUDENTS IN DISTANCE EDUCATION ENVIRONMENTS Ana Rimbasari (Universitas Siber Muhammadiyah)
7	THE INFLUENCE OF ENTREPRENEURIAL EDUCATION, ENTREPRENEURIAL SPIRIT AND SELF-EFFICACY ON ENTREPRENEURIAL INTENTION IN GENERATION Z IN THE SPECIAL REGION YOGYAKARTA (DIY) Oktabrian Bima Rizki (University of Technology Yogyakarta), Sujoko (University of Technology Yogyakarta)
8	THE EFFECT OF PER CAPITA INCOME, ECONOMIC GROWTH RATE, AND TAX RATE TOWARDS TAX RATIO IN ASIA PACIFIC ECONOMIC COOPERATION (APEC) COUNTRIES IN 2016-2022 Vita Roro Pramudita (Universitas Jenderal Achmad Yani), Bani Binekas (Universitas Jenderal Achmad Yani)
9	CHALLENGES OF BRAND ELEMENTS TO THE CANCEL CULTURE PHENOMENON: LITERATURE REVIEW R. Satrio Pambudi (STIE YKPN Yogyakarta), Rusmantin Adi Sulastri (STIE YKPN Yogyakarta)
10	INTEGRATING INSTITUTIONAL, STAKEHOLDER, AND LEGITIMACY THEORIES: INSIGHTS FROM A SYSTEMATIC REVIEW OF GOVERNMENT STRATEGIES FOR SUSTAINABLE DEVELOPMENT Tri Ciptaningsih (STIE YKPN), Baldric Siregar (STIE YKPN), Maria Pampa Kumalaningrum (STIE YKPN)
11	THE ROLE OF DEBT RESTRUCTURING IN STRENGTHENING THE RELATIONSHIP BETWEEN FINANCIAL DISTRESS AND TAX AGGRESSIVENESS IN PROPERTY AND REAL ESTATE COMPANIES IN INDONESIA Chalarce Totanan (Tadulako University), Ni Made Suwitri Parwati (Tadulako University), Nurlaela Mapparessa (Tadulako University), Andi Ainil Mufidah Tanra (Tadulako University), Yuldi Mile (Tadulako University), Resky Oktaviani (Tadulako University), I Made Ari Kusuma (Tadulako University), Ni Luh Dian Sundari Indah (Tadulako University)
12	THE EFFECT OF PROFITABILITY, LEVERAGE, AND ASSET ACTIVITY PERFORMANCE ON PROFIT GROWTH OF SUBSECTOR COMPANIES PROCESSED FOODS PERIOD 2019-2023 Saima Putri (Pakuan University), Siti Maimunah (Pakuan University), May Mulyaningsih (Pakuan University)
13	MITIGATING AGENCY CONFLICTS THROUGH ESG: A STUDY ON PROFITABILITY AND TAX AVOIDANCE BEHAVIOR IN CORPORATIONS Dian Sulistyorini Wulandari (Pelita Bangsa University), Agus Fuadi (Pelita Bangsa University), Nadia Fathurrahmi Lawita (Pelita Bangsa University), Salmiya Kartika Herira (Pelita Bangsa University), Putri Edelweis Aprilia Alfansyah (Pelita Bangsa University)
14	PENGARUH KUALITAS INFORMASI, KREDIBILITAS INFORMASI, DAN PROMOSI PENJUALAN PADA TIKTOK TERHADAP MINAT BELI PRODUK SOMETHINC DI E-COMMERCE Naomi Tabitha Aprilia (IBI Kesatuan), Anton Widio P (IBI Kesatuan), Bayu Prasetyo (IBI Kesatuan), Donny Hendri (IBI Kesatuan), Bachtiar Arif (IBI Kesatuan)

Room: 12 (Zoom), Hours: 10 AM – 1 PM Jakarta Time, July 26, 2025	
No	Moderator: Vina Pebianti (Universitas Negeri Jakarta)
1	SALES PROMOTION AND PRICING STRATEGIES: THEIR EFFECTS ON FMCG PURCHASE DECISIONS Widi Astuti (Jinarakkhita Buddhist College of Lampung), Andre Kurniawan (Jinarakkhita Buddhist College of Lampung), Karsinah (Jinarakkhita Buddhist College of Lampung).
2	ANALISIS PERAN KEPEMIMPINAN KEPALA SEKOLAH DALAM MENINGKATKAN MUTU PENDIDIKAN DI SDN 19 SINTO Rupia (Shanti Bhuana Institute), Eligia Monixa Salfarini (Shanti Bhuana Institute), Dedy (Shanti Bhuana Institute).
3	THE IMPACT OF ACADEMIC MANAGEMENT INFORMATION SYSTEMS ON THE PERFORMANCE OF LECTURERS AND STUDENTS Karsinah (Jinarakkhita Buddhist College of Lampung), Varen Febriantoro (Jinarakkhita Buddhist College of Lampung), Linda (Jinarakkhita Buddhist College of Lampung).
4	EMPLOYEE PERFORMANCE ANALYSIS BERKAT MART BENGKAYANG REGENCY, WEST KALIMANTAN Utami Citriana Sustryanti (Shanti Bhuana Institute), Eligia Monixa Salfarini (Shanti Bhuana Institute), Dedy (Shanti Bhuana Institute).
5	UNCOVERING THE FINANCIAL SECRETS OF MSMES: THE ROLE OF KNOWLEDGE, ATTITUDE, AND PERSONALITY IN FINANCIAL MANAGEMENT OF CULINARY ENTREPRENEURS IN MERJOSARI Fatih Sahirul Muttaqin (University of Islam Malang), Eka Farida (University of Islam Malang), Ita Athia (University of Islam Malang).
6	THE EFFECT OF BRAND IMAGE, PRODUCT QUALITY AND BRAND TRUST ON PURCHASE DECISIONS AT SKINCARE SKINTIFIC PRODUCTS (STUDY ON STUDENTS AT MALANG CITY) Uswatul Tirania Choirul Nissa (University of Islam Malang), Agus Widarko (University of Islam Malang), Etty Saraswaty (University of Islam Malang).
7	THE INFLUENCE OF *ENVIRONMENTAL SOCIAL GOVERNANCE* AND *ECO-EFFICIENCY* ON FIRM VALUE MEDIATED BY FINANCIAL PERFORMANCE IN MINING SECTOR COMPANIES LISTED ON THE INDONESIA STOCK EXCHANGE FOR THE PERIOD 2019-2023 Indri Kurnia Ardiyanti (Jenderal Achmad Yani University), Veronika Santi Paramita (Jenderal Achmad Yani University).
8	ACCOUNTING STANDARDS IN THE DIGITAL ERA: ADAPTING REGULATIONS TO TECHNOLOGICAL (A CASE STUDY OF A MILITARY-AFFILIATED FOUNDATION IN INDONESIA) Jati Dwi Apriyanto (Jenderal Achmad Yani University), Siti Kustinah (Jenderal Achmad Yani University).
9	THE INFLUENCE OF LOCUS OF CONTROL, RISK TAKING PROPENSITY, NEED OF ACHIEVEMENT, PERSONALITY, ENTREPRENEURIAL EDUCATION AND SOCIAL SUPPORT ON ENTREPRENEURIAL DECISIONS IN THE PROPERTY SECTOR IN INDONESIA Muhammad Wildan Gimnastiar (University of Technology Yogyakarta), Gia Rizky (University of Technology Yogyakarta)
10	ASSESSING STUDENTS' ACCEPTANCE OF ACCURATE SOFTWARE IN THE TEACHING AND LEARNING PROCESS Yanto Darmawan (Politeknik YKPN Yogyakarta), Evieana Riesty Saputri (Politeknik YKPN Yogyakarta), Rahimah (Politeknik YKPN Yogyakarta)
11	THE INFLUENCE OF SOCIAL MEDIA AND BRAND AWARENESS ON INCREASING THE NUMBER OF CONSUMERS (CASE STUDY OF MSMES GETUK TAKE TAWANGMANGU) Lasarus Icon Sandro (Institut Teknologi Bisnis Kristen Bukit Pengharapan)
12	COST-BENEFIT ANALYSIS OF IMPLEMENTING WOOD CHIP AS A SUSTAINABLE FUEL IN CEMENT MANUFACTURING: A MANAGERIAL PERSPECTIVE Albert Yansen (University of M.H. Thamrin)
13	HEDONIC SHOPPING AND IMPULSE BUYING: UNDERSTANDING CUSTOMER MOTIVATION IN THE E-COMMERCE ERA Dika Argian Syah (Pelita Bangsa University), Anisah Istiqomah (Pelita Bangsa University), Hanip Munib Al Haqqi (Pelita Bangsa University), Cut Farah Selene Aurelia (Pelita Bangsa University)
14	INTEGRATION OF ESG PRINCIPLES IN FINANCIAL MANAGEMENT STRATEGIES: IMPLICATIONS FOR PERFORMANCE AND COMPETITIVENESS OF ENERGY SECTOR COMPANIES IN INDONESIA Erwan Sastrawan (Tadulako University), Ayu Putri Utami (Tadulako University), Nini Andriani (Tadulako University), Abdul Aziz (Tadulako University), Bayu Sujud Anugerah (Tadulako University)
15	PENGARUH ONLINE CUSTOMER REVIEW, INFLUENCER MARKETING, DAN PERSEPSI HARGA TERHADAP KEPUTUSAN PEMBELIAN (STUDI KASUS KONSUMEN ERHA CLINIC BOGOR) Nathaniel Alfian Wiraja (IBI Kesatuan), Mashadi, Pinto Jaya (IBI Kesatuan), Sri Mulyati (IBI Kesatuan), Yudin Taqyudin (IBI Kesatuan)

Room: 13 (Zoom), Hours: 10 AM – 1 PM Jakarta Time, July 26, 2025	
No	Moderator: Siti Syahlina Azahra (Universitas Negeri Jakarta)
1	REWARD SYSTEMS AND EMPLOYEE PERFORMANCE: EXAMINING THE IMPACT IN ORGANIZATIONAL SETTINGS Meta Amelia Putri (Jinarakkhita Buddhist College Of Lampung), Hendri Ardianto (Jinarakkhita Buddhist College Of Lampung), Andi Prayoga (Jinarakkhita Buddhist College Of Lampung)
2	EXPLORATION OF FINANCIAL MANAGEMENT BEHAVIOR OF SUNGAI BETUNG COFFEE SHOP CUSTOMERS BASED ON LOCUS OF CONTROL Amui (Institut Shanti Bhuana), Helena Anggraeni (Institut Shanti Bhuana), Aloysius Hari Kristianto (Institut Shanti Bhuana), Dedy (Institut Shanti Bhuana)
3	EMPLOYEE ENGAGEMENT AND TURNOVER INTENTION: A QUANTITATIVE ANALYSIS OF WORKFORCE DYNAMICS Juniartie (Jinarakkhita Buddhist College of Lampung), Fendi Darma (Jinarakkhita Buddhist College of Lampung), Hendri Ardianto (Jinarakkhita Buddhist College of Lampung)
4	FLEXIBLE WORK ARRANGEMENTS AND WORK EFFECTIVENESS: INSIGHTS FROM EMPLOYEE EXPERIENCES Juni Suryanadi (Jinarakkhita Buddhist College of Lampung), Lia Sari (Jinarakkhita Buddhist College of Lampung), Derianto (Jinarakkhita Buddhist College of Lampung)
5	THE INFLUENCE OF LOCUS OF CONTROL, RISK TAKING PROPENSITY, NEED OF ACHIEVEMENT, PERSONALITY, ENTREPRENEURIAL EDUCATION, AND SOCIAL SUPPORT ON ENTREPRENEURIAL DECISIONS IN THE RETAIL SECTOR Isyak Islam Udin (University of Technology Yogyakarta), Gia Rizky (University of Technology Yogyakarta)
6	FINANCIAL PERFORMANCE ASSESSMENT OF INFRASTRUCTURE SOES IN INDONESIA: THE CASE OF PELINDO MERGER Novi Diah Wulandari (Nahdlatul Ulama Yogyakarta University), Nurna Pratiwi (Nahdlatul Ulama Yogyakarta University), Dwi Trianti (Nahdlatul Ulama Yogyakarta University), Suhada (Nahdlatul Ulama Yogyakarta University)
7	THE INFLUENCE OF ECO-EFFICIENCY, CARBON EMISSION DISCLOSURE, AND GREEN INNOVATION ON COMPANY VALUE SUB-SECTOR BASIC MATERIAL COMPANY Siti Kustinah (Universitas Jenderal Achmad Yani), Neni Mariani (Universitas Jenderal Achmad Yani), Eddy Winarso (Universitas Jenderal Achmad Yani)
8	THE EFFECT OF PERCEIVED USEFULLNESS AND PERCEIVED SAFETY OF SYSTEM ACCOUNTING ON INTENTION TO ADOPT DIGITAL PAYMENT IN CIMAHI CITY SMES Sofia Windiarti (Jenderal Achmad Yani University), Nunung Aini Rahmah (Jenderal Achmad Yani University)
9	HUMAN RESOURCE PLANNING AND ORGANIZATIONAL PERFORMANCE: A SYSTEMATIC LITERATURE REVIEW Khoirul Rosiqin (Universitas Trunojoyo Madura), Itaul Masarroh (Universitas Trunojoyo Madura), Moh. Arifin (Universitas Trunojoyo Madura), Helmi Buyung Aulia Safrizal (Universitas Trunojoyo Madura)
10	MUSLIM CONSUMERS' PERCEIVED VALUE ON REVISIT INTENTION TO SYAICHONA MOH CHOLIL BANGKALAN WITH CUSTOMER SATISFACTION AS MEDIATING VARIABLE Mohammad Irfandi Iqbal (Universitas Trunojoyo Madura), Nurita Andriani (Universitas Trunojoyo Madura), Miftahul Jannah (Universitas Trunojoyo Madura)
11	COMPARISON OF ONLINE PURCHASE DECISIONS (MARKETPLACE AND SOCIAL COMMERCE) INFLUENCED BY THE MARKETING MIX (7P) IN GENERATION Z Sri Handayani (Universitas Teknologi Yogyakarta), Gia Rizky (Universitas Teknologi Yogyakarta)
12	THE EFFECT OF PROFITABILITY, SOLVENCY, AND THE SIZE OF PUBLIC ACCOUNTING FIRMS ON AUDIT DELAY WITH FIRM SIZE AS A MODERATING VARIABLE (EMPIRICAL STUDY ON ENERGY SECTOR COMPANIES LISTED ON THE INDONESIA STOCK EXCHANGE FOR THE 2021 - 2023 PERIOD) Diah Septiani Dwi Pramesti (Universitas Nasional), Arni Karina (Universitas Nasional)
13	PERCEIVED EASE OF USE, TRUST AND FEATURES ON INTEREST IN USING DIGITAL WALLET AMONG STUDENT ENTREPRENEURS AT PELITA BANGSA UNIVERSITY Ridwan Muhsoni (Pelita Bangsa University), Wisnu Susilo (Pelita Bangsa University), Ilham Muhammad Mardi Putra (Pelita Bangsa University), Desma Alsheka Widyastuti (Pelita Bangsa University)
14	THE EFFECTS OF WORK CULTURE AND TEAMWORK ON EMPLOYEE PRODUCTIVITY IN PALU CITY Andi Indriani (Tadulako University)
15	PENGARUH KEPERCAYAAN, PERSEPSI MANFAAT, DAN RESIKO TERHADAP MINAT PENGGUNAAN BLU BY BCA DIGITAL (STUDI KASUS PADA NASABAH BLU BY BCA DIGITAL TAHUN 2024) Maria Angela Mustika (IBI Kesatuan), Arnold Sultanto H. (IBI Kesatuan), Annaria Magdalena (IBI Kesatuan), Eddy Safni Rosa (IBI Kesatuan)

Room: 14 (Zoom), Hours: 10 AM – 1 PM Jakarta Time, July 26, 2025	
No	Moderator: Audia Zikra (Universitas Negeri Jakarta)
1	THE RELATIONSHIP BETWEEN CREATIVITY AND ENTREPRENEURIAL MINDSET AMONG ECONOMICS FACULTY STUDENTS Aldo Wise Hanjaya Yusdhika (Jinarakkhita Buddhist College), Dedi Kundana Jinarakkhita Buddhist College), Ratna Wardani (Jinarakkhita Buddhist College)
2	THE EFFECT OF PROMOTION, PRICE, AND PRODUCT QUALITY ON REPURCHASE INTEREST (CASE STUDY ON EIGER CONSUMERS IN BENGKAYANG CITY) Maera Christina (Shanti Bhuana Institute), Blasius Manggu (Shanti Bhuana Institute)
3	THE EFFECT OF MANAGEMENT INFORMATION SYSTEM IMPLEMENTATION ON THE EFFECTIVENESS OF DECISION MAKING IN EDUCATIONAL INSTITUTIONS Vina Pujayanti (Jinarakkhita Buddhist College), Kartika (Jinarakkhita Buddhist College), Dedi Kundana (Jinarakkhita Buddhist College)
4	THE INFLUENCE OF DIGITAL PROMOTION, HEDONIC SHOPPING MOTIVATION, AND SHOPPING LIFESTYLE ON IMPULSE BUYING AMONG MARKETPLACE USERS (A STUDY OF GENERATION Z IN DEPOK CITY) Mochamad Tri Sultan Firdausy (Pakuan University), Arie Wibowo Irawan (Pakuan University), Aditya Prima Yudha (Pakuan University), Rifli Ramadhan Sabililah (Pakuan University)
5	THE IMPACT OF CORPORATE SOCIAL RESPONSIBILITY AND ENVIRONMENTAL PERFORMANCE ON FINANCIAL PERFORMANCE: EMPIRICAL STUDY OF PALM OIL PLANTATION COMPANIES LISTED ON THE INDONESIAN STOCK EXCHANGE Ratih Ginanjar Krismawati (Jendral Achmad Yani University), Sofia Windiarti (Jendral Achmad Yani University)
6	THE EFFECT OF CARBON EMISSION DISCLOSURE, GREEN INNOVATION AND INTELLECTUAL CAPITAL ON FIRM VALUE Salsabila Aulia Putri (Jendral Achmad Yani University), Nunung Aini Rahmah (Jendral Achmad Yani University)
7	THE EFFECTIVENESS OF STOCK SPLITS IN INVESTOR SIGNALING: AN EVENT STUDY ANALYSIS BEFORE AND DURING COVID-19 Hafidz Nurhuda (Trunojoyo Madura University), Tito IM. Rahman Hakim (Trunojoyo Madura University), Hendra Sanjaya Kusno (Politeknik Negeri Balikpapan), Rahmat Hidayat (Trunojoyo Madura University)
8	ENHANCING PUBLIC SECTOR PERFORMANCE: THE ROLE OF KNOWLEDGE AND WORK EXPERIENCE IN SHAPING EMPLOYEE EFFECTIVENESS IN LOCAL GOVERNMENT INSTITUTIONS Irva Nur Diana (Trunojoyo Madura University), Zainiyatul Afifah (Trunojoyo Madura University), Widya Rizka Arfy (Trunojoyo Madura University)
9	THE INFLUENCE OF TAX UNDERSTANDING, TAX AWARENESS, AND TAX COMPLIANCE ON E-FILING USAGE Alyaa Husniyyah (Universitas Nasional), Dipa Teruna Awaludin (Universitas Nasional)
10	ENTREPRENEURSHIP EDUCATION COMPETENCE AS THE KEY TO INDONESIA'S ECONOMIC DEVELOPMENT IN THE DIGITAL AGE Nurwahdania (STIAB Jinarakkhita Lampung), Partama Nagatirtha (STIAB Jinarakkhita Lampung), Henny Meyliana (STIAB Jinarakkhita Lampung)
11	THE EFFECT AN EMPIRICAL INVESTIGATION OF MINING COMPANIES LISTED ON THE INDONESIA STOCK EXCHANGE FOR THE 2019–2023 PERIOD EXAMINING THE IMPACT OF CORPORATE SOCIAL RESPONSIBILITY ON FINANCIAL PERFORMANCE Tanti Dian Pratiwi (Universitas Trunojoyo Madura), Alexander Anggono (Universitas Trunojoyo Madura), Prasetyono (Universitas Trunojoyo Madura), Tito IM Rahman Hakim (Universitas Trunojoyo Madura)
12	MANAGING MUSLIM-FRIENDLY TOURISM THROUGH RELIGIOUS-CULTURAL INTEGRATION: THE CASE OF KAMPUNG GELGEL, BALI Dhiya Alatas (Universitas Nasional), B Syarifuddin Latif (Universitas Nasional)
13	THE INFLUENCE OF TRUST AND SECURITY ON PURCHASE DECISIONS MEDIATED BY CUSTOMER SATISFACTION IN CASH ON DELIVERY TRANSACTIONS OF USED ELECTRONIC GOODS ON FACEBOOK MARKETPLACE Mamad Muhamad (Universitas Pelita Bangsa), Adibah Yahya (Universitas Pelita Bangsa), Tri Ngudi Wiyatno (Universitas Pelita Bangsa), Anna Wulandari (Universitas Pelita Bangsa), Ilham Muhammad Mardi Putra (Universitas Pelita Bangsa)
14	SCOPING REVIEW: GREEN OPERATIONS PRACTICE IN MSMES Suryadi Hadi (Tadulako University), Sulaeman Miru (Tadulako University), Syamsuddin (Tadulako University), Asngadi (Tadulako University), Saharuddin Kaseng (Tadulako University), Muhammad Gunawan (Tadulako University)
15	PENGARUH CAR, LDR, ROA, DAN BOPO TERHADAP RISIKO KREDIT PADA BANK SWASTA NASIONAL PERIODE 2018-2023 Aurora Putri Rafifah (IBI Kesatuan), Uluan Silaen (IBI Kesatuan), Wadudi Wibowo (IBI Kesatuan), Wimpi Srihandoko (IBI Kesatuan)

Room: 15 (Zoom), Hours: 10 AM – 1 PM Jakarta Time, July 26, 2025	
No	Moderator: Wisnu (Universitas Negeri Jakarta)
1	THE EFFECT OF PRODUCT INNOVATION AND DIGITAL MARKETING STRATEGY ON THE SUCCESS OF MICRO, SMALL AND MEDIUM ENTERPRISES (MSMES) Adelia Mahayani Putri (Jinarakkhita Buddhist College of Lampung), Nanda Aditiya (Jinarakkhita Buddhist College of Lampung), Taridi (Jinarakkhita Buddhist College of Lampung)
2	EFFECT OF ENTREPRENEURSHIP TRAINING ON ENTREPRENEURSHIP READINESS OF VOCATIONAL STUDENTS Dedi Kundana (Jinarakkhita Buddhist College of Lampung), Henny Meyliana (Jinarakkhita Buddhist College of Lampung), Albert Betrand Giovanni Setiawan (Jinarakkhita Buddhist College of Lampung)
3	EXPLORATION OF EMPLOYEE WORK MOTIVATION TO IMPROVE EMPLOYEE PERFORMANCE AT KSP CU PANCUR KASIH LEDO SERVICE PLACE Hilarianty (Institut Shanti Bhuana), Dedy (Institut Shanti Bhuana)
4	THE ROLE OF SOCIAL CAPITAL BEHIND THE SUCCESS OF MIGRANT TRADERS IN NUR BAKSO BENGKAYANG MSME Lia Prasoka (Institut Shanti Bhuana), Helena Anggraeni Tjondro Sugianto (Institut Shanti Bhuana), Aloysius Hari Kristianto (Institut Shanti Bhuana)
5	THE INFLUENCE OF TAX INFORMATION DISSEMINATION, TAX SANCTIONS, AND TAXPAYER AWARENESS ON LAND AND BUILDING TAXPAYER COMPLIANCE AMONG RESIDENTS IN TULUSREJO SUBDISTRICT Siti Arsyiati (Universitas Islam Malang), Irma Hidayati (Universitas Islam Malang), Tri Sugiarti Ramadhan (Universitas Islam Malang)
6	THE INFLUENCE OF HALAL KNOWLEDGE, ISLAMIC RELIGIOSITY, AND ATTITUDE ON PURCHASING DECISIONS FOR HALAL COSMETICS AMONG GENERATION Z AT MALANG ISLAMIC UNIVERSITY Syema Yusfiah (Universitas Islam Malang), Dwiyani Sudaryanti (Universitas Islam Malang), Ratna Tri Hardaningtyas (Universitas Islam Malang)
7	REALIZING FINANCIALLY INTELLIGENT SANTRI: THE EFFECT OF SHARIA FINANCIAL LITERACY, KNOWLEDGE, AND FINANCIAL ATTITUDES ON FINANCIAL MANAGEMENT BEHAVIOR (AT SANTRI ISLAMIC BOARDING SCHOOL SABILURROSYAD MALANG) Umi Aimmatun Nadziroh (Universitas Islam Malang), Anik Malikah (Universitas Islam Malang), Mohamad Bastomi (Universitas Islam Malang)
8	ANALYZE OF NON-PHYSICAL WORK ENVIRONMENT AND ORGANIZATIONAL CULTURE ON TURNOVER INTENTION OF PRODUCTION DEPARTMENT EMPLOYEES AT PT GIWANGKARA KANDANGWESI Celsa Heriani Putri (Universitas Jenderal Achmad Yani), Khaerul Rizal Abdurahman (Universitas Jenderal Achmad Yani)
9	PENGARUH MODEL TAM TERHADAP ATTITUDE DAN BEHAVIORAL INTENTION: SEBUAH KAJIAN TERHADAP DOKTER DI RUMAH SAKIT KELAS C DI PULAU JAWA Eka Setiawan (Esa Unggul University)
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2	FINANCIAL AGILITY IN FMCG FIRMS: ANALYZING THE POST-PANDEMIC NEXUS OF WORKING CAPITAL AND PROFITABILITY Julian Hernandes (Universitas Atma Jaya Yogyakarta), Dwitya Aribawa (Universitas Atma Jaya Yogyakarta)
3	THE INFLUENCE OF AUGMENTED REALITY AND ONLINE REVIEWS ON CONSUMER LOYALTY: A GENERALIZED STRUCTURED COMPONENT ANALYSIS OF THE ROLE OF CUSTOMER EXPERIENCE AND SATISFACTION Ponirin (Tadulako University), Maskuri Sutomo (Tadulako University), Umar Syarifuddin (Tadulako University), Dzurotul Khoir Nasyihah (Tadulako University)
4	DISRUPTIVE BANKING TECHNOLOGIES AND INSTITUTIONAL PERFORMANCE: A PANEL ANALYSIS OF INDONESIAN BANKS Rosintia (Universitas Atma Jaya Yogyakarta), Dwitya Aribawa (Universitas Atma Jaya Yogyakarta)
5	THE ROLE OF SATISFACTION IN MEDIATING THE EFFECTS OF LIFESTYLE AND REFERENCE GROUPS ON REPURCHASE DECISIONS Ida Ayu Dwi Puspitasari (Tadulako University), Zakiyah Zahara (Tadulako University), Maskuri Sutomo (Tadulako University), Rian Risendy (Tadulako University), Rahmat Mubaraq (Tadulako University)
6	FINANCIAL LITERACY AND THE GENDERED DYNAMICS OF FINANCIAL BEHAVIOUR: EVIDENCE FROM HOUSEWIVES IN AN EMERGING COUNTRY Yohana Aditha Martien (Universitas Atma Jaya Yogyakarta), Dwitya Aribawa (Universitas Atma Jaya Yogyakarta)
7	THE EFFECTS OF SUSTAINABLE LEADERSHIP AND MENTAL HEALTH ON EMPLOYEE PERFORMANCE: THE ROLE OF "MALIUNTINUVU" CULTURE AS A MODERATOR Mohammad Ega Nugraha (Tadulako University)
8	INTEGRASI OMNICHANNEL DAN PENGARUHNYA TERHADAP RETENSI NASABAH MELALUI PENGALAMAN, NILAI, DAN KEPUASAN DI PERBANKAN Dewi Anggraeni (Esa Unggul University)
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NAVIGATING INDONESIA'S CLIMATE TRANSITION: TOWARD RESILIENT AND RESPONSIBLE INVESTMENT

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Abstract

Indonesia's climate transition presents a complex challenge. While the country has committed to reducing emissions under its Nationally Determined Contribution (NDC), its economy remains closely linked to carbon-intensive sectors such as coal, nickel, and palm oil, which continue to drive GDP and investment flows. At the same time, climate change impacts, like floods, extreme heat, and land degradation are increasingly disrupting communities, infrastructure, and supply chains.

A proposed key initiative is the Just Energy Transition Partnership (JETP), which seeks to mobilize international funding to support the early retirement of coal-fired power plants and accelerate the shift to clean energy. This process involves significant trade-offs, including lost operating profits, the cost of replacement clean energy, and long-term climate gains. Blended finance, leveraging both public and private capital, can play a catalytic role in funding renewable energy, just transition programs, and climate resilience efforts. Stronger institutions, clearer policy frameworks, and consistent sustainability standards will be essential to ensure impact.

VENTURE CAPITAL AND THE INTERNATIONALIZATION OF INNOVATION IN ENTREPRENEURIAL FIRMS

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Abstract

Innovation plays a key role in China's economic goals and the venture capital (VC) sector has become an important force in China's industrial transformation. Foreign VCs have played a pivotal role in the development and growth of China's VC market. We examine the impact of foreign VCs on their portfolio firms' innovation strategy and success in China. We find that foreign VCs do not increase the domestic innovation of their portfolio firms but promote innovation in international markets. Domestic innovation has a negative impact whereas foreign innovation has a positive impact on foreign exits. The results suggest that international innovation is more highly valued by foreign VCs, acquirers and IPO investors and reflect the benefits of international experience and connections of foreign VCs to their Chinese portfolio firms

ANALYSIS OF THE IMPACT OF DIGITAL TRANSFORMATION ON LOGISTICS PERFORMANCE INDEX USING MACHINE LEARNING METHODS

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Abstract

This study aims to examine the relationship between digital transformation indicators and the Logistics Performance Index (LPI) using machine learning techniques. By utilizing the Network Readiness Index (NRI) data, countries' digitalization levels were measured and correlated with LPI scores. The analysis employed the XGBoost algorithm to model the impact of digitalization on logistics performance, while LIME (Local Interpretable Model-agnostic Explanations) was used for interpretability, revealing which digital transformation factors influence LPI and in what direction. The findings demonstrate that digital infrastructure investments and technology adoption significantly enhance logistics performance. According to the model results, key drivers such as e-commerce infrastructure, internet penetration, and cloud computing usage positively affect LPI scores. These insights provide strategic recommendations for policymakers to prioritize specific digital transformation initiatives in the logistics sector. The study offers valuable guidance for developing countries seeking to improve logistics efficiency through targeted digital advancements.

COMMERCIALIZATION OF EDUCATION ON SOCIAL MEDIA: THE CASE OF TURKISH EDUCATIONAL CHANNELS ON YOUTUBE

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Abstract

This study investigates the commercialization of education on social media by focusing on educational YouTube channels operating in Turkey. Specifically, it explores how these channels, which are primarily dedicated to subject matter teaching across various grade levels, structure their content and engagement strategies in ways that reflect commercial motives alongside pedagogical aims. Using document analysis as the methodological framework, the study analyzed 17 Turkish-language educational YouTube channels, selected based on their high viewer engagement and clear focus on school-related content. An inductive thematic coding approach guided the analysis. Data were examined across six dimensions: quantitative metrics, targeted educational levels and subjects, content focus and organization, accessibility and interaction features, media and material usage, and the types of links directed to viewers. The findings reveal that these channels exhibit strong exam-centric tendencies, rely on community-building strategies to maintain audience loyalty, and employ multiple forms of monetization—such as directing viewers to paid educational materials, private websites, and branded content. Educational content is not only organized to align with national examinations but also tailored to enhance audience retention and revenue generation, suggesting a blend of pedagogical and commercial priorities. These results are discussed in relation to ongoing debates on the commodification of education. While YouTube democratizes access to knowledge, the findings suggest that it simultaneously facilitates a market-driven logic that prioritizes performance-based content and revenue strategies. The study calls for further critical reflection on how social media platforms shape educational practices and redefine the boundaries between learning and commerce.

Keywords: Social Media, YouTube, Commercialization, Education,

APPLICATION OF ARTIFICIAL INTELLIGENCE-BASED TECHNOLOGIES IN THE CORPORATE INDUSTRY: OPPORTUNITIES AND CHALLENGES

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Abstract

This quantitative research study tried to determine the application of artificial intelligence-based technologies (AI) in the corporate industry, particularly focusing the opportunities and challenges encountered by administrative professionals across Metro Manila. The study employed a researcher-made survey questionnaire and randomly selected 385 administrative professionals currently employed within Metro Manila. It highlights the importance of administrative professional's acceptance and workplace's support in ensuring the crucial competencies necessary for maximizing the opportunities and minimizing the challenges found in the application of AI-based technologies in the workplace. Findings showed that AI-based technologies present significant opportunities which heighten knowledge, skills, productivity, and efficiency. However, it also presents significant challenges like adaptability and flexibility issues in the change of work practices leading to job replacement. The study suggests workplace to provide knowledgeable database, clear data policy, create support system, and implement regular employee's skills assessment to effectively utilize AI-based technology and to contribute to the career growth and development of administrative professionals. The information and result generated in this study may lead educational institutions in discovering AI-based technology related programs, courses, or seminars for a much better benefits of students in an AI-driven workplace. Future studies may assess long-term impacts of AI-based technologies for employment and skills requirement in the corporate industry as well as in other types of industry.

Keywords: administrative professionals; AI-based technology; adaptability; flexibility; productivity

DESIGN-BASED RESEARCH AS A CONTEXT-RESPONSIVE INQUIRY METHOD: RETHINKING INNOVATION IN QUALITATIVE RESEARCH

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Abstract

In contemporary organizational contexts, research is increasingly expected to engage with complex, evolving, and context-sensitive problems. Traditional methodologies often fall short in addressing such challenges, particularly when the goal is not only to understand but also to improve practice. In response, Design-Based Research (DBR) offers a methodological alternative that integrates empirical inquiry with intervention-oriented design.

Rather than serving solely as a practical problem-solving framework, DBR is a theory-generating research approach grounded in pragmatism. It combines iterative processes of analysis, design, implementation, and revision, and emphasizes collaboration between researchers and practitioners. Through these cycles, DBR facilitates the development of context-specific design principles while also contributing to broader theoretical understanding.

This paper presents a theoretical discussion of DBR as an innovative methodology within qualitative research traditions. It outlines DBR's historical background and methodological features, drawing on models. Key characteristics such as collaboration, process orientation, and analytical generalization are emphasized to highlight DBR's distinctiveness among qualitative approaches.

While DBR is widely recognized in educational research, this paper does not limit its scope to a specific institutional domain. Instead, it frames DBR as a versatile strategy applicable across fields where dynamic, real-world problems require actionable knowledge. To support this argument, the paper briefly illustrates a DBR-based project on Balanced Scorecard development as an example of methodological application.

In conclusion, DBR is presented as a robust, context-responsive, and generative methodology that strengthens the link between theory and practice, offering a valuable contribution to innovation-oriented qualitative research.

Keywords: Design-Based Research, qualitative method, innovation

FREQUENCY OF MOBILE PAYMENTS USAGE: THE ROLE OF DEMOGRAPHICS HERD BEHAVIOR AND RISK AVERSION

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Abstract

The increasing usage of mobile banking is gradually transforming the way consumers access financial services. Nevertheless, its usage is still restricted by some consumer due to the sensitivity of information shared and risk involved with using a new technology. This study examines how behavioral factors such Herd Behavior and Risk Aversion affect usage of mobile banking. A survey was conducted to collect data from 100 respondents in Oman. Apart from demographic data the survey included questions to check for Herd Behavior and Risk Aversion. It was found that a most of the respondents have used the mobile payments at some point of time. For mobile payment usage the responses were collected in the categories "Never, Seldom, Some of the time and Most of the time." It was also found that demographic factors such as age, education, occupation and income influence the usage of mobile payments.

The never used was the reference category and it was compared with the Seldom used, Some of the time and Most of the time categories. Firstly, persons with higher age, higher education and doing business are more likely to be in the seldom used category as compared to the never used category. Secondly, Persons with higher age, higher Education and Occupation, Income and exhibiting herd behavior are more likely to use mobile payments some of the time as compared to the reference category (never used). While, risk aversion persons are more likely to be in the never used category. Finally, the Higher age, Education and Occupation, Income and Risk Aversion are significant in the Most of the time MP usage category. The results of herding were observed in the Seldom category, some of the time while risk aversion was observed in the Some of the time and Most of the time category.

This study is a pioneering study for Oman as it uses behavioral factors to predict the usage of mobile payments. Thus it will help decision makers like governments and financial service providers to identify and appreciate the demographics as well as behavioral factors that that predict the usage of mobile payments in Oman.
Keywords: Mobile Payments Usage, Demographics, Herd Behavior, Risk Aversion

1. Introduction

Mobile payment henceforward (MP) consists of financial services in particular money transfer that are performed through a mobile phone. MP expedites business transactions, by enabling a person to pay for their goods and services using a mobile. Off late the use of MP is growing exponentially and this growth is projected to continue in future. MP is usually more convenient as compared to other online payment methods. As per Gross, Hogarth, and Schmeiser (2012) due to the omnipresence of mobile phones, and their growing capability, they are being used as a tool for online financial services and shopping, leading to a positive effect on consumers' financial well-being. Though their use is still limited in Arab nations, financial transactions in emerging nations are gradually moving from cash-based systems to electronic forms. (Al-Sabaawi et al.). Table no. 1 shows the status of Digital Payments in Oman and worldwide. Wherein "Mobile point of sale is a technology that enables merchants to process payments via their mobile device (smartphone or tablet) instead of a cash register or POS terminal" constitutes a major part of digital payments.

Fintech is developing at a very fast pace, but its regulation has lagged behind, which raises the risks for users of these goods and services. Furthermore, there are other hazards associated with utilizing the internet for financial access, including fraud, phishing, privacy loss, and susceptibility to biased selection procedures. Thus there is a need to study the factors affecting the MP usage. To add to the existing literature, this study aims to analyze usage or frequency of MPs from a perspective of demographics as well as behavioral factors such as Herd Behavior and Risk Aversion.

The paper is organized as follows. Section 2 discuss the literature on demographics and behavioral factors. Section 3 Research Methodology, Section 4 Results and Discussion and finally Section 5 covers the Conclusion.

Table No.1 Status of Digital Payments

Oman

- Mobile point-of-sale payments (MPOS) is expected to generate $5.93 billion in transaction value by 2025.
- The growth in transaction value is expected to expand at a rate of 22% CAGR (2025–2029), to US$13.29 billion by 2029.
- By 2029, there will be 1.43 million users in the MPOS payments sector.

World-wide

- It is expected that the market for digital payments would reach a total transaction value of US$20.37 trillion by 2025.
- Transaction value is anticipated to expand at a 15.90% CAGR (2025–2029), to US$36.75 trillion by 2029.
- At an expected value of US$12.56 trillion in 2025 the MPOSs will be the largest segment in digital payments.

https://www.statista.com/outlook/fmo/digital-payments/mobile-pos-payments/oman?currency=USD

2. Literature Review

2.1 Mobile Payments and Demographics

Digital means have substantially replaced cash in financial transactions (Panetta et al). Mobile payments, digital wallets, digital currencies, online transfers, QR code payments, and other electronic payment systems are all examples of digital payments (Susanto et al.). The MP comprises both online and offline purchases of goods and services, as well as transfers between individuals and the government., and the payment of utility bills and fees. Furthermore, the transaction cost of MP is minimal (Bezhovski, 2016).

For individuals, compared to utilizing a personal computer, MP offers more efficiency and convenience. Users can perform transactions from anywhere at any time because mobile devices are constantly on. Therefore, compared to internet payment, mobile payment is much quicker and more comfortable. (Krishna & Shanmugam, 2017; Yu et al., 2016). For business, MPs facilitates real time, efficient and economical method of getting money from clients. (Nguyen & Huynh (2018); Yaokumah et al. (2107)). Also MPs lead to an increases business (Wang & Huang, 2023). For governments, MPs can help in several ways such better transparency, reduced flow of black money and a general increase in economic activity. (Nguyen & Huynh (2018); Putrevu & Mertzanis (2024)). As per Niu et al. (2020) education

level has an impact on mobile payments. Mobile payment acceptance is more common among younger individuals, women and higher educated persons. (Cao et.al ,2018). Education, age, occupational, effect the mobile payment frequency (Duh & Akasreku, 2024). A study by Chen et.al (2020) found that age and gender were main factors associated with e-payment usage and males and elder respondents were more probable to use e-payment systems.

2.2 Herd Behavior and Risk Aversion

Herd behavior

Herd behavior (HB) is said to happen where an individual follows and mimic the behavior of a group rather than making decisions independently (Keynes,1930). Individuals' behaviors are molded by noticing what other persons around them are doing (Sun, 2013). Therefore, as per a Herd behavior theory a person will follow others while adopting and using a new technology such as MPs. " In close-knit groups, herd behavior is particularly prevalent, and people are persuaded to imitate behaviors they see in their communities and neighborhoods. (Ham et al., 2012). This study builds on herd theory and applies this to MPs, proposing that the usage of MP behaviors of respondent is swayed by the behaviors of their neighbors, groups, and relatives.

Risk Aversion

The concept of risk aversion (RA) was introduced by Kahneman and Tversky (1979). When there is uncertainty about the outcome, people feel threatened. They attempt to steer clear of such circumstances in response to the uncertainty. Researchers such as Mandrik and Bao (2005) have explained risk aversion as "the degree of negative attitude towards risk due to outcome uncertainty". Risk aversion affects a person's decisions (Bao *et al.*, 2003) and the level of risk aversion is not equal in all individuals. People who have low risk aversion are more likely to use new goods and services. While, those with strong risk aversion view new items as dangerous because they are unsure and inexperienced. Therefore, risk-averse people could be reluctant to test new services until they receive widespread recognition for their benefits and safety. (Bao *et al.*, 2003). This is further supported by Belanche et al., 2020, who found that consumers who are highly risk averse are more likely to see new technology-based services negatively and would be cautious to use them.

3. Research Methodology

The main study variables have been evaluated using standardized questionnaires. Convenient, purposeful sampling was used to collect data from 100 respondents in Oman. The survey contained questions related to demographics, (i.e. Gender, Age, Education, Occupation and Income), HB, RA and MP usage. The respondents were asked regarding the frequency of usage (1= Never; 2 =Seldom; 3= Some of the time; 4= Most of the time). The survey questions for HB and RA are shown in the table 2 below. Multinomial logistic regression, or MNL for short, is used for data analysis. MNL uses a set of factors that can be continuous, discrete, dichotomous, or a combination of these to predict an outcome, like group membership (Tabachnick & Fidell, 2012). Normality, linearity, and homoscedasticity are not assumed by MNL. (Starkweather & Moske, 2011).

3.1 Variables

3.1.1 Dependent Variables

The dependent variable is the frequency of MP Usage. There are four levels: 1= Never; 2 =Seldom; 3= Some of the time; 4= Most of the time). The reference category for this study is Never (code 1).

3.4.2 Independent Variables

After considering the available literature, the determinants of MP Usage, the independent variables discussed below are specified to investigate the MP Usage. The independent variables are "Gender, Age, Education, Occupation, Income, Herd behavior and Risk Aversion".

Table 2: Survey Questions

Herd Behavior	For HB we use information from the question "How much do you agree or disagree that each of the following statements applies to you personally? When there are several similar products, I tend to buy what is recommended as the best-selling product, rather than what I actually think is a good product".	4=Strongly agree 3=Agree 2=Disagree 1=Strongly disagree	Strongly agree and Agree are considered as herd behavior. (Yoshino & Long, 2020).
Risk Aversion	For RA we use information from the question "Suppose you face a situation where there are two options" 1: A sure gain of 1,000 OMR 2: 50% probability of 2,000 OMR Gain and 50% probability of 0 gain. Which of the above will you choose	1= Risk Averse	Kahneman, D., & Tversky, A. (1979)..

4. Results and Discussion

The majority of those surveyed had utilized mobile payments. The sample consisted of 74 males and 26 females. Most of the participants were qualified up-to high school and were salaried with incomes below 1000 OMR (shown in Table. 3). 27% of the respondents can be considered to have herd behavior and 68 % as risk averse.

Table 3. Descriptive Analysis

Variable	Levels	Codes	Numbers	Percentage
Frequency of Usage	Never	1	28	28
	Seldom	2	26	26
	Some of the time	3	32	32
	Most of the time	4	14	14
Gender	Male	1	74	74
	Female	2	26	26
Education	Up to High school	1	45	45
	Intermediate to Graduate	2	41	41
	Graduate and Above	3	14	14
Occupation	Salaried	1	63	63
	Business	2	37	37
Income	Below 1000 OMR	1	68	68
	1000 to 3000 OMR	2	26	26
	Above 3000 OMR	3	6	6
Herd Mentality	Yes	1	27	27
	No	2	73	73
	Yes	1	68	68

Risk	No	2	32	32

The Model Fitting Information (Table 4) shows that the dependent variable is statistically substantially better predicted by the entire model than by the intercept-only model alone, as indicated by the value of p = 0.000.

Table 4. Model Fitting Information

	-2 Log Likelihood	**Chi-Square**	**Sig.**
Intercept Only	488.976		
Final (Mobile Usage)	431.83	60.945	0.000

The table no.5 displays the model's coefficients or parameter estimations. Three sets of logistic regression coefficients are obtained since the dependent variable has four levels. coefficients of the first sets of are found in the seldom row (representing the reference category never and the category seldom).

Table 5. Coefficients for the Model of Mobile Payment Usage

	Remittance	**B**	**Std. Error**	**Sig.**	**Exp(B)**
Seldom	Gender = Male	1.135	0.555	0.058	0.265
	Age	-0.454**	0.803	0.025	1.575
	Education= Intermediate to graduate	0.659**	0.654	0.033	0.517
	Education = Post graduate	0.703**	0.336	0.021	1.003
	Occupation = Business	0.807**	0.909	0.009	0.164
	Income	1.889	0.807	0.107	0.151
	Herd Mentality	0.417	0.148	0.057	1.616
	Risk Aversion	0.212	0.390	0.870	0.812
Some of the time	Gender = Male	0.829	0.355	0.087	0.265
	Age	-0.654**	0.403	0.045	1.575
	Education= Intermediate to graduate	0.359**	0.865	0.024	0.517
	Education = Post graduate	0.003**	0.736	0.049	1.003
	Occupation = Business	0.707*	0.609	0.000	0.164
	Income	0.889*	0.407	0.000	0.151
	Herd Mentality	0.380**	0.348	0.048	1.616
	Risk Aversion	0.661**	0.651	0.035	0.851
Most of the time	Gender = Male	1.409	0.637	0.127	0.244
	Age	-0.624**	0.225	0.005	1.867
	Education= Intermediate to graduate	0.161**	0.651	0.044	0.851
	Education = Post graduate	0.400	0.716	0.006	1.491
	Occupation = Business	2.708*	0.202	0.000	0.005
	Income	2.143*	0.537	0.000	0.117
	Herd Mentality	0.885	0.475	0.130	2.423
	Risk Aversion	0.303**	0.736	0.049	1.003

Note: R2=.533 (Cox and Snell), 0.496. (Nagelkerke); p =0.001 *; p =0.05, **

The first sets of coefficients are found in the seldom row (representing the comparison of the category seldom to the reference category never). Here, Age, Education and Occupation are significant. Persons with higher age, are less likely to be in the seldom category. Also, persons with higher education and doing business are more likely to be in the seldom used category as compared to the never used category.

The second sets of coefficients are found in the Some of the time row (representing the comparison of the category some of the time to the reference category never). Here, Age, Education and Occupation, Income, Herd Mentality and Risk Aversion are significant. Persons with higher age, Education and Occupation, Income and exhibiting herd behavior are more likely to use mobile payments some of the time as compared to the reference category (never used). While, risk aversion persons are more likely to be in the never used category.

The third sets of coefficients are found in the Most of the time row (representing the comparison of the category most of the time to the reference category never). Here, again respondents Age, Education and Occupation, Income and Risk Aversion are significant. Respondents with higher age, Education and Occupation and Income are more likely to use mobile payments most of the time as compared to the reference category (never used). While, risk averse persons are more likely to be in the never used category.

5. Conclusion

The convenience that mobile payment systems provide to customers is what makes them so popular. However, mobile payment transactions come with a danger of data theft and money loss in an era of increasing cybercrime. Therefore, it becomes crucial to comprehend how customers' mobile payment usage frequency are impacted by demographics and personal behavioral factors. This study used the demographic variables such as Gender, Age, education, Occupation and Income along with behavioral factors such as Herd mentality and Risk aversion of the respondents to predict the frequency of mobile payment usage. The study found that demographic factors such as age, education, occupation effect the mobile payment usage across all the 4 frequency of usage. While the effect of income was observed only in some of the time and most of the time frequency of usage. Herd mentality was limited to Some of the time users while risk aversion was important in the never used and seldom used frequencies.

The findings of the analysis show that mobile banking customers with various demographics and behavioral patterns exhibit different frequency of MP usage. Furthermore, this study is the novel study that used demographics as well as behavioral factors to predict the frequency mobile payment usage. Mobile payments are beneficial for customers, businesses and government. Policymakers should focus especially on encouraging older people to use mobile payments. To improve adoption, this can be achieved by creating training curricula and offering financial incentives. Thus the outcomes of this study are practical and useful in providing an insight to financial services providers and policy makers as to how to increase the frequency of usage of mobile payment.

Limitations and future research

There are various constraints of this study. First, this study is being carried out in Oman, where mobile payments are still in their initial stages despite their rapid development. Future research must look at nations where mobile business development is at a different stage in order to improve the generalizability of the findings. Secondly, compared to the total number of active mobile users, the sample size is quite tiny. Therefore, more samples must be gathered for future research. The herd behavior and risk aversion is studied therefore future research can focus on more behavioral finance variables.

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IMPACT OF DIGITAL LEADERSHIP AND OPEN INNOVATION ON ORGANIZATIONAL PERFORMANCE

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Abstract

This study examines the effect of digital leadership on open innovation in organizations. Specially propose that digital leadership can promote open innovation, but this relationship is mediated by employee digital mindsets and moderated by digital self-efficacy. Social Learning Theory (SLT) is used to investigate the relationship between digital leadership and open innovation and mediating role of Employee digital mindsets as well as moderating effects of Digital Self-Efficacy on Open Innovation. Target population of the study was software companies based in Rawalpindi, Islamabad. Time lagged study and Convenient Sampling was used to collect data, sample size of this research was 350, SPSS 21 and AMOS was used for data analysis. In order to estimate the direct, Mediation, and moderation effects that support the suggested theoretical model simultaneously, the statistical analysis depend on the process macro. Moreover, Results reveals that there is significant relationship between Digital Leadership and Open Innovation, Positive Role of Digital Mindset on Open Innovation however we found moderating role of digital self-efficacy as the results are not significant. Our research contributes that digital leadership will support open innovation, and have implication for Practioners and researchers leveraging digital technology to promote innovation in organizations. Future direction and Practical Implications are also discussed.

Keywords: Digital Leadership, Employee Digital Mindset, Digital Self-Efficacy, Open Innovation

1. Introduction

1.1 Overview of the Research

In the Business world, Digital leadership is a novel idea where management tasks are completed using digital platforms (Mihardjo, et al 2019) The digital era includes a method that uses technical advancements to solve organizational sustainability and effectiveness concerns. It is imperative that leaders fully understand the digital world and pay closer attention to the digitalization phase of the twenty-first century when employees realize how important the digital world is (Dorner and Edelman, 2015). This is why companies choose competent leaders over managers in today globalized environment. A problem that might be overlooked amidst other developments is meeting business needs, such those related to labor in addition to researching new technologies.it has been required of leaders to inspire this varied workforce of people. Organizations may manage risks of ongoing uncertainty with the aid of digital leadership. (Fenwick et al., 2021) The modernization of organizations now heavily relies on digital leadership. (Peng, 2021) Digital disruption presents new difficulties for leaders (Kane et al., 2019) Todays digital trends depends heavily on leadership to drive swift decisions-making and encourage change, understanding digital leadership is beneficial (Jäckli & Meier, 2020). Digital revolution is centered on highly qualified human resources (Hanna, 2018).As Cortellazzo et al. (2019)

Leaders are essential to creating a digital culture that facilitates collaborative activities in complicated scenarios with ethical problems, as noted in the review concerning leadership and the digitalized world. Digital enterprises now make up the bulk of companies that compete globally. (Albollado & Sehab, 2018). The advancement of contemporary digital technologies and the appearance of fibers in the digital sphere have led to a transformation of traditional procedures and business structures. (Barchiesi & Fronzetti Colladon, 2019, Berne-Martinez et al 2021. Cabras et al 2017: Palmie et al .2020.,Holzmann et al.,2020, Weaseling et al.2020) Being a digital business and having a leader with digital expertise can enable quick reactions to the shifting multicultural networks in the globe and restructure the company while being adaptable at all times. De Waalet et al. (2016), define digital leadership as a leadership approach that blends transformational leadership with the use of digital technology; The use of digital assets to accomplish organizational goals at organizational and individual level is the functions of digital leadership in organizations (Dimitrios et al., 2013 Thomson et al., 2016) Recent developments in digital technology have drastically change the competitive landscape, employment roles, and organizational structure in many firms. Digital leaders require a certain skill set to solve these problems and help business adapt (Frank et al., 2019 Somerville. 2013 According to psychologists, mindset refers to a way of thinking and orientation in the world that determines our perceptions, emotions, and behaviors. Digital Mindset refers to the capacity to see how data, algorithm, and artificial intelligence may pave the way for success and create new chances in corporate environment where data intensive and intelligent technology is becoming more and more prevalent. Though it requires effort, adopting a digital attitude is worthwhile and business who possess it react to market changes more swiftly and are well positioned to seize new business possibilities. Digital transformation is frequently met with resistance, just like any change project, and early mistakes are unavoidable. Tsedal Neeley and others (2022) a new understanding is necessary in light of the evolving workplace. A mindset is an experience –based collection of knowledge structures that are shared by a group of individuals who act in accordance with their shared style of thinking when taking in and processing information. (Vivienne Benke, 2013).

In order to fulfil rising expectations and exploit new opportunities, people will need to become increasingly digitally proficient and adaptive (Larson & DeChurch,2020).It has been demonstrated that self-efficacy connected to using digital systems in particular predicts effective utilization of those systems (Ulfert et al.,2022) Competence and beliefs should be distinguished even though they are connected since they each have their own effects on learning,motivation,and performance (Hughes et al., 2011 Marsh et al.,2017 Pajares & Schunks,2002)

Digital self-efficacy peoples willingness to use digital technologies and is not just tied to learning new skills (Hsu & Chiu,2004;Joo et al.,2018;Kher et al,2013) a wide notion, open innovation is researched at various levels, including those individuals, groups/projects, business units, and organizations (CC.J Cheng & Huizingh,2014;Chesbrough et al.,2006;West et al.,2014) one of the most crucial strategies for business to compete in a volatile market is open innovation (OI) (Bogers et al.,2018) the management if innovation processes in corporations ,control over knowledge ,and innovation –oriented processes that draw on outside ideas to enable good and effective invention are all included in the concept of open innovation (Barham et al.,2020) (Ciesielska,2018).

One of the most crucial strategies for business to compete in a volatile market is open innovation (OI) (Bogers et al.,2018) The term " Open innovation" refers to the control of knowledge ,the management of innovation processes in businesses (Barham et al.,2020) and

practices that encourage effective and beneficial innovation by utilizing outside ideas (Ciesilska.,2018) Therefore ,open innovation advises businesses to seek out collaboration and partnership with various organizations, professionals and experts in order to innovate strategically outside their own limitations (Cavallo et al.,2021) Open innovations have drawn a lot of scholarly attention recently (Gupta et al.,2023) and are an extremely important component of organizations digital transformation (Wiesbock and Hess,2020).To maintain ongoing innovation in processes, goods and services and to gain a competitive edge, the enterprises must rely on outside information and research collaborations (Dahlander and Gann,2010 : Popa et al.2017;Gupta et al.2023) (Singh et al.2021) In recent years, the influence of digital transformation on markets and organizations have been increasingly apparent and recognized (Cortellazoo et al.2019) According to research, organizations survive in today's cutthroat environment because of innovation (Ahmed et al.,2020) Therefore, in the context of digital technology, business organizations innovate their process, business model and services. (Nambisan et al., 2017).Bandura (1977) Believes that people actively digest information and consider the implications of their actions Learning from observation is possible if there is no cognitive activity at work. There psychological elements operate as a mediator throughout the learning process, deciding whether or not a new response is learned. The study examines how leaders in the digital age foster their team's ability to think creatively in order to adapt to emerging trends and technologies that foster open innovation. This research shed light on the factors that contribute to successful open innovation in organizations, and can inform the development of strategies and practices that can help organizations to foster a culture of innovation and drive business success in the digital age .Therefore, open innovation advises businesses to seek out collaboration and partnership with various organizations professionals, and experts in order to innovate strategically outside their own limitations (Cavallo et al., 2021)

2. Literature Review And Hypothesis Development

2.1 Digital Leadership

Digital leadership plays a crucial role in overseeing change management and facilitating the transition to Industry 4.0. According to Li et al. (2016), leaders must guide organizations through these transformations by leveraging digital technologies and fostering a digital culture. De Waal et al. (2016) describe digital leadership as a blend of transformational leadership and technological acumen. This requires leaders to possess both digital capabilities and an openness to learning, thus enabling them to navigate the volatility, uncertainty, complexity, and ambiguity (VUCA) that characterize today's dynamic environment (Sandell, 2013). Furthermore, digital leadership involves encouraging innovation and creativity through collaboration (Kreutzer et al., 2017; Wasono & Furinto, 2018).

Digital leaders are distinguished by their ability to motivate and influence others, guiding their organizations towards strategic success through digitization (Schiuma et al., 2021). Bennis (2013) adds that resilience and adaptability are essential traits for digital leaders. McCarthy et al. (2021) identify eight specific characteristics of leaders in digital transformation: Digital Strategist, Digital Body Builder, Digital Architect, Customer Centric, Organizational Agility, Data Advocate, Business Process Optimizer, and Digital Workplace Designer.

2.2. Digital Mindset

A digital mindset is defined as the thought patterns, attitudes, or orientations regarding the adoption of digital technologies, which are crucial for effective leadership in the digital age (Allen, 2020). Leaders with a digital mindset are observant of market trends, customer needs, and technological advancements. They foster an environment that encourages continuous learning and technological proficiency among team members.

Research indicates that a digital mindset is vital for the human side of digital transformation, promoting innovative thinking and experimentation with emerging technologies like cloud computing, blockchain, and artificial intelligence (Kane et al., 2017; van der Meulen et al., 2020). This mindset involves comfort with ambiguity and a preference for iterative processes over traditional high-fidelity planning (El Sawy et al., 2016; Hofert et al., 2018).

2.3. Digital Self-Efficacy

Digital self-efficacy refers to an individual's confidence in their ability to effectively use digital technologies (Bandura, 1982; 2003). This confidence is influenced by education, training, experience, and overall digital literacy. High digital self-efficacy leads to proactive learning, better performance, and resilience in the face of challenges (Bellini et al., 2000; Rohatgi et al., 2016). It is crucial for continuous adoption of emerging technologies and overcoming the psychological barriers associated with digital innovation (Martin, 2008; Ng, 2012).

2.4. Open Innovation

Open innovation (OI) involves leveraging knowledge flows across organizational boundaries to enhance value creation and capture competitive advantage (Chesbrough & Bogers, 2014). OI research spans various levels, from individual to national systems, yet often focuses on firm-centered approaches (Markovic & Bagherzadeh, 2018; Radziwon & Bogers, 2019). It emphasizes the importance of external stakeholder engagement in extending innovation practices beyond isolated firms (Randhawa et al., 2021).

The competitive aspects of OI require balancing the interests of multiple stakeholders, fostering ecosystem development (Jacobides et al., 2018; McGahan et al., 2020). This approach underscores the need for a comprehensive understanding of inter-organizational value generation and capture processes (Bogers et al., 2017; Chesbrough et al., 2018).

Integrating digital leadership, mindset, self-efficacy, and open innovation forms a cohesive framework for navigating digital transformation. Digital leaders must embody a digital mindset, fostering an environment of continuous learning and technological proficiency. High digital self-efficacy is essential for leveraging digital tools effectively, while open innovation practices ensure sustainable competitive advantage through collaborative value creation. Together, these elements drive successful digital transformation in today's VUCA environment.

2.5 Digital Leadership and Open Innovation

In recent years, the observable and recognized effects of digital transformation on organizations and markets have been widely acknowledged (Cortellazo et al.2019) Scholars have emphasized that innovation is a crucial factor of organizations to thrive in today’s competitive landscape (Ahmad et al.2020) Consequently, firms and organizations incorporate digital technologies to introduce innovation in their processes, advancements, business models, as well as products and services (Nambisan et al.,2017) Research on the connection between disruptive innovation and digital leadership in the modern era demonstrates that innovation was impacted by digital leadership (Kreutzer et al., 2017; Wasono and Furinto, 2018).

Digital leadership and open innovation are two concepts that are increasingly being used to help organizations stay competitive in a rapidly changing digital world. Digital leadership is the ability of managers and executives to leverage technology to improve organizational performance. This includes the use of analytics, data-driven decision making, and cloud-based applications. Open innovation, on the other hand, is the practice of utilizing external resources, such as outside experts, customers, and suppliers, to develop new ideas and solutions to address organizational challenges. Both of these concepts are important for organizations to remain

competitive and to stay ahead of the competition. Digital leadership involves being able to recognize opportunities and challenges posed by technology, and then taking advantage of them to improve organizational performance. It also involves leveraging technology to gain a competitive edge, such as through data-driven decision making, analytics, and cloud-based applications Open innovation also contributes significantly to building competitive advantage. By utilizing the expertise of outside experts, customers, and suppliers, organizations can develop new ideas and solutions to solve the challenges they are facing. This might assist business in staying one step ahead of rivals and competitive in a digital environment that is changing quickly, digital leadership and open innovation are both critical.

1. **H1** Digital leadership is positively and significantly associated with Open Innovation.

2.6 Digital leadership and Digital Mindset:

Environments in which people live, work and play are profoundly altered by digital revolution. To effectively execute digital transformation and realize digital innovation, people and their actions are identified as key factors. (Ben Shneiderman et al 2007.) within this framework, the need of employees have a "digital mindset" is often emphasized. (Satish Nambisan, et al. 2017) The term "digital mindset" has been applied inconclusively in the literature on information systems, originating from various viewpoints or viewed as a component of digital skills, and suffering from a general lack of clarity in its meaning. It is sometimes used interchangeably with digital thinking (Gerald C. Kane et al. 2017) Digital leadership is the ability to use digital technologies and processes to drive innovation, collaboration, and productivity in the workplace. It involves leveraging digital tools and resources to enable better decision making, collaboration, and communication. Digital leadership involves a deep understanding of the digital landscape and its potential to create value for an organization. A digital mindset is the commitment to using digital technologies to solve problems, drive innovation, and create a competitive advantage. It is the ability to think strategically about how digital tools and trends can be used to create new opportunities. Digital mindset is a crucial skill for both individuals and organizations, as it enables them to take advantage of the opportunities presented by digital transformation. It involves the ability to think critically and use digital tools to identify and capitalize on opportunities. It also requires an understanding of the digital landscape and the potential of digital technologies to create value.

2 **H2**. Digital Leadership is positively and significantly associated with Digital Mindsets.

2.7 Digital Leadership and Digital Self Efficacy:

Digital leadership is exerting influence through the use of technology, motivate, and enable colleagues to work collaboratively to achieve common goals. It involves the use of digital tools and strategies to motivate, engage, and empower employees in their day-to-day roles. Through digital leadership, organizations can create a culture of innovative thinking, collaboration, and problem-solving. The digital self-efficacy constructs psychological underpinnings encompass perspectives on digital technology. (Santoro et al., 2020) Majority of the individuals believe that one of the most essential skills one might possess in 21st Century data economy is digital competence. (Bouncken and Kraus, 2021).Technical obstacles accompanying the deployment of new technologies necessitate that people be prepared to interact with them and find solutions when they occur. (Ritala et al., 2021).Therefore, using digital technology to gather and organize information in order to solve problems and jointly create a body of knowledge is a component of digital competence.(Ferrari et al., 2012; Trilling and Fidel, 2009; Vireo, 2015). To fulfill one's responsibilities, it is no longer sufficient to be extremely skilled at using a narrowly limited and static repertory of digital tools and technology, employees must have a mindset that has faith in their ability to learn new skills and knowledge necessary to operate

new and perhaps more sophisticated technologies as they arise in the future, given the constant introduction of new technologies. (Martin, 2008; Ng, 2012).The confidence that one can use digital tools and technologies to accomplish a goal is known as digital self-efficacy. It is the confidence to use digital technologies to find and apply information, solve problems, and communicate effectively. Digital self-efficacy is an important factor in digital literacy, as it enables individuals to use digital tools to advance their own learning and development. Digital self-efficacy also has implications for digital leadership, as it helps individuals to be more confident and effective in their roles as digital leaders.

3 **H3**. Digital Leadership is positively and significantly associated with Digital Self Efficacy.

2.8 Employee Digital Mindset and Open Innovation

In order to drive innovation, an organizations business model must be open to the outside world. This includes using outside resources (outside-in innovation processes) and bringing new ideas to the market (inside-out innovation processes). (Kraus et al., 2021) Digital change blurs boundaries and makes it possible to include suppliers and customers into the process of creating new ideas. (Gasman et al.2010), When customers may be a great source of ideas for new products (Oganisjana and Kozlovskis 2019) Digital mindset is the way companies think about and approach digital disruption. It involves having a clear understanding of the digital landscape and how it can be leveraged to create value for customers. The combination of these two concepts drives innovation and competitive advantage. Companies that have a digital mindset and pursue open innovation strategies are able to swiftly identify and capture opportunities in a rapidly changing digital world.

H4 Digital Mindset is positively and significantly associated with Open Innovation.

2.9 Digital Self Efficacy and Open Innovation

Digitalization will become more and more integrated into processes, infrastructures, services, and goods. (Proeger and Runst, 2020).This does not imply that future leaders will always require technical and informatics expertise on every facet and reasoning of technology advancements. However, they will undoubtedly need to know how to leverage digital technology to promote new Products and services, change their business model, gain market share, boost and diversify performance, and create and protect disruptive opportunities. (Suresh Malodia et al., 2023) Trust and transparency with a range of stakeholders are factors that influence open innovation. (Chesbrough, 2020; Leonidou et al., 2020; Zhu et al., 2019).companies have the opportunity to form productive partnerships with external stakeholders, who may have specialized in particular industries ,in order to assist them in identifying trends, breaking into new market, creating new goods, diversifying their business model, and creating new sources of income for their company. (Camille & Brescia, 2022; Centobelli, Coercion, Charon, et al., 2020; Su et al., 2022).

H5. Digital Self Efficacy have positive effect on Open Innovation.

2.10 Mediating Role of Digital Mindset between Digital Leadership and Open Innovation

Open Innovation Involves the collaboration and co-creation of ideas, solutions, and

Knowledge with external partners. The concept of a digital mindset encompasses the attitude, beliefs, and abilities needed to effectively leverage digital technologies and adapt to digital change. It involves embracing innovation, being open to learning new skills, and having a growth-oriented mindset. When leaders exhibit digital leadership behaviors and create a culture that supports digital transformation, it can foster a digital mindset among employees (Jiang and

Jia 2019). Digital leaders who promotes a digital mindset create an environment that supports collaboration, risk-taking, and knowledge sharing, which in turn facilitates open Innovation. (Riaz et al.2020)

H 6. Digital Mindset mediates the relationship between digital leadership and open Innovation.

2.11 Moderating Role of Digital Self-Efficacy.

Open innovation results and digital leadership were impacted by digital self-efficacy. High digital self-efficacy individuals are more likely to adopt and use digital technology productively in their profession. (.Li and Liu et.al 2015). This can have a positive impact on their ability to engage in open innovation activities and contribute innovative ideas, Open innovation and digital leadership can work better together when digital self-efficacy is high. Digital Self –efficacy positively influence employees perception of open innovation culture and this relationship strengthen when digital leaders create a supportive enviorment.Overall,the moderating role of digital self-efficacy suggest that when individuals have confidence in their digital skills and abilities ,it enhances the impact of digital leadership and open innovation.(Lee and Choi 2019)

H7. Digital Self-Efficacy will moderate the relationship between digital leadership and open innovation.

2.10 Research Hypothesis:

H1. Digital leadership is positively and significantly associated with Open Innovation.

H2. Digital Leadership is positively and significantly associated with Employee Digital Mindsets.

H3. Digital Leadership is positively and significantly associated with Digital Self Efficacy.

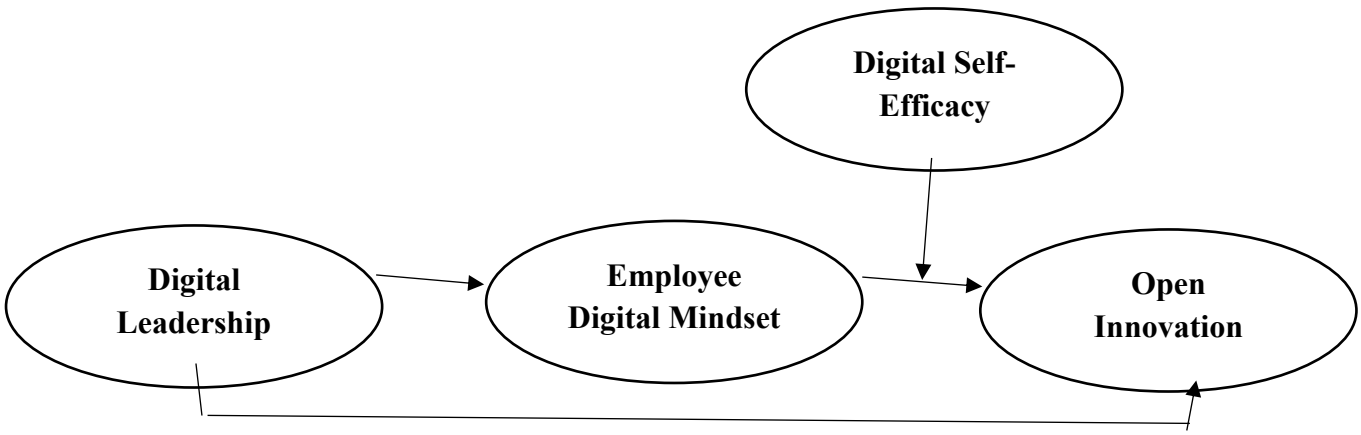
H4. Digital Mindset is positively and significantly associated with Open Innovation.

H5. Digital Self Efficacy have positive effect on Open Innovation.

H6. Digital Mindset mediates the relationship between digital leadership and open Innovation.

H7. Digital Self-Efficacy will moderate the relationship between digital leadership and open innovation

2.11 THEORITICAL FRAMEWORK



2.12 Theoretical Foundations Of The Proposed Model

Theoretical frameworks provide a foundation for understanding and analyzing phenomena within a specific context. In the case of the proposed model, Social Learning Theory serves as a theoretical basis for elucidating the mechanisms through which digital leadership influences employee digital mindsets and subsequently impacts open innovation outcomes. Let's delve into a detailed justification of this alignment, supported by relevant citations.

Observational Learning: Social Learning Theory posits that individuals learn through observation and modeling of others' behaviors (Bandura, 1977). In the context of digital leadership, employees observe how leaders engage with digital technologies, communicate digitally, and foster innovation. Bandura (1986) highlights the importance of observational learning in shaping individuals' beliefs and behaviors, stating that "much human learning is acquired through observation from models." Therefore, employees are likely to emulate the digital behaviors and attitudes demonstrated by digital leaders.

Modeling and Imitation: Bandura (1977) emphasized that individuals are more likely to adopt behaviors they observe in others, particularly if they perceive those behaviors as successful or beneficial. In the context of digital leadership, employees may model their behavior after digital leaders who demonstrate effective use of technology for innovation purposes. Bandura (1986) notes that "people are more likely to adopt a modeled behavior if it results in outcomes they value," suggesting that successful digital leadership behaviors are likely to be emulated by employees.

Reinforcement: Social Learning Theory highlights the role of reinforcement in shaping behavior. Bandura (1977) posits that reinforcement can occur through direct experiences or vicarious experiences observed in others. In the context of the proposed model, positive outcomes resulting from the adoption of digital technologies and innovative practices serve as reinforcement for employees' digital mindsets. Bandura (1986) notes that "individuals are more likely to adopt and retain modeled behaviors if they are reinforced." Therefore, when employees experience success and recognition for their digital initiatives, their confidence in their digital capabilities (digital self-efficacy) is strengthened, further promoting open innovation.

By aligning with Social Learning Theory, the proposed model provides a comprehensive framework for understanding the complex interplay between digital leadership, employee digital mindsets, digital self-efficacy, and open innovation outcomes within organizations. Bandura's seminal work on Social Learning Theory provides a robust theoretical foundation for examining these dynamics and their implications for organizational behavior and performance.

Social learning theory (SLT) will be utilized to comprehend how digital self-efficacy and attitude effect the link between open innovation and digital leadersip.SLT emphasizes the reciprocal connection between cognitive, behavioral, and environmental factors of human behavior. The idea behind social learning theory is that individuals can pick up knowledge from one another by observation, imitation, and modeling, these tendencies can be very useful in business as they encourage employees to share ideas, experience, and best practices, which increase their productivity and skill set. (Bandura, 1997)

Dweck, 2007 defined a mindset as a collection of beliefs, practices, or annotations that one or more individuals or group of individuals possess. Therefore, a mentality is a set of beliefs or a way of thinking the expression originates from cognitive psychology, a field that stresses how people analyses information from their own point of view.

The amount of information that humans can take in and process is constrained thinking aids in sifting through what is taken in and how it is interpreted. Thoughts are not constant; they evolve over time in response to fresh observation and encounters (Dweck, 2007). According to bellin and Pham (2007), mentality is crucial for business since it can help them chart their own course and come up with their own special method of problem-solving and decision-making through time. Additionally, this distinctive approach develops and unified brand that can be formalized and communicate to future hires. Growing research evidence supports the influence of perceived collective efficacy on group performance (Gully et al 2002, Stajkovik et al 2011) Some of these research used experimental manipulations to instill various levels of perceived collective efficacy in order to evaluate the motivational and behavioral implications of perceived collective efficacy Bandura (1997)

Others have discovered that a person's level of self-efficacy has a significant impact on how they approach objectives, projects, and obstacles. People who have a strong sense of self-efficacy: (a) view difficult problems as tasks to be mastered; (b) develop a deeper interest in the activities they engage in; (c) develop a stronger sense of commitment to one's interests and activities; and (d) quickly bounce back from setbacks and disappointments. In contrast, those who lack self-efficacy (a) shun tough jobs (b) think they are incapable of handling hard situations (c) concentrate on their own failure and poor consequences (d) lose faith in their own skills fast (Bandura 1994) In their 2011 study, Tomte and Hatlevik examined the connections between gender, ICT user profiles, and self-efficacy. The usage of computers, different software, and applications has made it easier to interact online, monitor oneself and others, assess oneself, and find resources. It is commonly known that new innovations in science education and information technology offer potential to design learner-centered, interactive, cost-effective, and flexible e-learning environments (Khan, B.H.2005) Encouraging collaboration, Knowledge sharing, and mentorship among employees creates opportunities for social interactions related to digital technologies, Through these interactions, individuals can learn from each other, exchange experiences and best practices ,and receive feedback and guidance, which can enhance their digital self-efficacy.

3. Research Methodology

3.1 Research Design

The current research primarily aims to assess the impact of digital leadership on open innovation and the mediating role of digital mindset. Mitchell and Jolley (2010) delineate two fundamental research design approaches: qualitative and quantitative. Quantitative research design, as highlighted by the authors, offers precision and convenience in data interpretation. Thus, this study adopts a quantitative approach, employing structured questionnaires to investigate the proposed hypotheses.

Building upon a theoretical gap identified in the literature, a theoretical model was developed to test the hypotheses. Consequently, a deductive approach was embraced for this research. Aguinis et al. (2017) assert that deductive techniques enhance methodological transparency in research endeavors. The unit of analysis in this study comprises individual employees working in various software companies located in Rawalpindi Islamabad.

With minimal interference from the researcher, data collection was facilitated, as the study does not necessitate alterations to the natural work environment or routine activities within

targeted organizations. As such, the research maintains methodological transparency and adherence to a Positivist philosophy.

Utilizing existing English language instruments for data collection was deemed appropriate, given that English serves as Pakistan's official language, and the majority of the population is proficient in reading, speaking, and understanding English (Naseer et al., 2016). Previous research conducted in Pakistan has successfully gathered data in English, indicating the suitability of this approach.

Moreover, the data collection for the current study employed a three-course period time-lagged research methodology, chosen for its suitability in causal research (Cook & Campbell, 1979). According to Cook and Campbell (1979), time-lagged research designs are particularly advantageous for causal studies. The questionnaire was distributed to individual employees of software companies based in Rawalpindi Islamabad, with an average pause of 1-2 weeks between each time wave of the study. This method allows for the examination of causal relationships over time and enhances the reliability of the research findings

. Data on the independent variable (Digital Leadership) will be gathered at time 1, data on the mediator (Digital Mindset) will be gathered at time 2, data on Digital Self Efficacy will be gathered at time 3, and data on the final independent variable (Open Innovation) will be gathered with a two to three-week gap**.**

3.3 Research Philosophy

Saunders, Lewis, and Thornhill (2009) define research philosophy as the set of assumptions guiding the generation of ideas and the production of knowledge. For the present study, a positivist philosophy has been selected. Positivism, as described by Park et al. (2020), is an approach that seeks to explore real situations through prediction and observation. It emphasizes the collection of unambiguous, accurate, and impartial data and facts. Positivist research methods can employ large and organized samples while maintaining objectivity and minimizing biases. Therefore, this quantitative research study aligns with the positivist paradigm, as data collection was conducted through questionnaires.

3.3 Population, Sample Size, and Sample Techniques:

Population refers to the entirety of individuals from whom the researcher gathers data for a study. Defining the population is a crucial step before initiating data collection. Since the population represents a large group, sampling is necessary for quantitative research, as it would be impractical and costly to collect data from the entire population. For this study, information was gathered from software companies in Rawalpindi Islamabad.

Sampling involves selecting a smaller subset, or sample, from the population. Past studies have recommended varying sample sizes depending on the complexity of the framework. For simple frameworks, a sample size of around 200 is suggested, while for more complex frameworks, a sample size of 300-400 is recommended (Boomsma, 1983). Additionally, Boomsma (1983) proposed that for time-lagged (longitudinal) studies, a sample size of 200-300 is sufficient.

research often recommends a sample size of 300–450 to gather data for complex research models, with 200 (Kelloway, 1998) serving as an approximate minimum sample size for any simple data set (Barlett, kortrlik & Higgins,2001) In the current study, a sample size of 400 was selected. However, only 350 responses were utilized in the data analysis after removing incomplete questionnaires, missing responses, and outliers. Due to resource constraints and time limitations, it was not feasible to collect data from the entire population. Therefore, a non-

probability convenience sampling technique was employed, allowing for the random gathering of maximum information from individual employees of different software companies.

3.4 Data Collection Procedure

The current study is quantitative research in which the proposed model and hypothesis were tested by using structured questionnaire the questionnaires were distributed personally to the respondents and approval was taken first from the concerned authorities of the participants. The questionnaire was designed with proper attention for the sake of participants to better understand questions the medium of questions was English as in the past era most of the studies conducted in Pakistan was questionnaire in English (Raja,Bouckenooghe,Syed,& Naseer ,2018) the questionnaire begin with a cover letter that explains the purpose of the study and ensures the confidentiality of employee responses .existing instruments that are available for the study variable and used in the prior research studies were adopted and all items of this study were self-administered .the questioners was divided in two parts ,the first part is the demographic part which contains the demographic details. Gender, Age. Department, Tenure of the Employees, so that it will be easy to segregated responses. The questionnaires were given to the respondents personally and the respondents were taken in confidence to give the responses at three different time lags (T1,T2,T3) at T1,The data was collected for the demographics section and the question regarding the study independent variable and moderator .Around 400 Question were distributed out of which 350 questions returned hence after time interval of 2 to 3 weeks 350 questioners that contains items of the mediator (Digital Mindset) of the study and the returned the questionnaire that were in useable form for the analysis, similarly after 2 weeks 350 questioner were disseminated among the respondents, which contains outcome variable research of the study i.e. Open Innovation the employee respondents were 350 at T3 and that is in useable form .Hence the final sample size for the current research study becomes 350 the overall response rate was good

3.5 Measures:

The study variables were measured using established and validated scales from prior research. The questionnaire was designed in English and not translated into Urdu, as English is the official language used by the organization in Pakistan and is easily understood by the target population. Consequently, data for the study were collected in English. Employees were required to complete the questionnaire themselves, making all variable items self-reported. A five-point Likert scale was used to measure the study constructs. The details of these measures are as follows:

3.5.1. Digital Leadership

Digital leadership was measured using six items originally developed by Ulutaş and Arslan to assess employees' perceptions of digital leadership. Therefore, six items were included in this study to gauge digital leadership. Each item was evaluated using a five-point Likert scale (1 = strongly disagree to 5 = strongly agree). The Cronbach's alpha reliability for this measure was 0.87.

3.5.2. Digital Mindset:

Aristizabal (2020) conducted a study titled "Mindset Matters: How and When Fixed Digital Mindset Influences Employees' Approach Towards and Avoidance of New Workplace Technology" as part of a Master's thesis at Handelshøyskolen BI. Therefore, Three Items were included to in this scale. Cronbach's alpha reliability coefficient is 0.83, Each item is rated on a 5-point Likert-type scale ranging from *Strongly Disagree* (1), *Disagree* (2), *Neutral* (3), *Agree* (4), to *Strongly Agree* (5).

3.5.3 Digital Self-Efficacy:
The Self-Efficacy Scale (SES), developed by (Schwarzer and Jerusalem,1996) was utilized to measure self-efficacy in this study. Originally created in Germany, the scale has been translated into various languages, including Chinese. The Chinese translation, along with its validity and reliability, has been confirmed by several researchers. For this study, the General Self-Efficacy Scale (GSES) was adapted to better reflect teachers' self-efficacy in their use of digital technology. The modified scale consists of five items, each rated on a 5-point Likert scale ranging from Strongly Disagree (1) to Strongly Agree (5).

The Cronbach's alpha reliability coefficient for the adapted scale in this study is 0.85

3.5.4. Open Innovation:
The scale developed by Naqshbandi (2016) was adapted to measure open innovation in this study. It consists of six items designed to capture a firm's degree and philosophy of openness in various aspects. Each item on the questionnaire is rated on a 5-point Likert scale, ranging from 1 ("strongly disagree") to 5 ("strongly agree"). The Cronbach's alpha reliability coefficient for the adapted scale is 0.88.

Table 3.1 Variables Instruments Summary

Sr.No	Variables	Authors	No of Items	Cronbach Alpha Reliablility	Data Collection
1	Digital LEADERSHIP	(Ulutas & Arslan,2018)	6	.87	Self-Reported (Time 1)
2	Digital Mindset	Aristizabal (2020)	3	.83	Self-Reported (Time 1)
3	Digital Self-Efficacy	(Schwarzer and Jerusalem,1996	5	.85	Self-Reported (Time 2)
4	Open Innovation	Naqshbandi (2016)	6	.88	Self-Reported (Time 3) (Time 4)

3.6 Data Analysis Techniques:
Statistical tools such as SPSS and AMOS were utilized for data analysis and hypothesis testing using the following procedure:

First, the responses collected at three different time intervals were organized and entered into SPSS software. Frequency distribution was then conducted to identify and correct any missing values and errors. Reverse-coded items were converted to their original form, and normality tests were performed.

Next, the Cronbach's alpha reliability for the study variables was evaluated, followed by the computation of the mean for all study variables. A bivariate correlation test was conducted to determine the associations between the study constructs. An Analysis of Variance (ANOVA) test was performed to identify control variables for the study.

To assess the composite and discriminant validity of the study constructs, Confirmatory Factor Analysis (CFA) was conducted using AMOS software. Hypothesis testing was performed using the Preacher and Hayes (2004) process techniques to examine the role of mediators and moderators between antecedent and outcome variables. For mediation, regression analysis

using Model 4 was applied, while moderation analysis also used Model 4 to determine interaction effects. Subsequently, plots were created to illustrate the direction and strength of the moderator variable.

4. Data Analysis And Results

Chapter Overview

This chapter presents the findings of the proposed mechanism, encompassing the summary of hypotheses, ANOVA results, and data findings. The data analysis includes sample characteristics, confirmatory factor analysis, descriptive statistics, correlation analysis, and mediating and moderating regression analysis. Additionally, the chapter concludes with the results of the hypotheses, indicating whether each hypothesis is accepted or rejected.

Data Coding

Before any analysis was performed using software, the data first needed to be coded. Responses received from employees at different intervals were organized, aligned, coded, and then entered into SPSS software. The study included various demographic questions, which were assigned numerical scores for analysis.

Data Screening

Data screening was conducted using statistical tools like SPSS. This crucial step ensures the data is free from inaccuracies before analysis. Data screening involves examining the data for errors and missing values. After coding the data in SPSS, frequency distribution was used to identify and correct missing values and outliers. Additionally, reverse-coded items were consolidated back to their original items before further analysis.

4.1 Frequency Distribution

In this current study the researcher characterizes the data in table form to present the data movements. Table No 01 provide the authentic distribution of the demographic variables which are gender, Age, Departments and tenure of the responses.

Present research study, the data is collected from three hundred and fifty valid respondents. Two subcategories of gender Ratio is Male 225 (64.3%) and whereas 125 (35.7%) are female's respondents. Majority of the respondents are male, comprising 64.30 % of the total, while females make up the remaining 35.7 % .There were five subcategories of age, 25 years and below are 103 ((29.4%), 26 years to 35 years were 109 (31.1.%),36 to 45 years were 62 (17.7%),46 to 55 years were 37(10.6 %)and 55 years above were 39 (11.1%) .Five subcategories of departments in which 66.9% from IT Department, Sales and Marketing 10.%,HR/Admin 5.7%,Development 10 % , ,Finance 7.4%, .Six subcategories of Tenure of the Employee 1 to 5 years were 27.7 % ,6 to 10 years 26.9 %,11 to 15 years .28.6 % ,16 to 20 years were 8.3 % percent, 4.6% were 21 to 25 years, and 4 % 26 to 30 are illustrated in table no 01.

Table No 01

Demographics	Frequency	Percent
GENDER		
Male	225	64.3 %
Female	125	35.7 %
Age		
25 and Under	103	29.4 %
26 to 35	109	31.1 %
36 to 45	62	17.7 %

46 to 55	37	10.6 %
55 and above	39	11.1 %
Departments		
IT	234	66.9%
Sales and Marketing	35	10 %
HR/Admin	2	5.7 %
Development	35	10 %
Finance	26	7.4 %
Tenure of Employee		
1 to 5 years	97	27.7%
6 to 10 years	94	26.9%
11 to 15 years	100	28.6%
16 to 20 years	29	8.3%
21 to 25 years	16	4.6%
26 to 30	14	4 %

Table 1 Frequency distribution of Demographics Variables

4.2. Reliability Analysis:

Reliability is a statistical concept that refers to the consistency, stability and reproducibility of measurements or results over time across different situation or observers. Results shown in table No 2 Digital leadership (DL) Cronbach alpha value is .910 which indicates high level of internal consistency of variable. This suggests that the items measuring digital leadership are highly correlated with each other and provide reliable measures of a construct. Digital Mindset (DMS) The Cronbach Alpha value is .799 indicated moderate level of internal consistency lower than the previous variable, it suggests a good level of reliability. Digital Self Efficacy (DSE) The Cronbach Alpha value of .783 indicates a moderate level of internal consistency. Similarly, to the previous variable, it suggests a reasonably good level of reliability, Open Innovation (OI) The Cronbach Alpha of .827 Indicates a moderate level of internal consistency and suggest good level of reliability.

Variable Name	Cronbach Alpha Values
Digital Leadership (DL)	.910
Digital Mindset (DMS)	.799
Digital Self –Efficacy(DSE)	.783
Open Innovation(OI)	.827

Table 2 Reliability

4.3 Descriptive Statistics

Descriptive statistics involve summarizing and communicating finding about data set. The mean represents the average value of the variable and standard deviation indicates the spread of data around the mean Skewness and Kurtosis are measure of the shape of the distribution with skewness indicating symmetry and kurtosis indicating the peakdness of the distribution.

The mean value for Digital Leadership is approximately 4.33, indicating a relatively high level of perceived digital leadership among the respondents on average. The standard deviation is relatively low (0.448), suggesting that the responses are tightly clustered around the mean. The

skewness value (-0.004) indicates a nearly symmetrical distribution. The negative kurtosis value (-0.189) suggests a distribution slightly flatter than the normal distribution, but not excessively so the mean value for Digital Mindset is approximately 3.99, indicating a slightly lower level of perceived digital mindset compared to digital leadership. The standard deviation (0.625) is higher compared to DL, indicating more variability in responses. The positive skewness (0.063) suggests a slightly right-skewed distribution, meaning there may be some respondents with exceptionally high scores. The kurtosis (-0.099) indicates a distribution slightly flatter The mean value for Digital Self-Efficacy is approximately 4.13, indicating a relatively high level of perceived digital self-efficacy among respondents, though slightly lower than digital leadership. The standard deviation (0.47) suggests less variability compared to DMS. The negative skewness (-0.042) indicates a slightly left-skewed distribution, with a few respondents having lower scores. The kurtosis (0.192) suggests a distribution slightly more peaked than the normal distribution. Than the normal distribution.

The mean value for Open Innovation is approximately 4.86, indicating a relatively high level of perceived openness to innovation among respondents. The standard deviation (0.46) is relatively low, suggesting less variability compared to DMS. The skewness (0.002) and kurtosis (-0.191) values suggest nearly symmetrical and normally distributed responses.

Respondents generally perceive high levels of digital leadership, digital self-efficacy, and open innovation, with slightly lower scores observed for digital mindset. The distributions for all variables are relatively normal, with some slight deviations noted in skewness and kurtosis.

Table 3

Variables	Mean	Std.Deviation	Skewness	Kurtosis
DL	4.3289	.44806	-.004	-.189
DMS	3.9877	.62530	.063	-099
DSE	4.1265	.46975	-.042	.192
OI	4.0862	.45874	.002	-.191

DL=Digital Leadership, MS=Digital Mindset, DSE= Digital Self Efficacy, OI =Open Innovation

Table 3. Descriptive Statistics

4.4 Confirmatory Factor Analysis:

A statistical method called confirmatory factor analysis is used to evaluate the measurement characteristics of a group of observable variables, or indicators and determines which latent construct or components these variables represents.CFA is a multivariate statistical technique that is frequently used to test a hypothesized factor structure and assess how well the observed data and theoretical model fit together its primary goal is to determine whether the observed variables match the predicted factor structure, as suggested by the theoretical framework. .it helps to access the construct validity and reliability of measurement instruments or scales. Further, CFA is frequently applied in diverse field in social sciences. In CFA the researcher specifies a measurement model that consists of latent factors and observed indicators .the latent factors are theoretical constructs that cannot be directly measured, while the observed indicators are the measureable variables that are believed to reflect those latent factors .the CFA examines how well the observed variables (indicators) relate to their corresponding latent factors the process involves accessing the parameters of the model, like factors loading (Indicating the strength of the relationship between the latent factor and observed indicator) and error variances ((Representing the uniqueness or measurement error of each indicator) as

per recommendations of Brown & Moore,(2012); Hair et al.(2014) Hue and Bentler,(1999) the fit of the model is then evaluated by comprising the observed data to the model implied covariance matrix using various fit indices ,such as chi-square statistics ,Comparative fit Index ((CFI) Tucker level index (TLI) AND root mean square error of approximation (RMSEA)"

Model fits suggested that the hypothesized factor structure is supported by observed data, one the other end if the data is not fit it deems to be inappropriate and problems with the proposed factor structure, measurement instrument or data quality, Researchers may revise the model, alternative changes, or make modification to improve the model fit.

Table 03 illustrate the CFA outcomes for full factor model (DL, DMS, DSE, OI) (x2df=1.486, GFI=.937, AGFI=.919, CFI=.973, TL=.969, NFI=.922, RMR=063, RMSEA=.037) Illustrated improved model fit compared to the overall one factor model shown in Table 03 and figured 03 (x2df=16.461, GFI .389, AGFI=.325, CFI=.840, TLI=.863, NFI=.796, RMR=.405, RMSEA=.210).

Model Fit Indices:

Fitness criteria	X/df	GFI	AGFI	CFI	TLI	NFI	RMR	RMSEA
Acceptable Range	**1-3**	**>.90**	**.>.80**	**>.95**	**>.90**	**>.90**	**<.09**	**<.08**
Full Factor (DL,DMS,DSE,OI)	**1.486**	**.937**	**.919**	**.973**	**.969**	**.922**	**.063**	**.037**
Overall One-Factor (DL,DMS,DSE,OI)	16.461	.389	.325	.840	.863	.796	.405	.210

DL=Digital Leadership: DMS=Digital Mindset: DSE =Digital Self-Efficacy: OI= Open Innovation

Table No 4 Model Fit indicies

Confirmatory factor analysis (CFA) comparing different models of Digital Leadership (DL), Digital Mindset (DMS), Digital Self-Efficacy (DSE), and Open Innovation (OI). Here's a table summarizing the key fit indices for the different models:

Model	X/df	GFI	AGFI	CFI	TLI	NFI	RMR	RMSEA	Explanation
Full Factor Model	1.486	.937	.919	.973	.969	.922	.063	.037	This model includes all four factors: Digital Leadership, Digital Mindset, Digital Self-Efficacy, and Open Innovation.
Overall One-Factor Model	16.461	.389	.325	.840	.863	.796	.405	.210	This model collapses all factors into one, which performs poorly according to most fit indices.
Default Model	1.486	.937	.919	.973	.969	.922	.063	.037	The default model likely represents the Full Factor model.

Model	X/df	GFI	AGFI	CFI	TLI	NFI	RMR	RMSEA	Explanation
Saturated Model	0	1.000	-	-	-	-	0	-	The Saturated Model perfectly fits the data, indicating it may be overfitting.
Independence Model	16.461	.389	.325	.840	.863	.796	.405	.210	This model assumes independence between variables, performing poorly compared to other models.

Table No 5: Key fit Indices for different Models

X/df: Ratio of Chi-square to degrees of freedom. Values around 1 indicate good fit.

GFI (Goodness of Fit Index), AGFI (Adjusted Goodness of Fit Index), CFI (Comparative Fit Index), TLI (Tucker-Lewis Index), NFI (Normed Fit Index): All indicate incremental fit indices. Values closer to 1 indicate better fit.

RMR (Root Mean Square Residual): Residuals after fitting the model. Lower values indicate better fit.

RMSEA (Root Mean Square Error of Approximation): Indicates how well the model fits the data, considering the error of approximation per degree of freedom. Values below 0.08 are generally considered acceptable.

AIC (Akaike Information Criterion), BCC (Bayesian Information Criterion), BIC (Bayesian Information Criterion), CAIC (Consistent Akaike Information Criterion): Indicate model parsimony, with lower values preferred.

ECVI (Expected Cross-Validation Index): Indicates model fit and complexity, with lower values preferred.

HOELTER: Indicates sample size adequacy. Higher values indicate better fit.

Based on these indices, the Full Factor Model seems to be the best fitting model among those tested, as it has the lowest X/df ratio, highest GFI, AGFI, CFI, TLI, NFI, and lowest RMR and RMSEA values. The Saturated Model fits perfectly but may be over fitting, while the Independence Model performs poorly, indicating that variables are not independent.

4.5 Bivariate Correlation:

The results of the correlation of this study is investigated in table no 4 which are analyzed by using SPSS.21. The correlation scrutiny reflects the corresponding association among the variables under investigation. The results show that there are significant positive correlations among the variables under study. The correlation and Coefficients (r) and their significance levels (p-value) Provides information about strength and significance of the relationship level among the variables. Digital Leadership has a positive relationship with Digital Mindset .DL and DMS ($r = .564$,$p < .001$) Digital leadership have a significant effect on Digital Self Efficacy DL and DSE($r =0.638$) Digital Mindset is Positively associated with Digital Self Efficacy DMS and DSE ($r = .585$,$p<.001$) Open Innovation have a Positively Associated with Digital Self Efficacy ,OI and DSE($r=0.595$,$p<0.001$) These correlations indicate that there is a relationship between the variables with higher values of one variable being associated with higher values of the other variable. *Table 6*

Variable	Mean	SD	DL	DMS	DSE	OI
DL	4.3289	.44806	**(.910)**			
DMS	3.9877	.62530	.564**	**(.799)**		
DSE	4.1265	.46975	.638**	.585**	**(.783)**	
OI	4.0862	.45874	.820**	.589**	**.**595**	**(.827)**

*** Correlation is significant at the 0.01 level (2-tailed) cronbach alpha reliabilities are in parenthesis*

Table No.5 Means, Standard Deviation and correlation analysis.

4.6 Control Variables:

Controlling variables allows researchers to isolate and examine the specific impact of each variable of interest, ensuring a more accurate and nuanced understanding of the relationship within the data, Demographic variables are like age, gender, department, tenure are being controlled for hypothesis testing, in order to identify control factor one-way ANOVA was run for every single dependent variable, and some of the values were found insignificant. Since ANOVA did not reveal any appreciable differences in our dependent variable (Open Innovation) with respect to demographics, Age, Gender, Department, Tenure, No controls were utilized in the study. Additionally, the study addressed the possibility of endogeneity bias.

DVs	Age		Gender		Department		Tenure	
	F	Sig	F	Sig	F	Sig	F	Sig
DL	.697	.594	.087	.769	.875	.479	.790	.557
DMS	4.159	.003	.319	.573	.327	.860	.223	.953
DSE	.452	.771	.085	.770	.329	.859	.751	.586
OI	1.640	.164	.363	.547	.974	.422	.906	.477

Table No 6: One-Way ANNOVA

4.7 Regression Analysis:
*4.7.1 Effect of Digital Leadership on Open Innovation***.**
The dependent variable open innovation was regressed on predicting variable of Digital Leadership the beta value is .820, R-Square is .672 and Adjusted R-Square is .671. The regression analysis suggests that Digital Leadership has a statistically significant positive effect on Open Innovation. For each unit increase in Digital Leadership, the Open Innovation score increases by approximately 0.839 units, holding all other variables constant. The effect size (Beta) of 0.820 indicates a strong standardized effect of Digital Leadership on Open Innovation.

Hence the hypothesis one is supported

Path DL → OI

Digital Leadership	β	R-Square	Adjusted R-Square
	.820 ***	**.672**	**.671*** **

*Table No.7 Effects of DL on OI *** p < .001*

4.7.2 Effects of Digital Leadership on Employee Digital Mindset

Depending variable Digital Mindset was regressed on predicted variable digital leadership and the results shown in the Table 7 is the beta value is .564 and R-Square Value is .318 and Adjusted R-Square value is .316 It Means that 31.8% of the variance in the outcome variable. The moderate correlation coefficient suggests a moderate positive linear relationship between Digital Leadership and the Digital Mindset.

Path DL → DMS

	β	R-Square	Adjusted R-Square
	.583* **	**.318**	**.316*** **

*Table no.8 Effect of DL on DMS *** P < .001*

Hence the Hypothesis two is supported.

4.7.3 Effects of Digital leadership on Digital Self Efficacy.
The Depending Variable Digital self-efficacy was regressed on the predicting variable digital leadership beta value is .638 which is moderate positive relationship the p value is less than .005 R-Square is .407 and Adjusted R-Square is .405

The hypothesis is accepted that there is moderate and significant relationship with digital mindset and open innovation.

Hence the hypothesis 3 is accepted.

Path DL → DSE

Digital Mindset			
	β	**R-Square**	**Adjusted R-Square**
	.638 * **	**.407**	**.405 *** **

*Table 9 Effect on DL on DSE *** P < .001*

4.7.4 Effects of Digital mindset on open innovation.
The Depending variable open innovation was regressed on the predicting variable digital mindset with controlling the effects of age. At a step 1, the value of R-Square of control variables is .008 At the second step of the regression the beta value is .589 which is moderate positive relationship the p value is less than .005 R-Square is .347 and Adjusted R-Square is .346

The hypothesis is accepted that there is moderate and significant relationship with digital mindset and open innovation.

Hence the hypothesis four is accepted.

Path DMS → OI

Digital Mindset			
	β	**R-Square**	**Adjusted R-Square**
	.589 * **	**.347**	**.346 *** **

*Table 10 Effect on DMS on OI *** P < .001*

4.7.5 Effects of Digital Self-Efficacy on open innovation.

The Depending variable open innovation was regressed on the predicting variable digital Self-Efficacy w **β** value is .595 which is positively related the p value is less than .005 R-Square is .354 and Adjusted R-Square is .352

The hypothesis is accepted that there is moderate and significant relationship with digital mindset and open innovation.

Hence the Hypothesis five is accepted.

Path DSE → OI

Digital Mindset			
	β	**R-Square**	**Adjusted R-Square**
	.595 ***	**.354**	**.352 *****

*Table 11 Effect on DSE on OI *** P < .001*

Multiple Regression Analysis:

Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**
1	.820[a]	.672	.671	.26308
2	.834[b]	.696	.694	.25373
3	.835[c]	.698	.695	.25335

Model 1: The correlation coefficient (Pearson's r) between the predicted values and the actual values of the dependent variable is 0.820. This model explains 67.2% of the variance in the dependent variable, as indicated by an R Square value of 0.672. The Adjusted R Square, which adjusts for the number of predictors in the model, is 0.671. The standard error of the estimate is 0.26308.

Model 2: This model includes additional predictors compared to Model 1. The correlation coefficient between predicted and actual values increases slightly to 0.834, indicating a somewhat stronger relationship. The proportion of explained variance (R Square) also increases to 69.6%, while the Adjusted R Square is 0.694. The standard error of the estimate decreases slightly to 0.25373.

Model 3: Similar to Model 2, this model includes additional predictors. The correlation coefficient remains relatively stable at 0.835. The proportion of explained variance increases

marginally to 69.8%, with an Adjusted R Square of 0.695. The standard error of the estimate decreases slightly to 0.25335.

Overall, each successive model appears to provide a slightly better fit to the data, as indicated by increases in R Square and Adjusted R Square values and decreases in the standard error of the estimate. However, the improvements between Model 2 and Model 3 are minimal, suggesting that the additional predictor(s) in Model 3 may not contribute significantly to explaining the variance in the dependent variable beyond those already included in Model 2.

4.8 Mediation Analysis:

For mediation analysis we used PROCESS v.4.2 by Andrew F. Hayes. Number of bootstrap samples for percentile bootstrap confidence interval is sample size 5000 and all confidence interval is 95 Percent. Bootstrapping is a non-parametric resampling method that does not impose the state of data normality, and frequently resampling data to produce confidence intervals. Table No 11 Shows the effects, standard errors (SE), t-values (T) lower (LLCI) and upper (ULCI) confidence interval for the total effect, direct effect, and indirect effect. The total "effects" refers to the overall relationship between variables in the analysis the value is 0.8393, indicating the positive relationship. The Direct Effect represents the direct relationship between the variables, excluding any indirect effects, it has a value 0.7316 indicating a positive relationship, The Indirect Effect refers to the relationship between variables that is mediated by another variable. The value of 0.1077 suggests a relatively weaker indirect effect. The standard errors (SE) provide a measure of the uncertainty associated with the estimated effects. The t-values (T) indicate the significance of the effects, with larger absolute values suggesting greater significance. All the effects have relatively large t-value, indicating that they are statistically significant. The lower (LLCI) and upper (ULCI) confidence interval provides a range of value within which we can be confident that the true effect lies. The confidence intervals for the total effect, direct effect, and indirect effect do not include zero, further supporting the Hypothesis.

Hence hypothesis no 6 is supported.

	Effects	**SE**	**T**	**P**	**LLCI**	**ULCI**
Total Effect	.8393	.0314	26.7053	.0000	.7775	.9012
Direct Effect	.7316	.0367	19.9377	.0000	.6595	.8038
Indirect Effect	.1077	.0268			.0597	.1646

Table no 12 Mediation effect of DMS

Sobel Test:

Sobel's test (1982) is a significance test for the indirect effect, ab , and can be used to form a confidence interval. It can be computed from the coefficients for a and b and their standard errors.

The Sobel test is basically a specialized t test that provides a method to determine whether the reduction in the effect of the independent variable, after including the mediator in the model, is a significant reduction and therefore whether the mediation effect is statistically significant.

	Input		Test statistics	p-value
ta	12.728	Sobel test	9.13211777	0
tb	13.11	Aroian test	9.11847242	0
		Goodman test	9.14582456	0

est Statistics and P-Values, ta (Test Statistic for Path a): 12.728 tb (Test Statistic for Path b): 13.11

These test statistics (ta and tb) represent the significance of the indirect paths 'a' and 'b' in the mediation model. Sobel Test, Test Statistic: 9.13211777 p-value: 0, Aroian Test: Test Statistic: 9.11847242

p-value: 0, Goodman Test:, Test Statistic: 9.14582456,p-value: 0

The test statistics for the Sobel, Aroian, and Goodman tests are all very high (above 9).

The p-values for all three tests are 0, indicating extremely strong evidence against the null hypothesis.

Mediation Effect: The very low p-values (0) suggest that the mediation effect is highly significant. This means that the mediator variable significantly carries the influence of the independent variable to the dependent variable.

Consistency: The consistency across the Sobel, Aroian, and Goodman tests in both the test statistics and the p-values further strengthens the conclusion. All three tests agreeing on the significance adds robustness to the findings.

The results from the Sobel, Aroian, and Goodman tests collectively indicate a highly significant mediation effect. The indirect paths in the mediation model are statistically significant, providing strong evidence that the mediator variable plays a critical role in the relationship between the independent and dependent variables.

4.9 Moderation Analysis:

As suggested by HAYES (2018), the researcher used the Process- Macro to evaluate the moderation hypothesis by employing the bootstrap sample size of 5000 for percentile confidence intervals and a 95 % level of confidence for all confidence intervals in the output. Moderation analysis is a statistical technique used to explore the relationship between two variables while considering the influence of a third variable, known as moderator the moderator variable helps explain when and how the relationship between the two primary variable changes. Table No 12 Results shows that the constant terms is -.3762. This represents the expected value of dependent variable when all independent variable are zero. However, it is not statistically significant as the p-value is .6925 indicated that it may not have a significant impact on the dependent variable.

Digital Leadership (DL) has a coefficient of .9218 this suggests that a one-unit increase in "DL" is associated with an increase of .9218 units in the dependent variable.it is statistically significant p-value=.0001 Indicating strong and positive relationship between "DL" and Dependent Variable Open Innovation "OI" Digital Self Efficacy "DSE" has a coefficient of .2869 and p-value is .2213 which is not significant, LLCI/ULCI ".1748", .0513. and values are not matched with the predicted hypothesis so moderation is not proved in the study.

	Coeff	SE	T	P	LLCI	ULCI
Constant	-.3762	.9503	-.3958	.6925	-2.2453	1.4930
DL	.9218	.2270	4.0608	.0001	.4753	1.3683
Value Inc.	-.0395	.0545	-.7259	.4684	-.1467	.0676
DSE	.2869	.2341	1.2254	.2213	-.1736	.7473

Value Inc.	.0617	.0575	-1.0738	.2837	-.1748	.0513
F = .5270	**R= .8255**	**R-Sq. =.6814**		**R-Sq. Chng =.0005**		

Table No 12 Moderation effect of Digital Self Efficacy

SUMMARY OF THE RESEARCH HYPOTHESIS:

Hypothesis No.	Hypothesis	Results
H1	Digital Leadership have a significant impact on Open Innovation.	Supported
H2	Digital Leadership is Significantly associated with employees Digital Mindsets.	Supported
H3	Digital Leadership is positively and significantly associated with Digital Self Efficacy.	Supported
H4	Digital Mindset have a positive impact on Open Innovation	Supported
H5	Digital Self Efficacy have positive effect on Open Innovation	Supported
H6	Digital Mindset mediate the relationship between digital leadership and Open Innovation	Supported
H7	Moderating role of DSE between Digital Leadership and Open Innovation is insignificant and vice versa.	Not Supported

Table No.14 Summary of Research Hypothesis.

5. Discussion And Conclusion

5.1 Discussion

The Path of organizational success requires leadership at every stage, and digital leadership has emerged as a noteworthy phenomenon in this regards**.** An organization must have digital leadership that fosters information sharing and innovation capacity in order to accomplish open innovation. The study contributes to extent research by explaining how digital leaders develop digital mindsets of the employees and how to foster the digital self-efficacy to achieve open innovation that is highly important to compete and outperform the rivals. Based on the results, it appears that the hypothesis related to the moderating role of digital self-efficacy on the relation between digital leadership and open innovation was found to be insignificant. However, it is important to note that the other hypothesis was supported, indicating significant positive relationship between digital leadership and open innovation and mediating role of digital mindset is positively related, Organizations with effective leadership are more likely to have successful open innovation practices, this study indicates that individual with a positive digital mindset are more likely to contribute to open innovation efforts. This study contributes to our understanding of the role digital leadership, digital mindset, and digital self-efficacy in fostering open innovation. They provide valuable insights for organizations looking to leverage these factors to drive innovation and stay competitive in the digital age.

Major Finding's overview:

According to the results obtained, Digital leadership has a significant impact on open innovation,

5.2 Managerial Significance:

The study demonstrated the significance of digital leadership in digital transformation to foresee digital disruption, with implications for management practice. The vision and mission of the digital cooperation's depends on digital transformation to give the organization to direction it needs to reach its intended future position. The managerial importance of digital leadership, digital thinking and open innovation are essential for businesses to remain

competitive in today's digital economy. It is evidenced that in the fourth industrial revolution is not possible without digital transformation which is essential for organizational performance (Marino-Romero et al., 2022). Digital leadership is the ability to lead and manage a digital organization. It requires an understanding of technology and the ability to create an organizational vision and align it with customer needs. Digital thinking is the ability to think, plan and act digitally. It requires leaders to be able to think strategically as we as tactically and make decisions that align with the organizations digital goals. These leaders use digital transformational
Strategies to manage knowledge to achieve competitive performance toward innovation (Ruel

et al., 2021 Finally, open innovation is the ability to identify and adopt new ideas, technologies, and processes that can help and organization achieve its goals. It requires leaders to be proactive in exploring new strategies and solutions that can help the organization stay competitive and stay ahead. With a strong digital mindset, digital leadership and open innovation, organizations can gain a competitive edge and keep up with the fast pace of technology.

5.3 Contextual Significance:
Pakistan's Software development industry is undergoing a transformation due to the growth of digital technologies. Digital leadership, digital mindset and open innovation are increasingly important to the success of this industry. Digital leadership emphasizes the need for companies to embrace digital transformation and create a culture of innovation. A digital mindset is the ability to anticipate, recognize and seize opportunities for digital disruption. Open innovation is the process of collaboration between companies, universities and other stakeholders to create new products and services that can be commercialized. Leaders who have a high value for knowledge in the organization have a strong tendency to create an internal environment in a manner that allows coworkers to exercise and nurture their knowledge sharing and manipulation abilities (Crawford et al., 2003; Del Giudice and Maggioni, 2014; Politis, 2002), which have been perceived vital for open innovation.

There concepts are significant for the software industry in Pakistan as they help companies become more agile, responsive and forward thinking. Digital leadership encourages companies to use digital tools and processes to maximize performance, reduce costs and increase customer satisfaction. A digital mindset helps companies think innovatively, recognize opportunities and take advantage of them. Open innovation allows companies to use resources outside their organization to develop new services and products. This can help them stay competitive and stay ahead of the competition. Adopting these concepts in the software development industry in Pakistan can help create a more dynamic and innovative environment. It can also help foster collaboration and creativity, leading to new products and services that can help companies stay competitive and profitable. As the sector moves towards digitization, these concepts can help companies stay ahead of the curve.

5.4 Limitations and future research
The study might have limitations in terms of sample size and diversity of the sample future research could focus one expanding the sample size to ensure more representatives and generalizable findings, this study focused on a specific industry or organizational context, which limits the generalizability of the findings. Future research could employ a combination of qualitative a quantitative method to gain more comprehensive understanding of the relationship between digital leadership, Digital Mindset, and Digital self-efficacy. Cross cultural studies investigating cross-cultural aspects of digital leadership and open innovation could help understand how cultural factors influence the relationship between digital leadership and open innovation. Organizational Climate and Support examining the impact of

organizational climate and support on the development of digital mindset and self-efficacy among leaders could provide valuable insights into creating an enabling environment for digital leadership and open innovation. Development programs effective intervention to enhance digital leadership capabilities. Innovation Outcomes, Creativity, idea generation, and problem-solving could further enhance our understanding of the relationship between digital leadership and open innovation.

5.6 Conclusion

This study shed light on the important role of digital leadership, digital mindset, and digital self-efficacy in driving open innovation within organizations. Although the hypothesis related to the moderating role of digital self-efficacy was found insignificant in this study, other hypothesis was supported, indicating significant relationships between digital leadership, digital mindset, and open innovation. The findings of this study have important implications for organizations looking to stay competitive and innovative in the digital age.it emphasize the importance of effective digital leadership, cultivating a positive digital mindset, and developing digital self-efficacy in employees to enhance open innovation initiatives. This research provides valuable insights that can aid organizations in navigating the digital landscape and encourage them to invest in developing their digital leadership capabilities and fostering a digital friendly culture.

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PROFITABILITY OF TECHNICAL TRADING RULES WITH SENTIMENT AND ECONOMIC POLICY UNCERTAINTY INDEX VALUES IN CRYPTOCURRENCIES

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Abstract

This study applies simple moving average trading strategies combined with the investor sentiment index and Economic Policy Uncertainty index values as indicators to the daily prices of the top five cryptocurrencies. These cryptocurrencies are selected based on their market capitalization. The integration of sentiment and EPU index values into technical trading rules is intended to provide additional market insights beyond existing price trends. Results show that, except for Binance Coin, the risk-adjusted annual mean returns generated using technical trading rules outperform the Buy-and-Hold strategy for Bitcoin, Ethereum, Tether, and Solana. Furthermore, incorporating sentiment and EPU index values into SMA strategies produces higher annual mean returns compared to both SMA strategies without these indicators and the Buy-and-Hold approach. These findings highlight the potential of sentiment and EPU index values to enhance the effectiveness of technical trading strategies in the cryptocurrency market.
Keywords: Technical Trading, Simple moving average, Investor Sentiment Index, Economic Policy Uncertainty, Cryptocurrency, Financial Technology

1. Introduction

Over the years, numerous trading models have been introduced, supported by empirical evidence demonstrating their profitability compared to the simple Buy-and-Hold (BH) strategy. Despite this proliferation of models, technical trading analysis (TTR) remains a cornerstone for market practitioners due to its practical utility and adaptability (Bley & Saad, 2019). This approach utilizes historical data, such as past prices, trading volumes, and market interest, to predict future price movements (Park & Irwin, 2007). The application of TTRs has expanded over the years to diverse financial markets such as foreign exchange (Neely & Weller, 2012) and different regional markets (Metghalchi et al., 2012). More recently, TTRs have been applied to the rapidly evolving cryptocurrency market, an asset class that has gained significant traction over the past decade (Grobys et al., 2019; Ahmed et al., 2020).

Since Bitcoin's introduction in 2009, the cryptocurrency market has grown significantly, with over 8,000 active cryptocurrencies and a global market capitalization exceeding $2 trillion USD as of April, 2024[1]. Bitcoin remains the most popular cryptocurrency, but the market's broader appeal stems from its accessibility and decentralized structure (Ghosh et al., 2020). The cryptocurrency market continues to gain traction, with some investors, bloggers, and academics predicting that cryptocurrencies could eventually replace traditional currencies (Wilson, 2019). Numerous studies conducted in recent years have shown that technical analysis holds significant predictive power for cryptocurrency profitability (Gerritsen et al., 2020;

[1] data retrieved from https://coinmarketcap.com/ as of April 30, 2024

Hudson & Urquhart, 2021). While many studies suggest that the cryptocurrency market remains inefficient (Corbet et al., 2019; Ahmed et al., 2020), others indicate a gradual shift toward greater efficiency over time (Le Tran & Leirvik, 2020; Anghel, 2021).

Despite the widespread use of TTRs, skepticism persists due to their reliance on historical data, such as past prices and volumes, to predict current price movements. However, profitability can be enhanced by incorporating reliable parameters that reflect broader market or macroeconomic environments (Taylor, 2014). Using such parameters as part of the rules (strategy) will lead to the success of that investment strategy. Research in this area has explored various factors influencing returns, particularly macroeconomic variables, across both traditional stock markets (Tangjitprom, 2012) and cryptocurrencies (Nakagawa & Sakemoto, 2021; Wang et al., 2023). Empirical studies further reveal that macroeconomic news significantly affects returns in both equities (Birz & Lott, 2011) and cryptocurrencies (Corbet et al., 2018; Lyocsa et al., 2020).

Investor sentiment, often shaped by news, plays a crucial role in influencing market behavior and returns. For example, the sentiment index developed by Baker and Wurgler (2006), based primarily on business cycle parameters, has demonstrated significant correlations with stock market returns. This index, or similar ones, has been adopted by subsequent researchers to predict returns in various markets, including cryptocurrencies (Mokni et al., 2022; Anamika et al., 2023).

Similarly, the Economic Policy Uncertainty (EPU) index, developed by Baker et al. (2016), has gained widespread use and demonstrates a significant relationship with both stock and cryptocurrency returns (Baker et al., 2016; Wang et al., 2020). Given the substantial increase in financial crises over the past three decades compared to the preceding century, it becomes essential to incorporate parameters that capture uncertainty events

In this study, sentiment and EPU index values are integrated into TTRs alongside price data. Incorporating these indicators allows for a more comprehensive reflection of the current market environment, potentially enhancing the effectiveness of trading strategies. We posit that the inclusion of sentiment and EPU index values will improve the profitability of TTRs by providing more robust constraints and better contextualizing market conditions. This research contributes to the existing body of literature on technical trading analysis by offering a novel perspective. While previous studies primarily emphasized price and volume data, our study broadens the scope by incorporating sentiment and EPU index values as environmental indicators, thereby enriching the understanding of their impact on trading strategies and profitability.

2. Data and Methodology

2.1. Data

The selection of cryptocurrencies in this study is based on their market capitalization as of April 30, 2024[2]. The cryptocurrencies included in the study are Bitcoin, Ethereum, Tether, Binance, and Solano and all are denominated in US dollars. Table 1 presents the market capitalization and corresponding sample periods for each cryptocurrency. The start dates vary across assets due to differences in historical data availability; for example, Bitcoin's data begins on January 1, 2015. For all cryptocurrencies, the sample period extends through June 30, 2022. This end

[2] https://finance.yahoo.com/ as of April 30, 2024

date reflects the data coverage of the investor sentiment index, which was accessed from the authors' website on April 30, 2024.

The investor sentiment index, originally developed by Baker and Wurgler (2006), spans from January 1985 to June 2022 and is available only at a monthly frequency[3]. To synchronize with the cryptocurrency data, values from both the sentiment and EPU indices are incorporated beginning 200 days prior to each cryptocurrency's start date. This adjustment allows for the construction of 200-day rolling medians or tertiles, which are used as sentiment indicators. The EPU index, sourced from the database provided by Baker et al. (2016), is available at a daily frequency and complements the coarser monthly sentiment data[4]. Additionally, risk-free rates corresponding to the sample periods were obtained from the Fama–French factor datasets hosted on Ken French's data library[5].

2.2. Trading rules and methodology

In this study, we used simple moving average (SMA) which is one of the widely used technical trading rules.

2.2.1. Simple Moving average (SMA)

The following provides a brief explanation of the SMA, with a more detailed discussion available in the study of Hsu et al. (2016). In an SMA model, buy or sell signals are determined based on the comparison between shorter- and longer-period averages of price levels. The N – day (period) simple moving average on day t is mathematically defined as:

$$SMA_t(N) = \left(\frac{1}{N}\right)\sum_{i=0}^{N-1} P_{t-i} \tag{1}$$

where P_t represents the price on day t. An N − period daily simple moving average is calculated the prices of the most recent N trading days and dividing the total by N. The SMA is updated daily by dropping the oldest price and incorporating the newest one within the N -day window. A **buy signal** is generated when the closing price exceeds the SMA $SMA_t(q)$ by at least x % and remains above this level for d consecutive days. Conversely, a **sell signal** is triggered when the closing price falls below the SMA $SMA_t(q)$ by at least x % and stays below it for d consecutive days. For this study, only a long strategy is applied, focusing on generating and analyzing buy signals, while sell signals are excluded from the analysis.

The total number of moving average periods (q) considered in this study is eleven, specifically:

$$q \in \{2,5,10,15,20,25,50,100,150,200,250\} \tag{2}$$

The different percentage increase scenarios (x) applied to the rules amount to thirteen, as follows:

$$x \in \{0, 0.05, 0.1, 0.5, 1.0, 5.0\} \tag{3}$$

The total number of days (d) that the price must remain above or below the threshold includes five scenarios, specifically:

[3] https://pages.stern.nyu.edu/~jwurgler/ as of April 30, 2024

[4] https://pages.stern.nyu.edu/~jwurgler/ as of April 30, 2024

[5] https://mba.tuck.dartmouth.edu/pages/faculty/ken.french/data_library.html as of April 30, 2024

$$d \in \{0, 2, 3, 4, 5\} \quad (4)$$

These parameters define the framework for evaluating the effectiveness of the moving average-based trading rules in this study.

2.2.2. SMA with Sentiment index value and EPU index value

Sentiment index values and EPU index values are incorporated as additional indicators into the traditional SMA framework. Initially, sentiment and EPU values are applied individually at the buying point, then solely at the selling point, and finally at both buying and selling points. This approach generates a range of rules that are tested to provide insights, such as whether cryptocurrencies should be bought when investor sentiment is high or low. To create these indicators, the rolling median or tercile values of sentiment and EPU indices over a 200-day period are utilized. At each buying or selling point, the 200-day median or tercile values are compared with the current sentiment or EPU index value. A buy or sell signal is generated only when this condition is met; otherwise, no signal is triggered. This methodology enhances the traditional SMA by incorporating additional market information, rather than relying solely on historical price data. As a result, the modified rules offer improved explanatory power and impose better constraints, reducing the likelihood of losses. For further details, refer to Appendix (Table A1, Figure A1, Figure A2).

2.3 Performance Measures

The annual mean return r_{am} for each rule is calculated based on the total number of holding days and the summation of all returns for that specific rule over the entire period. The formula for r_{am} is:

$$r_{am} = \frac{1}{t} * (r_t) * 365 \quad (5)$$

where r_t represents the total return for the rule after accounting for transaction costs and risk-free costs, t is the total number of holding days, and 365 represents the number of trading days in a year. The total return r_t is calculated as:

$$r_t = \frac{\Sigma \left((SP - BP) - TC - R_f \right)}{BP} \quad (6)$$

Where:

- SP and BP represent the selling price and buying price, respectively.
- TC is total transaction cost, calculated as 0.5% of each transaction value (buying or selling), as per Lintilhac and Tourin (2017) and Hudson and Urquhart (2021).
- R_f is risk free rate, computed as the summation of daily interest rates for the trading period plus the first-day interest rate applied to the buying price.

This methodology incorporates all relevant costs, ensuring an accurate calculation of returns for each rule over the specified period.

3. Results and discussions

Table 1 presents the descriptive statistics of the cryptocurrencies along with the Sentiment index and EPU. Table 1 provides the market capitalization, along with their respective sample

periods which vary due to differences in historical data availability. Bitcoin records the highest average price ($12,889.07) but also exhibits substantial volatility, as indicated by its standard deviation ($16,739.52) and maximum price ($67,566.83). In contrast, Tether, a stable coin, shows minimal price fluctuation, with a standard deviation of just 0.006.

Table 2 provides a comparative analysis of the highest annual mean returns for five major cryptocurrencies across various trading strategies. These include the Buy and Hold (BH) strategy, SMA without sentiment and EPU indexes, SMA with the Sentiment Index, SMA with the EPU Index, and SMA incorporating both indexes. The results reveal that SMA strategies, particularly those integrating sentiment and EPU indexes, generally achieve higher annual mean returns compared to the BH strategy, underscoring the advantages of active trading approaches over passive investment strategies.

The BH strategy, serving as a baseline, provides modest returns for Bitcoin (8.21%), Ethereum (0.48%), Binance (22.31%) and Solana (15.34%) while underperforming for Tether (-0.0185%). SMA strategies without sentiment and EPU indexes achieve consistently higher returns across cryptocurrencies, particularly for Solana (55.23%) and Bitcoin (13.09%), emphasizing the utility of technical trading rules over passive investment approaches. When sentiment or EPU indexes are incorporated, the results indicate that market conditions significantly impact performance. For Bitcoin and Tether, SMA strategies yield the highest returns under low sentiment and EPU conditions, suggesting these assets perform better during periods of subdued investor sentiment and economic uncertainty. In contrast, Solana and Binance achieve their highest returns under high sentiment and EPU conditions, with Solana reaching an annual mean return of 64.52% under high sentiment and 58.78% under high EPU conditions. Ethereum shows mixed results, benefiting from both high and low sentiment and EPU conditions depending on the specific configuration.

Table 3 delves deeper by examining the highest annual mean returns achieved under 200-day rolling **tercile-based** conditions. The tercile approach divides index values into three categories—low (below 33.33%), medium (33.33% to 66.67%), and high (above 66.67%)—offering a more granular understanding of how market sentiment and economic uncertainty influence cryptocurrency performance.

The results in Table 3 further corroborate the effectiveness of integrating sentiment and EPU indexes into SMA strategies. SMA without sentiment or EPU indexes generally outperforms the Buy and Hold (BH) strategy, but the incorporation of tercile sentiment and EPU values enhances returns for most cryptocurrencies under specific conditions. For Bitcoin and Tether, the highest returns occur under low sentiment and EPU conditions, aligning with the findings in Table 2. For instance, Bitcoin achieves an 11.51% return under low sentiment (below the 33.33% tertile) when buy and sell signals are triggered.

In contrast, Ethereum, Binance, and Solana demonstrate superior performance when sentiment or EPU index values are high. Solana achieves an exceptional annual mean return of 168.15% when both sentiment and EPU values are in the upper tercile (above 66.67%), reinforcing its sensitivity to favorable market conditions. Ethereum also benefits significantly, achieving its highest return (15.31%) under high tercile sentiment and EPU conditions. The values in parentheses provide additional context, representing returns when conditions are contrary (e.g., "not low" for low sentiment). These comparisons highlight the impact of index thresholds on strategy outcomes, emphasizing the added explanatory power of sentiment and EPU measures.

Table 4 has information of overall highest return of the Buy and Hold strategy (BH), SMA strategy, SMA strategy with index (sentiment or EPU or both) values along with the trading

days. It can be observed that trading days are considerably reduced except Solana because of additional constraint introduced in the form of useful information about the environment which in turn increased the return. To check the robustness, trading costs and money market rates (risk-free rates) are considered which affects the profits of the technical trading rules like Bley and Saad (2020).

Table 1: Descriptive statistics for all top five cryptocurrencies for the testing period

	Sample Period	Market Cap (in billion)	Obs	Mean	S. E	SD	Median	Min	Max
BTC	01/01/2015 - 6/30/2022	1,124.00	2738	12889.070	319.909	16739.52	6788.58	178.103	67566.83
ETH	11/09/2017 - 6/30/2022	351.69	1695	1099.738	30.242	1245.07	423.669	84.308	4812.087
Tether	11/09/2017 - 6/30/2022	110.45	1695	1.002	0.000	0.006	1.001	0.967	1.078
BNB	11/09/2017 - 6/30/2022	80.50	1695	132.502	4.537	186.802	21.871	1.510	675.684
SOL	04/10/2020 - 6/30/2022	55.36	812	56.094	2.326	66.294	31.231	0.515	258.934
Sentiment	01/01/2015 - 6/30/2022	-	2738	0.179	0.011	0.567	0.001	-0.368	2.083
EPU	01/01/2015 - 6/30/2022	-	2738	128.962	2.000	104.661	97.735	3.320	861.1

Table 2: Highest SMA annual mean returns of different markets (with and without median sentiment/EPU index values)

Type of strategy		Trade signal to		Bitcoin	Ethereum	Tether	Binance	Solana
		Buy	Sell					
Buy and Hold strategy		_		8.21	0.48	-0.0185	22.31	15.34
Applied Technical Trading Strategy Simple moving average (SMA)	without EPU and sentiment	_		13.09	9.02	-0.013	16.28	55.23
	With Sentiment index	Low[a]		15.16	8.57	0.044	18.18	15.36
		High[b]		5.52	9.02	-0.045	20.34	64.52
			Low	6.98	6.50	-0.011	8.69	44.51
			High	9.33	8.24	0.014	11.29	64.52
		Low	Low	11.51	6.81	0.004	21.06	15.36
		High	High	9.33	9.02	-0.031	20.34	64.52
	With EPU index	Low		6.44	3.99	0.013	42.56	40.98
		High		10.29	8.68	0.014	13.76	58.78
			Low	9.70	6.98	0.019	9.90	47.05
			High	8.48	8.38	0.014	11.14	51.12
		Low	Low	7.17	5.59	0.013	42.56	47.96
		High	High	8.89	8.56	0.014	15.19	51.12
	with Sentiment & EPU index	Low		6.44	7.27	0.013	0.95	10.85
		High		5.72	9.44	-0.044	14.87	65.53
			Low	6.31	6.99	-0.009	14.27	39.61
			High	8.86	8.38	0.014	13.50	51.12
		Low	Low	7.92	5.19	0.005	26.07	14.23
		High	High	8.95	10.55	-0.029	14.30	51.12

Note: [a] Low when the current (on buy or sell or both signal generating period) sentiment index value is less than 200 day median sentiment index value or when the current EPU index value is less than the 200-day median EPU value; [b] High – similar to Low, the current index value will be greater than the 200 median value.; All values represent the annual mean return of the highest return under the specified condition/rule (SMA considered with or without sentiment index value and EPU value) of five cryptocurrencies. The 200-day rolling median values of sentiment and EPU index value are used at traditional SMA buying or selling (or at both) points. 365 days is used for calculation purpose since cryptocurrencies traded throughout year unlike stock market (stock market has holidays in a year and not traded on weekends). All annual mean return mentioned returns are risk-free adjusted as well as after considering transaction cost for each transaction.

Table 3: Highest SMA annual mean returns of different markets (with and without tercile sentiment/EPU index values)

Type of strategy		Trade signal to		Bitcoin	Ethereum	Tether	Binance	Solana
		Buy	Sell					
Buy and Hold strategy		_		8.21	0.48	-0.018	22.31	15.34
Applied Technical Trading strategy Simple moving average	without EPU and sentiment	_		13.09	9.02	-0.013	16.28	55.23
	With Sentiment index	Low[a]		15.16	8.57	0.0436	18.18	15.36
				(5.49)	(9.02)	(-0.0445)	(20.34)	(60.25)
		High[b]		5.49	9.02	-0.0445	20.34	66.8
				(13.91)	(8.57)	(0.0436)	(18.18)	(15.36)
			Low	6.98	6.5	-0.011	8.69	44.51
				(9.07)	(8.24)	(0.0135)	(11.59)	(51.76)
			High	8.38	8.24	0.0135	10.51	66.8
				(7.16)	(7.29)	(-0.011)	(10.1)	(50.66)
		Low	Low	11.51	6.81	0.0044	21.06	15.36
				(9.33)	(9.02)	(-0.0282)	(20.34)	(59.89)
		High	High	4.96	9.02	-0.0234	20.34	66.79
				(11.31)	(7.8)	(0.0044)	(20.87)	(18.82)
	With EPU index	Low*		6.44	4.01	0.0176	49.25	45.24
				(9.74)	(8.68)	(0.0135)	(13.76)	(57.14)
		High**		11.38	9.44	-0.0445	12.6	45.4
				(5.44)	(4.22)	(0.0436)	(42.56)	(57.92)
			Low	9.7	6.98	-0.0017	9.19	46.85
				(8.5)	(8.4)	(0.0135)	(11.33)	(51.12)
			High	8.09	8.36	0.0135	16.89	163.61
				(9.74)	(8.53)	(0.0069)	(9.9)	(51.12)
		Low	Low	9.52	7.11	0.0176	49.25	45.83
				(8.5)	(8.56)	(0.0135)	(13.76)	(51.12)

	High	High	8.94	13.09	-0.0383	18.05	143.43
			(8.06)	(6.98)	(-0.5454)	(42.56)	(51.23)
With Sentiment & EPU index	Low*		6.44	7.27	0.0176	3.59	6.92
			(6.34)	(9.44)	(-0.0445)	(11.17)	(61.53)
	High**		5.89	9.44	-0.0441	18.93	47.28
			(6.76)	(6.91)	(0.0436)	(23.83)	(15.36)
		Low	6.28	7.72	-0.0072	20.85	57.84
			(8.86)	(8.4)	(0.0135)	(10.95)	(51.12)
		High	8.63	8.24	0.0135	12.48	164.48
			(6.6)	(6.71)	(-0.0107)	(10.29)	(55.97)
	Low	Low	8.4	7.19	0.0053	31.91	18.27
			(8.86)	(10.23)	(-0.0224)	(10.55)	(51.12)
	High	High	8.94	15.31	-0.0251	14.45	168.15
			(8.12)	(8.78)	(0.0035)	(25.02)	(19.27)

Note: [a] Low when the current (on buy or sell or both signal generating period) sentiment index value is less than 200 day lowest tercile cut-off (1/3 value) sentiment index value i.e., if the current value lies in the lowest tertile/tercile or when the current EPU index value is less than the 200 day lowest tertile EPU value; [b] High – similar to Low, the current index value will be greater than the 200 upper tercile/tertile value. All values represent the annual mean return of the highest return under the specified condition/rule (SMA considered with or without sentiment index value and EPU value) of five cryptocurrencies. The 200-day rolling tertile values of sentiment and EPU index value are used at traditional SMA buying or selling (or at both) points. 365 days is used for calculation purposes since cryptocurrencies traded throughout year unlike stock market (stock market has holidays in a year and not traded on weekends). All annual mean returns are risk-free rate adjusted and account for transaction costs. Returns are annualized using 365 days to reflect the continuous trading nature of cryptocurrencies. Values in parentheses represent returns under "not Low" or "not High" conditions (i.e., index values outside the specified tercile).

Table 4: Highest overall return with return and trading days in each category

	Strategy	Rule	Return	Number of Trading days
Bitcoin	Buy and Hold	-	8.21	2738
	SMA	100,1,2	13.09	1379
	SMA (considering sentiment/EPU/both index)	150,0,2	15.16	847
Ethereum	Buy and Hold	-	0.48	1695
	SMA	250,1,4	9.02	626
	SMA (considering sentiment/EPU/both index)	2,5,3	15.32	574
Tether	Buy and Hold	-	-0.0185	1695
	SMA	5,0.5,5	-0.0129	149
	SMA (considering sentiment/EPU/both index)	20,0.5,3	0.0440	54
Binance	Buy and Hold	-	2.31	1695
	SMA	100,0,2	16.28	427
	SMA (considering sentiment/EPU/both index)	15,5,4	49.25	54
Solana	Buy and Hold	-	15.34	812
	SMA	200,0,0	55.23	471
	SMA (considering sentiment/EPU/both index)	2,5,5	168.15	585

Note: Table 4 represents the highest overall annual mean return under each strategy (Buy and hold, SMA, SMA with sentiment or EPU index or both index value consideration). The number of trading days indicates the sum of total number of holding days for all the transactions for that rule during the entire sample period. For SMA and SMA (considering sentiment/EPU/both index), the rule is given in the format q,x,d – where q is moving average days, x is percentage increase scenario and d number of days the price should remain.

4. Conclusion

The profitability of technical trading rules in this case simple moving average was applied with additional information about the environment (additional information in the form investor sentiment index and EPU index values) to top five cryptocurrencies (based on their market capitalization). The results are promising and returns of SMA are better in four out of five cryptocurrencies except Binance, but the highest returns in all five cryptocurrencies are better when SMA is applied with either investor sentiment index or EPU index values or both. Our study supports the already existing literature implying that the technical trading rules will yield profits when applied to cryptocurrencies (Grobys et.al, 2020; Corbet et al, 2019). In addition, from our study it can be observed that the profit will be better than traditional technical trading rules if additional market/environment information incorporated in technical trading rules. When additional information is added to existing technical trading rules makes the rule more adaptive and dynamic. Our study doesn't include dynamic general equilibrium asset-pricing model to examine the risks associated with these rules (Lo et.al 2000). In the future, the information about the current scenario can be added in some other forms like pandemic situation or some other conditions which can reflect the economic situation/environment better.

Appendix

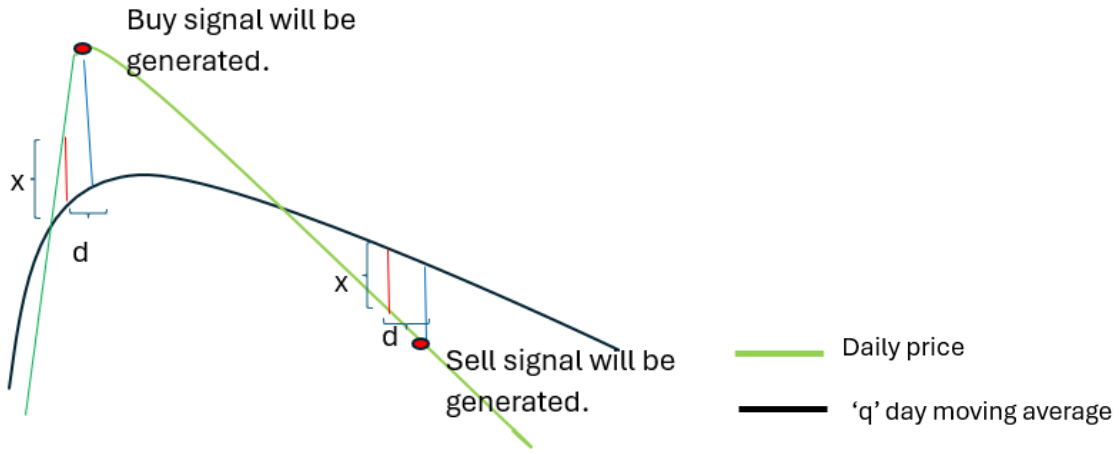

Figure 1: Simple moving average trading rule

Figure 1 represents SMA trading rule. The buy signal will be generated if the daily price increases more than 'x' percentage over the 'q' day moving average and stays above for 'd' days. For example, if the rule is 20,5,5 (q,x,d) then daily price should be 5% above 20 day moving average for 5 days.

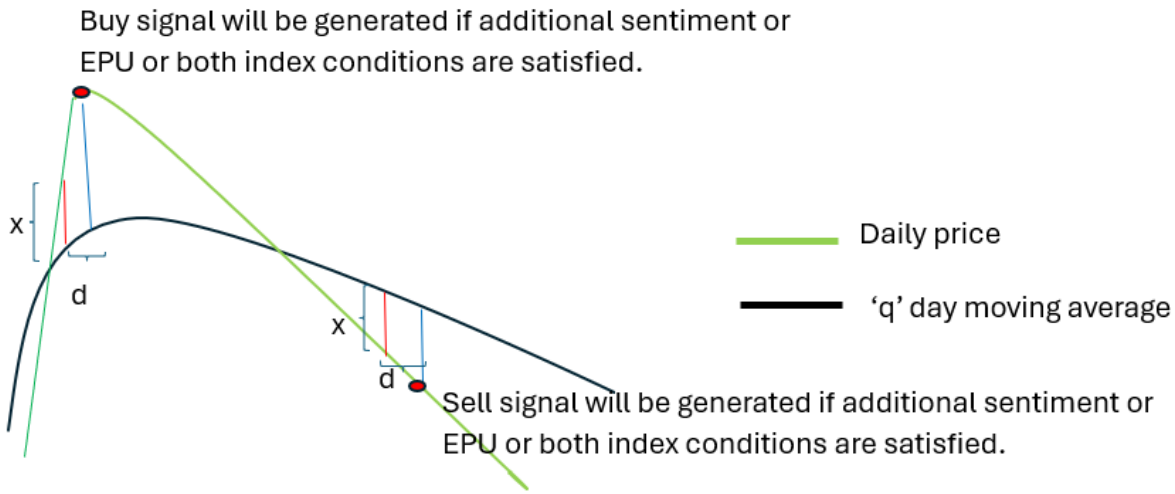

Figure 2: Simple moving average trading rule with sentiment or EPU or both index value consideration

Figure to shows in SMA trading rule, sentiment or EPU or both index value is considered while generating buy/sell or both signals. For example, if the given condition both sentiment and EPU index value should be high at both buy and sell signal applied to above stated SMA rule (20,5,5) then buy signal will be generated if daily sentiment index value is greater than 200-day median (lies in upper tertile if tercile is considered) sentiment value as well as daily EPU value also greater than its 200-day median (in upper tertile if tercile is considered) in addition to satisfying actual SMA rule (daily price should be 5% above 20 day moving average for 5 days).

Table A1. Different cases formed based on median value of sentiment and EPU index values

	Buying point / crossover		*Selling point / Crossover*		
	Sentiment Index	EPU index	Sentiment Index	EPU index	comments
Low	<				only Sentiment index indicator is applied only at buying point (current sentiment value should be lower than the 200-day median value of sentiment index)
High	>=				only Sentiment index indicator is applied only at buying point (current sentiment value should be higher than the 200-day median value of sentiment index) – similarly other cases are formed below
Low			<		only Sentiment index indicator is applied only at selling point
High			>=		
Low	<		<		only Sentiment index value is applied at both buying and selling point
High	>=		>=		
Low		<			only EPU index value is applied only at buying point
High		>=			
Low				<	only EPU index value is applied only at selling point
High				>=	
Low		<		<	only EPU index value is applied at both buying and selling point
High		>=		>=	
Low	<	<			both Sentiment and EPU index value at only buying point
High	>=	>=			
Low			<	<	both Sentiment and EPU index value at only selling point
High			>=	>=	
Low	<	<	<	<	both Sentiment and EPU index value at both buying and selling point
High	>=	>=	>=	>=	

Note: The median value of sentiment index and EPU index over the period (January 1985 to December, 2014) is 0.136 and 85.11. If the value is below the median, then it is considered as low and if the value is above or equal to the median value then it is considered high. Similarly, terciles will be used to form different cases and then it will be combined with SMA. In terciles cases, the value below 33.33% (lowest tertile) is considered as low and value above 66.67% (Upper tertile) are considered as high. In case for 'not low' the values will be above lowest tertile and 'not high' condition the values should be less than upper tertile.

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THE FACTORS AFFECTING BRAND LOYALTY OF CONSUMER ELECTRONICS PRODUCTS IN THE COMPUTER COMMUNICATION CATEGORY IN CHENGDU, SICHUAN PROVINCE, CHINA

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Abstract

This article aims to 1) To study the level of consumer opinions in Chengdu, Sichuan Province, China on information factors and access to information, purchase intention, marketing mix, reliability, and brand loyalty of electronic products in the computer and communication group. 2) To study the influence of information factors and access to information, purchase intention, marketing mix, and reliability on brand loyalty of electronic products in the computer and communication group of consumers in Chengdu, Sichuan Province, China. 3) To propose guidelines for developing the market for electronic products in the computer and communication group that meet the needs of consumers in Chengdu, Sichuan Province, China. The research instruments were questionnaires and interview forms. The sample group of 400 consumers of electronic products in the category of computer communication devices, including PCs, laptops, smartphones, and tablets in Chengdu and employees of a company selling electronic products in the category of computer communication devices in Chengdu, Sichuan Province, China. Twenty key informants of electronic products in the category of computer communication devices in Chengdu, Sichuan Province, China who had purchased the products at least twice in the past 6 months. The sampling method was non-probability, convenience sampling, and purposive sampling. The results of the electronic products in the category of computer communication devices entrepreneurs in Chengdu, Sichuan Province, China assess market demand and consumption trends, which are useful for planning and forecasting in the future, as well as finding ways to expand the business, improving and developing electronic products in the category of computer communication devices to expand and grow, creating stability for businesses related to electronic products in the category of computer communication devices, and helping government policymakers understand the current situation and future trends. Accurate and complete information will help make policy decisions more effective and practicable, both for policy development and policy promotion of electronic products in the category of computer communication devices, as well as help understand consumer behavior and lead to the development and improvement of existing theories in marketing, management, and behavioral economics. Those who are interested in studying the knowledge of factors that influence brand loyalty of consumers in electronic products such as computer equipment and communication devices can use the research results for research and as reference information.

Keywords: *Brand Loyalty, Consumer, Electronics Products, Computer Communication Category*

1. Introduction

The consumer electronics industry, particularly the computer communication category, has seen rapid growth in recent years, driven by technological advancements, evolving consumer preferences, and increasing disposable incomes. In China, one of the largest and fastest-growing markets for consumer electronics, the city of Chengdu in Sichuan Province has

emerged as a critical hub for both local and international brands. As the purchasing power of consumers in Chengdu continues to rise, understanding the factors that influence brand loyalty in the computer communication sector is essential for companies seeking to maintain a competitive edge in this highly dynamic market (Zhou et al., 2019).

Brand loyalty is a critical element in the consumer electronics industry, where customers have a wide variety of options to choose from. With numerous brands competing in the marketplace, understanding the drivers behind consumers' long-term attachment to a brand can provide valuable insights for manufacturers and marketers. These insights not only allow businesses to refine their products and services but also enable them to develop marketing strategies that enhance customer retention and foster stronger relationships with their consumers (Aaker, 1996; Oliver, 1999).

Previous studies on brand loyalty have identified several key factors, including product quality, customer satisfaction, emotional connection with the brand, social influence, and perceived value (Oliver, 1999; Aaker, 1996). In the context of the computer communication category, these factors are particularly relevant as consumers often seek products that offer reliability, technological innovation, and brand prestige. Additionally, in regions such as Chengdu, where consumers are becoming increasingly sophisticated and exposed to global technological trends, understanding the local market's specific preferences and influences becomes even more crucial (Li & Wang, 2016; Zhou & Liu, 2018).

This research aims to explore the factors affecting brand loyalty among consumers of computer communication products in Chengdu, Sichuan Province. By examining the relationship between various factors such as product quality, customer satisfaction, emotional attachment, and social influences, this study seeks to provide valuable insights for manufacturers and marketers in developing effective strategies to enhance brand loyalty in this competitive market. Ultimately, the findings of this research will contribute to the understanding of consumer behavior in the context of the rapidly growing Chinese electronics market and offer actionable recommendations for businesses aiming to strengthen their brand loyalty and achieve long-term success in Chengdu and beyond.

2. *Literature review*

2.1 Brand Loyalty in the Electronic Product Market

Brand loyalty is a central concept in consumer behavior, reflecting a consumer's predisposition to consistently purchase a particular brand over time (Aaker, 1996; Chaudhuri & Holbrook, 2001). In the context of electronic products, brand loyalty has been influenced by a variety of factors, including product quality, price perception, brand trust, and satisfaction. Research by Oliver (1999) emphasizes that brand loyalty is shaped not only by the satisfaction derived from the product itself but also by the emotional connection that consumers form with the brand. Consumers in China, particularly in cities like Chengdu, exhibit strong loyalty toward foreign brands such as Apple, Samsung, and Huawei due to the perceived higher quality, technological innovation, and status associated with these brands (Zhang & Liu, 2018).

2.2 The Role of Information Factors and Access to Information

Information factors, such as access to product information and consumer knowledge, are crucial in shaping purchasing decisions. Elliott & Boulton (2008) argue that access to reliable and comprehensive information allows consumers to make informed choices, reducing perceived risks and enhancing trust in the product. In the digital age, the role of online reviews, social media platforms, and influencer marketing has become increasingly important in shaping

consumer perceptions (Zhou et al., 2019). For example, social media platforms such as Weibo and TikTok serve as significant sources of information for Chinese consumers, influencing their purchasing decisions and brand loyalty (Zhao & Liu, 2018). This is particularly relevant in Chengdu, where consumers are increasingly using digital platforms to access information and compare products before making purchasing decisions.

2.3 Purchase Intention and Consumer Behavior

Purchase intention is a strong predictor of actual buying behavior, and understanding the factors that influence purchase intention is essential for marketers. According to Ajzen's (1991) Theory of Planned Behavior, attitudes, subjective norms, and perceived behavioral control all contribute to the formation of purchase intentions. In the context of electronic products, research has shown that brand trust and perceived product quality are key drivers of consumers' intention to buy. Studies by Lee & Lee (2018) found that consumers in China, particularly the younger generation, are highly influenced by brand reputation and the status associated with owning a premium product. As technology continues to improve, the perceived usefulness and innovation of products further enhance purchase intentions (Venkatesh & Davis, 2000).

2.4 Marketing Mix (4Ps) in Consumer Electronics

The marketing mix Product, Price, Place, and Promotion remains a vital framework for understanding consumer behavior, especially in the competitive consumer electronics market. Kotler & Armstrong (2016) argue that an effective marketing strategy must integrate these four elements to appeal to consumer needs and preferences.

Product: In the electronics market, product innovation and quality are crucial in attracting consumers. Brands like Apple and Samsung focus on technological advancements, premium designs, and offering unique features that set them apart from competitors (Chevalier & Gutsatz, 2017).

Price: Pricing strategies in the electronic product market often reflect the perceived value of the brand. Premium pricing is often associated with foreign brands like Apple and Samsung, which are perceived as high-end products. Consumers in Chengdu have shown a willingness to pay a higher price for products they perceive as offering superior quality and prestige (Chevalier & Gutsatz, 2017).

Place: The distribution strategy is critical in ensuring product availability. With the rapid expansion of e-commerce platforms, online shopping has become a preferred channel for consumers in Chengdu. A multi-channel distribution approach that includes both physical retail stores and online platforms like Tmall and JD.com is vital in reaching a larger consumer base (Zhou et al., 2019).

Promotion: Promotional activities such as advertising, celebrity endorsements, and social media campaigns are key to driving consumer interest and reinforcing brand loyalty. Influencer marketing on platforms like Weibo and TikTok has become an effective way for brands to reach younger consumers and build long-term loyalty (Liu & Zhang, 2019).

2.5 Reliability and Trust in Electronic Products

Reliability and trust are essential factors that contribute to the development of brand loyalty. Reliability refers to the consistency of the product’s performance over time, while trust relates to the consumer’s belief in the brand's integrity and quality assurance (Chaudhuri &

Holbrook, 2001). Foreign brands like Apple and Samsung are often associated with high reliability due to their consistent product performance and customer service (Zhou et al., 2019). Consumers in Chengdu, particularly those who have had positive experiences with these brands, often express a high level of trust, which further reinforces their brand loyalty. Brand trust is often linked to product reliability, leading to repeat purchases and long-term customer relationships (Chaudhuri & Holbrook, 2001).

2.6 Consumer Behavior in Chengdu and Sichuan Province

Consumer behavior in Chengdu, Sichuan Province, is shaped by the region's unique socio-economic factors. As one of the rapidly developing regions in China, Chengdu's growing middle class is increasingly demanding high-quality consumer electronics. Liang & Xu (2018) emphasize that consumers in Chengdu are more willing to invest in premium foreign-brand products due to the region's economic development and increasing exposure to global trends. Moreover, Zhang & Liu (2018) highlight that the younger demographic in Chengdu is particularly influenced by global brands and is more inclined toward technological innovation and cutting-edge features.

3. Methodology

The research instruments were questionnaires and interview forms. The sample group of 400 consumers of electronic products in the category of computer communication devices, including PCs, laptops, smartphones, and tablets in Chengdu and employees of a company selling electronic products in the category of computer communication devices in Chengdu, Sichuan Province, China. Twenty key informants of electronic products in the category of computer communication devices in Chengdu, Sichuan Province, China who had purchased the products at least twice in the past 6 months. The sampling method was non-probability, convenience sampling, and purposive sampling.

3.1. Theoretical framework

This theoretical framework integrates several prominent theories in consumer behavior, marketing, and psychology to explain the complex dynamics behind brand loyalty in the consumer electronics market in Chengdu, Sichuan Province, China. It emphasizes the importance of cultural, social, psychological, and marketing mix factors in shaping consumer behavior and brand loyalty. By understanding these factors, businesses can better cater to consumer needs, refine their marketing strategies, and ultimately build stronger, long-lasting relationships with their customers in this competitive market. in Figure 1.

3.2 Conceptual framework

The conceptual framework for this study is designed to explore the key factors influencing brand loyalty in the consumer electronics market in Chengdu, Sichuan Province, China, specifically focusing on the computer and communication devices category, which includes products like smartphones, tablets, PCs, and laptops. Based on the literature review and relevant theories, the framework integrates various factors such as information factors, purchase intention, marketing mix components, and reliability to understand how they affect brand loyalty. in Figure 1.

3.3 Instrumentation

The research on the factors affecting brand loyalty of consumer electronics products in the computer and communication category in Chengdu, Sichuan Province, China, used multiple research instruments to collect both quantitative and qualitative data. These instruments were designed to capture a comprehensive understanding of consumer behavior, particularly

regarding information factors, purchase intention, marketing mix elements, reliability, and brand loyalty. The instruments used in this study included questionnaires, interview guides, and observation protocols.

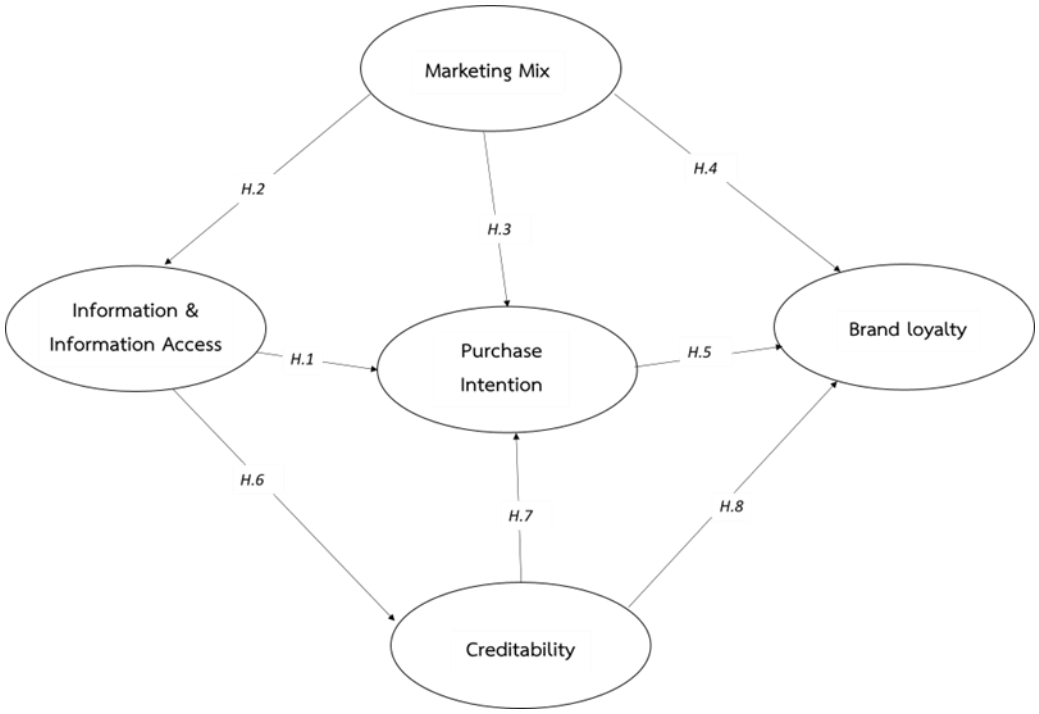

Figure 1. Conceptual framework
(Zhe Wang, 2025)

4. Results and discussions

Quantitative Research Findings

The findings from the quantitative research provide valuable insights into the factors influencing the brand loyalty of consumer electronics products in the computer and communication category in Chengdu, Sichuan Province, China. The survey data from 400 consumers who have purchased smartphones, laptops, PCs, and tablets were analyzed to examine the impact of various factors, including information factors, purchase intention, marketing mix elements, reliability, and brand loyalty.

1. Emotional Factors: The emotional factors, including social status, brand prestige, and self-expression, were found to be significant drivers of purchasing decisions. Consumers in Chengdu reported a high level of emotional attachment to foreign-brand products like Apple and Samsung. The average score of 4.12 indicates that emotional factors play a central role in shaping consumers' brand loyalty. The desire for social recognition and prestige from owning high-end foreign-brand electronics was evident. This finding aligns with Hofstede's (2001) theory on the importance of status and face-saving in collectivist cultures, where purchasing foreign brands serves not only functional purposes but also acts as a means to project social identity and success. This result suggests that foreign-brand electronics, particularly Apple and Samsung, are not only seen as functional tools but as symbols of status and prestige. The brand's emotional appeal is crucial for fostering brand loyalty, as it reinforces consumers' social standing and personal identity.

2. Social Influences: Family recommendations, peer suggestions, and influence from social media were also important factors. Consumers in Chengdu reported that recommendations from family members and friends had a significant impact on their purchasing decisions. The average score of 3.98 reflects the role of social networks and social media influencers in shaping consumer choices. The high score for social influences indicates the strong role of collectivism in China's consumer behavior. The Theory of Planned Behavior (Ajzen, 1991) supports this, as subjective norms (the influence of family and peers) strongly affect purchase intention and loyalty. The findings also underline the importance of influencers in the decision-making process, with consumers increasingly turning to social media platforms like Weibo and TikTok for product recommendations.

3. Psychological Factors: Psychological factors, such as self-esteem, social recognition, and self-expression, also have a considerable effect on purchasing decisions. The average score of 3.85 reflects that consumers view foreign-brand products as a way to boost their social status and express their identity. These findings align with Maslow's Hierarchy of Needs (1943), where consumers prioritize social acceptance and self-esteem over basic product functionality. The psychological satisfaction derived from owning high-end electronics, which are associated with prestige, is a strong motivator for purchase and loyalty. This also corroborates Chaudhuri & Holbrook's (2001) research on the relationship between self-esteem and brand loyalty.

4. Product Quality: Product quality, including design, technology, and innovation, was rated as the most important factor influencing purchase decisions, with an average score of 4.23. Consumers in Chengdu highly value the technological innovation and superior quality offered by brands like Apple and Samsung. The emphasis on product quality supports the Brand Equity Theory (Aaker, 1996), which states that consumers associate strong brands with superior quality and innovation. Apple and Samsung are perceived as industry leaders, and their ability to consistently introduce cutting-edge technology reinforces their premium positioning. As consumers in Chengdu are highly value-conscious, the perceived superior quality of foreign brands significantly drives purchase intention and brand loyalty.

5. Price: Consumers in Chengdu reported being willing to pay a premium price for foreign-brand products, with an average score of 3.78. This suggests that while price remains an important factor, consumers associate the higher price with better quality and social status. This finding supports the idea that premium pricing is a key part of the brand positioning strategy for foreign electronics brands (Chevalier & Gutsatz, 2017). Apple and Samsung leverage their premium pricing to reinforce perceptions of quality and status. The willingness to pay higher prices reflects the value consumers place on quality, reliability, and social standing.

6. Distribution Channels: The availability of foreign-brand products through both offline retail stores and online platforms was also a significant factor influencing purchasing decisions. With an average score of 3.92, it is clear that consumers in Chengdu value the convenience of being able to purchase electronics through multiple channels. The importance of distribution channels aligns with the Marketing Mix (4Ps) framework (Kotler & Armstrong, 2016). The availability of foreign brands via both physical retail outlets and e-commerce platforms enhances consumer accessibility and convenience, which positively impacts purchase decisions and brand loyalty. In Chengdu, where online shopping is becoming increasingly popular, multichannel distribution strategies are essential for reaching a wide range of consumers.

7. Promotion: Promotional activities, including advertising, celebrity endorsements, and social media campaigns, were found to have a moderate influence on purchase decisions, with an average score of 3.65. While not as influential as product quality or social influences, promotion still plays an important role in raising brand awareness and interest. This finding supports the Brand Equity Theory, which emphasizes the role of promotion in strengthening brand recognition and consumer loyalty. Effective promotional campaigns, especially those involving social media influencers, help to maintain consumer interest and build long-term loyalty (Liu & Zhang, 2019).

Qualitative Research Findings

The qualitative research aimed to explore in-depth the factors influencing brand loyalty for consumer electronics products in the computer and communication category in Chengdu, Sichuan Province, China. In total, 20 key informants participated in semi-structured interviews, consisting of regular consumers and industry experts from local electronics retailers. This qualitative research was designed to capture insights into how various emotional, social, psychological, and marketing factors impact consumers' purchase decisions and brand loyalty.

1. Emotional Factors

The interview data strongly indicated that emotional attachment to foreign brands such as Apple, Samsung, and Huawei is a significant driver for consumer loyalty. Many consumers highlighted how purchasing these foreign-brand products allows them to project an image of status and success. This emotional attachment is deeply rooted in the desire for social recognition and prestige, which corresponds with Hofstede's (2001) concept of "face" or social prestige in collectivist societies. This underscores how brand loyalty is tied not just to the functionality of the product, but also its role in enhancing personal identity and social standing.

2. Social Influences

The interviews further revealed that family recommendations, peer influence, and the increasing impact of social media influencers are integral to consumer decision-making in Chengdu. This finding highlights the collectivist nature of Chinese society, where purchasing decisions are significantly influenced by the opinions and experiences of family members and peers. In China, social influence is a powerful factor in shaping brand loyalty, as evidenced by the research of Solomon (2015). Additionally, social media influencers were frequently cited as a source of product recommendations. One participant remarked, "I follow several tech influencers on Weibo and TikTok. Their product reviews made me feel more confident in my decision to buy Apple products."

3. Psychological Factors

Psychological drivers such as self-expression and social acceptance were mentioned by several interviewees as reasons for purchasing foreign brands. Consumers are motivated by the desire to align with global trends and present themselves as modern and cosmopolitan. This psychological factor aligns with Maslow's Hierarchy of Needs (1943), where consumers are not only seeking to satisfy basic needs (such as communication) but also striving for esteem needs a desire to be perceived as successful and connected to global trends. This reinforces how brand loyalty for foreign brands is closely tied to psychological satisfaction.

4. Product Quality and Reliability

Product quality and reliability were frequently highlighted as key factors influencing both the initial purchase decision and brand loyalty. Consumers in Chengdu particularly valued innovation, durability, and performance. This feedback illustrates that product quality is a

primary determinant of brand loyalty. Consumers show strong loyalty when they believe a brand consistently offers reliable, high-quality products that meet their needs. As Apple and Samsung maintain high standards for innovation and durability, they successfully retain loyal customers who value the functional performance of the devices (Chevalier & Gutsatz, 2017).

5. Price Sensitivity

Although the premium pricing strategies of foreign brands are often perceived as expensive, many interviewees expressed a willingness to pay more for a product they consider high-quality and associated with prestige. Consumers' price sensitivity is moderated by the perception that the higher price is a reflection of the premium quality and status associated with the brand. This is consistent with findings in previous studies on premium pricing strategies (Chevalier & Gutsatz, 2017). Apple and Samsung brands continue to maintain strong brand loyalty by justifying their high prices through perceived value and quality.

6. Promotion and Advertising Influence

While promotional activities (e.g., advertisements, celebrity endorsements, and social media campaigns) were mentioned as important, they were not as influential as product quality and social influences. However, promotions that involved celebrity endorsements or social media influencer campaigns were noted as increasing brand awareness and reinforcing brand loyalty. While promotion did not dominate the decision-making process, it played an important role in enhancing brand recognition and emotional connection. The use of celebrity endorsements and social media influencers reinforces brand identity and increases consumer engagement, particularly in the younger demographic (Liu & Zhang, 2019).

5. Conclusion

This research explores the factors influencing brand loyalty for foreign-brand smartphones and tablets in Chengdu, Sichuan Province, China, focusing on emotional, social, psychological, and marketing mix factors. The study finds that brand loyalty is driven not only by product functionality but also by emotional attachment, social status, and personal identity. Social factors such as the desire for recognition and prestige, peer recommendations, family influence, and social media influencers play a significant role in shaping consumer loyalty. Psychological factors, such as self-expression and self-esteem, are key drivers of long-term brand attachment. From a marketing perspective, product quality, innovation, and premium pricing strategies significantly impact both purchase decisions and brand loyalty. Additionally, multichannel distribution enhances consumer convenience, further solidifying brand loyalty. The findings offer valuable insights for businesses to develop targeted strategies to engage customers and strengthen their market position in Chengdu and other Chinese markets. This research highlights that building brand loyalty requires more than just offering high-quality products; it involves understanding the emotional and psychological needs of consumers and effectively leveraging social networks and influencers to create strong brand connections.

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THE FACTORS INFLUENCING CONSUMERS' PURCHASE DECISIONS ON FOREIGN-BRAND SMARTPHONES AND TABLETS IN SICHUAN PROVINCE, CHINA

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Abstract

This article aims to 1) To study and analyze the level of cultural factors, social factors, psychological factors, and marketing mix factors that influence consumers' purchasing decisions for foreign-brand smartphones and tablets in Sichuan Province, China. 2) To identify the paths and relationships between cultural factors, social factors, psychological factors, and marketing mix factors that influence consumers' purchasing decisions for foreign-brand smartphones and tablets in Sichuan Province, China. 3) To provide guidelines for manufacturers and entrepreneurs to determine effective marketing strategies and product presentations to increase the chances of consumers' purchasing decisions for foreign-brand smartphones and tablets in Sichuan Province, China. The research instruments were questionnaires and interview forms. The sample group of 500 consumers in Sichuan Province, China who have purchased foreign brand smartphones and tablets at least once in the past year. The key informants were personnel of 20 consumers who have purchased foreign brand smartphones and tablets in the past 6 months and/or distributors of foreign brand smartphones and tablets in Sichuan Province, China. The sampling method was non-probability, convenience sampling and purposive sampling. The results of the manufacturers and entrepreneurs to have a better understanding of the factors that influence the decision to buy foreign brand smartphones and tablets, expand knowledge that is useful both academically and commercially, and integrate knowledge to create marketing strategies that are consistent with consumers. The research will be a source of information for creating and improving effective marketing strategies, creating awareness of the quality and differences of foreign brand smartphones and tablets, expanding marketing opportunities among consumers in Sichuan Province, China, and driving innovation and organizational development to develop and promote the efficiency of appropriate organizational operations that respond to the needs of consumers in Sichuan Province, China, which will create long-term organizational strength and competitiveness.

Keywords: Consumers, Purchase Decisions, Foreign-Brand Smartphones, Tablets

1. Introduction

In recent years, the rapid growth of the smartphone and tablet market has reshaped consumer behavior globally, with foreign brands gaining significant traction. In China, foreign-brand smartphones and tablets, such as Apple, Samsung, and Huawei, have established themselves as premium products due to their perceived high quality, innovative features, and status value. This trend is particularly evident in regions like Sichuan Province, which, despite being an inland province, is experiencing significant economic growth and urbanization. As the purchasing power of consumers in Sichuan continues to increase, so does their demand for high-quality foreign-branded electronics. (Sakara & Alhassan, 2014)

Understanding the factors that influence consumer purchasing decisions is crucial for manufacturers and marketers seeking to capitalize on this growing market. Numerous studies

have pointed to the importance of cultural, social, psychological, and marketing mix factors in shaping consumer behavior. In China, cultural values such as collectivism, family influence, and social status play an integral role in determining brand preference and purchasing decisions. Additionally, social influences from family, friends, and online communities, particularly through social media platforms like Weibo and TikTok, have become powerful forces in guiding consumer choices. (Zhang & Tarndamrong, 2023; Ho, Liu, & Chen, 2022)

Psychologically, consumers are often motivated by the desire for convenience, status, and self-expression, which foreign brands are well-positioned to offer. Furthermore, the marketing strategies employed by foreign brands, including product offerings, pricing, promotional tactics, and distribution channels, significantly impact consumers' perceptions and their purchasing behaviors. These elements must be carefully tailored to meet the needs of the diverse consumer base in Sichuan Province. (Sheng et al., 2019; Shi & Jiang, 2023)

This research aims to explore the factors that influence consumers' decisions to purchase foreign-brand smartphones and tablets in Sichuan Province. By examining cultural, social, psychological, and marketing mix factors, this study seeks to provide valuable insights for manufacturers and marketers, enabling them to develop more effective and targeted strategies. Ultimately, understanding these factors will help businesses improve their market positioning, expand their reach, and enhance customer satisfaction, thereby driving the long-term success of foreign-brand smartphones and tablets in Sichuan and beyond. Through this research, we hope to contribute not only to the academic understanding of consumer behavior in emerging markets but also to provide actionable recommendations for businesses looking to engage with the rapidly growing Chinese technology market.

2. Literature review

2.1 Cultural Factors and Their Influence on Consumer Behavior

Cultural factors are fundamental in shaping consumer behavior and preferences. According to Hofstede's (2001) cultural dimensions theory, culture significantly influences individuals' behavior, perceptions, and decision-making processes. In China, which is characterized by collectivism and respect for social harmony, purchasing decisions are often influenced by family, social groups, and societal expectations. Li and Wang (2016) highlight that Chinese consumers place high importance on social status, which drives the appeal of foreign brands such as Apple and Samsung. These brands are perceived as symbols of prestige and innovation, often associated with high quality and cutting-edge technology.

The concept of "face" (social prestige) also plays a crucial role in Chinese consumer behavior. In this context, owning a foreign-brand smartphone or tablet is not only about fulfilling functional needs but also about enhancing one's social status (Tan & Cheung, 2017). Furthermore, as China's younger population becomes increasingly exposed to global culture, the influence of Western values and the desire to belong to a modern, cosmopolitan group have further reinforced the appeal of foreign-brand products (Chen & Li, 2019).

2.2 Social Influences: Family, Peers, and Media

Social factors, including family, peers, and broader social networks, exert a profound impact on consumer behavior, particularly in collectivist societies like China. Solomon (2015) asserts that in collectivist cultures, social conformity and the desire for acceptance are significant factors influencing consumer decisions. Family and peer recommendations are central to Chinese consumers' choices, with these groups often serving as the primary sources of information and influence.

Moreover, the rapid expansion of social media platforms such as Weibo, WeChat, and TikTok in China has amplified the role of social influences on purchasing decisions. Consumers, especially younger demographics, are increasingly exposed to product endorsements and recommendations from social media influencers and key opinion leaders (KOLs), further shaping their attitudes toward foreign brands (Zhao & Liu, 2018). This dynamic demonstrates how social networks and online influencers are essential in guiding purchasing behavior in the Chinese market.

2.3 Psychological Factors: Motivation, Perception, and Brand Loyalty

Psychological factors such as motivation, perception, and brand loyalty significantly influence consumer decision-making processes. Maslow's hierarchy of needs (1943) suggests that consumers prioritize fulfilling basic physiological needs before pursuing higher-order needs such as social acceptance and self-esteem. Smartphones and tablets, which have become essential tools for communication, entertainment, and work, not only fulfill basic needs but also serve as symbols of social status and self-expression (Lee & Lee, 2018).

The concept of brand loyalty is particularly relevant in the context of foreign-brand smartphones and tablets. Research by Chaudhuri and Holbrook (2001) shows that consumers tend to develop emotional attachment and trust toward brands they perceive as high-quality, reliable, and consistent. This is evident in China, where foreign brands like Apple have established a loyal customer base due to their perceived superior quality and innovation (Zhou et al., 2019). The psychological need for trust, combined with the desire for status, motivates consumers to repeatedly choose foreign brands over local alternatives.

2.4 Marketing Mix (4Ps) and Its Impact on Purchasing Decisions

The marketing mix, encompassing Product, Price, Place, and Promotion, plays a critical role in influencing consumer purchasing decisions. Kotler and Armstrong (2016) emphasize that effective marketing strategies must integrate these four elements to satisfy consumer needs and preferences. In the case of foreign-brand smartphones and tablets, each element of the marketing mix significantly influences consumer behavior:

Product: Foreign-brand smartphones and tablets, such as Apple and Samsung, are positioned as high-quality, technologically advanced products. These brands differentiate themselves by offering superior performance, unique features, and innovative designs that meet the needs of Chinese consumers who value cutting-edge technology (Chevalier & Gutsatz, 2017).

Price: The pricing strategies of foreign brands often reflect their premium positioning in the market. High prices are associated with superior quality, and many Chinese consumers view the premium price as a reflection of the brand's status and technological advancements. Price sensitivity, however, remains a significant factor, especially among middle-income consumers (Chevalier & Gutsatz, 2017).

Place: Foreign brands ensure the availability of their products through both physical retail outlets and e-commerce platforms. In China, foreign brands are sold through flagship stores, authorized retailers, and online platforms such as Tmall and JD.com. The accessibility of these products via multiple channels has a direct impact on consumer interest and sales (Zhou et al., 2019).

Promotion: Promotion plays a vital role in driving consumer decisions. Foreign brands use a combination of advertising, celebrity endorsements, and influencer marketing to enhance their visibility and appeal. Digital platforms like WeChat and Weibo are particularly crucial in China for building brand recognition and establishing trust with consumers (Liu & Huang, 2020).

2.5 Consumer Behavior in the Chinese Market

The consumer market in China is rapidly evolving due to the country's economic growth and the increasing adoption of technology. According to Zhang and Liu (2018), Chinese consumers have become more inclined to purchase foreign-brand smartphones and tablets due to their perceived high quality, innovation, and status. As the middle class continues to grow, so does the willingness to invest in high-end foreign products, with foreign brands becoming synonymous with quality and luxury.

The influence of digital marketing, mobile payment systems, and e-commerce platforms has also transformed the way consumers make purchasing decisions. Zhou et al. (2019) argue that the convenience of online shopping and the proliferation of mobile payment options have played a significant role in the rise of foreign-brand smartphone and tablet sales in China. Despite their preference for high-end products, Chinese consumers remain price-sensitive and often seek value for money, especially in the context of domestic competition.

2.6 Sichuan Province Consumer Behavior

Sichuan Province, a rapidly developing region in southwestern China, presents unique characteristics in consumer behavior. As the province's economy grows and urbanization increases, there is a growing demand for high-quality foreign-brand products, including smartphones and tablets. According to the China Consumer Confidence Index (2018), consumers in Sichuan are increasingly adopting foreign-brand products due to rising income levels and greater exposure to global trends.

The younger population in Sichuan, more open to technological advancements and foreign culture, represents a key demographic in driving the demand for foreign-brand smartphones and tablets (Liang & Xu, 2018). The purchasing behavior in this region is also influenced by regional preferences and access to foreign products. While Sichuan consumers have access to a wide range of foreign products through online platforms and brick-and-mortar stores, local factors such as cultural traditions and exposure to foreign brands through media also shape their purchasing decisions.

3. Methodology

The research instruments were questionnaires and interview forms. The sample group of 500 consumers in Sichuan Province, China who have purchased foreign brand smartphones and tablets at least once in the past year. The key informants were personnel of 20 consumers who have purchased foreign brand smartphones and tablets in the past 6 months and/or distributors of foreign brand smartphones and tablets in Sichuan Province, China. The sampling method was non-probability, convenience sampling and purposive sampling.

3.2. Theoretical framework

The theoretical framework for understanding the factors influencing consumers' purchasing decisions in Sichuan Province is rooted in a comprehensive analysis of cultural, social, psychological, and marketing factors. By integrating Hofstede's cultural dimensions, Maslow's hierarchy of needs, the marketing mix model, social influence theory, and consumer decision-making models, this framework offers a holistic view of the complexities involved in consumer behavior. The research will use this framework to explore the interplay between these factors in driving the demand for foreign-brand smartphones and tablets in Sichuan, China, and to provide actionable insights for businesses seeking to engage this consumer market effectively, as illustrated in Figure 1.

3.4 Conceptual framework

This conceptual framework illustrates how the combined effect of cultural, social, psychological, and marketing factors drives consumer behavior and purchasing decisions in Sichuan. It highlights the importance of tailoring marketing strategies to these intertwined factors in order to successfully appeal to Chinese consumers, especially in emerging markets like Sichuan Province. By understanding these factors, businesses can more effectively engage with their target audience, enhance consumer satisfaction, and ultimately succeed in the competitive smartphone and tablet market. in Figure 1.

3.5 Instrumentation

The combination of structured questionnaires and semi-structured interviews offers a comprehensive approach to understanding the factors influencing consumers' purchasing decisions for foreign-brand smartphones and tablets in Sichuan Province, China. The use of both quantitative and qualitative methods allows for a nuanced understanding of consumer behavior, providing valuable insights for marketers and businesses looking to target this dynamic and growing market.

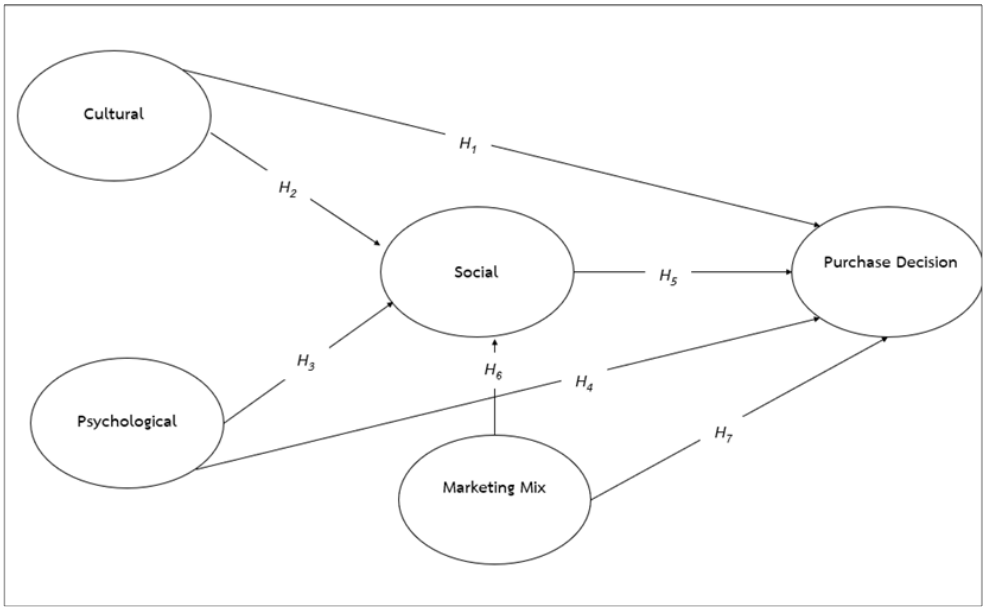

Figure 1. Conceptual framework
(Chen Xian, 2025)

4. Results and discussions

Quantitative Research Findings

The quantitative research findings reveal key insights into the factors that influence consumers' purchasing decisions for foreign-brand smartphones and tablets in Sichuan Province. The results, based on surveys conducted with consumers in the region, emphasize the significance of emotional, social, psychological, and marketing mix factors in shaping consumer behavior.

1. Emotional Factors:

Consumers in Sichuan Province view purchasing foreign-brand smartphones and tablets as an investment in social status and self-expression. The average score ($\bar{x}$ = 4.12) indicates that emotional factors significantly influence purchasing decisions. This aligns with

Hofstede's (2001) study, which emphasizes the importance of status and face-saving in collectivist societies. In such societies, the choice of purchasing foreign brands like Apple and Samsung is seen not only as choosing a product with good functionality but also as an investment in social standing and social acceptance (Liu & Zhang, 2019). Purchasing these brands reflects consumers' identity as members of a successful and sophisticated social group.

2. Social Influences:

Findings from the interviews show that family recommendations, peer suggestions, and social media influencers play a significant role in purchasing decisions. The average score ($\bar{x}$ = 3.98) reflects the strong influence of social factors in shaping purchasing behavior. This supports Solomon's (2015) research, which highlights the significance of social influence in consumer decision-making, particularly in collectivist societies like China, where family and peers are often instrumental in guiding purchase choices. Furthermore, Zhao & Liu (2018) also found that social media influencers play an important role in shaping consumer attitudes and driving purchasing decisions.

3. Psychological Factors:

Consumers in Sichuan Province view foreign brands as a tool for self-expression, particularly when choosing brands that reflect their social status and psychological needs (Maslow, 1943). The decision to purchase brands like Apple or Samsung helps consumers feel socially accepted and successful, aligning with Chaudhuri & Holbrook's (2001) study, which states that self-esteem and the need for self-expression can foster long-term brand attachment.

4. Product Quality:

Product quality, such as design and innovation, was rated as the most significant factor in the purchase decision ($\bar{x}$ = 4.23). This highlights the importance of technology and innovation in adding value to foreign brands like Apple and Samsung, which consistently introduce cutting-edge technology that meets consumer demands (Kotler & Armstrong, 2016). Furthermore, consumers in Sichuan Province place high value on product quality, making it a key driver in their decision to choose foreign brands, which are perceived to offer superior features and performance.

5. Price:

Consumers in Sichuan Province are willing to pay a premium price ($\bar{x}$ = 3.78) for products they perceive as high quality and socially prestigious. This demonstrates the relationship between price and consumer satisfaction in the decision to purchase foreign-brand smartphones and tablets. The premium pricing strategy adopted by brands such as Apple and Samsung aligns with consumer perceptions of these products as symbols of status and quality (Chevalier & Gutsatz, 2017).

6. Distribution Channels:

The availability of foreign-brand products through both offline retail stores and online platforms is a crucial factor in purchasing decisions. The average score ($\bar{x}$ = 3.92) reflects the importance of accessibility in consumers' decision-making processes. As noted by Kotler & Keller (2016), utilizing diverse distribution channels ensures that products are easily accessible to a wide range of consumers, enhancing convenience and driving sales.

7. Promotion:

Promotional activities, such as advertising, celebrity endorsements, and social media campaigns, have a moderate impact on purchasing decisions ($\bar{x}$ = 3.65). While not the most

influential factor, promotions help to raise awareness and generate interest in foreign-brand products. Liu & Zhang (2019) highlighted the effectiveness of influencers in driving consumer interest and confidence, which aligns with the results of this study, where promotional efforts indirectly influence purchasing decisions.

Qualitative Research Findings

The qualitative findings from interviews with consumers and experts in the foreign-brand smartphone and tablet market in Sichuan Province reveal that various factors influence purchasing decisions. These factors are not only emotional and status-driven but also closely related to actual user experiences and product satisfaction.

1. Influence of Social Status and Emotions

The interviews revealed that consumers in Sichuan purchase foreign-brand smartphones and tablets to create social status and self-expression. Some participants mentioned that owning an Apple or Samsung smartphone made them feel modern and part of a successful, sophisticated group. This supports the quantitative findings, where social status was one of the most influential factors. Consumers in this group also expressed pride in owning foreign-brand smartphones or tablets, even though the price of the products is higher. The satisfaction and the perceived social value they gained from the product contributed significantly to their purchasing decision. This aligns with Hofstede's (2001) cultural dimensions theory, which highlights how status and social prestige play a significant role in collectivist societies like China. Similarly, Chen & Li (2019) emphasized that owning foreign-brand products is an important means of showcasing social prestige and modernity in Chinese culture.

2. The Role of Influencers and Recommendations from Friends and Family

Interviews with several consumers highlighted that family recommendations, peer suggestions, and social media influencers play a crucial role in purchasing decisions. Family and friends' recommendations help reduce doubts when choosing products, as consumers feel more confident when supported by trusted individuals. Additionally, social media influencers have a significant role in creating awareness and encouraging purchase decisions. Many respondents mentioned they were inspired by reviews and recommendations from influencers on platforms like Weibo and TikTok, which helped them feel more confident in choosing foreign brands. This is consistent with Solomon's (2015) research, which emphasizes the role of social influences in collectivist cultures, where family and peers have a significant impact on consumer choices. Zhao & Liu (2018) also found that social media influencers play an important role in shaping consumer attitudes and encouraging purchasing decisions in China.

3. Real User Experience and Product Satisfaction

Most interviewees discussed real user experiences as an essential factor in their decision to purchase foreign-brand smartphones and tablets. Consumers who had previously used these products expressed greater satisfaction with the quality and durability compared to those using them for the first time. This qualitative data supports the quantitative finding that product quality is the most influential factor in purchase decisions. Using foreign-brand smartphones and tablets, such as Apple and Samsung, with their distinct designs and modern innovations, led consumers to feel that these brands met both their self-expression needs and practical requirements for daily use. This is aligned with Chaudhuri & Holbrook (2001), who stated that brand loyalty and emotional attachment are often driven by positive user experiences, especially with high-quality, reliable products.

4. Willingness to Pay Premium Prices

When asked about the factors related to price willingness, most consumers said they were willing to pay higher prices for products they perceived as high quality and capable of enhancing their social status. This willingness was especially noticeable among consumers aged 25-35, who view purchasing premium products as an investment in status and social acceptance. This is consistent with Chevalier & Gutsatz (2017), who discussed the premium pricing strategy of foreign brands, explaining that higher prices are often associated with superior quality and exclusivity, which appeals to status-conscious consumers.

5. Conclusion

This study provides significant insights into the factors influencing consumers' purchasing decisions for foreign-brand smartphones and tablets in Sichuan Province, China. The results highlight the pivotal role of emotional and social factors, particularly social status and self-expression, which strongly influence consumer behavior. These factors align with the collectivist nature of Chinese society, where personal identity and social recognition are deeply intertwined with purchasing decisions. Moreover, product quality and technological innovation emerged as key determinants in consumers' decisions to choose foreign brands like Apple and Samsung. The high value placed on premium products reflects the consumers' willingness to invest in brands that offer superior quality and prestige. Additionally, price sensitivity was evident, with consumers in Sichuan willing to pay premium prices for products that convey a sense of luxury and status. The study also emphasized the importance of multi-channel distribution in making these products accessible to consumers both offline and online, enhancing convenience and increasing the likelihood of purchase. Lastly, while promotional activities, including celebrity endorsements and social media campaigns, had a moderate impact, they contributed to the overall awareness and desirability of foreign-brand smartphones and tablets. In conclusion, marketers and manufacturers aiming to succeed in the Sichuan market should focus on building brand prestige, emphasizing product quality and innovation, and leveraging the influence of social media and word-of-mouth recommendations. By understanding the emotional, social, and psychological factors that drive consumer behavior, businesses can develop targeted marketing strategies that resonate with the cultural values and needs of consumers in this region. These insights can help enhance market positioning, increase customer satisfaction, and foster long-term brand loyalty in China's rapidly growing tech market.

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TO BE OR NOT TO BE? IS THE EMERGING STABLECOINS REGIME OF 2025 IN HONG KONG SAR END OF THE PREDICAMENT ON LEGALIZATION AND EFFICIENT REGULATION OF CRYPTO ASSET MARKET

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Abstract

To tap into the potential of crypto markets or to stay aloof is a daunting dilemma many national regulatory authorities face as the underlying distributed ledger technologies (DLT) and multitude of challenges relating to crypto assets continue to evolve. Hong Kong SAR (HKSAR) is no exception, which despite its acclaimed position as one of the world's leading financial centres, has until recently put off its entry into the crypto market by just deliberating the advantages and risk of licensing crypto operations within its territory. However, on 21 May 2025, the efforts have culminated in the successful passing of a pioneering Stablecoins Bill, a comprehensive regulatory framework that is slated to enter into legal force soon. As a regime resulting from various quandary pertaining to policy goals and regulatory standards, calls for a closer scrutiny to determine its potential to achieve a balance between market facilitation and safeguarding stakeholders' interests. The present paper aims to specifically assess the core characteristics of the new Stablecoins licensing regime to determine its scope and potential implications in harmonizing diverse interests. The paper reviews the Hong Kong regime in the light of the international regulatory recommendations as well as comparative legal developments in the US, which also passed its stablecoins regulation recently, soon after Hong Kong. Finally, the paper will delve into the question whether the enactment of the stablecoins regime hold the prospects of ending the related policy and regulatory dilemma governing crypto assets and enhancing the position of Hong Kong SAR as a prominent international and regional centre for crypto assets market.

Keywords: Crypto Assets, Stablecoins, Market Governance, Regulatory Standards, Hong Kong, Comparative Law

1. Introduction

The need for balance between harnessing technology and regulating its use for the benefit and protection of a society, cannot be seen more pronounced than in the case of digital assets market. Unlike various other fields of digital technology applications, services offering digital assets using encryption and distributed ledger technology (DLT) are often perceived as precarious, warranting specific policy and regulatory intervention. In particular, issuing and circulating of private crypto currencies are generally seen as a sensitive endeavour in many

societies due to its ability to emulate and compete with certain restricted functions like those served by sovereign fiat currencies as well as its potential to pose a range of financial or economic risks. Given the apprehension of such risks emanating from private digital assets and its threat of encroachment upon sovereign prerogative of issuing and handling of national currencies, some jurisdictions have issued outright ban on the introduction and circulation of such assets. However, most jurisdictions have not made much official endeavour in undertaking policy or legislative measures, which could be qualified as a 'wait and see' response based on how the technology or the market develops and how other jurisdictions react. In the said context, it is relevant to note that some of the developed countries and markets, which typically react with prompt response to tame into emerging technologies, have shown a cautious approach in actively embracing the wide range of digital assets and crypto currencies. Even if they did not ban the development of digital assets or currencies in their markets, the related policy or legislative response were generally slow to come.

Despite the resolute recommendations from major international institutions like Financial Stability Board (FSB) and Bank of International Settlement (BIS) as early as 2020, calling national authorities to introduce various regulatory, supervisory and oversight measures on crypto assets like stablecoins, concrete national regulatory measures are starting to emerge only now. This lukewarm response could be attributed to various uncertainties and policy dilemmas individual jurisdictions faced, albeit often initiating some studies and public consultations on the matter. Under such circumstances, jurisdictions like Hong Kong SAR and others which strive to excel as leading financial centres in the world were particularly feeling the pressure to react with necessary policy and legislative measures to stay ahead of the equation, but at the same time ensure essential interest stay protected. As a newly emerging field of governance, some of the pertinent early policy and regulatory responses in key jurisdictions tend to be diverse and varied.

International efforts to harmonize national standards and regulations are still scant although the first generation of national regulatory standards often have a common source of inspiration from the recommendations of international institutions like FSB and BIS. Therefore, carrying out self-introspection and comparative law reviews of distinct domestic legislative developments is crucial for individual jurisdictions like Hong Kong to ascertain and maintain stability and leadership of their financial services market. Moreover, international investors and service providers will inevitably seek to assess the comparative regulatory environment governing digital asset markets to determine market entry and investment levels. In such a background, the present paper aims to closely review the newly introduced regulatory mechanism governing a specific type of digital asset in Hong Kong, namely the stablecoins, to determine how it seeks to balance between the perceived benefits and threats. Being a very recent regulatory measure, the Hong Kong Stablecoins Bill introduced in May 2025 and slated to take legal effect in August 2025 prompts the present paper to carry out a close scrutiny and comparative law assessment of the key regulatory standards to identify its strength and weaknesses in providing a balanced market environment.

Firstly, the paper will examine the policy debates in Hong Kong leading up to the introduction of the stablecoins regulatory regime and how its evolution was influenced by relevant international regulatory recommendations. The paper will systematically review the newly introduced stablecoins regulatory framework to identify how it seeks to achieve the balance between different standards and stakeholder interests. The paper will then endeavour to carry out a comparative law exercise with reference to definition standards governing stablecoins

market, namely the United States, as the most recent regulatory development passed subsequent to enactment of the Hong Kong regime. The paper will conclude with a discussion of the relevant findings to determine the advantages and limitation the new regulatory regime provides in strengthening the status of Hong Kong as a global financial centre. Deriving from various findings, the paper will make certain recommendation for developing and sustaining a healthy and vibrant stablecoins market in Hong Kong SAR.

2. Policy debates and international influence in the process of formulation of stablecoins regulatory framework in Hong Kong SAR

Hong Kong was inspired by the FSB work and recommendations in initiating policy discussion aimed at developing regulatory framework governing crypto assets market. However, the regulatory progress in Hong Kong pertaining to stablecoins could be seen as sluggish given the fact that the first set of relevant recommendations by FSB were issued in 2020 and it took more than four years for Hong Kong to finally bring its efforts to fruition. In this regard, it is important to assess the original set of high-level recommendations on stablecoin issued by FSB in 2020 along with its further refinement carried out by the FSB review in 2022-2023 (FSB-HLR 2020 and FSB-HLR 2023) and how they influenced the evolution of the policy and regulatory regime in Hong Kong. Moreover, from a comparative perspective, the progress in Hong Kong has been relatively slower than Singapore, which published its finalized regulatory approach on stablecoins in 2023. However, Hong Kong preceded the US in passing the stablecoins bill in May 2025. Among these two comparable jurisdictions, the present paper will closely examine the US regime as it has enacted an exclusive law on stablecoins and at around the same period of Hong Kong. To determine how much of the policy developments and regulatory standards in Hong Kong has been in lines with international recommendations, the paper will first assess the major policy debates and objectives in Hong Kong that ultimately lead to the formation of the bill and the resulting legislation (Stablecoins Ordinance 2025).

Subsequent to the major FSB initiative in 2020 issuing the FSB-HLR 2020, Hong Kong undertook its major response in 2022 through a discussion paper issued by Hong Kong Monetary Authority (HKMA) focused on crypto assets and stablecoins (HKMA, 2022). The Hong Kong Stablecoin Discussion Paper 2022 (HKSDP 2022) has derived a substantial inspiration from the work of FSB, which is evident from the wide reference made to the FSB definitions and recommendations. At the very outset, the HKSDP 2022 was referring to the development of international standard setting bodies and national financial regulators around the world taking stock of the benefits and risks of crypto assets, to call upon the need to make regulatory initiatives in Hong Kong. It pointed out to the significant increase in market capitalization and increasing investments in crypto assets and its growing nexus with mainstream financial system as some of the major causes to initiative regulatory intervention.

With a broader motivation of the maintaining monetary and financial stability, the HKMA undertook to review the regulatory treatment of crypto assets with a particular emphasis on enhancing public confidence in local payment systems and prioritizing user protection. Based on these objectives, two key areas were earmarked for regulatory focus namely a) Authorized Institutions (AIs) and their crypto assets related exchanges and services with customers and b) review of the adequacy of existing regulatory framework and the required expansion to address challenges related to the use of crypto assets and particularly the stablecoins as its sub-set. The choice of focus upon stablecoin as the first type of crypto asset to regulate was driven by the expectation that stablecoins will be perceived by the users and market players as the form of

crypto asset that will command common acceptance as a means of storing value and making payments due to its pegging nature with an underlying asset and the consequential stability. As a result, HKMA was convinced to focus specifically on 'payment related stable coins' as a priority and ensure that they are effectively regulated before being circulated and marketed to the public in Hong Kong SAR. At the same time, non-payment related and unbacked crypto assets were classified as instruments for speculative investments requiring continuous monitoring for the purpose of possible regulatory intervention in the future[6]. However, the HKMA recognized that such class of crypto assets typically face challenges relating to consumer knowledge of underlying risks, user protection and its potential use in illicit money laundering and terrorist financing. HKMA also acknowledged the growing nexus between such 'unregulated crypto assets' and the 'mainstream financial system' as well as the consequential potential risks that will weigh in on the latter if there is a severe price correction suffered by the former.

Referring to the ongoing efforts initiated by other regulatory authorities namely the Securities and Futures Commission (SFC) involved in the development of a virtual asset trading platform and Financial Services and the Treasury Bureau (FSTB) contemplating a licensing regime, HKMA undertook to monitor related developments and coordinate with other regulatory authorities on the need for regulatory intervention to address any evolving risks arising from non-payment related crypto-assets. HKMA also pointed out the need to maintain close dialogues with other financial regulators and relevant standard setting international institutions to keep up with regulatory developments in the world. It emphasized that a close alignment of the regulatory framework and supervisory approach in Hong Kong with the recommendations of the international bodies is critical for avoiding possible regulatory arbitrage in related activities. The HKSDP 2022 clearly reveals the preference undertook by Hong Kong in developing a regulatory regime focusing on payment related stablecoins as a priority over the regulation of any other type of crypto assets.

The narrow regulatory mandate could arguably be attributed to various factors including the infancy of the nonpayment/unbacked crypto asset products and markets, the dearth of related regulatory initiatives in other jurisdictions limiting comparative law insights, as well as the selective focus of the emerging international regulatory standards like the FSB-HLR 2020 specifically on stablecoins. Moreover, HKMA itself elaborated the growing significance of stablecoins and the increasing requirement of its regulation. HKMA argued that the potential use of stablecoins for payment purposes and the resulting prospects of its enhanced role in the mainstream financial system, and in every day commercial and economic activities could cause direct impact on monetary and financial systems. Hence, the choice of prioritizing the preparedness for regulating stable coins, in lines with the related call of FSB on the matter, was justifiable.

HKMA recognized that stablecoins could be further classified into two main categories namely asset based stablecoins and algorithm based stablecoins. While the former is generally linked to specific asset classes like fiat currency or currencies, commodities like precious metals, and

[6] At this time, HKMA believed that albeit their rapid evolution, crypto assets in general constituted only a limited share in the overall global financial assets and its adoption rate among the people of Hong Kong was also very low. However, it is relevant to note that HKMA, at the same time, was aware of the possibility that crypto assets might exist and be exchanged anonymously and given the nature of the enabling technology could easily be transferred, including across borders, potentially giving rise to the risk of use for illicit activities like money laundering or terrorist financing. See HKMA, 2022 at p.6.

other types of financial assets like securities, the latter typically engages specific protocols that seek to maintain a stable value through adjustments of supply based on demand. In addition, HKMA also acknowledged that with the technological feasibility, any stablecoin could gain reach across multiple jurisdictions and hence regulatory coordination to govern such GSCs as recommended by FSB is essential. In 2022. HKMA while initiating the discussion on the need for regulatory preparedness to govern stablecoins in Hong Kong, enumerated the works and recommendations of key international institutions on the subject. The HKMA mainly referred to the contributions made by Basel Committee of BIS, the FSB, Committee on Payment and Market Infrastructure (CPMI) and International Organization of Securities Commissions (IOSCO), as well as the tangential works of the intergovernmental body Financial Action Task Force (FATF) on stablecoins as part of its focus on virtual assets (VA) and virtual asset service providers (VASP)[7] in 2019 and 2021 respectively (FATF, 2019), (FATF, 2021). In addition, HKMA also referred to the regulatory developments in certain regional jurisdictions like the Peoples Republic of China (PRC) and Singapore and other prominent jurisdictions in the European Union, United Kingdom and the United States of America.

HKMA identified certain regulatory standards already existing in Hong Kong, which are related to some pertinent activities and services like the VASP, payment systems and stored value facilities and distribution of VA related products. However, it concluded that the payment related stable coins may not fall within the purview of those existing regimes and expressed the need to design a separate and new regulatory framework governing stablecoin related activities. For that purpose, HKMA identified that the major risks arising from stablecoins warranting regulation includes financial stability risks (affecting payment integrity and banking stability), risks of monetary stability (bearing currency substitution risk and risks related to monetary policy transmission mechanism), settlement risks (affecting finality in settlement), risks related to user protection and financial crime and cyber risks. Additionally, HKMA also emphasized the need to update the domestic regulatory regime to prevent regulatory arbitrage and ensure compliance with relevant internationally agreed standards and best practices to uphold the position of Hong Kong as an international financial centre. Finally, it set three major objectives for the required regulatory intervention namely guaranteeing monetary and financial stability, protecting users and curtailing regulatory arbitrage risks[8]. To determine future policy direction and the scope of the intend regulation, the HKMA sought consultation and feedback involving the industry and public. Based on the outcome of the consultation major conclusions were reached demarcating the key parameters of the regulatory regime, which will go on to define the future course of legislative action (HKMA 2023).

Revealing the intention to introduce a mandatory licensing regime governing stable coins, HKMA confirmed that a risk-based approach will be adopted in defining the scope of their

[7] Although FATF mandate is primarily focused on combating money laundering and terrorist financing issues, it is one of the earliest international bodies that has been producing works and guidance focused on virtual currencies since 2014. Subsequently, in 2019 it produced the first global standards addressing risks of money laundering and terrorist financing arising from virtual assets and updated the same in 2021. See FATF, 2019 and FATF 2021.

[8] Moreover, HKMA was keen on achieving the regulatory goals following two guiding principles, which interestingly are pertaining to the need to adhere to international standards and balancing regulation with innovation. These attributes are quite evident from the two guiding principles namely a) the principle of 'agile regulatory approach', which warrants measures in place to ensure that the regulatory framework remains responsive to the evolving market developments and pertinent international deliberations and b) the principle that calls the regulatory development to be proportionate and risk based albeit congenial for financial innovation. See HKMA, 2022 at p.24.

structure, with a priority to regulate stablecoins linked to one or more fiat currencies[9]. HKMA also enumerated the key activities that will be subjected to regulation, which includes governance, issuance, stabilisation and wallets pertaining to stablecoin operations. The regulation will mandate licensing for any operations carrying out a regulated activity, actively marketing such activity to the public, indulging in such activity in connection with a stablecoin linked to Hong Kong dollar or activities, which in the opinion of the authorities should be regulated as a matter of significant public interest. The regulatory effort will follow the principle aimed at introducing a comprehensive regulatory framework addressing a whole gamut of issues like including requirements of financial resources, audit and disclosure, risk management, user protection, ownership, governance and anti-money laundering and counter terrorist financing. It also clarified that only stablecoins that have full backing of the reserve assets and able to ensure redemption at par will be permitted and stablecoins that seek to derive their value from arbitrage or algorithm will not be legalized. The principle that the regulated entity should not deviate from its principal business authorized under the license will be enforced.

At this stage, although the major aspects of the course of regulatory action were determined, the question of whether the regulatory goals had to be achieved through the introduction of a new legislation or by virtue of amendments to the existing laws remained unanswered. Soon after, however, this dilemma was settled in favour of the former, when the FSTB along with HKMA, in December 2023, made a legislative proposal to implement a regulatory regime governing the issuers and operations of stablecoin (FSTB and HKMA, 2023). It not only exhibited the preference for a new legislation to implement the licensing regime governing the issuance of fiat referenced stablecoins (FRS) but also revealed a renewed set of policy objectives with which it will be implemented. The articulated policy objectives related to FRS include introduction of safeguards against monetary and financial stability risk, protection of users, conservation of the status of Hong Kong as international financial centre by the introduction of regulatory regime reflecting international standards, and promotion of sustainable and responsible development of the VA ecosystem.

For further development of the regulatory regime and the related legislative measures, the proposal undertook to follow the interesting guiding principle of ‘same activity, same risk, same regulation as well as the principles of a risk-based approach, readiness to address emerging market developments and international deliberations, proportionality of regulation reflective of risks, providing level playing field and prevention of regulatory arbitrage. Subsequently, based on the consultation initiated in 2023, the FSTB and HKMA published its responses in July 2024 through its paper enumerating the conclusions arising from the consultation carried out with around 108 respondents (FSTB and HKMA, 2024). The important issues deliberated in this context pertains to the scope and coverage of the key definitions and regulated stable coin activity, the proposed legislative approach, nature of the planned regulatory and licensing framework, custody and offering of FRS, the powers of the authorities to modify the regime, supervisory and investigative powers of HKMA, offences and sanctions relating to stablecoins, and establishment of an appeals tribunal to review related decisions of HKMA. Finally, the consultation conclusion paper affirmed that HKMA will facilitate regulatory compliance by issuing relevant licensing and supervisory guidelines in the future.

[9] At the same time, HKMA promised that necessary flexibility for authorities to bring other structurally designed stablecoins within purview of the regime in the future. See HKMA, 2023 at p.4.

3. Legal definitions of fundamental legal terms governing stablecoins in international recommendations and Hong Kong Stablecoins Ordinance 2025.

3.1 International taxonomy defining key legal terms influencing stablecoins regulatory frameworks.

As national legal definitions of key terms relating to digital assets and stablecoins tend to differ, it is necessary to insinuate international definition of important terms and use them as a common frame of reference. The assessment and comparison of definition standards adopted by different national regulatory frameworks requires reference to the definitions provided by the FSB as a major institution of inspiration for national initiatives. Reference to FSB definitions should allude to the two versions of the High Legal Recommendations on global stablecoin arrangements (FSB-HLR) made in 2020 and 2023 respectively. The definitions propounded by FSB on three important terms in 2020 namely digital asset, crypto asset and stable coin are crucial to understand the distinction between these closely linked terms as well as individual national efforts in defining them.

Among the three essential terms, digital asset is defined by FSB to encompass digital representation of any value used for payment or investment purposes albeit to the exclusion of digital representation of fiat currencies. So digital asset could be understood as an asset representing the value of anything except fiat currencies and to be used fundamentally as an instrument of payment or investment. The 'digital representation of a value' and the 'purposes of use' are two notable characteristics of the definition. On the other hand, the definition of crypto asset is qualified as a private digital asset using cryptography and distributed ledger or analogous technology. The emphasis on 'private nature' and 'two technological characteristics' of a crypto asset are the distinct characteristics to note. Stablecoin is defined as a specific type of crypto asset aspiring to maintain a stable value with reference to either a specific type of asset or a group of assets (FSB Report, 2020). The 'stable value' proposition and the 'linkage to certain asset class(es)'are the core components emerging from the definition of stablecoin. The FSB defines three specific types of stablecoins namely asset-linked stable coin, global stablecoin and algorithm-based stablecoin. The definition of 'asset-linked stablecoin', enumerates it as a coin that is designed to derive its stability with reference to three specific types of assets namely physical assets, financial assets or other crypto assets. 'Global stablecoin' (GSC) is defined in terms its reach and scale with a categorial reference to its potential to transcend multiple jurisdictions and attain substantial volume. An 'algorithm-based stablecoin' on the other hand is defined for its characteristic of maintaining a stable value through the adjustment of its supply based on demand using relevant protocols.

Finally, FSB also provides a detailed definition of the term 'stablecoin arrangement', which signifies any arrangement that combines distinct functions and related activities to enable the usage of an underlying instrument as a means of payment or stored value. A comparative assessment of the definitions of the core terms in the FSB-HLR 2023 reveals that the number of terms defined have increased considerably with the definition of fifteen new terms added and the definition of one of the terms found in FSB-HLR 2020 dropped. However, what is significant to note is the change in definition of some of the terms originally defined in HLR-GSC 2020. The major change in definition in FSB-HLR 2023 pertains to the fundamental term 'digital asset' that forms the basis of the definition of its variations namely crypto-asset and stablecoin. The definition of digital asset in FSB-HLR 2023 has withered its original exclusion of representation of fiat currencies and has added a new type of value representation namely

'contractual rights'. Under the new FSB definition of 2023, digital asset signifies a digital representation of any type of value or contractual rights to be used still for the original purposes of payment or investment. By virtue of this change, the recognition of digital assets representing fiat currencies and stablecoins linked to fiat currencies by national regimes is made possible.

Despite the profound implications, the basic definitions of the terms 'crypto-asset' and 'stablecoin' in FSB-HLR 2023 remained unchanged. However, conspicuous changes could be identified in the definitions of some specific types of stablecoins (FSB Report, 2023). Firstly, the FSB-HLR 2023 dropped the apparently superfluous definition of the 'asset-linked stablecoin' and introduced a pertinent definition of two new terms namely 'fiat-referenced stable coin' and 'reserve-based stablecoin'. The definition of fiat-referenced stable coin is characterized by its objective to attain a stable value through fiat currency-based references with a potential use for payment and/or stored value purpose(s). A stablecoin that is reserve based is also defined based on its objective to maintain a stable value using a dedicated pool containing reserve assets.

The FSB-HLR 2023 also provides an expanded definition of GSC. The renewed definition of GSC comprehends stablecoins that have an existing or potential reach and use across multiple jurisdictions with the possibility of attaining a systemically important role (including for the purposes of payment and/or stored value) in one or more jurisdictions. It is apparent that the new definition of GSC has relinquished its previous emphasis on the potential to attain 'volume' under the FSB-HLR 2020 and replaced it with potential to attain systemic significance including in the sphere of certain specifically mentioned purposes. Finally, other notable new terms that are defined in FSB-HLR 2023 includes various terms related to crypto assets like its issuer, services, service providers, ecosystem, market, activities, and trading platform, as well as a set of broad and functional terms like decentralised finance and protocols, blockchain, smart contract, and various types of wallets.

3.2 The scope and implications of core legal definitions in Hong Kong Stablecoins Ordinance

Firstly, regarding the scope of legal definitions of pertinent terms under the Ordinance, it is visible that they are inspired by the international standards but adapted to the local needs and policy preferences. Evidence of such a balance could be demonstrated referring to the definitions of certain key terms under the Ordinance. For example, the fundamental term 'stablecoin' is defined by the Ordinance using a two layered approach. Firstly, the definition enumerates what are the essential characteristics of a stablecoin, which arguably is very much in lines with international definitions. However, in the second layer, the definition categorically excludes a prescribed set of digital representation of value that will not constitute a stablecoin, and many of those grounds of exclusions are arguably incorporated to reflect domestic policies and preferences.

In addition, the approach of the Ordinance in incorporating a narrower category of definition of the term 'specified stablecoin' and providing a regulatory design that would primarily govern that specific category of stablecoin is another interesting example of the balance. Moreover, the two layered approach of defining the term 'specified stablecoin' with a standard set of characteristics first, followed by the recognition of various avenues through which the regulator, HKMA, may further expand the same (through notices published in the official Gazette) can also be seen as balancing the present and future needs of determining the scope

of the subject matter to be regulated. In addition, the scope and characteristics of the definition of some other pertinent terms like 'regulated stablecoin activity' and 'offering specified stablecoin' could also be argued as indicating the balance sought to be achieved. At the same time, the fact that the term 'licensed stable' coin is defined in a more specific and categorical manner makes it difficult to trace any traits of a balancing exercise.

The Stablecoins Ordinance does not purport to define all key terms. Instead, It utilizes the definition of certain terms from other relevant laws in Hong Kong. For example, the Ordinance simply refers to the definition of the terms 'authorized institution' and 'authorized institution incorporated outside Hong Kong' from the relevant banking legislation in Hong Kong. Similarly, terms like 'company' 'associated company', and 'body corporate' are not defined in the Ordinance and the respective definitions from the relevant company law of Hong Kong are adopted as such. On the other hand, certain other terms like an 'entity', 'controller', 'indirect controller', 'majority and minority shareholder controllers', manager, and officer are independently defined under the Ordinance. Interestingly, the term 'chief executive' is partially defined independently (in cases where the term relates to a licensee that is not an authorized institution) and partially with reference to existing banking legislation (in cases where the term relates to a licensee that is indeed an authorized institution). These blended approach in definition of terms can also be seen as an attempt to balance between drafting efficiency by simply transplanting terms already well defined in other related legislation and exclusively defining other terms to serve specifically to the needs of the regulatory regime governed by the Ordinance.

4 International regulatory initiatives on stablecoins and domestic manifestations in Hong Kong Stablecoins Ordinance.

4.1 Substantive international regulatory standards on crypto assets and stablecoins

Despite being an international instrument issuing non-binding recommendations governing stablecoins that are aimed at reaching and usage across multiple jurisdictions, the utility of the FSB-HLR in inspiring the development of individual national policy and regulatory frameworks should be highlighted based on its specific features and recommendations. Firstly, the specific enumeration of certain fundamental elements essential for the establishment and functioning of stablecoin markets within the purview of the definition of stablecoin arrangement can serve as a useful reference to individual jurisdictions in developing domestic regimes. The definition of stablecoin arrangement systematically identifies various activities, functions, governing mechanism, people and entities involved in stable coin operations, each of which will provide the opportunity for national authorities to identify the set of issues and processes that calls for a regulatory intervention. For example, the range of the activities listed in the stablecoin arrangement like issuing, creating and destroying stable coins, managing and providing services for reserve assets, operating and validating transactions, as well as exchanging, trading and market making of stable coins would enable a systematic identification of various stages where regulations need to be introduced.

The prescription of the function of the governance body to encompass the establishment and monitoring rules governing stablecoin arrangement addressing issues like types of permitted entities, validating protocols to be used in transactions, and the manner of achieving stabilisation of the issued coins are also useful indicators for designing relevant regulatory bodies and their competences. Secondly, the individual high-level recommendations emerging

from the FSB-HLR 2023 can serve as a major directive for national policy makers and legislators to determine specific fields where regulatory standards need to be created or amended to create and implement a vibrant regime governing the establishment and functioning a stablecoins market. Moreover, the detailed description of each of the recommendation in the FSB Report 2023 will help national authorities to determine on which aspects strict adherence is desirable and on which aspects they could avail a permissible flexibility and customize the relevant recommendations to suit local market conditions and preferences. The crux of the core high level stablecoin recommendations of FSB evidences its unparallel guidance value for national regulatory authorities. Although the FSB-HLR 2023 are provided with a focus on GSCs, the essence of the recommendations will be pertinent and useful for developing regulatory regimes governing stablecoins market of different types and scope. Therefore, individual recommendations can be examined from the perspective of its general utility in constructing a stablecoin regulatory regime excluding the elements that are exclusively focused on the reach and use of stablecoins in multiple jurisdictions.

The focus of the first FSB-HLR 2023 is aimed at achieving regulatory and supervisory readiness of national authorities, where by two important elements could be derived. The first element is a call for national authorities to possess and utilize pertinent powers, tools and resources to attain their readiness. The second element emphasizes on the regulation, supervision and overseeing (RSO) of the underlying stablecoin arrangement along with its concomitant functions and activities, and the effective enforcement of relevant laws and regulations. The second FSB-HLR 2023 calls upon the national authorities to apply comprehensive and effective RSO requirements meeting international standards to relevant stable coin arrangements. The recommendation calls upon such RSOs to be imposed on a functional basis and proportional to the risk involved albeit subject to the condition that they are in consonance with relevant mandates. The third FSB-HLR 2023 prescribes cooperation and coordination among relevant authorities to promote efficient and effective communication, consultation and information sharing to support each other's duties, to ensure RSO of relevant stable coin arrangements and to motivate consistency in regulatory and supervisory outcomes. The fourth FSB-HLR 2023 mandates authorities to impose requirements upon relevant stablecoin arrangements to create and disclose a comprehensive 'governance framework', earmarking definitive and direct lines of responsibility and accountability for all related functions and activities arising out of the arrangement.

The fifth FSB-HLR 2023 mandates the authorities to demand relevant stablecoin arrangement to establish effective risk management frameworks to address various material risks arising from its related functions and operations. Specific purposes for which the framework could be prescribed includes attaining operational resilience, safeguarding cybersecurity, introducing Anti-Money Laundering (AML) and Combating the Financing of Terrorism (CFT) measures and determining 'fit and proper' requirements. The sixth FSB-HLR 2023 requires the authorities to impose obligations on relevant stablecoin arrangements to establish robust frameworks, systems and process to collect, store, safeguard and report any relevant data, with the possibility of authorities having access to the data to carry out their respective RSO mandates. The seventh FSB-HLR 2023 mandates authorities to require relevant stablecoin arrangement to establish suitable recovery and resolution plans and plans to support any orderly winding down of operations, continuity of critical functions and activities, and prevention of spillovers upon financial system.

The eighth FSB-HLR 2023 mandates the authorities to require the stablecoin issuers and other participants in any relevant stablecoin arrangement to furnish comprehensive and transparent information about the functioning of the arrangement to all its users and stakeholders[10]. The ninth FSB-HLR 2023 prescribes authorities to require relevant stablecoin arrangement to enable users to make robust legal claims against the issuer and/or relevant reserve assets along with a guarantee to attain redemption in a timely manner. Two other specific requirements stem from this recommendation. Firstly, if the relevant stablecoin is referenced to a single fiat currency, the related redemption should be at par with the relevant fiat. Secondly, authorities should also require the stablecoin arrangements to have stabilisation mechanism, redemption rights and compliance with prudential requirements to maintain the value of the stablecoins and reduce any risks of runs. The tenth and final FSB-HLR 2023 asks the authorities to demand relevant stablecoin arrangements to satisfy all applicable RSO requirements in their respective jurisdictions before the commencement of stablecoin operations there and to comply with any new regulations introduced.

The range of Issues the FSB-HLR 2023 seek to address in the governance of stablecoin is very comprehensive and inevitably critical for national regulatory developments. As argued earlier, despite being a set of recommendations aimed at GSCs, its utility in developing regulatory regimes for governance of any type of stablecoins operations including purely domestic non-GSCs market cannot be denied and is well evident from the above analysis. Such a finding is also supported by other key international institutions like the BIS, which argues that the aim of the FSB-HLRs is to promote consistent and effective RSOs of not only GSCs across jurisdictions, but also stablecoins that have the potential to ultimately attain the status of GSCs in the future (BIS, 2024). Moreover, the BIS underscores the utility of the FSB-HLRs in addressing financial stability risks posed by stablecoins both at domestic and international levels. It also highlights the advantage provided by FSB-HLRs in supporting innovation and providing flexibility in implementation of individual domestic approaches in different jurisdictions[11].

Similar to the FSB stablecoin regulatory reference, the BIS has also produced consultative outcome, and its final prudential standard focused on addressing crypto assets related prudential challenges facing banking operations (Basel Committee, June 2022) and (Basel Committee, December 2022). These are useful references to determine national regulatory intervention to shield banking operations from related crypto asset risks including stablecoins. The useful set of international guidance on stablecoin arrangements was jointly issued by the CPMI and IOSCO, which primarily articulates how the principles of financial market infrastructure could be applied to stablecoin arrangements in different jurisdictions. (CPMI & IOSCO, 2022). Finally, the Fintech Notes on regulating stablecoins and arrangements issued by the International Monitory Fund is also a pertinent reference for national authorities seeking to develop stablecoins regulatory framework. The IMF Fintech Note alludes to five distinct policy objectives and related regulatory considerations for national authorities to address a set

[10] The information so provided should comprehend a range subject matters that are aimed at enhancing the understanding of the functioning of the involved stablecoin arrangement. For the enumeration of the various types of information to be provided see Recommendation 8 of FSB-HLR 2023.

[11] The BIS also distinctly point out the FSB-HLRs emphasis on the technology neutral approach, a prominent principle-based approach propounded by key international legal harmonization bodies like the United Nations Commission on International Trade Law (UNCITRAL) in various technology related legal harmonization instruments and already adopted by many states. BIS argues that the technology neutral approach of FSB-HLRs would prioritise the focus on underlying activities and risks related to stablecoin markets. See BIS, 2024.

of parallel risks that could potentially arise in a crypto ecosystem involving stablecoins. (Parma Bains & et.al, 2022).

The five policy objectives aimed at achieving financial stability and integrity, securing operational and cyber resiliency, deriving the potential of stablecoins with effective management of risks and protecting consumer and investor interests will enable national authorities to categorially segment their policy focus and align them with the identified set of parallel risks to introduce relevant regulatory standards using the list of regulatory considerations recommended. Moreover, the IMF notes also highlight the relevance of the FSB and its works for national regulatory authorities. It argues that FSB is well placed in establishing global standards to support national regulation of stablecoins and related arrangements. It emphasizes that national authorities should introduce immediate regulatory actions and related frameworks that are flexible in incorporating internationally coordinated stablecoin standards developed by FSB, especially in the light of the growing systemic implications of crypto assets and stable coins.

4.2 Balancing features of substantive regulatory standards in Hong Kong Stablecoins Ordinance 2025

Following the conclusions to the consultation on legislative proposal in 2023, Hong Kong SAR drafted a comprehensive Bill on stablecoins, which was successfully passed by Hong Kong Legislative Assembly on 21 May 2025. The resulting Stablecoins Ordinance 2025 is slated to enter into force in August 2025, a closer review of which is needed to assess how the overall legal framework and its salient regulatory standards seek to achieve an effective regulation and balance essential interests in the pioneering legalized stablecoins market in Hong Kong. The 2025 Ordinance provides a very comprehensive legal framework that elaborately prescribes regulations governing various activities and licensing pertaining to stablecoins, distinct functions and investigative powers of the regulatory authorities, related offences and sanctions as well as the avenues of review of specified decisions and judicial appeal. Additionally, the 2025 Ordinance along with addressing certain confidentiality requirements, and miscellaneous issues prescribes a set of eight distinct schedules that specifically governs a range of issues arising from the regulatory framework.

The pertinent issues governed under schedules are specified affairs relating to stablecoin activities, minimum criteria applicable to a licensee, licensing fee, license revocation grounds, powers of statutory manager of a licensee, administration and functions of the stablecoin review tribunal, as well as transitional provisions and amendments to other enactments resulting from the introduction of the Ordinance. A close analysis of a select set of salient regulatory features of the Ordinance reveals how the regulatory deliberations and preparatory efforts since the discussion paper on the matter was first issued by HKMA in 2022 culminated into concrete regulatory standards and the extent to which they balance diverse factors and interests. Such factors and interests could involve various components that may relate to the international recommendations and standards, as well as the domestic policy objectives and preferences systematically examined in the previous sections of this paper.

Part 2 of the Ordinance prescribing the major regulations of activities pertaining to ‘specified stablecoins’ is divided into two segments namely the ‘restrictions’ imposed upon specified stablecoins related activities and the comprehensive ‘licensing regime’ governing various aspects like licensing process and governing conditions, ownership (controller) and

management of licensee, and powers of the regulatory authority over the management of licensee and other provisions imposing control over the licensee. First, it is important to note that the licensing regime prescribed under the Ordinance is limited to the specified stablecoins that at present primarily pertains to those that are fiat referenced involving one or more official currencies, albeit the possibility to encompass specified stablecoins referencing or representing other units of account or economic value or value class in the future[12]. An official currency is defined as the currency issued by the government, central bank, the monetary authority or an authorized note issuing bank in a jurisdiction.

The license to be ssued under the Ordinance is essential to carry out any 'regulated stablecoin activity', which is defined to include three distinct categories of activities carried out by a person namely a) issuing a specified stablecoin in Hong Kong SAR, b) issuing of a specified stablecoin outside Hong Kong SAR that is wholly or partly referenced to Hong Kong dollar to retain its stable value and c) an activity, which HKMA may in the future specify as a regulated stablecoin activity through official notification[13]. In this approach, we could see the design of the regulation balancing between locally issued and foreign issued stablecoins, as well as the required related referencing to official currencies in general and the Hong Kong dollar in particular comprehending different scenarios of stablecoins issuance.

The first two sets of activities that are related to the issuance of fiat referenced specified stablecoins and the third one opening the possibility to expand the scope of activities (which potentially could cover the issuance of new forms of stablecoins referencing to other types of assets) on the bequest of HKMA can also be seen as a balanced approach in confining to fiat referenced stablecoin activities currently and yet opening the possibility to expand the licensing regime governing other types of stablecoin activities. Another important set of provisions that evidences a balancing of interests pertains to the balance sought to be achieved by the licensing conditions that could be imposed under the Ordinance. The assessment of the related provisions gives a general impression that the large number of conditions that could be imposed at the time of the grant of a license or added or amended at any time after the grant of a license are predominantly favouring the interest of protecting the integrity and smooth functioning of the licensed activities.

Specific types of imposable conditions indicated by the Ordinance like the requirements or restrictions on business activities, requirements of reserve assets, their management and conditions of use, imposition of additional financial resources maintenance, demands to cease or carry on any of the licensed business activities, imposition of requirements or disclosure related to the accounts of the licensee, and restrictions on the maximum value of the licensed specified stablecoins indicates the intention of legislators to strictly safeguard the integrity and functioning of the licensed activities. However, there are some parallel provisions that arguably provide some degree of offsetting effects by offering procedural fairness to the licensee[14]. The imbalance in this context is however understandable and arguably justifiable given the risks and vulnerability facing the broader interest of the market participants including consumers.

[12] The definition of specified stable coin contemplates the possibility of HKMA specifying other units of account or a store of economic value to serve the function of referencing in a stablecoin or a value or class of value to enable the function of a stable coin as a digital representation. See Article 4 (1) and (2), Stablecoins Ordinance 2025.
[13] See Article 5 (1) and (4), Stablecoins Ordinance 2025.
[14] See Article 17 (1) and (2) and Article 18 of the Stablecoins Ordinance that prescribes the range of licensing conditions and the related procedural safeguards, respectively.

The Ordinance mandates the licensee to maintain reserve assets to back up the value of the stablecoin as well as to honour any redemption request from the holder of the coin. This along with various fundamental requirements to be satisfied by a licensee prescribed as the 'minimum criteria' by the Ordinance reveals various standards and safeguards that are inspired by the international recommendations and experiences as well as domestically reinforced elements. A close review reveals how these elements are blended and incorporated in an exclusive schedule to the Ordinance[15].

A licensee under the minimum criteria should first and foremost be a company (as defined in the Hong Kong Company law) or an authorized institution incorporated outside Hong Kong. Secondly, the licensee should have sufficient financial resources and liquid assets, as well as a minimum prescribed paid-up share capital or other HKMA approved financial resources that are equivalent of higher than the prescribed paid-up share capital. Thirdly, in prescribing the reserve assets as part of the minimum criteria, the Ordinance sets out an elaborate array of requirements for the management and control of the assets maintained as a reserve, which clearly evidences the mix of internationally inspired standards and locally conceived elements. Similar characteristics can also be found in case of the redemption guarantees, which the Ordinance demands as part of the minimum criteria a licensee should satisfy. Another set of intriguing minimum criteria requirements under the Ordinance pertains to need for the licensee to ensure that the key persons involved in the stablecoin operations like the controller of a licensee, chief executive, director, and stablecoin manager are indeed 'fit and the proper person' to hold the position in question.

The Ordinance also imposes 'knowledge and experience' requirement upon officers of a licensee, who are involved in everyday management and operations of the licensed stablecoin activities. The prudential and risk management requirements and the measures imposed to prevent money laundering and terrorist financing as part of the minimum criteria under the Ordinance are predominantly a reflection of respective international standards discussed earlier in the paper. The next notable minimum criteria, albeit being expressed in very general terms, arguably touches the core of the concern that would typically arise in any crypto asset. In this regard, the Ordinance interestingly mandates that the issuance of any specified stablecoin by a licensee should be grounded on prudence and soundness relative to the purpose, business model and operational aspects of the issued coin. This provision should serve as an effective tool for the licensing authority to assess and determine untenable stablecoins at the very beginning and prevent them from being floated in the market. However, lack of prescription of any procedure and parameters to determine the prudence and soundness of a proposed stablecoin could be subjected to criticism as one of the obvious weaknesses of the Ordinance.

Another well balanced provision of the Ordinance that is also prescribed as a minimum criterion is related to the requirement of exclusivity of the activities a licensee should carry out (mandating such activities to be fundamentally focused only on the licensed stablecoin and not on any other business). However, a balance is sought to be achieved, whereby the licensee could seek the consent of HKMA, if it intends to carry out any additional business activity other than the licensed stablecoin activity. Moreover, in this context, the licensee is required to put in place prescribed control systems to balance that the activities of the new business do not create significant risks to the licensed stablecoin activities as well as manage and minimize potential conflict of interests. Similarly, as part of the disclosure requirements in the minimum

[15] See Schedule 2, Stablecoins Ordinance 2025.

criteria, the licensee is required to achieve a balance of interests between its own and the interests of the holders of the issued stablecoins by introducing prescribed risk management policies and procedures and disclosing relevant information to those holders.

Finally, while the remaining minimum criteria mainly alludes to the obligations of the licensee to provide prescribed complaint handling mechanism, to introduce business recovery and continuity in response to any operational disruption, to have control systems to achieve an orderly winding-down and the consequential redemption in an orderly manner, there is also positive prohibition, which prescribes that the licensees should not pay or permit to pay any interest for the specified stablecoins issued by them. In the light of the specific duty to fulfil minimum criteria imposed by the Ordinance, several balancing features emerging from the analysis should serve the interest of the ensuring the stability and security of the stablecoins well and at the same time provide the licensee essential room to manoeuvre in attaining the goals of the stablecoins business.

5 Comparative regulatory standards in US Stablecoins Regime 2025

The US Congress successfully passed a stablecoins bill on 17 July 2025[16], which was then immediately signed into a law by the President of US on the very next day. The law titled 'Guiding and Establishing National Innovation for U.S. Stablecoins Act' (GENIUS Act 2025) is the first comprehensive Federal crypto asset legislation in USA, which as in the case of Hong Kong, is also perceived as a delayed enactment and response by a major financial market jurisdiction in the world. As very much a contemporary stablecoin regulatory framework for the Hong Kong Stablecoins Ordinance introduced almost around the same time, a close comparative analysis of the US GENIUS Act will reveal the respective strength and weaknesses, that should provide valuable insight for Hong Kong regulators and market players.

At the very outset, a scant comparison of the Hong Kong and US legislation reveals that the regime enacted in US is not as comprehensive as Hong Kong. Moreover, a closer analysis indicates that specific provisions of the US regulatory framework are distinct due to its nature as a federal legislation that needs to grapple with several domestic realities including encompassing of state level governance and related mechanisms. In addition, the differences in other substantive regulatory standards also indicate a conscious choice and deviation of the US regime. Despite differences, certain important similarity between the two legislations should be acknowledged. One of the most striking similarities between the Hong Kong and the US regime in terms of the scope is the choice of focus on payment related stablecoins as the subject matter of regulation. Regarding specific characteristics and patterns in the legislation, certain similarities are also discernible. Both legislations contain an extensive set of definitions of key legal terms and like Hong Kong, the US GENIUS Act also balances between utilizing the definitions from existing legislation for certain terms and providing independent definitions for others to suit the needs of the stablecoins regulatory regime.

Unlike the Hong Kong Ordinance which defines the terms 'stablecoin' and 'specified stablecoin' as well as three other types of specific stablecoins, the US Act only defines one single term that is subjected to the present regulation namely 'payment stablecoin'. It is defined as a digital asset to serve as a means of payment or settlement with the 'issuer' of the coin

[16] It is, however, relevant to note that the bill did not win the full support of the Representatives of the House as the bill was passed with a split of 308-122 votes demonstrating the lack of support from a sizable number of members. See Rafael Nam (2025).

representing or creating reasonable expectation of its stability of value relative to a 'monetary value' and having a definitive obligation to convert, redeem or repurchase the issued coin for a fixed amount of 'monetary value'[17]. The term 'monetary value' is defined as a 'national currency' or a 'deposit' denominated in a national currency. The recognition of 'a deposit' as part of the monetary value in the US law enhances the scope of reference to an underlying asset in issuing a stablecoin. In comparison, the definition of the term 'specified stablecoin' in the Hong Kong Ordinance currently comprehends only stablecoins that seek to maintain their stable value by wholly referring to one or more official currencies. As seen already, although the regulator HKMA could notify to expand the reference to 'other units of account' or 'stores of economic value', until such a notification is made in the future, the scope of reference to an underlying asset in issuing a specified stablecoin regime in Hong Kong would be perceived as narrower than USA.

As the basic definition of payment stablecoin, unlike the Hong Kong Ordinance, makes an explicit reference to the term 'digital asset', it is also defined under the Act to mean any digital representation of value recorded using cryptography and distributed ledger technology[18]. Moreover, the definition mandates that the digital asset in question should not be a national currency or a security issued by an investment company. However, the US legislation in the context of the possibility for future expansion of regulation to non-payment stablecoins [19], defines yet another type of stablecoin namely 'endogenously collateralized stablecoins'. It is defined as a digital asset involving a representation by its originator guaranteeing its conversion, redemption or repurchase for a fixed value, with reference to another digital asset created or maintained by the same originator[20].

In contrast, the approach of Hong Kong Ordinance to provide a direct reference and definition of the term 'stablecoin' and providing a definition of 'specified stablecoin' to indicate the stablecoins that will fall within the scope and purview of the Ordinance is arguably a more systematic approach. On a similar vein, the inclusion of three specific definitions of different types of stable coins in the Hong Kong Ordinance, namely asset-linked stable coin, global stablecoin and algorithm-based stablecoin, arguably comprehends potential variations in terms of referenced assets, geographical reach and technological basis better. In conclusion, the choice of the US legislation in this regard to refer and define more generic terms is clearly a distinct approach to that of Hong Kong Ordinance, which refers and defines terms that are specifically germane to 'stablecoins' and its variations. Other notable definitions pertain to the terms 'digital asset service provider', 'Federal qualified payment stablecoin issuer', 'foreign payment stablecoin issuer', 'institution-affiliated party', 'money', 'national currency', 'permitted payment stablecoin issuer', ' person', 'primary federal payment stablecoin regulator, 'stablecoin certification review committee', 'state-chartered depository institution', 'state payment stablecoin regulator', and 'state qualified payment stablecoin issuer'.

Among the notable definitions enumerated above, some of the terms defined calls for a specific discussion due its significance and distinction. For example, the definition of a 'foreign

[17] See Section 2 (22) of the GENIUS Act 2025.
[18] See Section 2 (6) of the GENIUS Act 2025. In addition, the Act also defines the general technological term 'distributed ledger'.
[19] It is interesting to note that the GENIUS Act creates a mandate to the Secretary of the US Treasury to carry out a study on endogenously collateralized stablecoins and report on several features and utilization relating to the non-payment stablecoins. See Section 11 (a) of the GENIUS Act 2025.
[20] See Section 11 (b) of the GENIUS Act 2025.

payment stablecoin issuer' which will be of interest to international players interested in US stablecoins market is one of the definitions that merit discussion. The term is defined to signify an issuer of a payment stablecoin that is organized under laws of or domiciled in a foreign country or a territory of the US, American Samoa, Guam, Puerto Rico, or the Virgin Islands. However, such an issuer should not fall within the category of 'permitted payment stablecoin issuer' as defined in the Act. In defining the term 'federal qualified payment stablecoin issuer', the Act primarily enlist certain types of entities namely a 'Federal branch' or a 'non-banking entity' (excluding a State qualified payment stablecoin issuer) that is approved to issue payment stablecoins as a 'federal qualified nonbank payment stablecoin issuer' by the Comptroller as prescribed in the Act, and an 'uninsured national bank' that is chartered and approved by the Comptroller to issue payment stablecoins as a 'federal qualified nonbank payment stablecoin issuer'[21]. Similarly, one of the important terms that is relevant to determine the management and personnel of a permitted payment stablecoin issuer is 'institution-affiliated party'. Such a party is defined as a director, controlling stockholder, employee, or officer of a permitted payment stablecoin issuer. Finally, the term 'person' is broadly defined to comprehend not only individual natural persons but also specifically named legal persons. The legal persons enumerated in the definition are association, company, cooperative organization, corporation, other incorporated or unincorporated business entity, and trust. The distinct characteristics emerging from the above definitions in the US Act evidences its utility in providing necessary clarity to achieve the smooth interpretation and functioning of the related substantive regulatory standards enforced by the new Act.

6 Concluding Observations

The comparative assessment of the international regulatory recommendations on stablecoins, the policy developments and regulatory standards governing stablecoins market in Hong Kong SAR and the selective features of the new US stablecoins regime in this paper reveals the drive and determination of relevant international bodies and individual jurisdictions to establish a *lex specialis* to promote stablecoins market and protect stakeholders' interests. As discussed, the international initiatives on the subject matter have been spanned more than a decade now, with some of the earliest efforts relating to virtual currencies initiated by the FATF as early as 2014. What started with the focus on a general category of digital asset, subsequently evolved to specifically address some of the formidable challenges emanating from use of such technology like money laundering and terrorist financing. However, as evident from the analysis, the real momentum in regulatory governance of stablecoin as a specific class of digital asset was ignited by the pioneering work of the FSB, which resulted in the release of most pertinent international regulatory recommendations on stablecoin in 2020.

What followed as a series of national responses although could be termed as lukewarm, given the fact that FSB itself has been finetuning the standards to release a revised set of recommendation indicates the complex nature of the underlying characteristics and activities pertaining to stablecoins market. Despite the revised recommendations on stablecoin have been released in 2023, the concrete regulatory frameworks governing stablecoins in prominent international financial centres like Hong Kong and USA took much longer to emerge demonstrates the underlying complexity of the subject as well as the policy dilemmas and efforts to strike a fine balance between various interest faced by individual jurisdictions. In this regard, the timing and the priority attributed to payment related stablecoins in both Hong Kong

[21] See Section 2 (11) of the GENIUS Act 2025.

and USA demonstrates the growing conviction that it is the class of crypto asset that is relatively safe and sound to be legalized and licensed. However, as revealed in the review of the first major legislation governing stablecoins in both jurisdictions, the regulatory framework needed to govern the whole gamut of issues arising in the stablecoins market should be very comprehensive and capable of achieving a fine balance between involved interests.

This is critical not only for the healthy development of the digital asset markets but also to build sufficient safeguards against potential overflow of financial risks across borders, given the ease of reach of digital assets across the globe. Even if the risks of global or regional financial risks emanating from any specific digital asset offerings and circulation is minimal at present, national level systemic risks arising from such offerings in individual jurisdictions cannot be ignored and should be shielded against effectively. As the analysis of the international and domestic policy debates and regulatory responses in this paper reveal, the preference at present seems to be on a focused approach of choosing the safest form of digital asset to develop relevant regulatory standards. The analysis of the international initiatives governing stablecoins and the domestic regulatory response in Hong Kong revealed various alignment and distinctions. The analysis focused on the definitions of the core terms and principles highlight the significance of the need to laydown detailed standards internationally, as the subject matter of regulation namely the stablecoins are new phenomenon that were not subjected to specific national regulatory frameworks beforehand. Moreover, the complexity of the technical and financial engineering underlying the development and offering of stablecoins warrants a comprehensive regulatory standard development even spanning to detailed definitions and principles. In this regard, the comparison of the definitions and principles emanating from the recommendations of the FSB and those that form part of the first generation Stablecoins Ordinance in Hong Kong reveal various alignment. At the same time adaptation to local needs in defining and laying down regulatory standards in the new Hong Kong regulatory framework demonstrates the balance sought to be achieved.

The analysis of the developments in Hong Kong reveals that both the policy debates preparing toward the development of the regulatory regime, as well as the resulting legal framework reflect the influence from different international efforts. Especially, many of the regulatory standards in the new Stablecoins Ordinance could be related to the specific FSB-HLR 2023 standards as well some other international efforts in this regard like the standards pertaining to anti-money laundering and counter terrorist financing. However, the analysis of a select set of regulatory standards from the new legislative framework of Hong Kong reveals that there are several balancing provisions that are uniquely present. The balances sought to achieved, as the discussions reveal were not so much between international and domestic interests but between the interests of various stakeholders involved in the stablecoin markets and operations. In particular, the keen objective of the regulator in achieving strong financial consumer protection is much visible in various safeguard measures built into the regulations. At the same time, as the analysis revealed sufficient leeway is built into the mechanism that could provide the licensee of the stablecoin activities to foster business goals and promote related interests. The clear regulatory environment resulting from the Hong Kong Stable Coins Ordinance 2025 as well as its various key balancing regulatory standards in lines with international prescriptions will certainly enhance the efficiency and productivity of the stablecoins business operations in the market.

The narrow scope of the Hong Kong regime revealed in the paper indicates the cautious approach the regulators in Hong Kong would like to take. However, with the high prospects of

the success of the emerging regime, which is visible from various findings of this paper, it is a question of time before the motivation to extend the regime to new forms of stablecoins will emerge. Moreover, the success of the present regime will also inspire calls for Hong Kong to seek governance and regulation of other types of crypto assets. Moreover, the analysis of the salient features of this first generation of specific crypto asset legislation confirms the end of various policy and regulatory dilemmas in Hong Kong, which by itself is a good sign for providing necessary stimulus and confidence for future expansions. In anticipation of the rapid developments in different forms of crypto asset offering and the ensuing legalization in other competing markets like the US and Singapore, Hong Kong does not have much choice but to keep up with international and regional regulatory developments. In this regard, the specific comparative law studies focused on key jurisdictions pioneering in regulatory standards governing stablecoin are crucial for Hong Kong to sustain its position as an international financial centre. The choice of US regime to compare in this paper is quite pertinent for Hong Kong, given the similarity in the scope of application being focused on payment related stablecoins.

The comparative analysis of the new GENIUS Act in the US revealed that the regime despite being not as comprehensive as the Hong Kong Ordinance, has a wider scope in terms of the permissible underlying reference asset in designing the stablecoins. However, at the same time, the Hong Kong regime has provided the enabling provisions for potential expansion of the permissible reference assets of the stablecoins in the future. The Hong Kong regulator HKMA, should continue to assess comparative law developments and choose to use the powers granted onto it to expand the reference asset base of the specified stablecoins to not only keep up with other jurisdictions but to seek leadership in the development of the stablecoins market. Unlike in the US, where the drive to streamline stablecoins towards the support of dollarization, Hong Kong could freely seek to diversify the referenced asset to multiple stable currencies and other asset clauses to gain a comparative advantage in offering congenial legal environment for the growth and expansion of stablecoins market. In this regard, Hong Kong could also consider asset clauses pegged to the currencies of other two jurisdictions in the Greater Bay Area (GBA) namely Peoples Republic of China and Macau SAR. Especially, with the limited prospects of the other two jurisdictions legalizing and regulating crypto assets, Hong Kong SAR as the most vibrant jurisdiction among the three members of the GBA, will not only be able to gain from the related investment and business opportunities but will also be able to discharge its role to the motherland in enabling and enhancing the Chinese Yuan denominated international payments using stablecoin payment mechanisms. Such a regional focused regulatory enhancements, blended with an international outlook, using the inbuilt extensible provisions offered by the comprehensive Stablecoins Ordinance will no doubt provide Hong Kong a distinct advantage over other regional players like Singapore that are yet to comprehensively legislate on the exclusive regulatory governance of Stablecoins market.

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BRAND PERCEPTION AND ADVOCACY IN POP MART INDONESIA: EMOTIONAL ATTACHMENT AND PERCEIVED VALUE AS KEY DRIVERS

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Abstract

This study aims to examine the relationship between brand perception and brand advocacy among Pop Mart consumers, with emotional attachment serving as a mediating variable and perceived value as a moderating variable. A quantitative approach was employed by distributing online questionnaires to 350 respondents with prior purchasing experience of Pop Mart products. Data analysis was conducted using Partial Least Squares Structural Equation Modeling (PLS-SEM) via SmartPLS. The results reveal that brand perception does not have a direct and significant influence on brand advocacy. However, emotional attachment significantly mediates the relationship between brand perception and brand advocacy. Although perceived value is often considered a crucial factor in influencing consumer behavior, the findings indicate that it does not significantly moderate the relationships examined in this study. In the case of Pop Mart, emotional attachment appears to be a more influential factor in driving brand advocacy than perceived value. These findings provide insight into consumer-brand dynamics in niche markets, suggesting that emotional factors may play a more significant role than perceived value in influencing consumers' willingness to advocate for a brand.

Keywords: *brand advocacy, brand perception, emotional attachment, perceived value, Pop Mart Indonesia*

1. Introduction

People nowadays set high expectations for brands to have products that either offer originality in their product line or collaborate with famous media outlets to provide a wider range of customers with varying preferences. Most cases like these are what drive the brand to do more research on trending topics, such as how to relate to their audience. Therefore, it is noteworthy to understand the aspects that strengthen these connections for long-term success (Mostafa & Kasmani, 2020). This approach is evident in Pop Mart's recent growth, as the brand reported a significant increase in overseas revenue during the first half of 2024 (Team D, 2024). Pop Mart is a leading Chinese designer toy company best known for its blind box collectibles and character-driven merchandise (Huo, 2024). Pop Mart, like other brands, needs to evolve and grow as a business. To achieve that goal, they need to know what the customers' preferences are, how to maintain them, and develop strategies accordingly. This study builds upon the previous research of Ahmadi & Ataei (2022) on emotional attachment and brand advocacy. The study focused on emotional bonds as the mediating variable in brand-related behaviors. Where this study differs is that this paper uses brand perception as the independent variable and perceived value as the moderating variable. By recognizing the impact of psychological factors in shaping consumer-brand relationships, brands can adopt more targeted and resonant strategies.

2. Literature review

2.1. Brand Advocacy

Brand Advocacy relates to the actions of volunteers who frequently recommend a brand to other customers (Kumar & Kaushik, 2020). According to Suwarsi et al. (2024), brand advocacy involves taking positive actions to express one's liking for a brand, recommending the brand to others, and protecting the brand from any attacks that might harm or tarnish its reputation. This behavior is most likely formed through customers' satisfaction and a bond of trust from the brand, which will eventually result in loyalty (Xie et al., 2019).

According to Kotler et al. (2017), companies transform brand awareness into brand advocacy through a process known as Brand Advocacy Ratio. Simsek and Noyan (2019) findings revealed that customer satisfaction, trust, and perceived product quality are the effects of advocacy (Albutra et al., 2024). Considering the various outcomes that have been the focus of marketing and consumer research, brand advocacy has consistently emerged as a vital indicator of a brand's deeper relationship with its audience. According to research by Aljarah et al. (2022), it has been demonstrated that UGC has a more substantial influence on Brand Advocacy than FGC, with brand familiarity serving as a mediating variable. However, previous research conducted on hospitality products (Bilro et al., 2019) demonstrated that brand advocacy does not influence customer engagement.

2.2. Brand Perception

Keller (2003) defines brand perception as the belief and connection a customer has with the brand. Social media plays an important role for customers to shape a positive brand perception and maintain interaction between brands and customers. Maintaining an online presence is necessary, as it aligns with presenting a positive image (Susilawati et al., 2024). Brand perception is one of the building blocks of customer behavior. It forms a customer's perceptions, connections, and interactions with brands. It is defined as people's belief in what a brand can offer rather than what it claims to portray (Albutra et al., 2024).

Based on Guliyev (2023), several indicators contribute to forming brand perception, including image, personality, brand awareness, and association. It is influenced by product quality, messaging, and customer interaction. The positive results encourage good reactions such as loyalty, equity, and advocacy, while negative ones often result in distrust and disengagement (Susilawati et al., 2024). Brand perception constructs have been used in the research of economics, marketing, and business, showing significant influence on various variables (Sukumaran, 2021; Etuk et al., 2025; Shang & Plaikaew, 2025).

2.3. Emotional Attachment

Emotional Attachment represents a deep and lasting bond that consumers form with a brand, often shaped by repeated positive experiences and meaningful interactions (Dwivedi et al., 2018). This attachment goes beyond mere satisfaction, influencing behaviors such as loyalty and advocacy (Ahmadi & Ataei, 2022). Thomson (2006) noted that emotional attachment is a predictive factor of satisfied, trusting, and committed relationships between consumers and brands. In addition, prior research has demonstrated that consumers' emotional attachments positively affect brand attitudes and purchase intentions, along with word-of-mouth (Jun & Yi, 2020). Building emotional bonds with brands is becoming a natural part of how consumers choose and stay local to products today (Ghorbanzadeh & Rahehagh, 2020).

In academic research related to transportation, tourism, social media, and hospitality (Chand et al., 2024; Hasan, 2023; Na et al., 2023; Gómez-Suárez & Veloso, 2020), emotional attachment is commonly explored as a mediating variable. Among the numerous studies

conducted, the study by Garanti (2019) specifically examined brand perception and emotional attachment, the same variables investigated in the present research, with findings that brand perceptions have a positive impact on emotional brand attachment in the fashion industry. Referring to prior studies carried out in the technology industry (Abdelkader et al., 2020), revealed that emotional brand attachment has a significant and positive relationship to Brand Advocacy, with control variables such as gender that affect the outcome of the research.

2.4. Perceived Value

Customer perceived value arises from comparing the benefits a customer receives from a product or service, the alternatives available in the market, and the cost or effort they must invest. It reflects a consumer's ability to choose between comparable options without necessarily altering their preference (Wuisan & Elton, 2021). Although inherently subjective, perceived value is often shaped by personal expectations, experiences, and individual priorities, making it vary significantly among customers (Ihsan et al., 2023). Therefore, perceived value can be seen as the customer's overall evaluation of whether a product or service is worth engaging with, based on what the customer receives and what they have to give in return.

Perceived value, reflecting consumers' assessment of the benefits and costs associated with a product or service, remains a fundamental determinant of customer satisfaction and market competitiveness across various industries (Liu et al., 2024). Based on several previous studies, perceived value not only directly affects customer engagement (Itani et al., 2019; Xie et al., 2021) but also strengthens the effect of two various variables (CHIN et al., 2020; Seo-Yeon & Hye-Yoon, 2021). However, a previous study also encountered a moment where perceived value could not serve as a moderator of several variables, but was still in line with the study's purpose (Mohammad et al., 2021).

Based on the explanation above, the temporary hypotheses are as follows:

H1*: Brand Perception has a positive and significant influence on Brand Advocacy*

H2*: Brand Perception has a positive and significant influence on Emotional Attachment*

H3*: Emotional Attachment has a positive and significant influence on Brand Advocacy*

H4*: Brand Perception has a positive and significant influence on Brand Advocacy, mediated by Emotional Attachment*

H5*: Brand Perception has a positive and significant influence on Brand Advocacy, moderated by Perceived Value*

3. Methodology

This research employs a quantitative method using a self-administered online questionnaire distributed to Indonesian citizens who have purchased Pop Mart products online or offline. Since the exact population of Pop Mart customers in Indonesia is not yet estimated, this study uses an estimated population of 46 million customers in China as a reference (Jeyaretnam, 2025). The sample size is determined using the Taro Yamane formula with a 7% margin of error, resulting in a target of approximately 400 respondents (Olonite, 2021). Data analysis is conducted with SmartPLS to test both the outer model (validity and reliability of indicators) and the inner model (relationships between variables). To allow for neutral responses and capture a wider range of opinions, a 5-point Likert scale is used, ranging from strongly disagree (1) to strongly agree (5).

3.3. Theoretical framework

Mehrabian and Russell (1974) proposed a model known as the Stimulus-Organism-Response (S-O-R) model. It is described as a person's response to stimuli from the external

environment. Therefore, this study proposes that Brand Perception is a stimulus (S) that will trigger the initial external evaluation (O) of customers in the form of emotional attachment to product providers, which then results in brand advocacy as Response (R).

3.4. Conceptual framework

The conceptual framework in Figure 1 explains how brand perception can influence a customer's eagerness to recommend a brand to others. Followed by emotional attachment as a mediating variable and perceived value as a moderating variable. The model proposes that when a customer has a positive perception, it will eventually develop a sense of emotional attachment. The emotional attachment will lead to brand advocacy because of the form of loyalty they have towards the brand.

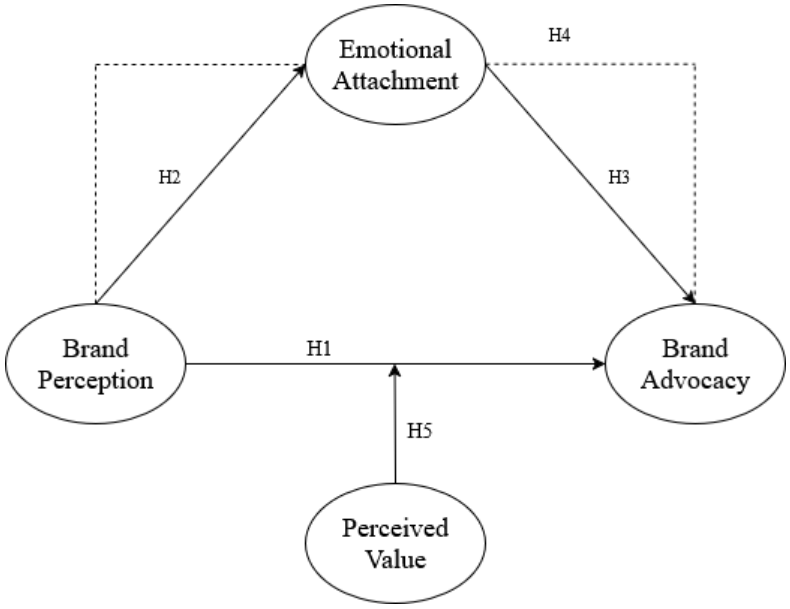

Figure 1. Research model
(based on Ma & Lu, 2024)

4. Results and discussions

To assess the reliability and validity of each construct, data were collected through an online survey. The questionnaire was distributed via platforms such as Instagram, WhatsApp, and Line using Google Forms. Between May 1st and May 20th, 2025, a total of 352 responses were received, with 350 of them meeting the eligibility criteria for inclusion in the analysis. This dataset can be accessed via this link: https://docs.google.com/spreadsheets/d/1S-0sc9hY5WjrAhCeQ3liPqSD82t-z_VxfsE_dX-Gp_I/edit?usp=sharing

4.1 Research Instrument Testing

Table I

Respondent Characteristics

Demographics	*Category*	*Number*	*Percentage*
Gender	Male	96	27.3%
	Female	256	72.7%
Age	15 – 19	73	20.7%
	20 – 24	122	34.7%

25 – 29	97	27.6%
30 – 34	50	14.2%
> 35	10	2.8%

This study uses the Partial Least Squares Structural Equation Model (PLS-SEM) to analyze the data. Data analysis was executed in 2 stages: the Outer Model and the Inner Model analysis, respectively.

4.1.1 Outer Model Analysis

The first phase of analysis involves testing the construct validity and reliability of the research instrument. To identify the construct validity, it can be seen from the loading factor of each variable. Regarding reliability, it is assessed through Cronbach's alpha and composite reliability output. Based on Hair et al. (2014), the principle used for convergent validity is to have a loading factor value > 0.70. In Table II, the output indicates that all outer loading values of all items are above 0.70. All variables in this study have met the criteria for reliability testing, with a Cronbach's alpha value of 0.70 or higher (Hair et al., 2010) required. A composite reliability value exceeding 0.70 is the requirement for the reliability test (Hair et al., 2010). Therefore, it can be concluded that all variables in this study have met the validity and reliability requirements.

Table II. Outer Loading

Variable	Item	Loading Factor	Description
Brand Advocacy	BA1	0.7	Valid
	BA2	0.805	Valid
	BA3	0.812	Valid
	BA4	0.78	Valid
	BA5	0.852	Valid
Brand Perception	BP1	0.754	Valid
	BP2	0.82	Valid
	BP3	0.811	Valid
Emotional Attachment	EA1	0.706	Valid
	EA2	0.713	Valid
	EA3	0.727	Valid
	EA4	0.722	Valid
	EA5	0.743	Valid
	EA6	0.723	Valid
Perceived Value	PV1	0.772	Valid
	PV2	0.71	Valid
	PV3	0.781	Valid
	PV4	0.847	Valid

Source: Data Processed (2025)

Table III. Cronbach Alpha and Composite Reliability

Variable	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Description
Brand Advocacy	0.85	0.855	0.893	Reliable
Brand Perception	0.71	0.717	0.838	Reliable
Emotional Attachment	0.817	0.82	0.868	Reliable
Perceived Value	0.784	0.803	0.86	Reliable

Source: Data Processed (2025)

4.1.2 Inner Model Analysis

The second phase of analysis is measuring the hypothetical test results from the output in Table IV. The hypothesis significance level can be indicated by the path coefficients. Additionally, the mediation and moderation effect was tested to determine each role, whether it was to mediate a whole relationship, strengthen, or weaken a relationship.

Brand Perception has a Positive and Significant Influence on Brand Advocacy

The result shows that the Brand Perception path coefficient on Brand Advocacy has a positive value of 0.075 with a t-statistic value of 1.155 and a significance level (p-values) of 0.248. Based on Hair et al. (2010), with the value of T-statistic > 1.65 and p-values < 0.05, the relationship is stated to be insignificant. Thus, **the first hypothesis is rejected**.

Brand Perception has a Positive and Significant Influence on Emotional Attachment

The result shows that the Brand Perception path coefficient on Emotional Attachment has a positive value of 0.601 with a t-statistic value of 7.168 and a significance level (p-values) of 0.000. Based on Hair et al. (2010), with the value of T-statistic > 1.65 and p-values < 0.05, the relationship is stated to be significant. Thus, **the second hypothesis is accepted**.

Emotional Attachment has a Positive and Significant Influence on Brand Advocacy

The result shows that the Emotional Attachment path coefficient on Brand Advocacy has a positive value of 0.438 with a t-statistic value of 4.513 and a significance level (p-values) of 0.000. Based on Hair et al. (2010), with the value of T-statistic > 1.65 and p-values < 0.05, the relationship is stated to be significant. Thus, **the third hypothesis is accepted**.

Brand Perception has a Positive and Significant Influence on Brand Advocacy, mediated by Emotional Attachment

The result shows that the Brand Perception path coefficient on Brand Advocacy through Emotional Attachment has a positive value of 0.263 with a t-statistic value of 3.97 and a significance level (p-values) of 0.000. Based on Hair et al. (2010), with the value of T-statistic > 1.65 and p-values < 0.05, Emotional Attachment mediates the relationship and is stated to be significant. Thus, **the fourth hypothesis is accepted**.

Brand Perception has a Positive and Significant Influence on Brand Advocacy, moderated by Perceived Value

The result shows that the Brand Perception path coefficient on Brand Advocacy moderated by Perceived Value has a negative value of 0.03 with a t-statistic value of 0.688 and a significance level (p-values) of 0.491. Based on Hair et al. (2010), a value of T-statistic > 1.65 and p-values < 0.05 is stated to be insignificant. Thus, **the fifth hypothesis is rejected**.

Table IV. Hypothesis Testing

	Hypothesis	Path Coef	T statistics	p-values	Decision
H1	BP → BA	0.075	1.155	0.248	Rejected
H2	BP → EA	0.601	7.168	0.000	Accepted
H3	EA → BA	0.438	4.513	0.000	Accepted
H4	BP → EA → BA	0.263	3.97	0.000	Accepted
H5	PV x BP → BA	-0.03	0.688	0.491	Rejected

Source: Data Processed (2025)

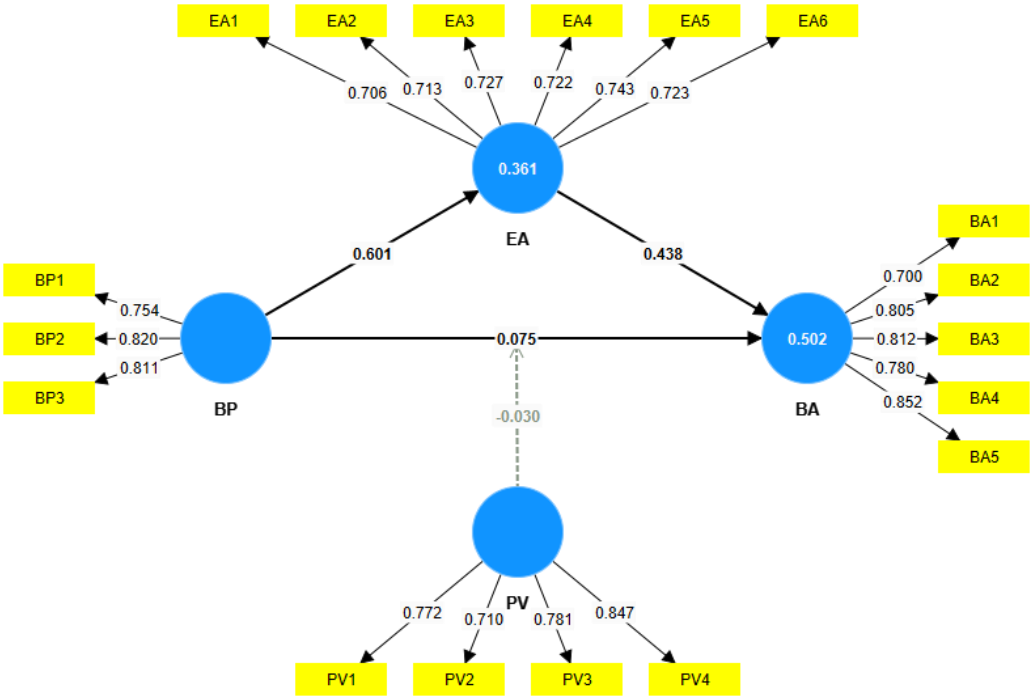

Figure 2. PLS-SEM Result of the Conceptual Framework

Table V. Coefficient of Determination (R^2)

	R-square	R-square adjusted
BA	0.502	0.496
EA	0.361	0.359

Source: Data Processed (2025)

Table V shows that the value for Emotional Attachment is 0.361. This means that 36.1% of the variation in Emotional Attachment can be explained by Brand Perception. The remaining 63.9% is attributed to other variables not included in the model of this study. Furthermore, the R Square value for Brand Advocacy is 0.502. It can be concluded that 50.2% of its variation is explained by Brand Perception, Emotional Attachment, and Perceived Value. The remaining 49.8% is attributed to variables outside the scope of this model, such as corporate social responsibility, brand image, brand experience, brand identification, self-brand congruence, and justice perceptions (Xie et al., 2019; Abdelkader et al., 2020; Aksoy & Yazici, 2023).

4.2 Discussion

Brand Perception on Brand Advocacy

The first hypothesis is rejected, which shows that the use of Brand Perception has no direct influence on Brand Advocacy. This outcome contrasts with previous research by Susilawati et al. (2024), which found that Brand Perception has a significant influence on loyalty, equity, and advocacy. In contrast, the specific outcome of the first hypothesis has not been observed in any previous research. The indicators for Brand Advocacy are measured using five key metrics: willingness to recommend, positive word-of-mouth, brand defense, repeat purchase behavior, and social media engagement. Thus, customers' perception of a brand must be studied thoroughly as a way for customers to advocate for a brand.

Brand Perception on Emotional Attachment

The second hypothesis is accepted. This means that the better the customer's perception of Pop Mart products, the more emotionally attached they become to the brand. It shows that the use of Brand Perception has a direct influence on Emotional Attachment. The results of this study were supported by Garanti (2019), which found that brand perception has a positive and significant effect on emotional attachment in the fashion industry. In contrast, no other research has reported the opposite result of the second hypothesis. Brands must improve their perception to make the customers more attached to them. The indicators for Brand Perception are measured using three indicators: Product Quality, Messaging, and Customer Interaction. Product Quality is one of the key aspects of brand perception that determines whether customers perceive the quality of a product as high, standard, or below standard. Messaging is how a brand conveys its objective to customers, and Customer Interaction is how a brand communicates with its customers in any form, such as through feedback, suggestions, or reviews on social media (Pretner et al., 2021). Thus, a positive perception will lead to emotional attachment.

Emotional Attachment on Brand Advocacy

The third hypothesis is accepted. This means that the more attached a customer is to a brand, the more likely they are to promote or recommend the product to other people. It shows that the use of Emotional Attachment has a direct influence on Brand Advocacy. Other research that has examined the relationship between these variables, however, has employed different methods, such as Abdelkader et al. (2020) in the technology industry, who conducted a study on the relationship between emotional brand attachment and brand advocacy. The result was that emotional brand attachment has a significant and positive relationship to brand advocacy, with control variables that are noteworthy in affecting the outcome of the research. The indicators for Emotional Attachment are measured using six indicators: satisfaction, trust, commitment, brand attitudes, purchase intentions, and word of mouth (Jun & Yi, 2020). Thus, the correlation between customers' emotional attachment and customers' brand advocacy is that positive feelings towards a brand are often elicited by the emotional component of their branding (Ahmadi & Ataei, 2022).

Emotional Attachment mediates the influence of Brand Perception on Brand Advocacy

The fourth hypothesis is accepted. Some research has examined emotional attachment as a mediator between variables; however, it has been done on different products, such as Chand et al. (2024) in India conducted a study about low-cost carrier airlines, and the result

was that emotional attachment mediates the effect of service quality and repurchase intentions. Other research conducted in Bangladesh states that emotional attachments partially mediate the relationship between variables (Hasan, 2023). Therefore, it can be concluded from the previous research and the results of this study that emotional attachment plays a big part in influencing the model's variables. Pop Mart needs to focus on selecting a perfect strategy to enhance customers' emotional attachment, thereby achieving a positive perception that ultimately leads to brand advocacy.

Perceived Value moderates the influence of Brand Perception on Brand Advocacy

The fifth hypothesis is rejected. It shows that Perceived Value weakens the relationship between Brand Perception and Brand Advocacy. The results of this study align with those of Mohammad et al. (2021), who stated that perceived value weakens the customer engagement value in the banking industry context. In contrast, research by Baidoun & Salem (2023) revealed that perceived value as a moderating variable strengthens the relationship between online shopping behavioral intention during COVID-19 in Palestine. The outcome of this study also contradicts the research by CHIN et al. (2020), which found that perceived value has a moderating effect on the relationship between destination attractiveness and resources, as well as destination image, in a natural protected area in Malaysia. The indicators for Perceived Value are measured using four indicators: low price, product desirability, quality for price paid, and benefit vs sacrifice. Thus, it can be concluded that perceived value in the Pop Mart context does not strengthen the relationship between brand perception and brand advocacy, but weakens it. There are possibilities that other moderating variables, which can explain or strengthen the relationship, are mentioned in the PLS-SEM output.

5. Conclusion

Brand advocacy holds an important key in determining a company's growth and keeping up with its competitors. This phenomenon is often potent in community-driven markets, such as Pop Mart. Brand advocates frequently impact other customers by sheer gossip alone. Based on the analysis and discussion presented, emotional attachment and perceived value are expected to be the key drivers in this study; however, only emotional attachment fulfills the hypothesis as a mediating variable. Perceived value acted as a moderating variable, weakening the relationship between brand perception and brand advocacy; therefore, it is not considered a strong key driver. The lack of studies that mention Emotional Attachment as a mediating variable in creating brand advocacy for both utilitarian and hedonic brands is notable. The results of this study indicate that brand perception has a positive and significant influence on brand advocacy, with emotional attachment serving as a key bridge. Therefore, improving customers' perception of a brand and fostering their emotional attachment to it are two approaches that can significantly contribute to a customer's willingness to advocate for a brand.

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THE RELATIONSHIP BETWEEN CREATIVITY AND ENTREPRENEURIAL MINDSET AMONG ECONOMICS FACULTY STUDENTS

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Abstract

This study aims to determine the effect of creativity on the entrepreneurial spirit in Faculty of Economics students. Creativity is one of the important competencies that is believed to play a role in shaping an entrepreneurial mindset that is innovative, risk-taking, and able to create value. This research uses a quantitative approach with a survey method. The number of respondents was 100 students selected through purposive sampling technique. The research instrument consists of two measurement scales, namely the creativity scale and the entrepreneurial spirit scale which have been tested for validity and reliability. Data analysis was conducted using simple linear regression. The results showed that creativity has a positive and significant effect on the entrepreneurial spirit of students, with a regression coefficient value of 0.635 and a significance of 0.000 ($p < 0.05$). The R Square value of 0.419 indicates that 41.9% of the variation in entrepreneurial spirit can be explained by creativity, while the rest is influenced by other factors outside the model. This finding confirms the importance of creativity development in the entrepreneurship learning process in higher education. Thus, educational institutions are advised to integrate learning approaches that encourage creativity to strengthen students' entrepreneurial spirit in a sustainable manner.

Keywords: *Creativity, entrepreneurial spirit, students, Faculty of Economics*

1. Introduction

The development of an entrepreneurial spirit among university students is a crucial strategy for addressing the complexities of the modern labor market and the ever-changing dynamics of the economy (Sumarno et al., 2018). In the context of higher education, students are not only prepared to enter the workforce with specific skills, but are also encouraged to cultivate the ability to identify opportunities and contribute to economic development through entrepreneurial activities. This underscores the need to adapt educational curricula to meet these evolving demands. An entrepreneurial mindset is a combination of risk tolerance, innovation, independence, and a focus on creating both economic and social value-qualities that are increasingly essential for graduates entering competitive industries (Berglund & Wennberg, 2006). Therefore, fostering an entrepreneurial spirit is a central element in shaping adaptive and competitive human resources, particularly within Faculties of Economics (Daddi et al., 2020).

The high unemployment rate among university graduates highlights the urgent need for a paradigm shift-from primarily focusing on being job seekers to empowering individuals as job creators-which requires a rethinking of traditional educational approaches (Wang & Ying, 2022). Data from the Central Statistics Agency show that the open unemployment rate for university graduates in Indonesia has reached 6.75%, illustrating the challenges new graduates face in securing employment (Oktora et al., 2018). Additionally, a report from the Ministry of Cooperatives and SMEs indicates that the entrepreneurship ratio in Indonesia is around 3.47% of the total population, a figure significantly lower than in developed countries where the entrepreneurship ratio exceeds 10%, revealing a substantial gap in entrepreneurial activity. This

disparity underscores the importance of cultivating entrepreneurial spirit and skills from an early stage, especially among university students who possess intellectual potential and access to knowledge. The high number of unemployed university graduates suggests that many individuals still lack adequate competitive capacity to enter the labor market (Dzakkiyuddin et al., 2020). Moreover, entrepreneurship can play a vital role as a key mechanism in economic recovery following adverse events such as the COVID-19 pandemic, which had a significant impact on various sectors in Indonesia (Pramudita, 2021).

One of the crucial factors believed to play a significant role in shaping and fostering entrepreneurial spirit is creativity, defined as the ability to generate new, unique, and valuable ideas to solve problems or seize opportunities (Adekola & Ishola, 2020). Creativity lies at the heart of entrepreneurial activities because it enables individuals to pursue opportunities, develop distinctive products and services, and navigate the inherent uncertainties of the business world. This aligns with the recognition that entrepreneurship is a key driver of innovation, economic growth, and job creation. Creative thinking allows entrepreneurs to identify unmet needs, develop innovative solutions, and differentiate themselves from competitors in the market (Ubaidah et al., 2021). Creativity encompasses not only the generation of new concepts but also the translation of those ideas into tangible products, services, or processes that add value. Entrepreneurial activities must be driven by courage, perseverance, and strong determination, as entrepreneurship is fundamentally characterized by uncertainty, both in terms of success and failure (Tanjung et al., 2021). Therefore, the development of entrepreneurship should also be instilled from an early stage (Adekola & Ishola, 2020; Akhter et al., 2022).

Entrepreneurship education plays a vital role in fostering entrepreneurial attitudes, skills, and intentions among university students, making it essential to integrate entrepreneurship education into higher education curricula (Hou et al., 2022). Entrepreneurship education should emphasize action-oriented learning, with practical learning activities and professional career development as the primary processes in shaping entrepreneurs (Daddi et al., 2020). Universities and academic institutions provide resources and support for prospective entrepreneurs, including courses and programs related to entrepreneurship (Akin et al., 2019). Moreover, universities play a crucial role in creating a supportive entrepreneurial ecosystem by offering access to resources such as mentorship programs (Adeleye, 2019), business incubators, and funding opportunities. In the context of higher education, entrepreneurship education encompasses educational activities aimed at cultivating entrepreneurial qualities in students (Wu et al., 2023). hese activities include fostering a career-driven spirit, an exploratory mindset, an adventurous attitude, as well as production processes such as economic appreciation, profit creation, and business development (Wu et al., 2023). Furthermore, entrepreneurship education seeks to provide knowledge, skills, and motivation so that students can achieve entrepreneurial success across various fields (Gopal, 2020).

Previous studies have reinforced the hypothesis of a relationship between creativity and entrepreneurial spirit. Research by (Rodriguez & Lieber, 2020) found that entrepreneurship education based on creativity development can enhance entrepreneurial readiness and mindset among students. Furthermore, a study by (Sianturi & Baroroh, 2024) stated that creativity is a crucial aspect in shaping entrepreneurial readiness, especially when developed through practical and experiential learning approaches. However, most of these studies were conducted on high school or vocational school students, with limited research specifically focusing on the university student population, particularly those from the Faculty of Economics who possess distinct academic characteristics.

This research is to fill the gap in the literature with a focus on students of the Faculty of Economics. Although students in this faculty are equipped with economic and managerial

knowledge, the ability to think creatively may not develop optimally without the right learning approach. This is where the importance of understanding the relationship between creativity and entrepreneurial spirit empirically, so that efforts to develop entrepreneurial character are not only conceptual, but also based on an understanding of the potential and needs of the students themselves. This research is also an academic contribution in bridging between cognitive (knowledge) and affective aspects (creative and risk-taking attitudes) in entrepreneurship education.

Thus, the main objective of this research is to determine the extent to which creativity plays a role in shaping the entrepreneurial spirit among students at the Faculty of Economics. The findings of this study are expected to serve as a foundation for higher education institutions in designing entrepreneurship curricula and training programs that not only emphasize business theory but also encourage the exploration of creative ideas as practical preparation for students to face the dynamic business world.

2. Tinjauan Literatur

2.5. Creativity

Creativity is generally understood as an individual's ability to generate new, original, useful, and practical ideas to solve problems or address challenges (Runco & Jaeger, 2012). In the context of entrepreneurship, creativity not only involves generating ideas but also the ability to translate those ideas into innovative and value-added products, services, or business models. Creativity is considered the cornerstone of innovation development, product differentiation, and the ability to adapt to dynamic market changes (Adekola & Ishola, 2020).

Several commonly used indicators of creativity in research include fluency, flexibility, originality, and elaboration. Fluency refers to the ability to generate a large number of ideas, while flexibility reflects the diversity of ideas across different categories. Originality relates to the novelty of ideas, and elaboration concerns the depth of idea development (Guilford, cited in Munandar, 2009). These indicators are essential in assessing an individual's potential for creative thinking, particularly in the context of entrepreneurship.

2.6. Entrepreneurial Spirit

An entrepreneurial spirit reflects the attitudes, values, and characteristics that drive individuals to take risks, innovate, and create value through economic activities. Zimmerer and Scarborough (2005) define an entrepreneurial spirit as a person's passion, attitude, and behavior in managing a business or activity that involves seeking, creating, and implementing new ways of working, technologies, and products—all while improving efficiency to deliver better services and/or achieve greater profits.

The characteristics of an entrepreneurial spirit generally include being proactive, willing to take risks, innovative, achievement-oriented, self-confident, and capable of managing uncertainty (Luthje & Franke, 2003). In the context of university students, this entrepreneurial mindset needs to be cultivated early through various learning programs that encourage hands-on experience and critical reflection. Such initiatives may include business projects, startup competitions, and internships in the creative industry sector.

2.7. Related Researches

Empirical research has consistently demonstrated a significant correlation between creativity and entrepreneurial orientation. Creativity serves as a fundamental resource for business initiation and management, with its capacity to generate novel ideas that establish competitive differentiation and enhance business value (Ubaidah et al., 2021). A study by Rodriguez and Lieber (2020) further revealed that cultivating creativity within educational environments effectively strengthens entrepreneurial competencies, with particularly notable impacts observed among secondary and tertiary-level students.

Sianturi and Baroroh's (2024) research empirically validates that experiential pedagogical methods particularly business simulations and case-based learning significantly augment creative capacities while concurrently developing entrepreneurial preparedness among learners. This evidence substantiates the paradigm that creativity transcends mere ideation, actively cultivating foundational entrepreneurial dispositions and competencies. Consequently, creativity emerges not as supplementary to entrepreneurial development, but as a constitutive element in forging the cognitive adaptability and innovation capacity essential for entrepreneurial success.

2.8. Framework

Based on the above discussion, it can be concluded that creativity plays a crucial role in shaping an entrepreneurial mindset. Students with high levels of creativity tend to demonstrate greater abilities in identifying opportunities, innovating, and taking calculated risks when establishing and managing ventures. Therefore, this study posits a significant positive relationship between creativity and entrepreneurial orientation among students of the Faculty of Economics. This hypothesized relationship forms the foundation of the conceptual framework, which will be empirically tested using a correlational quantitative research method.

3. Methodology

3.1 Approach and Research Type

This study employs a quantitative approach using correlational research design. The purpose of this approach is to examine the relationship between two variables: creativity as the independent variable and entrepreneurial mindset as the dependent variable. A correlational design was selected because it enables researchers to statistically measure both the strength and direction of the relationship between variables (Sugiyono, 2022).

3.2 Population and Sample

The population of this study comprises all active undergraduate students at the Faculty of Economics in a state university in Indonesia. The research sample was selected through purposive sampling, with the following criteria: (1) active students from at least the fourth semester onward, (2) those who have completed entrepreneurship courses, and (3) students willing to participate as respondents. A sample size of 100 students was used, deemed sufficient to represent the population for correlational analysis..

3.3 Data Collection Technique

The data were collected through online questionnaires distributed via Google Forms, accompanied by an introductory statement and informed consent from respondents. Participants completed the questionnaires independently within a specified time frame. The researchers ensured the confidentiality and anonymity of all collected data.

3.4 Data Analysis Technique

The data were analyzed using Pearson Product Moment correlation analysis to determine the direction and strength of the relationship between creativity and entrepreneurial mindset. Significance testing was conducted at a 95% confidence level ($\alpha = 0.05$). Data analysis was performed using statistical software, specifically the latest version of SPSS.

4. Result and Discussion

4.1 Uji Validitas

A validity test was conducted to determine the extent to which the statement items in the research instrument accurately measured the intended constructs. In this study, the validity test was administered to the entire sample of 100 respondents. The instrument comprised two main variables: Creativity and Entrepreneurial Mindset, each consisting of 20 statement items. The validity test was conducted using Pearson Product Moment correlation technique with the assistance of SPSS software. Each item in both variables was correlated with its respective variable's total score (item-total correlation). The decision criterion was based on the r-table value with a significance level of 5% and a sample size of n = 100, which yielded a critical value of 0.195. The analysis results revealed that all items in both the Creativity and Entrepreneurial Mindset variables demonstrated calculated r-values > 0.195 with significance values < 0.05. This indicates that each item showed a statistically significant correlation with its respective total score. Therefore, it can be concluded that all items in the Creativity and Entrepreneurial Mindset measurement instruments were validated and deemed appropriate for data collection in the main study.

4.2 Reliability Test

The reliability test is conducted to measure the internal consistency of the research instrument, that is, the extent to which the items in the questionnaire can provide stable and consistent results when used in repeated measurements. In this study, the reliability test was performed using Cronbach's Alpha coefficient.

Table 1. Reliability Test Output

Variable	N	Cronbach's Alpha	Description
Creativity	100	0,87	Reliable
Entrepreneurial Spirit	100	0,89	Reliable

Based on the reliability test results, it was found that the Creativity variable has a Cronbach's Alpha value of 0.87, while the Entrepreneurial Spirit variable has a value of 0.89. Both values are above the minimum threshold of 0.7, indicating that all items in each instrument have good internal consistency. Therefore, the questionnaire instruments used in this study can be considered reliable and suitable for further data collection.

4.3 Normality Test

The normality test is conducted to determine whether the research variable data follow a normal distribution or not. This is important for selecting the appropriate statistical test, as most parametric tests require normally distributed data. In this study, the normality test was performed on the variables Creativity and Entrepreneurial Spirit using the Kolmogorov-Smirnov test through SPSS software. This test was chosen due to the relatively large sample size of 100 respondents. Based on the results of the Kolmogorov-Smirnov test, the significance value (p-value) obtained was:

Table 2. Normality Test Results

Variable	Normality Test	Significance Score	Description
Creativity	Kolmogorov-Smirnov	0,128	Normally distributed data (p > 0.05)
Entrepreneurial Spirit	Kolmogorov-Smirnov	0,091	Normally distributed data (p > 0.05)

Since the significance values for both variables are greater than 0.05, it can be concluded that the data for Creativity and Entrepreneurial Spirit are normally distributed. Therefore, parametric statistical analyses such as Pearson correlation and linear regression can be used in this study.

4.3 Homogeneity Test

The homogeneity test aims to determine whether the data variances for each variable are similar (homogeneous) across the groups or samples being compared. The assumption of variance homogeneity is especially important when using parametric tests that compare two or more groups, such as the t-test or ANOVA. In this study, the homogeneity test was conducted on the variables Creativity and Entrepreneurial Spirit using Levene's Test available in the SPSS software. Based on the results of Levene's Test, the significance values (p-values) were obtained as follows:

Table 3. Homogeneity Test Results

Variable	Homogeneity Test	Significance Score	Description
Creativity	Levene's Test	0,245	Homogeneous
Entrepreneurial Spirit	Levene's Test	0,317	Homogeneous

Since the significance values for both variables are greater than 0.05, it can be concluded that the data variance for Creativity and Entrepreneurial Spirit is homogeneous. This supports the use of parametric statistical tests, which require variance homogeneity, in the analysis of this research data.

4.4 Simplified Linear Regression Test

To determine the extent of the independent variable's contribution, namely creativity, in explaining the dependent variable, entrepreneurial spirit, a simple linear regression analysis was conducted. This analysis produced a Model Summary table that presents important information such as the values of R, R Square, Adjusted R Square, and the Standard Error of the Estimate. These values illustrate the strength of the relationship between the variables as well as the accuracy of the regression model in predicting the dependent variable based on the independent variable studied.

The results in the Model Summary table serve as the basis for assessing whether the regression model used is adequate and appropriate in explaining the variation in entrepreneurial spirit through the influence of creativity.

Table 1. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0,647[a]	0,419	0,413	0,312

a. Predictor: (constant), Kreativitas

The R-Square value from this regression analysis is 0.419, or 41.9%. This means that creativity accounts for 41.9% of the variation in entrepreneurial spirit, while the remaining 58.1% is influenced by other variables outside the model that were not examined in this study. In general, the relationship between variables is considered good if the R-Square value is above

50%, whereas a value below 50% indicates that the relationship still needs improvement or enrichment with additional variables. Next, to determine the partial effect of the independent variable on the dependent variable, the researcher conducted a simple linear regression analysis. This analysis is used to assess the magnitude and direction of the relationship between the independent variable (creativity) and the dependent variable (entrepreneurial spirit).

Table 2. Coefficient

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.524	0.310		4.928	0.000
	Employee Well-being	0.635	0.078	0.647	8.186	0.000

a. Dependent Variable: Jiwa Kewirausahaan

a = the constant value from the Unstandardized Coefficients. In this case, it is 1.524. This constant means that if there is no influence from Creativity (X = 0), the predicted value of Entrepreneurial Spirit (Y) is 1.524.

b = the regression coefficient value, which is 0.635. This means that for every one-unit increase in the Creativity score (X), the Entrepreneurial Spirit (Y) will increase by 0.635 units. This indicates that Creativity has a positive effect on Entrepreneurial Spirit.

4.4 Discussion

Based on the results of the regression analysis, it was found that Creativity (X) has a positive effect on Entrepreneurial Spirit (Y), as indicated by the regression coefficient value of 0.635. This means that for every one-unit increase in the level of creativity, the entrepreneurial spirit increases by 0.635 points. The constant value of 1.524 indicates that without any contribution from creativity, the baseline entrepreneurial spirit is at that level. These findings are consistent with previous studies by (Komara et al., 2024; Maulana, 2018), which state that creativity is a key factor in shaping an adaptive and innovative entrepreneurial spirit. Other research by (Gupron et al., 2023; Suryawan et al., 2022) also shows that a high level of creativity is positively associated with the readiness and intention to engage in entrepreneurship among students and young professionals.

These results are further supported by studies indicating that students with longer entrepreneurial learning experiences tend to have more developed creativity and are able to apply it in the context of business innovation. This supports the findings of (Akbar et al., 2024; Ladista et al., 2024; Utami et al., 2024), who revealed that high creativity consistently contributes to the development of a sustainable entrepreneurial spirit. Conversely, students with more limited entrepreneurial learning experience show variability in their creative capacity and entrepreneurial orientation. This aligns with the findings of (Fayolle & Gailly, 2015; Souitaris et al., 2007) which demonstrate that a well-directed learning approach from the outset is crucial for consistently fostering entrepreneurial competencies.

These findings are also in line with studies by (Sardiana, 2025; Streimikiene et al., 2023) which emphasize that the ability to think innovatively and take risks-two key characteristics of creativity-play a crucial role in the success and sustainability of entrepreneurial activities. Therefore, educational institutions need to pay special attention to developing students' creativity through innovative, participatory, and experiential learning approaches. Strategies to enhance creativity will not only improve students' ability to think outside the box but also foster a resilient, innovative entrepreneurial spirit oriented toward creating economic and social value.

5. Conclusion

Based on the analysis conducted, it can be concluded that creativity has a positive and significant influence on the entrepreneurial spirit of students in the Faculty of Economics. The regression coefficient value of 0.635 indicates that an increase in the level of creativity directly impacts the enhancement of entrepreneurial spirit. In other words, the higher the creativity level possessed by the students, the greater their readiness and enthusiasm to develop an entrepreneurial mindset. These findings underscore the importance of developing creativity as a key aspect of the entrepreneurship learning process. Therefore, educational institutions need to give serious attention to fostering students' creativity through innovative teaching methods, entrepreneurial practice activities, and the creation of an environment that supports the exploration and application of creative ideas. This strategy will not only enhance students' innovation capabilities but also make a significant contribution to shaping an adaptive and sustainable entrepreneurial spirit.

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THE EFFECT OF MANAGEMENT INFORMATION SYSTEM IMPLEMENTATION ON THE EFFECTIVENESS OF DECISION MAKING IN EDUCATIONAL INSTITUTIONS

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Abstract

This study aims to examine the effect of Management Information Systems (MIS) implementation on the Effectiveness of Decision-Making in educational institutions. MIS implementation is believed to play an important role in enhancing decision-making effectiveness by providing accurate, relevant, and timely information. This research uses a quantitative approach with a survey method. The sample consists of 100 respondents selected through purposive sampling. The research instruments include two measurement scales: one for MIS implementation and one for Decision-Making Effectiveness, both of which have been tested for validity and reliability. Data analysis was conducted using simple linear regression. The results show that MIS implementation has a positive and significant effect on Decision-Making Effectiveness, with a regression coefficient of 0.635 and a significance value of 0.000 ($p < 0.05$). The R Square value of 0.479 indicates that 47.9% of the variation in Decision-Making Effectiveness can be explained by MIS implementation, while the remaining variation is influenced by other factors outside the model. These findings underscore the importance of MIS implementation in improving decision-making effectiveness in educational institutions. Therefore, it is recommended that educational institutions integrate MIS implementation into the decision-making process to enhance overall effectiveness.

Keywords: *Management Information System, Decision Making, Decision Effectiveness, System Implementation, Educational Institutions*

1. Introduction

In the era of rapid globalization and digitalization, effective and efficient decision-making has become a crucial aspect for the success of every organization, including educational institutions (Hasna, 2024; Mesiono et al., 2024). As the main pillar of developing quality human resources, educational institutions are required to continuously adapt to changing times and leverage technological advancements to improve the quality of management and decision-making (Hartati et al., 2024; Septiana et al., 2023). Accurate and data-driven decisions are essential in managing various aspects of education, ranging from strategic planning and resource management to enhancing the quality of learning (Febrianti et al., 2023). Management Information Systems (MIS) emerge as a solution that can enhance the effectiveness of decision-making in educational institutions. MIS is an integrated system that provides relevant, accurate, and timely information to decision-makers to support better decision-making processe (Rismawati et al., 2024). With information generated by MIS, such as financial reports, academic data, personnel data, and inventory, educational institutions can plan and manage policies more effectively (Sirojuddin et al., 2022).

Although the implementation of MIS in educational institutions has great potential to improve decision-making effectiveness, its implementation often faces various challenges. The main challenges include a shortage of trained human resources to manage information systems, limited adequate technological infrastructure, and resistance to change among educational institution administrators (Azizah et al., 2024; Panya Lita Teri et al., 2024; Sumbaryani et al.,

2023; Suryanadi et al., 2021; Wahyuni et al., 2024). These issues pose significant barriers to optimizing the use of MIS, even though the adoption of information technology can offer great opportunities to significantly improve institutional performance and competitiveness.

Previous studies on the implementation of Management Information Systems (MIS) in educational institutions have largely focused on technical aspects and infrastructure, without giving sufficient attention to human factors and organizational culture contexts. Research by (Ardianto et al., 2025a; Azizah et al., 2024; Luwiha et al., 2025) highlights the use of MIS in supporting educational administrative services but does not explore how human resources (HR) and organizational culture factors can influence the success of MIS implementation. Another study by (Febrianti et al., 2023) also emphasizes the importance of using information technology in educational planning management to improve efficiency but does not thoroughly examine the challenges related to the skills of MIS managers in educational institutions.

Many studies have yet to comprehensively examine the dynamics of MIS implementation, particularly in relation to the human resources managing the system and the organizational culture that supports its successful implementation. According to (Rismawati et al., 2024) MIS plays a role in improving the quality of educational services; however, their research focuses more on the external benefits of MIS without considering internal factors such as the competencies of the human resources involved in managing the system. Additionally, (Hartati et al., 2024) emphasize the importance of human resource management in educational institutions to enhance competitiveness but do not directly address how MIS can facilitate strategic decision-making by providing accurate and timely information.

This gap indicates that although many studies have identified the importance of MIS, there is still a lack of understanding of the contextual factors that play a role in the successful implementation of MIS in educational institutions. Research by (Sirojuddin et al., 2022; Sumbaryani et al., 2023) has discussed the implementation of MIS in the context of decision-making in educational institutions and schools, but these studies have focused more on technical and administrative aspects, without considering the role of organizational culture in the success of MIS implementation. Therefore, this study aims to fill the existing gap by conducting a more in-depth investigation into the influence of Management Information Systems (MIS) implementation on the Effectiveness of Decision-Making in educational institutions, as well as the challenges and opportunities that arise in the implementation process. By comprehensively examining human, organizational, and technological factors in MIS implementation, this research hopes to provide deeper insights into how MIS can be used effectively to support relevant data-driven decision-making and improve the overall performance of educational institutions.

This study is expected to make a significant contribution to the development of both theory and practice in the implementation of MIS in educational institutions. By providing a deeper understanding of the impact of MIS on decision-making, this research will not only help educational institutions optimize the use of MIS but also offer valuable insights for policymakers and education practitioners to design more effective and efficient systems to address contemporary challenges. It is hoped that the findings of this study will provide practical recommendations that can be used to improve technology-based management and decision-making in educational institutions.

2. Literature Review

2.9. Concept and Role of Management Information System (MIS) in Education

Management Information Systems (MIS) are systems designed to support management within an organization by providing the information needed for decision-making (Febrianti et al., 2023). n the context of educational institutions, MIS involves the integration of various

components, such as hardware, software, and human resources, working together to collect, process, store, and distribute relevant information to decision-makers. Efficient information management through MIS enables educational institutions to plan, organize, and control various educational processes more effectively and in a timely manner (Rismawati et al., 2024).

Management Information Systems (MIS) in education facilitates the management of academic, financial, personnel, and other information needed for decision-making. Through MIS, decision-makers can access more accurate and integrated data, enabling them to make evidence-based and more strategic decisions. For example, financial reports generated by MIS can assist educational institution leaders in planning annual budgets and identifying resource needs to support teaching and academic activities (Sumbaryani et al., 2023). Similarly, academic information processed by MIS can be used to analyze student performance, identify trends, and plan better educational policie (Sirojuddin et al., 2022).

2.10. Decision Making in Educational Institutions

Decision-making in educational institutions is the process of selecting the best alternative from several options to achieve the desired educational goals. Decisions made by education managers, such as principals, teachers, and administrators, can affect the success of implementing educational policies, resource management, and improving the quality of learning (Hayati et al., 2021). Proper decisions can enhance the effectiveness and efficiency of the institution's operations, while poor decisions can hinder the institution's progress and harm all parties involved (Gusnadi et al., 2024; Hanjaya Yusdhika et al., 2023; Tamiang, 2022).

Decisions in the educational context often involve many parties, including students, parents, teachers, and administrative staff. Therefore, decisions made must consider the needs of all stakeholders and be accountable. A good decision-making process requires complete, relevant, and timely information, which can be obtained by utilizing appropriate information systems, such as Management Information Systems (MIS) (Farid et al., 2025).

2.11. Challenges in Implementing Management Information Systems in Educational Institutions

Although MIS offers many benefits, its implementation in educational institutions does not always run smoothly. Some common challenges faced in implementing MIS in educational institutions include a lack of trained human resources, limited adequate technological infrastructure, and resistance to change from system administrators and users. According to (Farid et al., 2025) issues related to limited human resource competencies in managing MIS remain a major obstacle to its successful implementation in educational institutions. In many cases, educational institutions still rely on manual systems that require more time and effort to manage data and information, which ultimately worsens the effectiveness of decision-making because the necessary data is not available in real-time or accurately (Ardianto et al., 2023; Azizah et al., 2024; Nyanabhadra et al., 2024).

In addition, data integration issues also pose a major challenge in the implementation of Management Information Systems (MIS). Many educational institutions use several separate information systems, such as academic, financial, and administrative systems, which are not well integrated. Sumbaryani et al. (2023) state that poor system integration can lead to difficulties in accessing the information needed for quick and accurate decision-making. This greatly hinders efficient data management, as decision-makers cannot easily access interconnected data. Sirojuddin et al. (2022) also emphasize that well-integrated MIS implementation is crucial for educational institutions to function optimally in supporting decision-making. Therefore, proper system integration is essential for MIS to function

optimally in supporting decision-making. The success of MIS implementation in educational institutions heavily depends on careful planning, adequate training for users, and the presence of an integrated system, enabling decision-makers to access information quickly and accurately (Hartati et al., 2024; Mesiono et al., 202; Ardianto et al., 2020, 2025b).

2.12. Information System Security in Education

Information system security is a crucial aspect of implementing Management Information Systems (MIS), especially in educational institutions that manage personal data of students, teaching staff, and other sensitive information. Poor security can lead to data theft, misuse of information, or even system damage, which can harm the educational institution (Rismawati et al., 2024). Therefore, information system security must be taken seriously at every stage of MIS implementation, from planning to evaluation.

The information systems used in educational institutions must also be equipped with strict security protocols, including user authentication, data encryption, and regular system audits. These measures aim to protect the data and information held by the educational institution from external and internal threats that could compromise data integrity and confidentiality (Hasna, 2024; Sirojuddin et al., 2022). Optimal security in the implementation of MIS not only enhances stakeholder trust but also ensures the sustainability of the institution's operations.

2.13. The Effect of Management Information Systems (MIS) on the Effectiveness of Decision Making in Educational Institutions

The implementation of Management Information Systems (MIS) in educational institutions can enhance the effectiveness of decision-making by providing more accurate and timely information. MIS enables decision-makers to analyze data more deeply, identifying trends and patterns that might not be apparent when using manual methods. For example, an MIS that manages academic data can assist school principals or education administrators in monitoring student progress, identifying areas that require more attention, and planning more effective educational policies (Febrianti et al., 2023).

Furthermore, Management Information Systems (MIS) also facilitates coordination and communication between departments within educational institutions, enabling more coordinated decision-making based on the same information. This aligns with the findings of Sumbaryani et al. (2023), which show that an integrated management information system can enhance the effectiveness of planning and learning evaluation in schools. Thus, the implementation of MIS in educational institutions can help create decision-making that is more structured, evidence-based, and proactive in addressing existing challenges (Sirojuddin et al., 2022).

3. Methodology

3.1 Approach and Research Type

This study employs a quantitative approach with a correlational research design. The purpose of this approach is to examine the relationship between two variables: the implementation of Management Information Systems (MIS) as the independent variable and the effectiveness of decision-making as the dependent variable. Correlational research was chosen because it allows the researcher to statistically measure the strength and direction of the relationship between variables. This study aims to analyze the extent to which MIS implementation can influence the effectiveness of decision-making in educational institutions. (Sugiyono, 2021).

3.2 Population and Sample

Populasi dalam penelitian ini adalah seluruh pengambil keputusan di lembaga pendidikan, baik di tingkat dasar, menengah, maupun perguruan tinggi yang telah mengimplementasikan SIM dalam operasional mereka. Sampel penelitian diambil secara purposive sampling, dengan kriteria sebagai berikut: (1) pengambil keputusan yang memiliki pengalaman dalam penggunaan SIM di lembaga pendidikan, (2) penggunaan SIM dalam pengelolaan data akademik, keuangan, dan sumber daya manusia, dan (3) bersedia menjadi responden dalam penelitian ini. Jumlah sampel yang digunakan sebanyak 100 responden, yang dianggap representatif untuk analisis korelasional antara penerapan SIM dan pengambilan keputusan.

3.3 Data Collection Technique

Data were collected through questionnaires distributed online using Google Forms, accompanied by an introduction and informed consent agreement from the respondents. The questionnaires were self-administered by the respondents, with data collection carried out within a predetermined time frame. The questionnaire contained questions measuring respondents' perceptions of the implementation of Management Information Systems (MIS) in educational institutions and its impact on the effectiveness of decision-making. The researcher ensured the confidentiality and anonymity of the data obtained from each respondent.

3.4 Data Analysis Technique

The collected data will be analyzed using linear regression analysis to determine the effect of MIS implementation on the effectiveness of decision-making in educational institutions. Significance testing will be conducted with a 95% confidence level ($\alpha = 0.05$). Quantitative data analysis will be performed with the assistance of the latest version of SPSS statistical software to calculate correlations and test the hypotheses formulated in this study. The results of the linear regression analysis will indicate the extent to which MIS implementation influences the effectiveness of decision-making in educational institutions. With the methods described, this study is expected to provide clearer insights into the influence of Management Information Systems (MIS) on more effective decision-making in educational institutions, as well as offer practical recommendations to improve MIS implementation in educational management.

4. Results and Discussion

4.1 Validity Testing

Validity testing was conducted to determine the extent to which the items in the research instrument accurately measure the constructs they are intended to assess. In this study, validity testing was performed on the entire sample of 100 respondents. The instrument consists of two main variables: the Implementation of Management Information Systems (MIS) and the Effectiveness of Decision-Making, each comprising 10 statement items. Validity testing was conducted using the Pearson Product Moment correlation technique with the assistance of SPSS software. Each item within the variables was correlated with the total score of its respective variable (item-total correlation). The decision criteria referred to the r-table value at a 5% significance level with a sample size of $n = 100$, which is 0.195. Based on the analysis results, all items in the variables of MIS Implementation (X) and Decision-Making Effectiveness (Y) showed a calculated r-value greater than 0.195 with a significance level below 0.05. These results indicate that each item has a significant correlation with its respective total score. Therefore, it can be concluded that all items in the instruments for the variables of MIS Implementation (X) and Decision-Making Effectiveness (Y) are valid and suitable for use in the data collection process of the main study.

4.2 Reliability Testing

Reliability testing was conducted to measure the internal consistency of the research instrument, that is, the extent to which the items in the questionnaire produce stable and consistent results when used in repeated measurements. In this study, reliability testing was carried out using Cronbach's Alpha coefficient.

Table 1. Reliability Test Output

Variable	N	Cronbach's Alpha	Description
Management Information Systems (X)	100	0,88	Reliable
Decision-making Effectiveness (Y)	100	0,90	Reliable

Based on the results of the reliability test, the Management Information System (MIS) Implementation variable (X) has a Cronbach's Alpha value of 0.88, while the Decision-Making Effectiveness variable (Y) has a value of 0.90. Both are above the minimum threshold of 0.7, indicating that the instrument has good internal consistency. Therefore, the questionnaire instrument used in this study can be considered reliable and suitable for use in the data collection process of the main research.

4.3 Normality Test

The normality test was conducted to determine whether the research variable data follows a normal distribution or not. This is important for determining the appropriate type of statistical test, as most parametric tests require normally distributed data. In this study, the normality test was performed on two main variables: the Implementation of Management Information Systems (MIS) and the Effectiveness of Decision-Making, each consisting of 10 statement items. The normality test was conducted using the Kolmogorov-Smirnov test via SPSS software.

Table 2. Normality Test Results

Variable	Normality Test	Significance Score	Description
Management Information Systems (X)	Kolmogorov-Smirnov	0,112	Normally distributed data ($p > 0.05$)
Decision-making Effectiveness (Y)	Kolmogorov-Smirnov	0,083	Normally distributed data ($p > 0.05$)

Since the significance values for both variables are greater than 0.05, it can be concluded that the data for MIS Implementation and Decision-Making Effectiveness are normally distributed. Therefore, parametric statistical analyses such as Pearson correlation and linear regression can be used in this study.

4.4 Homogeneity Test

The homogeneity test aims to determine whether the data variances for each variable are similar (homogeneous) across groups, based on the assumption that the variances between groups are equal. This homogeneity test is important for use in ANOVA and is also used to verify the assumptions of parametric tests. In this study, the homogeneity test was conducted on the variables of MIS Implementation and Decision-Making Effectiveness using Levene's Test available in SPSS software.

Variable	Homogeneity Test	Significance Score	Description
Management Information Systems (X)	Levene's Test	0,182	Homogeneous

Decision-making Effectiveness (Y)	Levene's Test	0,295	Homogeneous

Table 3. Homogeneity Test Results

Since the significance values for both variables are greater than 0.05, it can be concluded that the data variances for MIS Implementation and Decision-Making Effectiveness are homogeneous. This indicates that the variability of data between the compared groups is uniform, allowing the ANOVA test and parametric tests such as linear regression to proceed.

4.5 Simplified Linear Regression Test

A simple linear regression test was conducted to determine the extent to which the Implementation of Management Information Systems (MIS) contributes to the Effectiveness of Decision-Making in educational institutions. In this regression analysis, the independent variable is MIS Implementation, and the dependent variable is Decision-Making Effectiveness.

Table 3. Summary Model

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0,692[a]	0,479	0,469	0,285
b. Predictor: (constant), Penerapan SIM				

The R Square value from the regression analysis is 0.479, or 47.9%. This means that the Implementation of Management Information Systems (MIS) contributes 47.9% to the Effectiveness of Decision-Making. The Adjusted R Square value is 0.469, which more accurately reflects the contribution of the independent variable after accounting for the number of variables in the model. This indicates that the regression model can explain nearly 47% of the variation in the dependent variable. The Standard Error of the Estimate (0.285) indicates a relatively small prediction error in the regression model, suggesting that the model is quite effective in predicting the dependent variable based on the independent variable.

Table 5. Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.752	0.289		6.060	0.000
	Penerapan SIM (X)	0.715	0.062	0.692	11.524	0.000
b. Dependent Variable: Efektivitas Pengambilan Keputusan						

The constant value (B = 1.752) represents the intercept or the value of Decision-MakingEffectiveness when the Implementation of Management Information Systems (MIS) is zero. The coefficient for MIS Implementation (X) is B = 0.715, indicating that for every one-unit increase in MIS Implementation, Decision-Making Effectiveness increases by 0.715. The standardized coefficient Beta = 0.692 shows a fairly strong influence of MIS Implementation on Decision-Making Effectiveness on a standardized scale. This value indicates that MIS Implementation has a significant effect on Decision-Making Effectiveness. The t-value of 11.524 with a p-value of 0.000 confirms that MIS Implementation (X) has a statistically significant impact on Decision-Making Effectiveness.

4.6 Discussion

Based on the results of the regression analysis, it was found that the implementation of Management Information Systems (MIS) (X) has a positive effect on the effectiveness of decision-making (Y), as indicated by a regression coefficient of 0.635. This means that for every one-unit increase in MIS implementation, the effectiveness of decision-making increases by 0.635 points. The constant value of 1.524 indicates that, without any contribution from MIS implementation, the baseline effectiveness of decision-making stands at this level. These findings are consistent with previous research by Febrianti et al. (2023), which stated that the implementation of information technology in educational management can improve the efficiency and effectiveness of decision-making. Another study by Sumbaryani et al. (2023) also showed that the effective use of Management Information Systems (MIS) is positively associated with more efficient and accurate decision-making in educational institutions.

These results are further supported by studies indicating that educational institutions that have effectively implemented Management Information Systems (MIS) tend to have more efficient and data-driven decision-making. This supports the findings of Rismawati et al. (2024) and Hartati et al. (2024), who revealed that optimal MIS implementation consistently contributes to improved effectiveness in decision-making that is more structured and information-based. Conversely, educational institutions with inadequate MIS implementation show greater variation in decision-making effectiveness, indicating a lack of access to relevant and timely information.

These findings are also in line with studies by Hasna (2024) and Sirojuddin et al. (2022), which emphasize that the ability to access accurate and timely information-two key characteristics of Management Information Systems (MIS)-plays a crucial role in the success and sustainability of decision-making in educational institutions. Therefore, educational institutions need to pay special attention to the development and implementation of Management Information Systems (MIS) through a more structured and technology-based approach. Strategies to enhance MIS implementation will not only improve the institution's ability to make more informed decisions but also promote decision-making that is more efficient, transparent, and oriented toward creating value at both the institutional and social levels.

5. Conclusion

Based on the analysis conducted, it can be concluded that the implementation of Management Information Systems (MIS) has a positive and significant impact on the effectiveness of decision-making in educational institutions. The regression coefficient value of 0.635 indicates that improvements in MIS implementation directly contribute to enhanced decision-making effectiveness. In other words, the better the MIS is applied within an educational institution, the more efficient and effective the decision-making process will be.

These findings underscore the importance of implementing Management Information Systems (MIS) as a key aspect in supporting data-driven decision-making based on relevant information. Therefore, educational institutions need to give serious attention to the development and optimal implementation of MIS through the use of appropriate technology, training for data managers, and better integration of information systems at every management level. This strategy will not only enhance the efficiency of decision-making but also make a significant contribution to building a more transparent, accurate, and data-driven educational management system.

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THE EFFECT OF DIGITAL MARKETING STRATEGIES ON CONSUMER LOYALTY IN FASHION PRODUCTS IN E-COMMERCE

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Abstract

The rapid development of information technology is driving major changes in marketing strategies, especially in the e-commerce fashion sector. One of the main challenges for fashion companies is building consumer loyalty amidst intense digital competition. This study aims to analyze the effect of digital marketing strategies on consumer loyalty in fashion products on e-commerce platforms. This research uses a quantitative approach with descriptive and verification methods, collecting data from 100 respondents using a Likert scale-based online questionnaire. Normality and linearity tests show that the data is normally distributed and the regression model is linear. The regression test results show that digital marketing strategies have a significant effect on consumer loyalty with a coefficient of determination of 12%. This indicates that although the effect is real, other factors outside of digital marketing strategies also play a major role in shaping consumer loyalty. Digital marketing dimensions such as social media, influencer marketing, email marketing, and SEO/SEM were found to positively contribute to increased consumer attachment and trust in the brand. The conclusion of this study is that digital marketing strategies play an important role in building fashion consumer loyalty in e-commerce, especially through visual communication approaches, personalized interactions, and digital consistency. It is recommended that fashion industry players strengthen their digital presence by integrating creative, relevant, and data-driven digital marketing strategies to retain and increase consumer loyalty in an era of increasingly fierce digital competition.

Keywords: *Digital marketing, consumer loyalty, e-commerce, fashion, social media.*

1. Introduction

The rapid development of information technology has led to major changes in the way companies market their products, especially in the fashion sector. One of the most significant changes is the shift from conventional marketing strategies to digital marketing. Digital marketing is an effective means to reach consumers in a broad, fast, and personalized manner. In the context of e-commerce, digital marketing strategies play a crucial role in building relationships between brands and consumers (Adnan Ali and Khan 2023).

The fashion industry is one of the most dynamic and competitive sectors, where customer loyalty is a valuable asset. Fashion consumers tend to have a high preference for trends, styles, and personalization. Therefore, companies need to build marketing strategies that not only attract attention, but are also able to maintain consumer engagement in the long term (Kotler et al. 2005).

Digital marketing encompasses various tactics such as social media marketing, email marketing, content marketing, Search Engine Optimization (SEO), influencer marketing, and paid digital advertising. These strategies have proven to be effective in attracting consumer attention and increasing interaction between brands and consumers. However, the effectiveness of these strategies in increasing consumer loyalty is still a relevant question for further research, especially in the context of e-commerce fashion products (Parebong 2023).

Several previous studies have shown that digital marketing has a significant influence on consumer loyalty. According to Sutrisno, Lestari, and Agus (2023), consumer emotional engagement built through digital media contributes to increased loyalty in the online retail industry. Meanwhile, Perry, Lundie, and Golder (2019) emphasized the importance of a consistent omnichannel experience in building long-term relationships with customers.

In the context of fashion e-commerce, factors such as the quality of visual content, speed of response on social media, and influencer testimonials play a role in creating positive brand perception. A study by Abid (2019) revealed that interactive digital marketing elements such as campaigns on Instagram or TikTok have a strong impact on purchase decisions and brand loyalty, especially among millennials and Gen Z.

However, the main challenge in implementing a digital marketing strategy is to ensure that the approach used is relevant to the needs and expectations of consumers. Personalization and automation, for example, will only be effective if supported by accurate data and a deep understanding of consumer behavior. According to Zulkarnain (2023), the use of data analytics in digital marketing can be key in optimizing customer retention..

The increasing competition between e-commerce platforms also requires fashion companies to create differentiation through superior digital experiences. Consumer loyalty is now not only determined by price and product quality, but also by the added value offered through fun, informative, and responsive digital interactions (Nurofik and Wiana 2022).

The purpose of this study is to analyze the effect of digital marketing strategies on consumer loyalty in fashion products in e-commerce. This research will highlight the key dimensions of digital marketing strategy and examine the extent to which each of these dimensions contributes to the formation of customer loyalty.

This research is expected to contribute both theoretically and practically. Theoretically, this research will enrich the literature on digital marketing and consumer loyalty in the realm of e-commerce. Practically, the results of this research can be used by fashion industry players to design more effective and consistent digital marketing strategies in maintaining a loyal customer base.

Based on this background, it is important to conduct an empirical study of the relationship between digital marketing strategies and customer loyalty in the online fashion industry, so that companies can better understand the factors that support success in retaining customers amid increasingly competitive competition.

2. Literature Review

2.14. Digital Marketing Strategy

Digital marketing strategy is a series of structured actions undertaken by a company to promote its products or services through digital channels. According to Husna et al. (2025), digital marketing encompasses various techniques such as content marketing, social media marketing, SEO, SEM, email marketing, and mobile advertising, all aimed at reaching consumers more effectively and efficiently..

Digital marketing enables companies to personalize their messages to consumers based on user behavior, interests, and purchase history. This significantly increases the chances of consumer engagement (Kotler et al. 2005). Effective personalization can enhance the relevance of displayed advertisements, ultimately leading to a more positive perception of the brand.

Social media marketing is an essential part of digital marketing strategy. Platforms such as Instagram, TikTok, and Facebook are widely used by fashion brands to create strong visual narratives and build closeness with their audiences. According to a study by Deviastri and Annisa (2022), social media interactivity can create experiences that strengthen consumers' emotional bonds with the brand.

In addition, the use of influencer marketing has become one of the most popular strategies in the fashion industry. Influencers have a unique appeal because they are perceived as more authentic by their followers. A study by Ao et al. (2023) shows that collaborations between brands and influencers can increase consumer trust, which ultimately enhances purchase intention and loyalty.

SEO and SEM help increase the visibility of fashion brands on search engines. By optimizing relevant content, fashion e-commerce websites can reach potential consumers who are actively searching for similar products. This is supported by findings from Schafer et al. (1999), which show that the proper use of SEO strategies can boost organic traffic and conversions.

Email marketing is still considered effective in retaining existing customers. By delivering relevant content such as exclusive offers, the latest product information, and personalized recommendations, email marketing helps maintain consumer engagement (Raman Arasu dan Viswanathan A. 2017).

Digital marketing also allows for more accurate measurement compared to conventional marketing. Using tools like Google Analytics and Meta Ads Manager, companies can analyze campaign performance in real-time and dynamically adjust their strategies (Wiratama, Hartiati, and Sadyasmara 2021).

In the fashion industry context, visual content is key. Fashion consumers tend to respond better to ads with appealing visuals, trend-appropriate aesthetics, and strong storytelling (Taufikurrahman Taufikurrahman et al. 2023). This highlights the importance of creativity in digital marketing.

The use of technologies such as artificial intelligence (AI) and machine learning is now beginning to be applied in digital marketing, especially in analyzing consumer behavior and providing automatic product recommendations. A study by Grassini (2023) states that the adoption of AI in digital marketing has the potential to enhance personalization effectiveness and long-term loyalty.

Thus, digital marketing strategies not only serve as promotional tools but also as means to build sustainable relationships with consumers, particularly in the highly competitive fashion e-commerce sector.

2.15. Consumer Loyalty

Consumer loyalty is the ongoing commitment of consumers to consistently repurchase products or services from a particular brand, despite the presence of competing alternatives in the market (Sulaiman et al. 2020). In the fashion industry, consumer loyalty is crucial because it generates repeat purchases and voluntary word-of-mouth promotion.

According to Nurhikma et al. (2022), consumer loyalty is formed from a combination of positive attitudes toward the brand and consistent purchasing behavior. Factors such as customer satisfaction, brand trust, and perceived value play key roles in shaping loyalty. One important element in building loyalty is the quality of the customer experience. In the digital context, this includes ease of website navigation, transaction speed, and responsive customer service. According to Hapriyanto (2024), notes that a positive digital customer experience is highly correlated with consumer loyalty.

The perceived value received by consumers also greatly influences loyalty. If consumers feel that the fashion products they purchase are of high quality and reasonably priced, they are more likely to make repeat purchases. Research by Atik Nurngaeni (2021) shows that positive perceived value increases repurchase intention and long-term loyalty. Customer satisfaction is often considered a mediator between marketing strategies and consumer loyalty. According to Kotler et al. (2005), high satisfaction does not always guarantee loyalty, but loyal customers almost certainly feel satisfied with the products or services they use.

Emotional attachment to the brand also plays a role in fostering loyalty. In the fashion industry, consumers tend to form bonds with brands that represent their identity or lifestyle. A study by Kurnia et al (2023) shows that emotional attachment can motivate consumers to remain loyal despite offers from other brands. In the digital era, consumer loyalty is also influenced by how frequently and consistently a brand interacts with its customers. Personal interactions through email, social media, or online customer service strengthen the relationship between the brand and consumers (Luwiha et al. 2024).

Loyalty programs that offer incentives such as discounts, reward points, or exclusive access have been proven to increase customer retention. According to Winell et al (2023), well-designed loyalty programs not only encourage repeat purchases but also create a sense of attachment to the brand. Recommendations from loyal customers often become the most effective marketing tool. Word-of-mouth from satisfied customers is considered more trustworthy than formal advertising. This underscores the importance of nurturing loyalty to organically expand brand reach (Mega Julianti et al. 2023).

Finally, consumer loyalty in e-commerce is highly vulnerable to changes in price, product availability, and digital experience. Therefore, fashion brands need to combine product quality with strong digital marketing strategies to retain customers in the long term.

3. Methodology

3.1 Research Type and Approach

This study employs a quantitative approach using both descriptive and verificative methods. The quantitative approach was chosen because this research aims to examine the influence of the independent variable (digital marketing strategy) on the dependent variable (consumer loyalty) through the collection and analysis of numerical data. The verificative approach is used to test the previously formulated hypotheses using empirical data.

3.2 Population and Sample

The population in this study consists of consumers who have purchased fashion products through e-commerce platforms in Indonesia. Given the very large and uncertain population size, the sample selection was conducted using a non-probability sampling technique with a purposive sampling approach. The sample size was determined using the Lemeshow formula for an infinite population, assuming a 95% confidence level and a 5% margin of error, resulting in a minimum sample size of 100 respondents.

3.3 Data Collection Technique

Primary data were collected using online questionnaires distributed through social media, email, and fashion consumer community platforms. The questionnaires were designed using a 5-point Likert scale, ranging from "strongly disagree" to "strongly agree." Secondary data were obtained from scientific literature such as journals, books, and articles related to digital marketing and consumer loyalty.

4. Result

4.1 Data Normality Test

The purpose of the normality test is to examine whether the regression variables have a normal distribution. In this study, the normality test was conducted using SPSS 26.0 with the Kolmogorov-Smirnov One-Sample test at a significance level of 0.05. The test results showed that the p-value for digital marketing strategy was 0.054 and for consumer loyalty was 0.067. Therefore, it can be concluded that the population data obtained from the questionnaire are

normally distributed, and the alternative hypothesis (H_a) is accepted. Further details can be found in Table 1 below.

Table 1. Normality Test Results One-Sample Kolmogorov-Smirnov Test

		Y	X
N		100	100
Normal Parameters[a]		67.0806	80.5242
	Mean	6.50278	5.84413
Most Extreme Differences	Std. Deviation	.121	.117
	Absolute Positive	.056	.117
	Negative	-.121	-.115
Kolmogorov-Smirnov	Z	1.344	1.303
Asymp. Sig. (2-tailed)		.054	.067

a. Test distribution is Normal.
b. Calculated from data.

The calculations show that the Asymp. Sig. (2-tailed) values from the Kolmogorov-Smirnov test for all variables are greater than 0.05. Therefore, it can be concluded that the residuals are normally distributed. For further details, please refer to the table below.

Table 2. Normality Test Results of Research Variables

Variable	Sig.	Kriteria Uji	Conclusion
Digital Marketing Strategy	0.100	0.100>0,05	Normal
Consumer Loyalty	0.135	0.135>0,05	Normal

4.2 Linearity Test

The linearity test of the regression line (a requirement for analysis) is conducted to determine whether the regression model used in this study is linear or nonlinear. The test is performed using the ANOVA table, and to carry out the linearity test, the following hypotheses are formulated: H_a: The regression model is nonlinear and H_o: The regression model is linear. The test criteria are: reject H_a if the significance value of the deviation from linearity in the ANOVA table is less than 0.05; otherwise, accept H_a. The results of the linearity test can be seen from the ANOVA output as follows.:

Table 3. Linearity of Digital Marketing Strategy and Consumer Loyalty.

ANOVA Table

			Sum of Squares	df	Mean Square	F	Sig.
X * Y	Between Groups	(Combined)	1457.637	26	56.063	1.982	.009
		Linearity	503.803	1	503.803	17.814	.000
		Deviation from Linearity	953.834	25	38.153	1.349	.152
	WitHan Groups		2743.291	97	28.281		
	Total		4200.927	123			

The significance value in Table 5 shows a deviation from linearity of 0.152, which is greater than 0.05. This indicates that H_o is accepted, or it can be concluded that the regression model is linear.

4.3 Significance Test

The hypotheses are formulated as follows: H_a: The regression equation is not significant and H_o: The regression equation is significant. The test criterion at a 0.05 significance level is

to reject H_a if the calculated t-value (t_{hitung}) is greater than the critical t-value (t_{tabel}); otherwise, H_a is accepted.

Table 4. Regression Coefficients of Digital Marketing Strategy and Consumer Loyalty.

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	36.052	7.630		4.725	.000
	X2	.385	.095	.346	4.077	.000
a. Dependent Variable: Y						

Based on the analysis results in Table 6, it can be seen that the organizational culture variable has a calculated t-value (t_{hitung}) of 4.725, which is greater than the critical t-value (t_{tabel}) of 1.980 at $\alpha = 0.05$. Therefore, H_0 is rejected, and it can be concluded that the regression equation is significant. The tendency of the influence of digital marketing strategy on consumer loyalty can be reflected in the coefficient of determination value, which is explained in Table 5 below:

Table 5. Coefficient of Determination of Digital Marketing Strategy and Consumer Loyalty.

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.346[a]	.120	.113	6.12535
a. Predictors: (Constant), X2				

The results of the correlation coefficient test are presented in the Model Summary table. Table 5 shows an R^2 score of 0.120, which means that the digital marketing strategy variable accounts for 12% of the variation in consumer loyalty, while the remaining 88% is influenced by other variables not included in this study.

5. Discussion

The results showed that digital marketing strategies have a significant and positive influence on consumer loyalty in the fashion product sector on e-commerce platforms. These findings corroborate previous literature that emphasizes the importance of digital marketing in building consumer attachment in the digital economy era (Kotler et al. 2005).

Digital marketing dimensions such as social media and influencer marketing were found to have the most dominant influence. Social media, particularly Instagram and TikTok, are able to create strong visual communication between brands and consumers. This visual approach not only attracts attention but also creates an interactive experience that enhances emotional bonds (Julianti1 et al. 2023). In addition, collaboration with influencers strengthens consumers' trust in brands, as they are considered more authentic and relatable (Ao et al. 2023).

The implementation of email marketing, content marketing, and SEO/SEM strategies also plays a role in retaining existing customers and attracting new ones. Email marketing, for example, allows brands to send personalized and relevant content, thus increasing engagement (Raman Arasu dan Viswanathan A. 2017). SEO/SEM, on the other hand, helps increase brand visibility when consumers search online, increasing the chances of purchase.

Statistically, the regression test results show that digital marketing strategies explain 12% of the variation in customer loyalty. While this number is not very large, it shows the real and significant contribution of digital strategies in creating loyalty. The remaining 88% is most

likely influenced by other factors such as price, product quality, service, or even fashion trends themselves.

In terms of theory, these results support the consumer loyalty model which includes satisfaction, perceived value, and emotional attachment as the main factors shaping loyalty (Sulaiman et al. 2020; Nurhikmat 2023). Consistent digital interactions, attractive visuals, and a personalized approach are key in building long-term loyalty..

Practically, these findings provide guidance for fashion industry players to focus more on developing consumer-centric digital strategies. In an increasingly digitally connected world, loyalty is no longer just shaped by product quality alone, but also by the quality of digital interactions between brands and their consumers.

The normality of the data and the linearity of the model also strengthen the validity of the analysis conducted, indicating that the regression model used can be used to describe the linear causal relationship between digital marketing strategies and customer loyalty.

6. Conclusion

Based on the results of the analysis and discussion that has been carried out, it can be concluded that digital marketing strategies have a significant influence on consumer loyalty in the context of fashion products on e-commerce platforms. The implementation of the right digital strategy is not only able to attract the attention of new consumers, but also effective in retaining existing consumers through continuous digital engagement.

Digital marketing strategies that include social media, content marketing, email marketing, influencer marketing, and search engine optimization (SEO/SEM) are proven to contribute positively to the formation of consumer loyalty. Consumers feel more connected to brands that are active and responsive in the digital world, especially on platforms they use daily such as Instagram, TikTok, and e-mail.

The results show that consistent communication, attractive visual content, and a personalized approach through digital marketing can increase consumers' trust and emotional attachment to the brand. This has an impact on loyal behaviors such as repeat purchases, recommendations to others, and preferences for brands even though there are many alternatives in the market.

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THE RELATIONSHIP BETWEEN SOCIAL MEDIA USAGE INTENSITY AND PURCHASE SATISFACTION OF MILLENNIAL CONSUMERS

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Abstract

In the digital era, social media has become an essential element in the lives of millennials—not only for social interaction but also in the purchasing decision-making process. The intensity of social media usage is believed to influence consumer satisfaction levels after making a purchase. This study aims to analyze the relationship between social media usage intensity and purchase satisfaction among millennial consumers. A quantitative associative method was employed, and data were collected through an online questionnaire distributed to 120 respondents aged 27–44 years old who are active on social media and have made online purchases. Data analysis included normality tests, linearity tests, significance tests, and simple regression using SPSS 26.0. The results indicate a positive and significant relationship between social media usage intensity and millennial consumer purchase satisfaction, with a correlation coefficient (R) of 0.546 and a coefficient of determination (R^2) of 0.675. This suggests that 67.5% of the variation in purchase satisfaction can be explained by social media usage intensity. Millennials who are more actively engaged in social media activities tend to experience higher purchase satisfaction, as they rely heavily on reviews, testimonials, and recommendations from these digital platforms. The conclusion of this study is that social media plays a crucial role in shaping the product purchase experiences and satisfaction of millennial consumers. Therefore, marketers are advised to optimize their digital marketing strategies by prioritizing interactive, informative, and value-aligned content tailored to the millennial generation in order to enhance customer loyalty.

Keywords: *Social media intensity, purchase satisfaction, millennial consumers, consumer behavior, digital marketing*

1. Introduction

In today's digital era, social media has become an integral part of daily life, especially for the millennial generation. Millennials are known for their active use of various social media platforms such as Instagram, TikTok, Twitter, and Facebook not only for socializing but also for seeking product information and making online purchases. These activities indicate a shift in consumer behavior from traditional approaches to a more dynamic and fast-paced digital era (Julianti1 et al. 2023) The intensity of social media usage directly influences how consumers receive, evaluate, and respond to product information they encounter. Millennials who are frequently exposed to promotional content or product reviews on social media tend to form different perceptions about product quality compared to those who rely solely on information from physical stores or conventional advertisements (Fadillah 2024). This indicates that social media is not just a communication channel, but also a crucial element in the purchasing decision-making process.

Along with the increase in digital transactions, questions have arisen regarding how the intensity of social media interaction influences consumer satisfaction with purchased products. Consumer satisfaction is an important indicator for assessing the success of a product or service. Satisfaction occurs when consumers' expectations align with or are exceeded by the

actual experience they encounter after purchase. Therefore, it is crucial to examine the extent to which exposure to information on social media contributes to the perceptions and experiences of millennial consumers (Nurhikma et al. 2022). Millennials, born between 1981 and 1996, have unique characteristics when it comes to consumption behavior. They tend to place more trust in consumer reviews, testimonials, and influencers than in official advertisements from brands (Statista, 2023). This makes social media a highly influential arena in shaping opinions and expectations about products. Therefore, it is important for marketers and business professionals to understand the dynamics of the relationship between social media usage intensity and the level of consumer satisfaction within this demographic segment. By considering the significance of this phenomenon, this article aims to analyze the relationship between the intensity of social media usage and purchase satisfaction among millennial consumers. This study is expected to provide deeper insights into the digital consumption behavior of the millennial generation and serve as a strategic reference for business professionals in designing more effective marketing approaches through social media platforms.

2. Literature Review

2.16. Intensity of Social Media Use

Social media has become one of the most dominant communication channels in modern life, especially among the younger generation. Its use extends beyond social interaction, reaching into various aspects of life such as education, politics, and particularly consumer behavior. Social media refers to a group of internet-based applications built upon the ideological and technological foundations of Web 2.0, which enable the creation and exchange of user-generated content (Hamid and Dahlawy Chalil 2021). Social media usage intensity refers to how frequently and for how long an individual uses social media, as well as the extent of their emotional and cognitive engagement with the platform. This concept includes dimensions such as frequency, duration, and depth of user interaction with social media. Therefore, intensity is measured not only quantitatively but also qualitatively, including how important social media is in a person's daily life (Husna et al. 2025).

Research by Parebong (2023) shows that the intensity of social media usage correlates with psychological factors such as social attachment, identity seeking, and the need for recognition. This further reinforces the idea that social media is not merely a communication tool, but also a meaningful space for self-expression and existence, especially for millennials. In a consumer context, the higher the intensity of usage, the greater the likelihood that an individual will be exposed to promotional content and product reviews. In a study by Khusnul et al (2023) it is stated that intensive use of social media can trigger behavioral changes, both in social and economic aspects. For example, someone who frequently uses Instagram or TikTok is more likely to be influenced in their purchasing decisions due to greater exposure to influencers, targeted ads, and product reviews compared to those who are less active. This proves that usage intensity plays a significant role in shaping consumer preference.

On the other hand, the intensity of social media usage can also reflect users' level of trust in digital platforms. A study by Puri et al (2023) states that more intensive users tend to have a more open attitude toward the information they encounter on social media, including product promotions and testimonials. In other words, higher usage intensity increases the likelihood that the information received will influence users' perceptions and behaviors in purchasing contexts. However, the intensity of social media usage does not always have positive effects. Several studies show that excessive use can lead to negative outcomes such as digital addiction, information overload, and impulsive purchasing decisions (Sutrisno et al 2023). Therefore, it

is important to understand that social media usage intensity should be viewed proportionally—considering not only the quantity but also the quality of the user's experience.

In the context of millennial consumer behavior, the intensity of social media usage often serves as an indicator of their involvement in the product information search process. Millennials are more likely to engage in social comparison before making a purchase, typically by reading reviews, comments, or watching product-related content (Harahap 2018). This suggests that the more intense an individual's social media usage, the more likely they are to rely on it during the purchasing decision-making process. Based on the discussion above, it can be concluded that social media usage intensity is an important variable that not only reflects a person's level of digital activity but is also closely linked to their mindset, consumption habits, and purchasing decisions. Therefore, in studies examining the relationship between social media and consumer behavior, this variable deserves in-depth analysis, both quantitatively and qualitatively.

2.17. Millennial Consumer Purchase Satisfaction

Purchase satisfaction is a central concept in consumer behavior studies, reflecting emotional or evaluative reactions to the experience of buying a product or service. According to Kotler et al. (2005), customer satisfaction refers to the feelings of pleasure or disappointment that arise after comparing perceptions of a product's performance with consumer expectations. If the product exceeds expectations, consumers will feel satisfied, even highly satisfied (Luwiha et al. 2025). Millennials, born between 1981 and 1996 (Pew Research Center, 2019), have unique characteristics when it comes to consumption behavior. They are more critical, digitally connected, and highly reliant on technology and social media in making purchasing decisions. Therefore, purchase satisfaction for millennial consumers is not determined solely by product quality, but also by the overall experience—from information search and brand interaction to after-sales service.

According to Zinedine et al. (2021), satisfaction is the result of a post-purchase evaluation of whether the consumption experience meets previous expectations. In the context of millennials, these expectations can be shaped by various sources, such as reviews from other users, recommendations from influencers, and visual experiences on social media. This means that the satisfaction formation process for this generation is more complex and involves multiple digital touchpoints (Luwiha et al. 2023). In a study conducted by Wahyudi et al. (2021), it was found that millennial consumer satisfaction is strongly influenced by the ease of accessing information, service speed, and the level of personalization. Millennials prefer purchasing processes that are fast, convenient, and tailored to their personal preferences. They also tend to provide feedback actively, whether in the form of online reviews or through social media, which then serves as a reference for other consumers.

One of the distinctive traits of millennials is their tendency to actively participate in digital interactions with brands. They value brands that are responsive, open, and aligned with their personal identities (Nurhikmat 2023). Therefore, satisfaction does not come solely from the product itself, but also from the emotional and experiential value provided by the brand throughout the purchasing process. Several studies also show that millennial consumers have high expectations regarding the overall customer experience. Research by Luwiha et al. (2023) introduces the concept of the experience economy, where consumers do not merely purchase products, but also experiences. This is highly relevant to millennials, as they place greater value on meaningful interactions with brands and expect immersive and enjoyable experiences throughout the purchasing process.

Purchase satisfaction can also influence the long-term behavior of millennial consumers. According to Nurhikmat (2023), customer satisfaction is positively correlated with brand loyalty and the likelihood of repeat purchases. In the context of millennials, they are more

likely to remain loyal to brands that provide a satisfying purchasing experience and are willing to recommend those brands to their social networks. Factors influencing the purchase satisfaction of millennial consumers include product quality, price, service, digital experience, and brand values. However, equally important are the social and emotional aspects offered by the brand. Research by Wahyudi et al. (2021) shows that perceptions of brand image formed through social media have a strong influence on the satisfaction and trust of millennial consumers.

Along with the increasing trend of online shopping, purchase satisfaction has become increasingly dependent on digital aspects such as delivery speed, application interface quality, ease of navigation, and responsive customer service. This is supported by research from Sutrisno et al. (2024) which emphasizes the importance of omnichannel customer experience in enhancing the satisfaction of digitally native generations like millennials. Overall, millennial consumer purchase satisfaction is the result of a combination of various rational and emotional factors. They demand more than just high-quality products; they seek experiences that are relevant, personalized, and aligned with their lifestyle and values. Therefore, in efforts to understand millennial consumer satisfaction, it is essential for researchers and practitioners to consider the digital and social dynamics that shape their preferences and behaviors.

3. Methodology

3.1 Research Type and Approach

This study employs a quantitative approach with an associative research design, as it aims to examine the relationship between two variables: social media usage intensity and millennial consumer purchase satisfaction. This approach is used to test hypotheses and statistically analyze the patterns of relationships between variables (Sugiyono 2021).

3.2 Population and Sample

The population in this study consists of millennial consumers in Indonesia who are active social media users and have made online purchases. In this context, millennials are defined as individuals aged between 27 and 44 years old in 2025, following the definition provided by the Pew Research Center. The sample was selected using purposive sampling technique. The number of samples used in this study was 120 respondents, which is considered sufficient for correlation and simple regression analysis (Sugiyono 2015).

3.3 Data Collection Technique

Data were collected through an online questionnaire distributed via social media platforms (Instagram, WhatsApp, and LinkedIn). The questionnaire was designed using a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree). The type of data collected was primary data, consisting of direct responses from respondents regarding their social media usage intensity and purchase satisfaction..

3. Result

3.1 Data Normality Test

The purpose of the normality test is to examine whether the regression variables have a normal distribution. In this study, the normality test was conducted using SPSS 26.0 with the Kolmogorov-Smirnov One-Sample test at a significance level of 0.05%. The test results showed a significance value of 0.005 for the variable Social Media Usage Intensity and 0.200 for Millennial Consumer Purchase Satisfaction. Therefore, it can be concluded that the data obtained from the questionnaire are normally distributed, and the alternative hypothesis (H_a) is accepted. For further details, refer to Table 1 below.

Table 1. Normality Test Results One-Sample Kolmogorov-Smirnov Test

One-Sample Kolmogorov-Smirnov Test			
		X	Y
N		120	120
Normal Parametersa,b	Mean	136.9490	161.8878
	Std. Deviation	16.57807	17.19679
Most Extreme Differences	Absolute	.110	.059
	Positive	.085	.059
	Negative	-.110	-.050
Test Statistic		.110	.059
Asymp. Sig. (2-tailed)		.005c	.200c,d
a. Test distribution is Normal.			
b. Calculated from data.			
c. Lilliefors Significance Correction.			
d. This is a lower bound of the true significance.			

The calculation shows that the Asymp. Sig. (2-tailed) value in the Kolmogorov-Smirnov test for all variables is greater than 0.05. Therefore, it can be concluded that the residual values are normally distributed. For more details, refer to the following table:

Table 2. Normality Test Results of Research Variables

Variabel	Sig.	Kriteria Uji	Conclusion
Intensity of Social Media Use	0.125	0.125>0,05	Normal
Millennial Consumer Purchase Satisfaction	0.112	0.112>0,05	Normal

4.2 Uji Linieritas

The linearity test of the regression line (analysis requirement) was conducted to determine whether the regression model used in this research is linear or nonlinear. The test was carried out using the ANOVA table. To perform the linearity test, the following hypothesis formulation is required: H_a: The regression model is nonlinear and H_o: The regression model is linear. The testing criterion is: reject H_a if the significance (sig.) value of deviation from linearity in the ANOVA table is less than 0.05; otherwise, H_a is accepted. The results of the linearity test can be observed in the ANOVA output as follows:

Table 3. Linearity of Intensity of Social Media Use and Millennial Consumer Purchase Satisfaction.

ANOVA Table							
			Sum of Squares	df	Mean Square	F	Sig.
X * Y	Between Groups	(Combined)	1457.637	26	56.063	1.982	.009
		Linearity	503.803	1	503.803	17.814	.000
		Deviation from Linearity	953.834	25	38.153	1.349	.152
	WitHan Groups		2743.291	97	28.281		

Total	4200.927	123

The significance value in Table 5 shows a deviation from linearity of 0.152 > 0.05, indicating that H_o is rejected, or in other words, it can be concluded that the regression model is linear.

4.3 Significance Test

Hypothesis formulation: H_a: The regression equation is not significant and H_o: The regression equation is significant, with the test criterion at a significance level of 0.05, H_a is rejected if the calculated t-value (t_{hitung}) is greater than the table t-value (t_{tabel}); otherwise, H_a is accepted.

Table 4. Regression Coefficients of Intensity of Social Media Use and Millennial Consumer Purchase Satisfaction.

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	36.052	7.630		4.725	.000
	X2	.385	.095	.346	4.077	.000
a. Dependent Variable: Y						

Based on the analysis results in Table 6, it can be seen that the organizational culture variable has a t-value of 4.725, which is greater than the table t-value of 1.980 at α = 0.05. Therefore, the null hypothesis (Ho) is rejected, indicating that the regression equation is significant. The tendency of the influence of digital marketing strategy on consumer loyalty can be reflected in the coefficient of determination value, as shown in Table 5 below:

Table 5. Coefficient of Determination of Intensity of Social Media Use and Millennial Consumer Purchase Satisfaction.

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.546[a]	.675	.113	6.12535
a. Predictors: (Constant), X2				

The results of the correlation coefficient test are presented in the Model Summary table. Table 5 shows an R^2 score of 0.675, indicating that the variable digital marketing strategy has an influence of 67% on consumer loyalty, while the remaining 33% is influenced by other variables not included in this study.

4. Discussion

The research results show that the more frequently and actively millennials engage in social media activities, the higher their level of satisfaction with their purchases. This indicates that social media is not only a source of information but has also evolved into a primary platform for shaping consumer perceptions and experiences. Statistically, the study shows a positive and significant relationship between the two variables. With a correlation coefficient (R) of 0.546 and a coefficient of determination (R^2) of 0.675, it can be concluded that approximately 67.5% of the variation in purchase satisfaction can be explained by the intensity of social media usage, while the remaining percentage is influenced by other variables.

These findings align with the characteristics of millennials, who are highly active in the digital space and tend to rely on testimonials, reviews, and content from influencers before making purchase decisions. Social media serves as a platform for them to search for information, interact with brands, and evaluate product quality based on community opinions. However, intensive use of social media also brings its own challenges. Literature studies cited in this journal mention potential negative effects such as information overload and impulsive decision-making. Therefore, marketers need to understand how to create content that is not only engaging but also informative and trustworthy, in order to enhance customer satisfaction without triggering irrational purchasing behavior.

This study underscores the importance of digital marketing strategies that align with the values and lifestyle of the millennial generation. A personalized, responsive, and experience-driven approach is highly recommended to build emotional engagement and customer loyalty. Overall, the research findings provide an important contribution to understanding the dynamics of digital consumer behavior, particularly among millennials. This can serve as a foundation for brands to optimize social media channels as a marketing tool that is not only effective in attracting interest but also in enhancing customer satisfaction and loyalty.

5. Conclusion

The results of this study indicate a positive and significant relationship between the intensity of social media usage and purchase satisfaction among millennial consumers. Millennials who are more active and engaged in social media activities tend to have higher levels of purchase satisfaction. This is due to the significant influence of social media as a source of information, reference, and social experiences that shape perceptions and purchasing decisions. Social media has become one of the key factors in shaping the perceptions and expectations of millennial consumers toward products or services. Activities such as reading reviews, watching promotional content, interacting with brands, and following influencers all contribute to post-purchase experiences and satisfaction. This indicates that social media is not merely a source of entertainment, but also plays a strategic role in the consumer decision-making process. These findings reinforce the role of social media as a key factor in shaping the experience and loyalty of millennial consumers. Therefore, marketers need to optimize their digital strategies by creating relevant, interactive, and millennial-oriented content to enhance customer satisfaction and engagement. Overall, this study supports the view that social media is an effective marketing and communication tool for building millennial consumer satisfaction. As such, targeted and socially interactive digital marketing strategies are essential for creating positive and satisfying purchasing experiences.

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THE INFLUENCE OF CUSTOMER ENGAGEMENT ON CUSTOMER LOYALTY IN MARKETPLACE PLATFORMS

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Abstract

The rapid advancement of digital technology has propelled a transformation in consumer behavior, shifting them from passive transactors to active participants within marketplace platforms. In this context, customer engagement becomes a crucial factor in shaping customer loyalty. This research aims to analyze the influence of customer engagement on customer loyalty among users of marketplace platforms in Indonesia. The study employs a quantitative approach with both descriptive and causal methods. Data was collected through online questionnaires distributed to 100 active respondents who interact through features like product reviews, ratings, and discussions. The collected data was then analyzed using simple linear regression through SPSS 25.0. The research findings indicate a positive and significant influence of customer engagement on customer loyalty, with a contribution of 78.1%. The cognitive, affective, and behavioral dimensions of engagement were found to strengthen customer loyalty. Discussion reveals that high-quality customer engagement not only creates positive experiences but also enhances customer retention and brand advocacy within the digital platform. In conclusion, active customer engagement plays a pivotal role in boosting customer loyalty. Therefore, marketplace companies are recommended to develop sustainable engagement strategies through interactive features, personalized services, and loyalty programs to retain customers in the long run.

Keyword: *customer engagement, customer loyalty, marketplace, customer involvement, digital strategy.*

1. Introduction

The rapid advancement of digital technology has profoundly transformed the way consumers interact with brands and products, particularly through digital platforms like marketplaces. Marketplaces have evolved beyond mere transactional spaces for buying and selling, becoming dynamic hubs for interaction and engagement between consumers and brands. In this context, the concept of customer engagement has gained significant relevance as a key driver of customer loyalty (Sofyan et al. 2023). Customer engagement" refers to the level of emotional, cognitive, and behavioral involvement that customers demonstrate towards a brand or platform. According to Sutrisno et al. (2024), Customer engagement encompasses active customer participation in interactions with a brand, whether through social media, product reviews, or community activities. In the context of a marketplace, engagement can occur through features such as reviews, ratings, forum discussions, or loyalty programs.

Previous research has shown that customer engagement has a positive correlation with customer loyalty. As stated by Jeffery et al. (2022), The higher the level of customer engagement with a brand, the more likely they are to remain loyal and make repeat purchases. Customer loyalty is crucial to business sustainability, as loyal customers tend to have a higher lifetime value and can become effective brand ambassadors. Marketplaces as digital platforms possess unique characteristics in facilitating customer engagement. Interactive features like

gamification, reward points, personalized content, and real-time interaction with sellers are strategies employed to boost engagement. According to Kotera et al. (2023), Digital interactivity has a significant impact on shaping both emotional and cognitive customer engagement.

While engagement is crucial, a significant challenge remains in transforming it into loyalty. In a competitive and multi-seller marketplace ecosystem, customers have a multitude of choices and can easily switch to other platforms offering greater value. Therefore, understanding the specific factors within customer engagement that significantly impact loyalty in the context of a marketplace is crucial (Patricia Aguilera-Hermida 2020). In a study conducted by Gold Nmesoma Okorie et al. (2024), The study found that engagement dimensions such as interaction satisfaction, trust in the platform, and perceived value significantly contribute to customer loyalty. This research reinforces that engagement is not merely about the intensity of interaction, but the quality of the interaction also plays a crucial role in building long-term relationships.

Furthermore, technology and personalization act as crucial catalysts in shaping impactful engagement. According to Hapriyanto (2024), Using customer data to deliver relevant and personalized experiences can enhance emotional engagement and strengthen customer commitment to a platform. In the context of a marketplace, this strategy can take the form of relevant product recommendations, personalized promotions, and responsive customer service. Various research also highlights that customer loyalty in digital platforms is influenced by aspects of trust and ease of use. According to Mittal et al. (2020), Trust is the foundation of online relationships, which can strengthen user engagement and loyalty. Therefore, system reliability and transparency in transactions are integral parts of an effective engagement strategy.

While numerous studies have investigated the relationship between engagement and loyalty, a gap persists in the specific context of marketplaces, particularly in Indonesia. The dynamics of the local market, user preferences, and digital behavior of Indonesian society present compelling variables worthy of deeper investigation. This is crucial for formulating more adaptive and relevant strategies for marketplace service providers within the country. Based on this background, this study aims to analyze the influence of customer engagement on customer loyalty on marketplace platforms in Indonesia. This research is expected to contribute both theoretically and practically to the development of digital marketing strategies that are oriented towards increasing customer loyalty through active engagement.

2. Literature Review

4.1. Customer Engagement

Customer engagement is a relatively new concept in marketing, but it has evolved into one of the key indicators in building long-term relationships between customers and brands. According to Ao et al. (2023), Customer engagement encompasses cognitive, emotional, and behavioral involvement of customers in their interactions with a brand. Engagement is not merely a transaction, but rather an active participation by customers in brand- or platform-related activities. Customer engagement is often described through three main dimensions: cognitive (thinking and attention towards the brand), affective (emotions and feelings evoked), and behavioral (active participation such as commenting, sharing, or providing reviews). As explained by Winell et al. 2023), These three dimensions work synergistically to influence the intensity and quality of customer engagement.

In digital context, Sutrisno et al. (2023) states that online platforms like marketplaces enable more dynamic and interactive engagement. For example, customers can read reviews, write comments, follow their favorite sellers, or share their experiences. These activities

strengthen emotional connections and foster social bonds between customers and brands, as well as with other members of the user community. Research by Wirapraja et al. (2021) The authors underscore the vital role of digital media in fostering engagement. They argue that through interactive digital strategies, companies can empower customers to participate more actively in the value creation process, ultimately leading to enhanced loyalty. This is particularly relevant in the context of marketplaces, which are characterized by intense user interaction.

In the marketplace, engagement can also be measured by how often customers interact with features like wishlists, ratings, reviews, live chat, or follow flash sales. According to Monferrer et al. (2019), A pleasant and meaningful user experience through the feature can increase emotional engagement and extend their engagement duration. Zheng et al. (2022) revealed that the level of engagement can be influenced by content quality, information reliability, and personal relevance. In this case, marketplaces need to present clear product information, attractive images, and an easy-to-use user interface in order to create a satisfying experience.

Futhermore, Zhafira et al. (2023) shows that customer engagement is also strongly influenced by elements of trust and perceived value. If customers feel that the platform provides more benefits than the effort expended, then they will be more actively engaged. This is known as value-based engagement. In the study conducted by Nurhaula et al. (2023), It is explained that customer engagement is a gradual process that develops from awareness, interest, evaluation, trust, active involvement, to loyalty. This process is not linear, but rather iterative and is influenced by the quality of experience that customers feel at each stage.

Marketplaces that succeed in creating high customer engagement usually have strong community features. This community allows customers to interact with each other, exchange experiences, and even give recommendations. Aristo Surya (2009) calls this "relationship marketing" that strengthens emotional bonds through community. Finally, customer engagement in the context of marketplaces cannot be separated from omnichannel strategies. According to Fadillah (2024), integrated interactions across channels such as mobile apps, websites, and social media can increase engagement as it creates a consistent and holistic experience for customers.

4.2. Customer Loyalty

Customer loyalty is defined as the tendency of customers to continue to make repeat purchases of a brand or platform even though many other alternatives are available. Monferrer et al. (2019) states that loyalty consists of four stages: cognitive loyalty, affective loyalty, conative loyalty, and action loyalty, which develop gradually. In the marketplace context, customer loyalty is demonstrated through repeated preference for a particular platform, even when competitors offer better prices or services. According to Nurhikma et al. (2022), Customer loyalty is formed from the interaction between positive attitudes and consistent repeat purchases of the brand or platform.

Kotler et al. (2005) added that loyalty can be reflected in behaviors such as recommendations to others, resistance to promotions from competitors, and long-term commitment to a platform. In the digital era, this behavior is often seen through positive reviews, sharing experiences on social media, or being part of a loyalty program. Puri et al. (2023) suggests that perceived service quality, trust, and perceived value are key antecedents of loyalty. Marketplaces that are able to provide an easy, safe, and enjoyable shopping experience are more likely to retain their customers in the long term. Research by Zinedine et al. (2021) shows that loyal online customers not only make repeat purchases, but are also cheaper in acquisition costs and more likely to become brand advocates. Therefore, building loyalty on digital platforms is crucial for long-term profitability..

Customer loyalty is also closely related to satisfaction and trust. According to (Aini, Budiarto, and Edliyanti (2021), In an e-commerce environment, customer satisfaction is an important mediator linking customer experience to loyalty. Consistent satisfaction will foster trust, which in turn strengthens loyalty. Research by Attas (2019) found that loyalty is divided into two: behavioral loyalty (repurchase behavior) and attitudinal loyalty (attitudes and long-term intentions). Both are important to measure simultaneously in order to fully understand loyalty in a marketplace context.

In Indonesia context, research by Khusnul et al. (2023) revealed that marketplace customer loyalty such as Tokopedia and Shopee is influenced by promotions, ease of transactions, and customer service. However, customer engagement is also an important predictor of customer loyalty. Marketplaces that want to increase loyalty must provide personalization, reward systems, and maintain service quality. According to Riofita et al. (2024), customers who feel valued and personalized experience will tend to stay longer and do positive word-of-mouth. Finally, the integration between engagement and loyalty is important in modern marketing strategies. As mentioned by Monferrer et al. (2019), Well-built engagement will result in loyalty that is not only short-term, but also emotionally and behaviorally sustainable.

3. Methodology

3.1 Type and Research Approach

This research is a quantitative study with a descriptive and causal approach. The quantitative approach is used to statistically test the influence of customer engagement on customer loyalty (Sugiyono 2021). This research is also explanatory in nature, as it aims to explain the causal relationship between two main variables: customer engagement as the independent variable and customer loyalty as the dependent variable.

3.2 Population and Sample

The population in this research encompasses all active users of marketplace platforms in Indonesia, such as Tokopedia, Shopee, Bukalapak, and similar platforms. Due to the vast and unidentified size of the population, a non-probability sampling technique using purposive sampling was employed (Sugiyono 2021). The sample size was determined using the formula by Hair et al. (2010), which requires a minimum of 5-10 respondents per variable indicator. With an estimated total of 20 indicators from two variables, the minimum sample size required is 100 respondents.

3.3 Data Collecting Technique

The data used in this research is primary data obtained through the distribution of online questionnaires using Google Forms. The questionnaire was developed based on indicators from previous literature and measured using a Likert scale of 1–5 (1 = strongly disagree, 5 = strongly agree). In addition, content validity was conducted through consultations with experts and instrument testing (pre-test) was conducted on 30 respondents before the main data collection.

4. Results and Discussion

4.1. Validity and Reliability Test

Validity testing is crucial in research to ensure that the instrument used accurately measures what it intends to measure. Meanwhile, reliability testing aims to determine if the instrument used provides consistent and dependable results. Here's a summary of validity and reliability testing.

Table 1. Validity and Reliability Test Recapitulation

Variable	Total Item	Number of Valid Items	Invalid Item	Alpa Grades	Information
Customer Engagement (X)	20	20	-	0,888	Reliable
Customer Loyalty (Y)	20	20	-	0,890	Reliable

In the Customer Engagement variable, all 20 items tested were deemed valid. The reliability test yielded an alpha coefficient of 0.888, surpassing the minimum threshold of 0.7, indicating the variable's reliability. This confirms that the instrument used to measure Customer Engagement exhibits strong internal consistency and is suitable for future data collection. For the Customer Loyalty variable, all 20 items tested were also deemed valid. The alpha coefficient for this variable is 0.890, considerably exceeding the minimum threshold of 0.7. Consequently, the Customer Loyalty measurement instrument is also deemed reliable. The high alpha value signifies the instrument's high consistency in measuring Customer Loyalty. Overall, both instruments employed in this research are reliable for measuring the Customer Engagement and Customer Loyalty variables.

4.2. Normality Test

The normality test is one part of data analysis requirement testing or classical assumption testing, meaning it is conducted before performing statistical analysis for hypothesis testing—in this case, regression analysis. Of course, good data is data that is normally distributed. The basis for decision-making in this normality test is as follows: if the significance value (Sig.) is greater than 0.05, then the research data is more likely to be normally distributed. Conversely, if the significance value (Sig.) is less than 0.05, then the research data is not normally distributed.

Table 2. One-Sample Kolmogorov-Smirnov Test

Unstandardized Residual		
N		100
Normal Parameters[a,b]	Mean	.0000000
	Std. Deviation	5.15776951
Most Extreme Differences	Absolute	.088
	Positive	.050
	Negative	-.088
Test Statistic		.088
Asymp. Sig. (2-tailed)		.057[c]

a. Test distribution is Normal.
b. Calculated from data.
c. Lilliefors Significance Correction.

Based on the SPSS output table, it is found that the Asymp. Sig. (2-tailed) value is 0.057, which is greater than 0.05. Therefore, according to the decision-making criteria for the Kolmogorov-Smirnov normality test mentioned earlier, it can be concluded that the data is normally distributed. Thus, the normality assumption or requirement for the regression model has been satisfied.

4.3. Regression Test

Table 3. Simplified Regression Test

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.884[a]	.781	.779	5.184

a. Predictors: (Constant), X
b. Dependent Variable: Y

The table above explains the correlation or relationship (R), which is 0.884. From the output, the coefficient of determination (R-Square) is obtained at 0.781. This means that the influence of the independent variable (Customer Engagement) on the dependent variable (Customer Loyalty) is 78.1%, while the remaining 21.9% of Customer Loyalty is influenced by other variables not examined in this study.

Table 4. ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	9412.854	1	9412.854	350.258	.000[b]
	Residual	2633.656	98	26.874		
	Total	12046.510	99			

a. Dependent Variable: Y
b. Predictors: (Constant), X

The output shows that the calculated F-value is 350.258 with a significance level of 0.000 < 0.05. This indicates that the regression model can be used to predict participation variables. In other words, there is a statistically significant influence of the Customer Engagement variable (X) on the Customer Loyalty variable (Y).

4.4. Hypothesis Testing

The hypothesis test (or influence test) serves to determine whether the regression coefficient is statistically significant or not. The hypotheses in this study are as follows:

H_0 = There is no significant influence of Customer Engagement (X) on Customer Loyalty (Y).
H_a = There is a significant influence of Customer Engagement (X) on Customer Loyalty (Y).

Meanwhile, to ascertain whether the regression coefficient is significant or not (in the sense that variable X has an effect on variable Y), this hypothesis test can be carried out by comparing the significance value (Sig.) with a probability of 0.05 or in another way, namely comparing the calculated t value with the t table. Hypothesis testing is often referred to as the t test, where the basis for decision making in the t test is if the t value is greater than t table, then there is an effect of Customer Engagement (X) on Customer Loyalty (Y). Conversely, if the t value is smaller < than the t table then there is no effect of Customer Engagement (X) on Customer Loyalty (Y). In general, the simple linear regression equation formula is Y = a + bX. Meanwhile, to find out the value of the regression coefficient, it can be done by referring to the output in the following Coefficients table.

Table 5. Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	8.138	2.508		3.244	.002
	X	.934	.050	.884	18.715	.000

a. Dependent Variable: Y

In the table, a is equal to the constant of the unstandardized coefficients. In this case the value is 8,138. This number is a constant number which means that if there is no customer engagement (X), the value of Customer Loyalty consistency. Then, b is equal to the regression coefficient number of 0.934, it can mean that every 1% increase in the level of customer engagement (X), customer loyalty (Y) will increase by 0.934. Based on the output above, it is known that the t value is 18.715 Because the t value has been found, the next step will be to find the t table value, with the following formula:

$$\frac{\text{Value of a}}{2} = \frac{0{,}05}{2} = 0{,}025$$

Degree of freedom (df) = n-2 = 100 - 2 = 98

The value of 0.025;98 is then seen in the distribution of t table values, then the t table value is 1.664. Because the t value of 18.715 is greater than > 1.664, it can be concluded that H0 is rejected and Ha is accepted, which means that there is an effect of Customer Engagement (X) on Customer Loyalty (Y). Based on this discussion, it can be concluded that there is an effect of Customer Engagement (X) on Customer Loyalty (Y) with a total effect of 78.1%. This influence means that there is a positive influence from customers on a sense of being involved in relation to the product and feeling valued which has an effect on increasing product purchase loyalty by these customers.

5. Conclusion

Based on the research findings regarding the influence of customer engagement on customer loyalty on marketplace platforms, several conclusions can be drawn:

1. Customer engagement has a positive and significant impact on customer loyalty. This indicates that the higher the level of customer involvement in activities within the marketplace platform, the greater the likelihood of them becoming loyal customers.
2. Dimensions of customer engagement such as cognitive, affective, and behavioral engagement have been proven to contribute to the formation of customer loyalty. Customers who feel emotionally involved and actively participate in platform activities (e.g., writing reviews, following promotions, interacting with sellers) tend to demonstrate long-term commitment to the marketplace.
3. Marketplaces, as digital platforms, have a significant opportunity to increase customer loyalty through appropriate engagement strategies. Interactive features, loyalty programs, personalization, and quality of digital service are factors that can strengthen the customer bond with the platform.
4. These findings also demonstrate that customer loyalty is not solely formed from transactional satisfaction, but also from the overall experience and the relationship built between the customer and the platform.

Therefore, marketplace companies are advised to actively manage and develop a comprehensive customer engagement strategy in order to continuously enhance customer

loyalty. In today's highly competitive digital landscape, customer loyalty is a crucial asset that can guarantee the long-term sustainability of a business.

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THE EFFECT OF *E-SERVICE QUALITY, E-TRUST* ON CONSUMER LOYALTY AS SHOPEE MARKETPLACE USERS IN BENGKAYANG REGENCY

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Abstract

This research aims to analyze the influence of e-service quality and e-trust on consumer loyalty of Shopee marketplace users in Bengkayang Regency. Electronic service quality (e-service quality) and the level of electronic trust (e-trust) are considered the main factors influencing consumer behavior on e-commerce platforms. This research uses a quantitative approach with data collection methods through questionnaires distributed to active Shopee consumers in Bengkayang Regency. In this research, the sample used was 150 samples. The collected data was then analyzed using multiple linear regression analysis techniques. The results of this research show that the variables e-service quality, e-trust have a positive and significant effect on consumer loyalty. These results indicate that good management of the e-service quality and e-trust dimensions can increase consumer loyalty of Shopee marketplace users in Bengkayang Regency. It is hoped that these findings can contribute to developing marketing strategies and improving services for Shopee in Bengkayang Regency, as well as providing insight for other e-commerce companies.

Keywords: *E-service quality, E-trust, Consumer Loyalty, Shopee Marketplace, Quantitative.*

1. Introduction

Innovation faces developments in today's era very fast, as well as expanding human needs. Innovation plays a very important part in human existence. Technology plays a very important role in human life, and the development of an increasingly sophisticated era requires us to keep up with these trends, especially in terms of rapidly growing internet-based technologies. In this context, the internet has a great impact on the development of the business world, and many people have used it for various purposes, one of which is through e-commerce. E-commerce refers to business activities that are carried out electronically through the internet. There is a form of e-commerce that is popular today, namely the purchase and supply of goods or online stores is a transaction between businesses and consumers, consumers can buy goods or services directly from online stores, and these transactions are carried out electronically. (Rakhmat Romadhan et al., 2019)

Table 1. Top data *of E-commerce* visitors in Indonesia in 2023

No	Brand	Top E-commerce *Warriors*
1	Shopee	237 million
2	Tokopedia	88.9 million
3	Lazada	47.7 million
4	Blibli	28.9 million
5	Bukalapak	11.2 million

***Source*:**https://databoks.katadata.co.id/datapublish/2023/10/11/pengunjung-shopee-makin-banyak-bagaimana-e-commerce-other

Based on information from Sameweb, Shopee is currently an online business website in the classification of the shopping center with the most guests in Indonesia. In September 2023, the Shopee website was recorded to get 237 million visits, an increase of around 38% compared to the initial position. The development of Shopee's visitors far outperforms its main rivals, namely Tokopedia, Lazada, Blibli, and Bukalapak.

Shopee in the e-commerce industry is a remarkable achievement, especially with the second ranking in the number of visitors in the third quarter of 2021. This shows Shopee's attractiveness and adaptability to the Indonesian consumer market. Some of the factors that can be identified as drivers of this success include the ease of consumers switching between e-commerce platforms and the high consumer awareness to search for information and compare products. The fact that Shopee has taken the lead as the e-commerce with the most visitors from 2017 to 2020 signifies its consistent dominance in the market. However, to maintain this position, Shopee needs to continue to innovate and improve its services and user experience. There are several strategies that can be considered: Improving Customer Service, app development on the platform, loyalty and discount programs, partnerships and product expansion, improving security and transparency, marketing and branding, and analyzing user data. By continuing to develop this strategy, Shopee can maintain and even improve its position as a leader in the Indonesian e-commerce market. Technological developments and changes in consumer behavior need to be anticipated and actively followed to remain relevant and competitive in the dynamic e-commerce era. (Waruwu & Sahir, 2022). However, in some cases that indicate that there are consumers who use e-commerce who do not get unsatisfactory quality of e-service quality in e-commerce, especially on the Shopee marketplace, this certainly affects consumer e-trust in the Shopee marketplace users. Of course, what the researcher wants to do is measure and see how far e-service quality and e-trust affect consumer loyalty of shopee marketplace users. Thus, e-service quality, e-trust can have a significant impact on consumer loyalty by providing ease of access to applications, a satisfactory user experience, efficient customer service, loyalty programs, and product reviews and recommendations.

In this study, the main thing is to analyze and test the extent of the influence of e-servicee quality, e-trus on consumer loyalty of shopee marketplace users in Bengkayang Regency. The results of this study are expected to help provide input to manufacturers who use internet media to market products that are useful following the correct e-service quality so that consumers can have an e-trust of consumers on the Shopee marketplace, so that consumers become loyal to the Shopee marketplace.

Based on the description above, several problem formulations can be found, which are as follows:

1. Is there an influence of *E-Service Quality* on consumer loyalty as a shopee *marketplace* user in Bengkayang district?

2. Is there an influence *of E-Trust on consumer loyalty as a shopee marketplace user* in Bengkayang district?

With the formulation of the above problem, the objectives of this research are:

1. To analyze whether *E-Service Quality* affects consumer loyalty as a user *of* the Shopee marketplace in Bengkayang district.
2. To analyze whether there is an influence of *E-Trust* on consumer loyalty as a user of *the Shopee marketplace in Bengkayang district*

The benefits of this research are to analyze the influence of e-service quality, e-trust on consumer loyalty of shopee marketplace users in Bengkayang district, as well as provide insights for marketing producers in recognizing and assessing consumer interests and getting the quality of the products they want to sell to consumers, besides that consumers can be wiser in buying products in e-commerce, especially in the shopee marketplace.

The variables to be studied based on the above background therefore the researcher raises the topic of the influence *E-service Quality, E-Trust* to dependents, i.e. user loyalty *marketpalce* shopee in Bengkayang Regency. In this study, the respondents were consumers of the people of Bengkayang district who had shoppe using *marketplace* Shopee for at least the last 3 months. The variables that will be studied based on the background that have been discussed by the researcher are using quantitative methods through data collection using questionnaires.

In this systematics in the next chapter, it will be explained, about the supporting theories of this research, such as theories about e-service quality, e-trust, and consumer loyalty. In the next chapter, we will provide a deeper understanding and understanding of this research, then in the next chapter will explain how this research is designed, the variables used and the methodology.

E-service quality is the extent to which the site works with the shopping, purchasing, and transportation of goods or the administration of a successful and efficient (Handayati & Indrato, 2023). Judging from the definition of administrative quality, it tends to be reasoned that the quality of assistance is a technique to estimate consumer loyalty from a web-based specialist cooperative including the purchase and transportation of goods or administration. This estimate is done by estimating how the assistance is perceived by the klein and comparing it with the assistance anticipated by consumers by considering certain components of administrative quality. According to Kortunay (2016), *E-service quality* is the extent to which a site permits the acquisition, enhancement and transmission of protected and useful goods and administration. As shown by Rufina Pramuditha et al., (2021) characterize *e-service quality* as a development of the site's capacity to make shopping, purchases, and socialization in a real and efficient manner.

E-trust It is a consumer's belief in the provision of products or services that they can be trusted to fulfill their promises in accordance with consumer expectations. E-trust is consumer trust as a belief that the most important thing in an effort to act so that the interests of buyers

can be met. E-trus is characterized as an important beginning of structuring and maintaining the relationship between consumers and online sellers. With the data provided by online pedagag is clear, accurate and complete, consumers will feel that this internet-based figure is not focused on taking advantage of this opportunity to sell products but this will increase the trust of online consumers given by sellers so as to gain buyer fortitude, first must gain their trust. (Aminsyah & Yulianti, 2019)

E-commerce i.e. Along with the development of the current business world *e-commerce* is a necessity to increase and win business competition and product sales. On the use process *e-commerce* buying and selling activities and marketing are more efficient where the use of *e-commerce* This will show the ease of transactions, reduce costs and speed up the transaction process. The quality of data transfer is also better than using manual processes, where there is no re-entry that allows human error to occur (Maulana Miftah Shabur, 2015)

Consumer loyalty is the goal of an organization in the business world carried out by customers, because if the buyer feels satisfied with a need for an item from the organization, the buyer will feel happy with what he gets so that it can provide benefits for the organization and the buyer because it will provide a good relationship. It is great for the organization and the customer and the organization's goods will have a positive impact where the buyer will tell his friends and family members that the goods are good. Consumer loyalty is a commitment from customers in the form of products or services that have been used by consumers so that they want to reuse the product or service and use it in the long term by the consumer. (Saragih & Elisabeth, 2019). Consumer loyalty is a deep commitment from customers to buy back from their preferred products or services for the future despite the influence of both the situation and marketing efforts that cause customers to switch to other products. From the above opinion, consumer loyalty can be defined as consumer loyalty to a product or service, which results in a tendency to make repeated purchases or continue to use the service. (Rqdog et al., 2014)

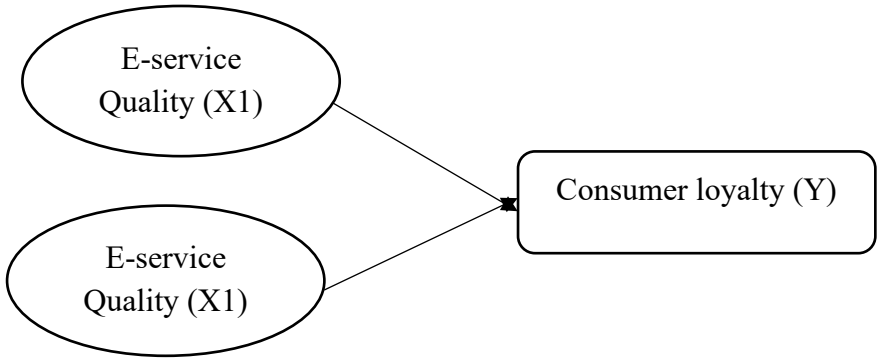


Figure 1: Frame of Mind

Source: Data processed by the author, (2025)

Research Hypothesis

Based on the literature review conducted, the following hypotheses are proposed:

H1: E-service Quality has a positive effect on consumer loyalty of Shopee users

H2: E-trus has a positive effect on consumer loyalty of shopee users

H3: Positive relationship between e-service quality and e-trust that affects consumer loyalty.

The first hypothesis (H1) of users who feel that electronic systems or services respond quickly to their needs tends to be more royal so that consumers will use Shopee continuously so that it becomes a consumer's loyalty. The second hypothesis (H2) states that with a trust between the seller and the buyer, consumers will feel comfortable using Shopee continuously so that it becomes the loyalty of a consumer, not only the trust between the seller and the buyer but the goods sold are also in accordance with the consumer's wishes. The third hypothesis (H3) can be seen that e-service quality. E-trust can have an influence on consumer loyalty.

2. Research Methods

Research Strategy

A. Sari (2023), the type of research that will be used is confirmatory research with a quantitative approach. This study aims to test the hypotheses that have been applied based on a literature review. Quantitative research will use questionnaires as research instruments. Quantitative research focuses on phenomena that can be objectively measured and analyzed by quantitative methods.

In this study, the aim is to find out how much impact *e-service quality and e-trust* have on consumer satisfaction and loyalty. The population in this study is individuals who have done web-based shopping from *the* shopee marketplace in Bengkayang district and at least 2 times in the last 3 months.

Method of Spraying

The sampling strategy in this study is non-probability sampling using purposive sampling techniques. Purposive sampling is a sampling procedure in research, in this study where members are randomly selected based on their quality, experience, perspective, or understanding. Prathama & Sahetapy (2019)

Sample Unit

The focus in this study is the entire community of Bengkayang Regency for consumers who use Shopee who have made transactions to purchase products or services at Shopee. For the determination of sample units in this study, there are several criteria used, namely individuals, both men and women, who have witnessed shopping for products or services using Shopee.

Sample Size

Sample size is the number of individuals or respondents in the population required in a study to represent the population as a whole. In this study, the sample used amounted to 150 respondents.

Formula for calculating sample size according to Hair

n X 5 to 10

15 X 5 to 10= 75 to 150

In this study, 150 samples were used. So that in the research

There are 15 indicators to meet the average, namely 75 to 150 samples

so that it has been considered sufficient to meet the criteria.

Research Location

This research was conducted in the Bengkayang Regency area. This research was carried out using surveys by distributing questionnaires indirectly through *google forms* so that the distribution of questionnaires can be carried out more widely.

Research object

The object of this research is people who have used the shopee marketplace who have made transactions either in the form of products or services online in Bengkayang district.

Analysis Method

Data processing is carried out computerized using several statistical data processing software, namely *Statistical Product and Service Solution* (SPSS) version 16.

3. Results And Discussion

Instrument Test Results

Instrument test is to carry out after testing an instrument or data collection tool in research. Instrument tests aim to measure the extent to which the instruments used in the research, such as questionnaires, tests, interviews, or observation tools, can accurately and validly measure the variables in question.

Table 1. Validity Test Results

Variabel	Indicator Code	R Count	R Table	Information
X1	E-SQ1	0,756	0,16	Valid
	E-SQ2	0,683		Valid
	E-SQ3	0,773		Valid
	E-SQ4	0,784		Valid
	E-SQ5	0,700		Valid
X2	ET1	0,591	0,16	Valid

	ET2	0,760		Valid
	ET3	0,718		Valid
	ET4	0,727		Valid
	ET5	0,665		Valid
And	LK1	0,766	0,16	Valid
	LK1	0,830		Valid
	LK1	0,825		Valid
	LK1	0,839		Valid
	LK1	0,652		Valid

Source: SPSS Validity test data processing results, 2025

Based on the results of the validity test in table 1, it can be concluded that all instrument statements are declared valid to measure the variables of e-service quality, e-trust, and consumer loyalty because the calculated r value is greater than the r value of the table (0.16).

According to the reliability test, it is a method used to evaluate the extent of consistency and stability of data or findings. In the reliability test used, the Cronbach's Alpha value used was above 0.5.(Fanggidae, 2022)

Table 2. Reliability Test Results

Variabel	**Cronbach's Alpha**	**Information**
E-service Quality (X1)	0,792	Reliabel
E-trust(X2)	0,729	Reliabel
Consumer Loyalty (Y)	0,836	Reliabel

Source: SPSS Reliability Test Data Processing, 2025

Based on the results of the Reliability test in table 2 above, *Cronbach's Alpha* value shows a number above 0.5 for each variable. All variables, ranging from *E-service Quality* to Consumer Loyalty, have a high level of reliability, which suggests that the measurement instruments used in this study are reliable and consistent. So it can be stated that the data obtained from these variables can be trusted in analyzing the relationship between *E-service quality, E-trust* and consumer loyalty.

Sample Sufficiency Test Results

The sample adequacy test aims to find out whether the measurement data with a certain level of confidence and accuracy has met the amount or not. Slovin calculations can be used to calculate the sample size of a population with the desired level of accuracy by the researcher (Stephanie in Kalimba et al., 2016)

Table 3. Sample Sufficiency Test Results

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.859
Bartlett's Test of Sphericity	Approx. Chi-Square	1.011E3
	Df	105
	Itself.	.000

Source: SPSS Sample Sufficiency Test Data Processing, 2025

Based on table 3 above, the results of the sample sufficiency test show that the value is 0.859 >0.5. This shows that the sample adequacy test has met the sample adequacy criteria and the data taken is sufficient to carry out further data processing.

Classic Assumption Test

A classical assumption test is a series of tests used to examine the feasibility of a linear regression model, ensuring that the data used meets the basic assumptions required for a valid regression analysis.

1. **Normality Test Results** According to Ghozali (2016), the data normality test can be carried out using the One Sample Kolmogorov Smirnov, where if the significance value is more than 0.05, it can be concluded that the data is distributed normally. Conversely, if the test results show a significance value of less than 0.05 it can be considered that the data is not normally distributed.

Table 4. Normality Test Results

One-Sample Kolmogorov-Smirnov Test				
		X1	X2	And
N		150	150	150
Normal Parameters[a]	Mean	4.1360	4.0560	4.0720
	Hours of deviation	.41729	.39195	.46359
Most Extreme Differences	Absolute	.246	.277	.232
	Positive	.228	.277	.202
	Negative	-.246	-.270	-.232
Kolmogorov-Smirnov Z		3.008	3.390	2.837
Asymp. Sig. (2-tailed)		.000	.000	.000

Source: SPSS Normality Test Data Processing, 2025

Based on table 4 above, it shows that the significance value is less than 0.05 for 3 variables. This shows that the data in this study is not normally distributed. Although in this study the assumption of normality was not met, this study still used the data for further analysis. This is because the number of samples used falls into the category of large samples (> 100) (*Hair et al*, 2018)

2. Multicollinearity Test Results

The VIF (inflation factor variance) multicollinearity test is a test conducted to assess whether there is a correlation between independent variables in a regression model. (Fanggidae, 2022)

Table 5. Multicollinearity Test Results

Variabel	*Collinearity Statistics*	
	Tolerance	*BRIGHT*
E-service Quality	.646	1.548
E-trust	.646	1.548

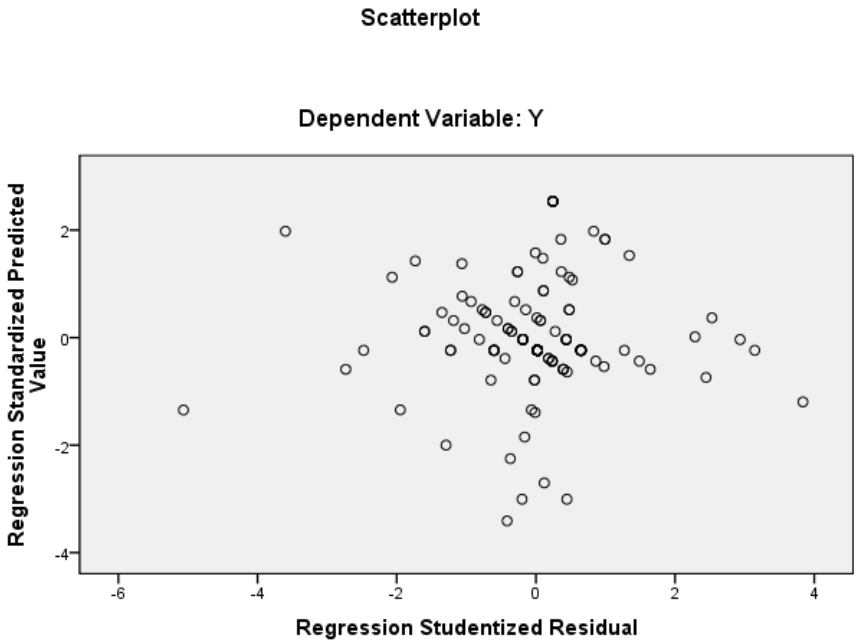
Source: SPSS Multicollinearity Test Data Processing, 2025

Based on table 5 above, it shows that the independent variables in this research data are free from multicollinearity. This can be seen in the tolerance value in the table above, which is more than 0.10 and the VIF value is less than 10. For the *E-service Quality* variable (Tolerance 0.646: VIF 1.548), the *E-trust* variable (Tolerance 0.646: VIF 1.548), from the values obtained, it can be concluded that there is no multicollinearity between variables in this study.

3. Heteroskedacityity Test Results

The heteroscedicity test is used to assess whether there is a significant difference in variability (variance) between residual or observational ones in a model. If the scatterplot graph shows a random scattering of points around the value of 0 on the Y axis, it can be concluded that there is no heteroscedasticity. (Fanggidae, 2022)

Table 6. Results of the HeteoskedacitySum Test



Source: SPSS Heteroscecityity Test Data Processing, 2025

In the graph above, it can be seen that the data is unclear and scattered erratically in the image above the pattern of scattered points above and below the number 0 on the Y axis, it can be concluded that there is no heterogeneity in the data used, meaning that there is variance disparity from one residual observation to another. The data used passed the classical assumption test of the heteroscedasticity test so that the data is suitable for use for regression models.

Regression Model Determination Test Result

Table 7. Regression Model Determination Test Results

Variable Independence	R2	Adjusted R2	F	Variable dependen: Consumer loyalty		
				B	T	Itself
E-service quality	0,526	0,519	81.419 (0,000)	0.304	4.307	0.000
E-trus				0.501	7.093	0.000

Source: SPSS Regression Model Determination Test Results, 2025

The model accuracy test can be seen in table 7 below, there are 2 independent variables, namely *E-service quality, E-trsut.* The accuracy of the model in interpreting the actual value can be measured through the value of the determination coefficient (R2), the statistical value of the data test F and the statistical value of the data test t. In this study, there is one dependent variable, namely consumer loyalty.

Multiple Linear Regression Test Results

Multiple linear regression is used in studies that have more than one independent variable. Multiple linear regression is a regression in which the bound variable is connected to more than one free variable which aims to find out how much value the free and bound variable is through the regression equation. The following are the results of multiple linear regression tests

Table 8. Multiple Linear Regression Test

Coefficientsa						
Model		Unstanndardized Coefficients		Standardized Coefficients	T	Itself.
		B	Std. Error	Beta		
1	(Constant)	.268	.300		.894	.373
	X1	.338	.079	.304	4.307	.000
	X2	.593	.084	.501	7.093	.000
a.Dependent Variable: Y						

Source: SPSS Multiple Linear Regression Test Results, 2025

It can be seen that based on table 8 above, the data results processed using SPSS, the constant obtained is 0.268, *the E-service quality* coefficient (X1) is 0.338, and *the E-trust* coefficient (X2) is 0.593. So the regression equation can be formulated as follows:

$Y = 0.268 + 0.338\ X1 + 0.593\ X2 + e$

Results of the Determinant Coefficient Test (R2)

The coefficient of determination (R2) is a test that assesses the ability of the model to explain the variation of dependent variables. The coefficient of determination ranges from zero to one. The greater the ability of the independent variable to explain the behavior of the dependent variable, the higher the value of the determination coefficient. The ordinary determination coefficient and the adjusted determination coefficient (*Adjusted R Square*) are two different forms of determination coefficients.

Table 9. Determinant Coefficient Test (R2)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.725a	.526	.519	.32148

Source: Determinant Test (R2) data processing results

In table 9 above, it is shown that the *value of the Adjusted R Square* is 0.519, which means that the ability of independent variables (*E-service quality*, *E-trust*) to predict dependent variables (consumer loyalty) is 51.9 percent, while the remaining 48.1 is influenced by other variables outside the research model. *R-Square* measures how big the deviation is in the model, the larger *the R-Square* means the less deviation in the model which indicates the model is better. In Multiple Linear Regression, the more free variables are included in the model, the *R-Square* value will go up even if there are insignificant free variables. *Adjusted R-Square* only measures *R-Square* with significant independent variables. Therefore, *the value of Adjusted R-Square* must be lower than *R-Square*, unless there is only one free variable then the value *of Adjusted R-Square = R-Square*. So in Multiple Linear Regression, we have to use *the Adjusted R-Square* value.

F Test Results

The F test functions to measure how much the influence of independent variables, namely *E-service quality* (X1) and *E-trust* (X2), affect simultaneously (together) the dependent variable, namely Consumer Loyalt

Table 10. Test F

Model		Sum of Squares	df	Mean Square	F	Itself.
1	Regression	420.742	2	210.371	81.419	.000a
	Residual	379.818	147	2.584		
	Total	800.560	149			

Source: SPSS Test data processing results, 2025

In table 10. above shows that the value of F obtained is 81.419, while for F the table is 3.06, the significance of 0.000 this shows that the independent variable has a simultaneous effect (together) on the dependent variable of Consumer Loyalty.

Hypothesis test results t (Variable Coefficient)

In this test, a significance level of 0.05 ($\alpha = 5\%$) is used, which has a criterion, namely if, the sig value < 0.05, then it is said to be significant. Seen first, the value of the regression coefficient, if it is in accordance with the direction of the hypothesis, it is said that Ha is

accepted. If the sig value is > 0.05, it is said to be insignificant. Which means that Ha is rejected so that there is no influence on the independent variable on the dependent variable. (Fanggidae, 2022)

Table 11.Test the Hypothesis t

Model		Unstandardized Coefficients		Standardized Coefficients	t	Itself.
		B	Std. Error	Beta		
1	(Constant)	1.341	1.501		.894	.373
	X1	.338	.079	.304	4.307	.000
	X2	.593	.084	.501	7.093	.000

Source: Hypothesis Test data processing results t

In table 11. above, it can be seen that the value of t in each variable is *E-service quality* t = 4.307, sig = 0.000 (<0.05) and *E-trust* t = 7.093, sig = 0.000 (<0.05) and for t the table is 1.655. It can be concluded that the *variables E-service quality* and *E-trust* have an effect on consumer loyalty because it produces a sig t value (<0.05).

4. Conclusion

Based on the results of the research and discussion above, it can be concluded that this study uses a quantitative approach method. This test aims to test the influence of *E-service Quality*, *E-trust* on consumer loyalty of Shopee users in Bengkayang Regency. In this study, respondents will answer each questionnaire statement that has been shared through *a google form* which consists of 15 statements. There are 150 respondents who participated in this study, the target respondents in this study are consumers who have used Shopee where the use has been used once. The results of the hypothesis test in this study are that *the E-service quality* variable has a positive and significant effect on consumer loyalty of Shopee users.there are t-test results in table 10. It can be seen that the t-value in each variable is *E-service quaity* t=4.307, sig=0.000(<0,0,05) and *E-trust* =7.093,sig=0.000 (<0.005) and for t the table is 1.655. This means that the existence of an easy-to-use site on *Shopee E-commerce* can make it easier for consumers to shop online which will use it constantly and can increase consumer loyalty. The results of the hypothesis test in this study show that *the E-trust* variable has a positive and significant effect on consumer loyalty of Shopee users. This means that with *e-trust* or trust, people can trust the good products or services provided on Shopee so that consumers can use it constantly so that it can increase consumer loyalty of Shopee users.

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THE ROLE OF SOCIAL CAPITAL BEHIND THE SUCCESS OF MIGRANT TRADERS IN NUR BAKSO BENGKAYANG MSME

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Abstract

This research analyzes the role of social capital in the success of migrant traders at UMKM Nur Bakso in Bengkayang, West Kalimantan. Using a qualitative approach with a single case study design, this study finds that social capital plays a crucial role in the success of migrant traders by building social networks, trust, and shared norms. The results indicate that migrant traders successfully mobilize social capital through cultural adaptation strategies, the formation of social networks, and the operationalization of social capital in business activities. This study has important implications for the development of MSMEs and productive migration policies and contributes to the discourse on the role of migration in local and regional economic development.

Keywords: Social Capital, Migrant Traders, MSMEs, Business Success, Productive Migration.

1. Introduction

Micro, Small, and Medium Enterprises (UMKM) in Indonesia play a very significant role in the national economy. According to data from the Ministry of Cooperatives and UMKM (2023), UMKM contributes 61.07% to Indonesia's Gross Domestic Product (GDP) and absorbs about 97% of the national workforce. In West Kalimantan alone, there are more than 500,000 UMKM operating, with 30% of them run by migrant traders (Adger, 2003).

The phenomenon of migrant traders in the context of MSMEs is interesting to study because it reflects the complexities of the relationship between geographical mobility, social adaptation, and economic success. Unlike local MSME actors who have natural embeddedness in the community, migrant traders face specific challenges in building social legitimacy and accessing local resources. In this context, social capital—which includes social networks, trust, and shared norms—becomes a determining factor that can dictate the success or failure of their ventures.

The concept of social capital, as proposed by Lin (2001), refers to resources that can be accessed through social networks, including norms, trust, and interpersonal relationships that facilitate coordination and collaboration for mutual benefit. In the context of migrant traders, social capital functions not only as an economic instrument but also as a mechanism for social integration that allows them to overcome barriers of otherness and build a sustainable position in the local economy.

UMKM Nur Bakso Bengkayang presents a representative case to explore the dynamics of social capital in the success of migrant traders. Founded in 2018 by migrant traders from Central Java, this business has shown an impressive growth trajectory, evolving from a simple stall to an established culinary destination in Bengkayang. This success raises a fundamental research question: how do migrant traders manage to mobilize social capital to achieve business success in an initially unfamiliar environment?

The identified research gap lies in the lack of empirical studies exploring the specific mechanisms by which migrant traders accumulate, operationalize, and maintain social capital in the context of Indonesia's SMEs. The majority of social capital research tends to focus on homogeneous or settled communities, while the unique dynamics faced by economic migrants—with the double burden of social adaptation and economic competitiveness—have not received adequate attention. However, understanding this phenomenon has strategic implications for regional economic development and productive migration policies.

This research is significant for several theoretical and practical reasons. First, from an academic perspective, this research will develop an understanding of adaptability and agency in the context of economic migration through the lens of social capital. Second, from a policy perspective, the findings of this research can inform the design of empowerment programs for MSMEs that are sensitive to the unique characteristics of migrant traders. Third, this research can contribute to a broader discourse on the role of migration in local economic development and regional resilience.

Specifically, this study aims to analyze how migrant traders in the Nur Bakso Bengkayang SMEs build and mobilize social capital as a strategy for adaptation and business success, identify the dimensions of social capital that have the most influence on the sustainability and growth of the business, and evaluate the challenges and opportunities faced in the process of accumulating social capital in the context of cross-cultural economic interaction.

The expected contribution of this research is the development of a conceptual framework that explains the pathway from economic migration to socio-economic integration through the mediation of social capital. In practical terms, this research will yield insights for developing strategies to empower Micro, Small, and Medium Enterprises (MSMEs) that optimize the potential of migrant traders as agents of local economic development. Through an in-depth qualitative approach, this research is expected to provide a nuanced understanding of how boundary-crossing in the context of economic migration can serve as a source of innovation and economic dynamism for local communities, while also providing a dignified livelihood for economic migrants.

2. Literature review

Social capital refers to the network of social relationships that can be utilized to achieve individual or group goals. This research will examine the role of social capital in the success of migrant traders, specifically in the context of MSMEs Nur Bakso in Bengkayang. According to Lin (2001), social capital is defined as resources that can be accessed through social networks, including norms, trust, and interpersonal relationships. By understanding this concept, we can identify the factors that contribute to the success of migrant traders and how they utilize their social networks to achieve economic goals. In this context, it is essential to

note that social capital not only functions as a tool for achieving economic goals but also as a social bond that strengthens community cohesion. As Mair (2009) asserts, this is evident in the daily interactions between traders and the surrounding community. When individuals feel connected to their community, they are more likely to participate in economic and social activities that benefit all parties. Therefore, a deeper understanding of social capital can provide valuable insights into the social dynamics underlying the success of MSMEs in the region.

The concept of Social Capital is based on the fundamental principle that society, as a social group, has the ability to bond through a sense of loss or brotherhood. In other words, social capital relates to the collective value in a social network that develops gradually as an implication of reciprocal relationships within it. This collective value naturally generates and reinforces Social Capital. Furthermore, the increase or decrease of Social Capital depends on the collective value present in a social network (Miftahusyaian, 2015).

Social capital basically consists of three main dimensions, namely:

1. Trust, as a key element of social capital, enables individuals to transact without suspicion, which in turn encourages better economic growth. In this context, trust can be considered the foundation that supports all social and economic interactions (Nain et al., 2023).
2. Norms serve as guidelines for behavior that regulate interactions between individuals, creating an environment conducive to collaboration. In the community of migrant traders, these norms often include values such as helping one another and sharing information, which are crucial for building trust among community members (Coleman, 2013).
3. Networks, social networks encompass the relationships woven between individuals and groups, facilitating access to information and resources. (Portes, A., 1998) emphasizes the importance of social networks in reducing transaction costs and improving economic efficiency.

3. Methodology Research Design

This research uses a qualitative approach with a single case study design to deeply explore the role of social capital in the success of migrant traders in the Nur Bakso Bengkayang MSME. The choice of a qualitative approach is based on the characteristics of the phenomenon being studied, namely the complex processes of social capital formation and mobilization that involve interacting interpersonal, cultural, and economic dimensions in the context of cross-cultural migration.

Qualitative approaches allow researchers to understand the subjective meanings constructed by migrant traders regarding their experiences in building social networks, developing trust, and adapting to local norms. This is important because social capital is an inherently subjective and contextual construct that cannot be comprehensively understood through a quantitative approach alone.

The single case study design was chosen because UMKM Nur Bakso Bengkayang represents a rich and revelatory case in the context of successful migrant traders. This case has unique characteristics as a success story that can provide deep insights into the mechanisms of

operationalizing social capital in a cross-cultural business environment. The single case design allows for the holistic and contextual analysis needed to understand the complexities of the socio-economic dynamics involved.

Setting and Context of the Research

The research was conducted at UMKM Nur Bakso located on Jalan Raya Sanggau Ledo-Bengkayang, Bengkayang District, Bengkayang Regency, West Kalimantan. The selection of this location is based on several strategic considerations: (1) representativeness as an area with a significant concentration of migrant traders, (2) the demographic characteristics of Bengkayang as a regency with ethnic and cultural heterogeneity allowing for observation of cross-cultural interaction dynamics, and (3) accessibility for conducting intensive fieldwork.

The geographical and social context of Bengkayang offers an ideal backdrop for studying migrant traders' social capital. Located in a border region with a diverse community, Bengkayang presents a dynamic social environment where migrant traders' adaptation and integration processes unfold naturally. The area's multiple ethnic groups and cultural backgrounds create complexities that demand advanced social navigation skills from migrant traders. UMKM Nur Bakso, founded in 2018, provides a suitable timeframe to examine the development of social capital from initial adaptation to established success. Its six years of operation allow for observation of the maturation of social relationships and the institutionalization of trust-based interactions.

This research utilizes a purposive sampling

Strategy with carefully designed selection criteria to garner a comprehensive understanding of social capital dynamics from diverse stakeholders. Participants are selected based on their relevance to the research phenomenon and their capacity to provide insightful and meaningful information.

The criteria for participant selection are as follows: (1) business owners must be migrant traders with at least 5 years of experience managing MSMEs in Bengkayang, actively engaged in community building and network development, and willing to share their personal adaptation experiences; (2) employees should have at least 1 year of work experience at MSMEs, regularly interact with customers and the community, and be involved in daily operations that demonstrate social capital implementation; (3) customers must be regular patrons visiting at least twice a week, representing various demographic segments (age, occupation, ethnicity), and willing to discuss their perceptions of service quality and social interactions. The sampling approach also prioritizes diversity in social positions and roles to capture multiple perspectives on social capital, recognizing its relational nature and context-dependent manifestations.

Data Collection MethodSemi-Structured In-Depth Interview

In-depth interviews became the primary method of data collection, conducted using a flexible yet focused interview guide on exploring three main dimensions of social capital: social networks, trust, and shared norms. For business owners, the interviews explored: (1) the process of initial adaptation and challenges faced as newcomers, (2) strategies used for building

social networks and establishing trust, (3) the role of cultural values and norms in business operations, and (4) perceptions of the contribution of social capital to business success.

For employees, the focus of the interview includes: (1) experience working in a cross-cultural business environment, (2) observations regarding the owner's approach in building customer relationships, (3) personal involvement in community activities and social networks, and (4) perception of workplace culture and values promoted in MSMEs.

For customers, the interviews explore: (1) factors that influence choice of patronage and loyalty, (2) quality of service and interpersonal interactions experienced, (3) perception regarding the integration of SMEs in the local community, and (4) comparison with other similar businesses in terms of social connectedness.

Participatory Observation

Participatory observation is conducted to obtain data regarding the concrete manifestations of social capital in daily business operations. The focus of the observation includes: (1) patterns of social interaction between owners, employees, and customers, (2) manifestation of trust in business transactions and relationships, (3) adherence to social norms and cultural practices in service delivery, and (4) evidence of social network activation in problem-solving or opportunity development.The observation was conducted over a period of three months with an intensity of 3-4 times a week at different time periods to capture variations in social dynamics. An unobtrusive participant observation approach was chosen to minimize reactive effects while allowing for rich data collection regarding natural social interactions.

Documentation Analysis

Documentation and analysis of artifacts are carried out to obtain supporting evidence regarding the manifestations of social capital, including: (1) business records that show customer loyalty patterns and repeat business, (2) communication materials that reflect values and norms, (3) evidence of community involvement and partnerships, and (4) testimonials or feedback that indicate trust and social connections.

Documentation analysis also includes a review of social media presence and online reviews to understand public perception and reputation building as indicators of social capital effectiveness.

Data Analysis Procedure

Analysis of the data uses a thematic analysis approach with a framework that integrates deductive elements from social capital theory with inductive discoveries from empirical data. The analysis process begins with comprehensive immersion in the data through repeated reading and listening to interview transcripts and field notes.

The stages of analysis include: (1) Initial Coding: line-by-line analysis to identify concepts, practices, and phenomena related to social capital dimensions; (2) Focused Coding: development of broader categories that group initial codes based on thematic similarities and theoretical relevance; (3) Axial Coding: exploration of relationships between categories to understand the causal conditions, contexts, and consequences of social capital mobilization;

(4) Selective Coding: integration of categories into a coherent theoretical framework that explains social capital's role in migrant trader success.

The constant comparative method is applied throughout the analysis process to ensure consistency and develop theoretical saturation. The analysis is enriched with thick description, enabling readers to understand contextual factors and assess the transferability of the findings. Data analysis software is used to facilitate the coding process and organize large volumes of qualitative data; however, substantive interpretation is still conducted manually to maintain sensitivity to cultural nuances and contextual meanings.

Validity and Quality of Data

To ensure rigor and trustworthiness, this research employs multiple validation strategies. Credibility is enhanced through: (1) prolonged engagement over three months to develop a deep understanding and build rapport with participants, (2) source triangulation involving multiple stakeholder perspectives, (3) method triangulation combining interviews, observations, and documentation analysis, and (4) member checking to verify interpretations with key participants. Transferability is facilitated through comprehensive thick descriptions of the research context, participant characteristics, and socio-cultural factors influencing social capital dynamics. Detailed contextual information enables readers to assess the applicability of findings in similar contexts. Dependability is ensured through systematic documentation of the research process, including decision-making rationales, methodological adjustments, and analytical procedures. A detailed audit trail allows external reviewers to follow the research logic and assess the consistency of procedures. Confirmability is strengthened through systematic reflexivity practices, where the researcher engages in critical self-reflection on personal biases, cultural assumptions, and potential influences on data interpretation. A reflexive journal is used to document the researcher's evolving understanding and maintain awareness of subjective elements in the qualitative research process.

Ethical Considerations

This research was conducted with strict adherence to ethical principles in qualitative research. Informed consent was obtained from all participants with a clear explanation of the research purposes, procedures, voluntary participation, and the right to withdraw without consequences. The consent process was conducted in a language easily understood by participants and included permission for recording interviews. Confidentiality and anonymity were ensured through the use of pseudonyms and careful attention to identifying details. Data were stored securely with restricted access limited to research team members. Special attention was given to cultural sensitivity, considering the cross-cultural nature of the research context. Consideration was also given to the potential impacts of the research on business operations and community relationships. Research activities were designed to minimize disruption to normal business activities and maintain respect for cultural norms and social protocols prevailing in the community.

Limitations of Research

This study has several limitations that need to be acknowledged. The generalizability of the findings is limited due to the single case study design and the specific contextual factors of the Bengkayang setting. Temporal limitations are also recognized, as social capital is a dynamic phenomenon that evolves over time, while the research period is relatively limited for capturing long-term dynamics. Cultural and linguistic barriers between the researcher and some participants may affect the depth and accuracy of data collection, although mitigation efforts have been made through the use of local language and cultural intermediaries when necessary. Subjectivity in interpretation is an inherent limitation in qualitative research that has been minimized through various validation strategies. Finally, scope limitations are acknowledged in terms of focusing only on successful cases, which may not capture the full spectrum of migrant trader experiences, including less successful or failed attempts. These limitations are considered in the interpretation and discussion of the findings.

3. Hasil dan Pembahasan

Profil UMKM Nur Bakso Bengkayang: Konteks Keberhasilan Pedagang Perantau

UMKM Nur Bakso Bengkayang represents a remarkable success story in the context of migrant traders in West Kalimantan. Founded in 2018 by Bu Nur, a migrant trader from Central Java, this business has undergone significant transformation from a simple cart to an established culinary stall with a strategic location on Jalan Raya Sanggau Ledo-Bengkayang. By employing three local employees and operating 13 hours a day (09.00-22.00 WIB), this UMKM has become a favorite culinary destination serving local Bengkayang consumers and surrounding areas. Bu Nur's success in building a sustainable business in a relatively short time demonstrates exceptional ability to navigate the complex socio-cultural landscape as a newcomer. The transformation from a cart trader to an established stall owner not only reflects economic growth but also successful social integration that enables access to resources, customers, and support systems necessary for business expansion.

Strategic Positioning and Social Capital

The strategic positioning of this UMKM, despite being located somewhat far from the city center (10-15 minutes from the market), shows confidence and strong social capital. The ability to attract customers to a relatively remote location indicates a strong reputation and loyal customer base formed through effective mobilization of social capital.

Formation and Mobilization of Social Capital: Adaptation Strategies of Migrant Traders

In-depth analysis of Bu Nur's success trajectory reveals a sophisticated strategy in forming and mobilizing social capital involving multiple dimensions and stakeholders. This process did not occur spontaneously but through a calculated approach combining personal values, strategic networking, and cultural adaptation.

Trust and Belief as Foundation Capital

The first dimension identified is the establishment of trust through demonstration of personal integrity and business reliability. Bu Nur started the trust-building process by showing consistency in quality and service, which gradually created a reputation as a trustworthy business operator.

Solidarity and Support Networks: Leveraging Family and Community Capital

The second crucial dimension is the mobilization of solidarity networks, both in family context and broader community engagement. Family support system plays a vital role in providing not only financial capital but also emotional support and strategic advice during challenging periods.

Social Networks: Strategic Network Building and Maintenance

The third fundamental dimension is conscious development of social networks spanning multiple social spheres. Bu Nur shows a sophisticated understanding of the importance of diversified networks in business success.

Operationalization of Social Capital in Business Success

The transformation of social capital accumulation into tangible business success involves strategic operationalization combining social resources with business acumen. This process shows a sophisticated understanding of how social relationships can be converted into economic opportunities and competitive advantages.

Cross-Cultural Dynamics in Social Capital Formation

The cross-cultural context of migrant trader operations adds complexity layers in social capital formation requiring specialized strategies for bridging cultural differences and overcoming initial social barriers.

Cultural Adaptation and Integration Strategies

Bu Nur shows sophisticated cultural adaptation strategies enabling effective integration into the local social fabric. This adaptation does not involve complete assimilation but selective adoption of local norms while maintaining core cultural identity.

Challenges and Obstacles in Social Capital Accumulation

Despite Bu Nur's success story showing effective social capital mobilization, this process is not without significant challenges and obstacles requiring resilience and strategic problem-solving.

Implications for UMKM Development and Productive Migration Policy

The findings of this research have significant implications for policy development and program design supporting UMKM development and productive migration initiatives.

Program Empowerment for UMKM that is Culturally Sensitive

Development of UMKM support programs requires recognition of unique challenges faced by migrant traders and incorporation of social capital development components.

Policy Framework for Productive Migration

Policy frameworks supporting productive migration require recognition of social capital as a crucial factor in migrant economic integration.

Broader Economic Development Implications

Understanding of social capital dynamics in migrant entrepreneurship can inform broader economic development strategies maximizing contributions from diverse business communities.

The research findings show that the success of migrant traders in the UMKM context cannot be understood solely through conventional economic lenses but requires appreciation of complex social dynamics and cultural negotiations underlying business success. Social capital is not just a supporting factor but a fundamental determinant shaping entrepreneurial outcomes in cross-cultural contexts.

4. Conclusion

This research concludes that social capital plays an important role in the success of migrant traders in the Nur Bakso Bengkayang SMEs. By building social networks, trust, and shared norms, migrant traders can mobilize social capital to enhance business activities and achieve success. The implications of this research are the importance of developing social capital in the development of SMEs and productive migration policies to improve the success of migrant traders and local and regional economic development.

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THE EFFECT OF PROMOTION, PRICE, AND PRODUCT QUALITY ON REPURCHASE INTEREST (CASE STUDY ON EIGER CONSUMERS IN BENGKAYANG CITY)

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Abstract

This study aims to examine how the influence of Promotion, Price, and Product Quality on Repurchase Interest in Case Studies on Eiger Consumers in Bengkayang City. Using quantitative methods and analyzed by regression, the research population refers to Eiger consumers in Bengkayang City. The sample taken was 150 respondents using purposive sampling technique. The results showed that the promotion variable, has a positive value of = 1.173 but does not have a significant value because the value is = 0.243 with a t value of 1.173, which means that the promotion variable has a positive and insignificant effect on consumer repurchase interest in Eiger products. Price and product quality have a positive and significant effect on consumer repurchase interest decisions on Eiger products.

Keywords: promotion, price, product quality, repurchase intention

1. Introduction

The growth of the business world is accelerating, with increasingly fierce business competition between companies. Each organization seeks to attract customers and meet their needs. The growth of the retail area in Indonesia is in line with economic progress, where many department stores, fashion stores offer a variety of shopping options for the public. This gives an advantage for consumers to choose a store that suits their needs and preferences. Many organizations are now competing with competitive prices, thus requiring financial supervisors to strengthen their position in the market. In this competition, organizations must strive to stay afloat. Research conducted by Hamdi, (2022) "The effect of product quality and price on Eiger purchasing decisions in Surabaya" which has been carried out, it is known that the results of the study show that the variables of product quality and price have a positive and significant effect on purchasing decisions. According to Sinaga & Sulistiono, (2020) "The Effect of Electronic Word Of Mouth and Social Media Promotion on Purchase Interest in Eiger Fashion Products" promotion has a positive and significant effect on consumer buying interest decisions. Research conducted by Saputra, (2018) "The influence of brand image, Word Of Mouth, product quality, price and service on purchasing decisions for Eiger manyar Surabaya

branch" which has been carried out, it is known that the results of the study show that the price variable does not have a significant effect.

Based on this explanation, the researcher is motivated to conduct further research. Therefore, in preparing this thesis, the researcher chose the title "the effect of promotion, price, and product quality on repurchase interest (case study on Eiger consumers in Bengkayang City).

2. Theoretical Foundation

Promotion

Promotion is part of a set of activities for an item. Promotion is also one of the activities in the field of marketing which is a communication that has been carried out for entrepreneurs to consumers or buyers who contain everything to influence the goods or services produced for consumers. Promotion is also very helpful for entrepreneurs to introduce products or services that have been made to consumers or buyers so that consumers know the advantages and uniqueness of these products. Jiwuk, (2019) Promotion is a marketing activity for entrepreneurs in an effort to maintain sustainability and improve product quality. Restaurant et al., (2024) . The objectives of promotion are: increase sales, maintain sales, show product excellence, identify a product, and notify a product. Here are some indicators of promotion: advertising, personal selling, sales promotion, public communication, and creating an image.

Price

Price is a very important part of a product or service marketing effort because price is the most important marketing mix in the economy. (Hamdi, 2022) . Broadly speaking, the price is an amount of the entire value of the means of exchange between producers and consumers for the benefits obtained for users with the product. Price is a medium of exchange used to obtain a product or service for a certain amount of money. (M. d. e. Saputra et al., 2024) . Here are some commonly used price indicators. Selling price setting, competitor price growth, price elasticity, price competitiveness, and price compatibility with service quality.

Product quality

Product quality is all the characteristics of a product that impact its capacity to fulfill stated or implied desires. Product quality has a direct impact on the performance of a product or service. Therefore, product quality with value and satisfaction from consumers can increase

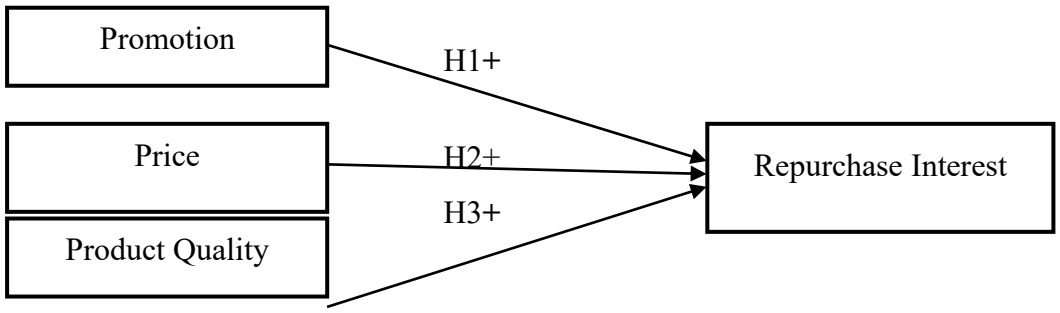
the purchase decision of a product. Anggraeni & Soliha, (2020) Product quality has several indicators including: Reliability, elasticity, conformity to specifications, durability, and functionality.

Repurchase Interest

According to Putri, (2021) . repurchase interest is one of consumer purchasing behavior where there is a match between the value of goods or services that can generate consumer interest in consuming them again in the future. The desire of consumers to repurchase an item is largely based on a sense of trust and value associated with the use of the item. Purnamawati et al., (2020) . Purchase interest can be defined through the following indicators: transactional, exploratory, preferential, and needs or desires.

Research Conceptual Framework

1. The promotion variable has a positive value of = 1.173 but does not have a significant value because the value is = 0.243 with a t value of 1.173, which means that the promotion variable has a positive and insignificant effect on consumer repurchase interest in Eiger products.
2. The results of hypothesis testing on the second hypothesis can be seen in table 4.15 which shows the coefficient value B = 2.99 with a sig value => 000, which means that the price variable has a significant and positive effect on the repurchase interest of Eiger consumers in Bengkayang City.
3. The results of hypothesis testing on the third hypothesis can be seen in table 4.15 which shows the coefficient value B = 2.65 with a sig value => 0.01, which means that the price variable has a significant and positive effect on the repurchase interest of Eiger consumers in Bengkayang City.



3. Research Methods

The research design used in this study is a quantitative method with the correlation of a study that participates in an act of data collection, to determine whether there is a relationship and the level of relationship between two or more variables. Quantitative Research Methods (Balaka, 2022) , Quantitative methods mean research that has fulfilled scientific principles, namely concrete / empirical, objective, measurable, rational, and systematic. Quantitative methods are also called *discovery* methods, because with this method it can be discovered and developed as new science and technology with research data in the form of numbers and statistical analysis.

The method used in sampling in this study is a *non-probability* method with *purposive sampling* technique. *Purposive* sampling is deliberate sampling based on certain relevant characteristics in line with research objectives. Ikhsani et al., (2021) One method of random sampling is to create a sample frame first, then use a computer program that generates random numbers to select samples from the frame. Firmansyah & Susetyo, (2022) .Based on the sample data, the research then makes generalizations, namely drawing conclusions that apply to the population from which the sample was taken. The sample taken in this study is people who have bought and used eiger products. The population inthis study are all people in Bengkayang City where the community has bought and used Eiger products .

Definition of Operational and Measurement Variables

Variable	Operational Definition	Source	Size
Promotion X1	Marketing communication to convey information	(Tjiptono, 2008).	1. Advertising 2. Personal selling 3. Sales promotion 4. Public relations 5. Creating an image
Price X2	The amount consumers pay for a product	Winasis, et al (2022).	1. Selling price determination 2. Competitor price growth 3. Price elasticity 4. Price competitiveness 5. Price match with service quality
Product quality X3	Combination of properties and characteristics	(Tjiptono, 2008).	1. Reliability 2. Aesthetics 3. Conformity to specifications (confermamane to specifications) 4. Durability 5. Functionality
Repurchase intention Y	Willingness to repurchase a product	According to Ferdinand (2002: 129)	1. Transactional 2. Referential 3. Exploratory 4. Preferential 5. Needs or wants

This research uses 20 indicators so that on average 100 to 200 samples are needed. In reality, 150 samples can be obtained so that they can meet the required sample criteria. The data collection method in this study was carried out by questionnaire, which is a data collection method carried out by giving several questions or written statements to respondents to be answered. Data collection in this study used 2 (two) methods . The method used in this research is quantitative method. Quantitative data analysis refers to a research approach that focuses on data in the form of numbers or numerical. Quantitative

research is a type of research that is systematically designed, planned, and clearly structured.

4. Results And Discussion

Promotion Validity Test

Indicator	r count	r table	Description
Promotion_P1	0,632	0,160	Valid
Promotion_P2	0,709		
Promotion_P3	0,797		
Promotion_P4	0,737		
Promotion_P5	0,787		

It can be seen that the results of the validity test of the promotion variable (X1) show that all indicators used to measure the variables used in this study obtained a correlation coefficient greater than r table = 0.160 (the value of r table for n = 150) the value of r table is used to compare the value of r count with r table with the provisions of *degree of freedom* (df) = n - 2, in this case n is the number of samples. This research uses the number of samples (n) = 150 and the amount (df) = 148 and alpha 0.05 obtained r table = 0.160. indicates that all indicators in this variable the value of r count> r table, where the value of r table = 0.160 which refers to the value of r table for or the number of samples = 150). In the price statement_P1 obtained an r value of 0.692, which means that more than 0.160 is declared valid. Then, the price_P2 statement obtained a calculated r value of 0.712, which means that more than 0.160 is declared valid. In the promotion statement_P3 obtained a calculated r value of 0.809 which means more than 0.160 is declared valid. In the promotion statement_P4 obtained a calculated r value of 0.778 which means that more than 0.160 is declared valid. In the promotion statement_P5 obtained a calculated r value of 0.715 declared valid.

Price Validity Test

Indicator	r count	r table	Description
Price_P1	0,692	0,160	Valid
Price_P2	0,712		
Price_P3	0,809		
Price_P4	0,778		
Price_P5	0,715		

It can be seen that the results of the price variable validity test (X2) show that all indicators in this variable have a value of r count> r table, where the value of r table = 0.160 which refers to the value of r table for or the number of samples = 150). In the price_P1 statement, the r value is 0.692, which means that more than 0.160 is declared valid. Then, the price_P2 statement obtained a calculated r value of 0.712, which means that more than 0.160 is declared valid. In the promotion statement_P3 obtained a calculated r value of 0.809 which means more than 0.160 is declared valid. In the promotion statement_P4

obtained a calculated r value of 0.778 which means that more than 0.160 is declared valid. In the promotion statement_P5 obtained a calculated r value of 0.715 declared valid.

Product Quality Validity Test

Indicator	r count	r table	Description
Product quality_P1	0,719	0,160	Valid
Product quality_P2	0,760		
Product quality_P3	0,749		
Product quality_P4	0,715		
Product quality_P5	0,709		

It can be seen that the results of the price variable validity test (X2) show that all indicators in this variable have a value of r count> r table, where the value of r table = 0.160 which refers to the value of r table for or the number of samples = 150). The price_P1 statement obtained an r value of 0.719, which means that more than 0.160 is declared valid. Then, the price_P2 statement obtained a calculated r value of 0.760, which means that more than 0.160 is declared valid. In the promotion statement_P3 obtained a calculated r value of 0.749 which means more than 0.160 is declared valid. In the promotion statement_P4 obtained a calculated r value of 0.715 which means that more than 0.160 is declared valid. In the promotion statement_P5 obtained a calculated r value of 0.709 declared valid.

Validity Test of Repurchase Interest

Indicator	r count	r table	Description
Interest in re-belli of Eiger products_P1	0,691	0,160	valid
Interest in re-belli of Eiger products_P2	0,717		
Interest in re-belli of Eiger products_P3	0,724		
Interest in re-belli of Eiger products_P4	0,750		
Interest in repurchasing Eiger products_P5	0,732		

It can be seen that the results of the price variable validity test (X2) show that all indicators in this variable have a value of r count> r table, where the value of r table = 0.160 which refers to the value of r table for or the number of samples = 150). In the price_P1 statement, the calculated r value is 0.691, which means that more than 0.160 is declared valid. Then, the price_P2 statement obtained a calculated r value of 0.717, which means that more than 0.160 is declared valid. In the promotion statement_P3 obtained a calculated r value of 0.724 which means more than 0.160 is declared valid. In the promotion statement_P4 obtained a calculated r value of 0.750 which means more than 0.160 is declared valid. In the promotion statement_P5, the calculated r value of 0.732 is declared valid.

Variables	Cronbach's Alpha	Description
promotion	0,787	
Price	0,794	

Product quality	0,781	Reliable
Interest in repurchasing Eiger products	0,771	

Reliability Test

It is known that the results of the reliability test in this study show that all variables have a *Cronbach's Alpha* value of > 0.06, which means that reliability is acceptable. The promotion variable has a *Cronbach's Alpha* of 0.787, the price variable has a *Cronbach's Alpha* value of 0.794, the product quality variable has a *Cronbach's Alpha* value of 0.781, and the eiger product repurchase interest variable is 0.771, which means that all variables in this study have a value of> 0.06 or more than 0.60 and meet the reliability testing criteria.

Normality Test

One-Sample Kolmogorov-Smirnov Test			
			Unstandardized Residual
N			150
Normal Parameters[a,b]	Mean		,0000000
	Std. Deviation		1,79024698
Most Extreme Differences	Absolute		,096
	Positive		,067
	Negative		-,096
Test Statistic			,096
Asymp. Sig. (2-tailed)[c]			,002
Monte Carlo Sig. (2-tailed)[d]	Sig.		,003
	99% Confidence Interval	Lower Bound	,001
		Upper Bound	,004

The normality test results show a significant value of 0.003, which means <0.05 or less than 0.05, which means that the data in this study are not normally distributed. Although the normality assumption in this study is not met, the data in this study can still be continued to further testing. This is because the number of samples in this study is included in the large sample category or samples > 100 samples (Hair et al, 2018).

Multicollinearity Test

Variables	**Collinearity Statistics**	
	tolerance	**VIF**
Promotion	0,613	1,632
Price	0,678	1,475
Product Quality	0,681	1,468

The table above shows that all variables included for mulicollinearity testing have a tolerance value> 0.10 or more than 0.10 and a VIF value <10 or less than 10 so it can be concluded that the variables in this study do not occur multicollinearity. In the test results carried out on the Promotion variable with a tolerance value = 0.613 and a VIF value = 1.632. Then, on the Price variable with a tolerenca value = 0.678 and a VIF value = 1.475. In the Product Quality variable with a tolerenca value = 0.681 and a VIF value = 1.468.

Multiple Linear Regression Analysis Test

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	**(Constant)**	**5,634**	1,491		3,779	,000
	Promotion	**,104**	,089	,102	1,173	,243
	Price	**,299**	,079	,313	3,785	,000
	Product Quality	**,265**	,080	,272	3,296	,001
Dependent Variable: Repurchase Intention						

The interpretation of the research results in table 4.10 is as follows:

Y1 = a + B1 X 1 + B1 X 2 - B1 X 3 + e

The values are interpreted as follows:

Y1 = 5.634 a + -0.104 X1 + 0.299 X2 - 0.265 X3 + e

Based on table 4.10, the data can be described as follows:

1. The constant value (constant or α) of the regression results is 5.634. This shows that there is a unidirectional influence between the independent variable and the dependent variable. If the value of promotion, price, and product quality is 0, the value of repurchase interest is 5,634.
2. The regression coefficient value on the promotion variable is 0.104 which shows a positive value, which means that if someone with a promotional variable on the interest in

repurchasing Eiger products, it will add a user level that can be the basis for someone to repurchase Eiger products.

3. The regression coefficient value on the price variable is 0.299. This shows a positive value which means that if someone with a price variable on the interest in repurchasing Eiger products, it will add a user level that can be the basis for someone to repurchase Eiger products.
4. The regression coefficient value on the product quality variable is 0.265. This shows a positive value which means that if someone with the product quality variable on the interest in repurchasing Eiger products, it will add a user level that can be the basis for someone to repurchase Eiger products.

5. Conclusions And Suggestions

This research is entitled "The Effect of Promotion, Price, and Product Quality on Repurchase Interest (Case Study on Eiger Consumers in Bengkayang City*)."* This study was conducted in Bengkayang City with respondents aged between 17 and 50 years who have an interest in or have used Eiger products. The main objective of this study is to determine the extent to which the independent variables, namely promotion, price, and product quality, affect the dependent variable, namely repurchase intention. Based on the results of the analysis and discussion, the following conclusions can be drawn:

1. Promotion has a positive but insignificant effect on repurchase intention of Eiger products, which means that although the direction of the relationship shows that promotion tends to increase repurchase intention, the effect is statistically insignificant. Thus, the hypothesis that promotion has an effect on repurchase intention is not supported in this study. This happens because even though promotions are carried out, consumers may not be too affected by these promotional activities, or the promotions carried out are not attractive enough, right on target, to encourage consistent repurchase interest decisions.
2. Price has a positive and significant effect on repurchase interest in Eiger products, meaning that the more appropriate or affordable the price offered, the more likely consumers in Bengkayang city are to make repurchase interest. This shows that the hypothesis proposed in the study is proven and supported by the data.

3. Product quality has a positive and significant effect on repurchase intention of Eiger products, which means that the higher the quality perceived by consumers, the more likely they are to repurchase Eiger products. The results of this study indicate that product quality is one of the main factors that influence consumer decisions to make repurchase interest. And can increase the level of satisfaction of consumers which in turn encourages them to buy Eiger products again in the future. Thus, maintaining or even improving product quality can strengthen consumer loyalty and influence consumers' decisions to continue buying Eiger products.

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THE RESPONS OF GOVERNMENT BONDS YIELD ON THE INTEREST RATE, CONSUMER PRICE INDEX, AND EXCHANGE RATE

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Abstract

This research aims to investigate the responses of government bonds yield of 10 and 1 years to the interest rate, consumer price index, and exchange rate. The data were from January 2010 until January 2025. All were monthly data. The analysis on data stationarity showed that interest rate and yield for 10 years were not stationary. The interest rate was stationary at first difference. Yield 10 years was stationary at second difference. The other variables were stationary at level. Error Correction Model showed that the previous residual did not have the correction influence. Therefore, we proceeded with vector autoregression to arrive at the responses of the yields. Impulse response function showed that 1-year-yield response positively to the shocks occuring on interest rate and exchange rate. This means uncertainties in exchange rate and interest rate will prompt the government to increase liquidity through bonds issuance. The 1-year-yield response negatively shocks on consumer price index. The 10-year-yield also behave similarly with the 1-year-yield. This means the government does not differentiate bonds based on their maturity. Overall, the government will take the same action to their bonds despite their maturities.

1. Introduction

Government bonds represent fundamental financial instruments that reflect market confidence in economic stability and serve as critical benchmarks for asset pricing (Koroleva & Kopeykin, 2022; Siahaan & Panahatan, 2020). Their yields, particularly at key tenors like one-year and ten-year, function as barometers of fiscal health, inflation expectations, and monetary policy effectiveness (Ariff et al., 2018). Understanding the determinants of yield movements across different maturities carries profound implications for policymakers and investors alike (Francova, 2017). This study examines the dynamics of one-year and ten-year government bond yields as dependent variables, probing their responsiveness to major macroeconomic forces. The investigation gains particular relevance amid global economic volatility and financial market uncertainty.

The spread between short-term and long-term yields forms the yield curve, which encapsulates vital information about future economic growth and inflation trajectories (Chirilus, 2024). A flattening or inverted curve often foreshadows economic deceleration, while a steepening slope suggests robust growth expectations (Coroneo et al., 2016). Analyzing how macroeconomic drivers distinctly impact one-year versus ten-year yields reveals divergent market expectations across time horizons. Focusing on these specific tenors enables nuanced assessment of yield curve dynamics beyond isolated data points. Furthermore, the ten-year to one-year spread serves as a critical sentiment gauge reacting to policy credibility shifts.

The central bank's policy interest rate stands as a primary independent variable exerting immediate influence on government bond yields (Tjandrasa, 2017). This effect is especially pronounced at shorter tenors like the one-year yield, where rate changes directly impact pricing. Longer-term yields respond more intricately, embedding expectations about future policy paths

and economic growth prospects (Kim & Stock, 2014; Purnomo et al., 2022). The relationship between policy rates and bond yields reflects complex transmission mechanisms across financial markets (Ali et al., 2025). Such connections remain fundamental to monetary policy effectiveness and debt market functioning.

Inflation constitutes another core independent variable through its erosion of fixed-income investments' real value (Barr & Campbell, 1997; Yusuf & Prasetyo, 2019). Rising inflation typically compels investors to demand higher nominal yields as compensation for purchasing power risk (Varirahartia & Marsoem, 2022). This dynamic affects both short-term and long-term government bonds, though with varying intensity across maturities (Bhat et al., 2016). Long-term yields demonstrate particular sensitivity to forward-looking inflation expectations and central bank credibility. Examining yield sensitivities to inflation reveals important insights about risk premiums and market confidence (Huang et al., 2019).

Exchange rate fluctuations introduce complex interactions with bond yields through multiple transmission channels (Marisetty, 2025). Currency depreciation can trigger imported inflation and potentially spur capital outflows from bond markets (Ślusarczyk et al., 2020). These dynamics may pressure yields upward as investors demand higher compensation for perceived risks. Conversely, currency appreciation might enhance foreign demand for domestic bonds, suppressing yields. The relationship intensifies in globally integrated financial markets where currency volatility transmits rapidly (Ngaruiya, 2016). These interactions create important feedback loops between foreign exchange and sovereign debt markets.

Despite extensive prior research on yield determinants, evolving global economic conditions demand renewed empirical scrutiny (Ozcelebi, 2021). Contemporary factors like unconventional monetary policies and supply chain disruptions may have altered historical relationships (Ahmad et al., 2009). This study provides timely analysis of how CPI, inflation, and exchange rates jointly drive one-year and ten-year yields. Examining these factors simultaneously offers a comprehensive framework for understanding sovereign borrowing costs. The findings contribute to evidence-based decision-making for both policy formulation and investment strategies.

2. Methodology

This research used four variables namely Government's Bonds Yield for one year and Government's Bonds Yield for ten years, interest rate, consumer price index, and exchange rate (USD/IDR). Government's Bonds Yield for one year and ten years were the dependent variables, while interest rate, consumer price index, and exchange rate were independent variables. The data extended from January 2010 until 2025. The first test conducted was stationarity test using Augmented Dickey-Fuller Method.

$$\Delta e_t = \beta e_{t-1}$$
$$\Delta e_t = \alpha + \beta e_{t-1}$$
$$\Delta e_t = \alpha + \beta e_{t-1} + \gamma \mathrm{Trend}_t$$

The e_t would be replaced with the variables. If the P-Value of β was less than 0.05, according to the Augmented Dickey-Fuller table, the variable was considered stationary. If a variable was not stationary, then it would be differenced once. After being differenced, then it will be tested for stationarity again. If it was not still stationary, it would be differenced once again before being tested for stationarity. The next test would be lag-length determination

several criteria would be used namely Akaike Information Criteria (AIC), Schwarz Information Criteria (SIC), and Hannah-Quinn Information Criteria (HIC). Subsequently, if the variable were stationary then we would run multiple regression. After that we would conduct Impulse Response Function to test for the response of Government's Bonds Yield for one year and ten years on the shocks occurring to interest rate, consumer price index, and exchange rate (USD/IDR). If the variable were not stationary, then we would test for The Cointegration. The Cointegration model used the residuals from following model:

$$\boldsymbol{Y1TH = \alpha + \sum \beta_1 INT_t + \sum \gamma CPI_t + \sum \lambda ExR_t}$$

$$\boldsymbol{Y10TH = \alpha + \sum \beta_1 INT_t + \sum \gamma CPI_t + \sum \lambda ExR_t}$$

The Σ referred to the Lag-Length determination. After obtaining the residuals, the Cointegrating relationship existed if the residuals were stationary. If Cointegrating relationship existed, we would run error correction model as follows:

$$\boldsymbol{Y1TH = \alpha - \left(\alpha + \sum \beta_i INT_{t-1} + \sum \gamma_i CPI_{t-1} + \sum \lambda_i ExR_{t-1}\right) + \sum \beta_i INT_t + \sum \gamma CPI_t + \sum \lambda_i ExR_t}$$

$$\boldsymbol{Y10TH = \alpha - \left(\alpha + \sum \beta_i INT_{t-1} + \sum \gamma_i CPI_{t-1} + \sum \lambda_i ExR_{t-1}\right) + \sum \beta_i INT_t + \sum \gamma CPI_t + \sum \lambda_i ExR_t}$$

Therefore, when Cointegrating relationship existed, the Impulse Response Function would include the error correction elements.

3. Results and discussion

Table 1 The Results of Stationarity Test

	At Level		At First Difference		At Second Difference	
	Coefficient	P-Value	Coefficient	P-Value	Coefficient	P-Value
Yield1	-0.003	0.0000	-0.011	0.0000		
INT	-0.004	0.0594	-0.027	0.0000		
IHK	-0.012	0.0000	-0.021	0.0000		
EXR	-0.014	0.0000	-0.022	0.0000		
Yield10	0.006	0.6853	0.020	0.07822	-0.023	0.0000

Source: Data Processed by Authors, 2025

We can see at level almost all variables are stationary except for two variables namely Interest Rate (INT) and Government Bonds Yield for 10 Years (Yield10). Government Bonds Yield for 1 Year (Yield1), Consumer Price Index (IHK), and Exchange Rate (EXR) have the p-values lower than 0.05 this means they all stationary. INT has to be differenced once to become stationary. While Yield10 has to be differenced twice to become stationary. Therefore, subsequent analysis will employ the variables at stationary form. The next test is about lag length determination. The results of lag length determination is as follows:

Table 2 Lag Length Determination of 1 Year Yield Model

Lags	AIC	BIC	HQC

1	**-2.404869**	**-2.287567**	**-2.357226**
2	-2.667850	-2.530998	-2.612267
3	-2.655218	-2.498815	-2.591694
4	-2.745540	-2.569586	-2.674075
5	-2.733038	-2.537534	-2.653632
6	-2.774642	-2.559588	-2.687296
7	-2.762227	-2.527623	-2.666941
8	-2.783228	-2.529074	-2.680002
9	-2.774740	-2.501035	-2.663573
10	-3.062419	-2.769164	-2.943311

Source: Data Processed by Authors, 2025

Table 3 Lag Length Determination of 10 Year Yield Model

Lags	AIC	BIC	HQC
1	**-1.732728***	**-1.614918***	**-1.684876***
2	-2.165069	-2.027624	-2.109242
3	-2.178315	-2.021235	-2.114513
4	-2.372755	-2.196040	-2.300977
5	-2.391384	-2.195034	-2.311631
6	-2.636800	-2.420815	-2.549072
7	-2.888442	-2.652822	-2.792739
8	-2.946536	-2.691281	-2.842858
9	-2.942004	-2.667114	-2.830349
10	-2.930282	-2.635757	-2.810653

Source: Data Processed by Authors, 2025

Table 2 and Table 3 show the lag length determination for the model involving Yield1 and Yield10. The criteria used for lag length determination are Akaike Information Criterion (AIC), Bayesian Information Criterion (BIC), and Hannah-Quinn Criterion. The lower the absolute value, the suitable the number for lag length. From table 2 and table 3 we can see that the number of lag for each model is 1. Therefore, the time series models for the research are

$$Yield1 = \boldsymbol{\alpha + \beta_1 INT_1 + \gamma_1 IHK_t + \lambda_1 EXR_t + \beta_2 INT_{t-1} + \gamma_2 IHK_{t-1} + \lambda_2 EXR_{t-1}}$$

$$Yield10 = \boldsymbol{\alpha + \beta_1 INT_1 + \gamma_1 IHK_t + \lambda_1 EXR_t + \beta_2 INT_{t-1} + \gamma_2 IHK_{t-1} + \lambda_2 EXR_{t-1}}$$

The first test run is ordinary least square involving time series terms. The regression will identify and measure the short-term influence of independent variables on dependent variables. The term t-1 denotes that the state from previous month is able to exert influence on the dependent variable. The models above posit that lag is only one month. Therefore, INT, IHK, and EXR from the previous one month are able to influence yield in the current month. Our test of cointegrating relationship does not show that there is a cointegration in the model. Therefore, we proceed to the results of statistical test for short-term influence are as follows:

Table 4 Lag 1 Regression Test of 1-Year Yield

	Coefficients	*Standard Error*	*t Stat*	*P-value*
Intercept	-0,09125965	0,03981088	-2,29233	0,023091
INT	0,014777239	0,012252382	1,206071	0,229437
IHK	0,006754379	0,011482649	0,588225	0,557149
EXR	4,53939E-06	4,6389E-06	0,978549	0,329169
INTt-1	0,000519895	0,012290129	0,042302	0,966307

IHKt-1	0,008555884	0,011438977	0,747959	0,455501
EXRt-1	1,35979E-06	4,6359E-06	0,293318	0,769631

Source: Data Processed by Authors, 2025

Table 5 Lag 1 Regression Test of 10-Year Yield

	Coefficients	*Standard Error*	*t Stat*	*P-value*
Intercept	0,006777499	0,059621514	0,113675401	0,90962769
INT	-0,00672701	0,018348798	-0,36661859	0,714354144
IHK	0,000530082	0,017206806	0,030806535	0,975459546
EXR	3,40083E-06	6,94309E-06	0,48981533	0,624888734
INTt-1	0,006067026	0,018390654	0,329897266	0,741879026
IHKt-1	0,002004217	0,017155558	0,116826107	0,907134154
EXRt-1	-3,7489E-06	6,93642E-06	-0,54046599	0,589574873

Source: Data Processed by Authors, 2025

As can be seen from the above table, there are no significant variables resulting from the regression test. Therefore, we conclude that there is no short-term causal relationship from the independent variable to the dependent variables. Interest rate, consumer price index, and exchange rate need more time than just one month to exert influence on the Government Bond's Yield of 1 and 10 years. The impulse response function results as follow will show the response of the 1 and 10-year yields on the shocks occurring to the independent variables

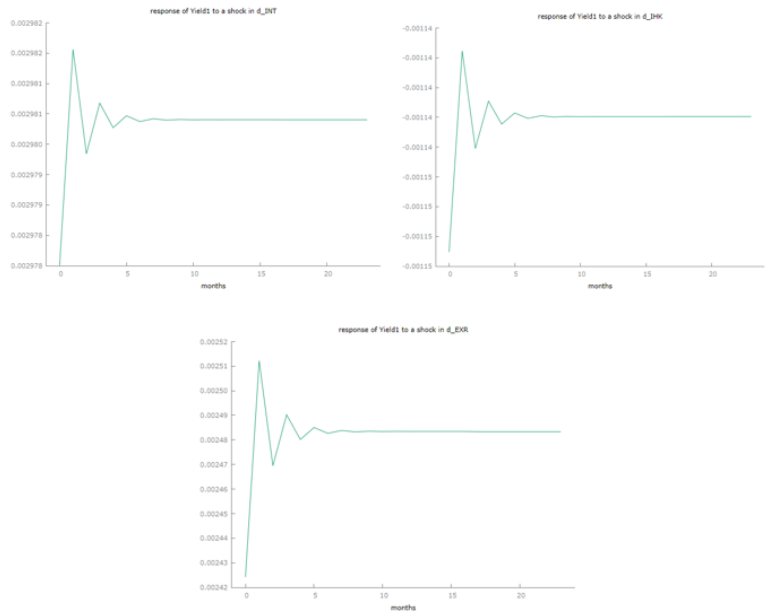

Figure 1. Response of 1-Year to Shocks on INT, IHK, and EXR

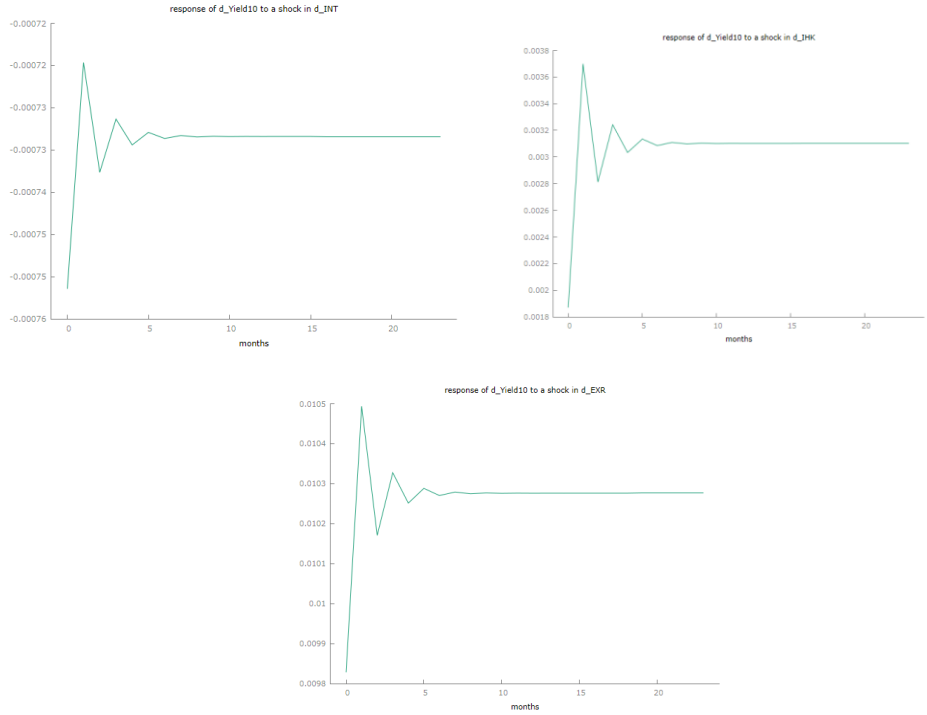

Figure 2. Response of Yield10 to Shocks on INT, IHK, and EXR

Figure 1 shows the response of 1-year yield on shocks occuring on INT, IHK, and EXR. The first graph on the top left panel shows the response of 1-year yield on INT. The graph shows that the response lies on the positive quadran. This means the yield will increase as a response to shocks occuring on the interest rate. There will be an increase in the yield. This means at the time of the uncertainty in the interest rate, the government will increase the coupon rate on 1-year bonds. This increase will increase the demand against the 1-year government bonds. Therefore, the government will have more liquidity to deal with the unicertainty in interest rate. More liquidity provides flexibility for the government because it will have more cash in hands. In the second month, the 1-year yield will decrease a little bit, but it is still in the positive zone. Basically there is a slowdown in the 1-year yield. The volatility is very low from month 2 until 5. After the 5th month, the response will be stable. Therefore, it takes 5 months for the 1-year yield to respond to the shocks on interets rate. The second graph shows the response of 1-year yield on the shocks occuring to the consumer price index. The response lies in the negative zone. This means there is a decrease in the 1-year yield when there is uncertainty in the consumer price index. The government will reduce interest rate of its 1 year bonds. When there is uncertainty in the consumer price index, the government will not try to drastically decrease liquidity in the economy. Therefore, it will try to decrease interest rate so that liquidity in the economy will not be shifted to the government. The last graph on the bottom part of the figure 1 shows the response of 1-year yield on the shocks occuring to exchange rate. The response lies on the positive zone. This indicates increase in the exchange rate. Uncertainties in the exchange rate will prompt the government to increase the coupon rrate of

1-year bonds. This will prompt the government to accumulate liquidity at its disposal. At the same time, liquidity in the economy will decrease because it is being shifted to the government's coffers. Decrease in the luqidity in the economy will strengthen the exchange rate of Ripuah against US Dollar. This will enable the people to afford imported goods in the economy. Since Indonesia still depends very much on imports, favorable exchange rate is crucial for the people to afford goods and services. By increase the government's 1-year yield, Rupiah money supply will decrease and the exchange rate against dollar will strengthen. The volaitlity of the response is discernible during the early months. From the month 2 to 5, the volatility is very mild. After month 5, the response will be stable with no volatility. All the responses are in the positive zone. Figure 2 shows the response of 10-year yield. The first graph shows the response of the 10-year yyield on shocks occuring to interest rate. The response is the opposite of those of 1-year bond. The response of 10-year bond is negative. There will be a decrease in the iterest rate of the bond. Long-term bonds are more prone to interest rate uncertainties since they have been locked at certain rate. Therefore, change in the general interest rate will cause negative response from the long-term bonds. Just like the other responses, the response will be stable after the mmonth 5. The second graph is the response of 10-year yield on shocks occuring to consumer price index. The response is positive. The more uncertainties in consumer price index, the higher 10 year bond yield will be. This is again the exact opposite to the 1-year yield in which it will decrease in times of uncertainties in consumer price index. Therefore, liquidity in the market will increase due to the decrease in 1-year yield, but then the liquidity will be absorbed in the 10-year bonds. The last graph is bout uncertainties in exchange rate. The 10-year yield will increase during times of uncertainties in exchange rate. This is in synchhronization with the 1-year yield that also increases to response the exchange rate. This increase in the yield will render the Rupiah exchange rate to strenthen against US Dollar so that imported goods will be affordable by th epeople in the economy. The response will be stable after the 5th month.

4. Conclusion

This research aims to investigate the response of the government's bond yield towards the shocks occuring to interest rate, consumer price index, and exchange rate. The yield is divided into 1-year yield and 10-year yields. The results show that the responses of 1-year yield to the shocks on the interets rate is positive while the response of 10-year yield is negative. On the other hand, the 1-year yield responds negatively to the shocks happening to consumer price index, while the 10-year yield responds positively. In relaation to exchange rate, both yields respond positively. This implies that during interest rate uncertainties, the government will increase the short-term interest rate for bonds while decreasing the longer-term one. Inestors can shift their investment toward the short-term government bonds. During times of uncertainties in consumer price index, the even is the other way around. The government increases the long-term bond interest while decreasing the short-term one. Therefore investors can shift their investment towards longer term bonds. Lastly, uncertainties in exchange rate will increase the interest for logn and shrot term government bonds. This in inline with the government's efforts to strengthen Rupiah. Future results can endeavour to investigate the private bonds response to the uncertainties in the macroeconomy.

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MARKETING HIGHER EDUCATION THROUGH EXPERIENCE: EXPLORING THE IMPACT OF BRAND LOVE AND CO-CREATION ON STUDENT LOYALTY

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Abstract

This research aims to analyze the influence of customer experience on customer value co-creation, and its impact on brand love and student loyalty in private higher education institutions (PHEI). Amidst increasingly fierce competition, PHEI are demanded to not only provide quality educational services but also to create memorable learning experiences and involve students in collaborative value creation. This study employs a quantitative approach using the Structural Equation Modeling (SEM) method. Data was collected through questionnaires distributed to active students from several PHEI in West Jakarta. The analysis results indicate that customer experience has a significant positive effect on value co-creation, which subsequently impacts the increase of brand love and student loyalty. Furthermore, brand love is proven to be an important mediator in strengthening student loyalty to the institution. These findings emphasize the importance of a participatory and emotional approach in building long-term relationships with students. This research provides a strategic contribution to PHEI management in designing meaningful student experiences to build sustainable loyalty.

Keywords: *Customer Experience*, *Value Co-Creation*, *Brand Love*,

1. Introduction

In the current era of globalization and digitalization, the higher education industry is experiencing increasingly fierce competitive dynamics. Higher education institutions are not only required to provide quality educational services but also must be able to build long-term relationships with their students as primary customers. Student loyalty to higher education institutions has become a strategic issue, especially in maintaining the sustainability of institutions amidst the challenges of changing demographics, technology, and increasingly complex student expectations (Ieva dan Ziliani, 2018).

Competition among higher education institutions, especially private higher education institutions (PHEI) in Indonesia, increasingly demands that institutions focus not only on academic quality but also on relational marketing strategies that create emotional attachment among students. One relevant strategy in this context is to build a meaningful customer experience and develop value co-creation as a form of value collaboration between institutions and students (Van Ngo & Yang, 2023).

As the competition to increase student numbers intensifies, higher education institutions need to strive to implement and offer high-quality service experiences (Zarandi,et. al., 2022). Therefore, it is important for higher education institutions to have a deep understanding of the shared responsibility between participants and further emphasize the importance of consumer responsibility to play an active role in shaping the value of their experiences (Dollinger, et. al., 2018).

In addition to experience and participation, the concept of brand love or affection for the institutional brand has also proven to be an important predictor in forming customer loyalty in various service sectors (Bairrada, 2019). In the context of higher education, students who love

their institutions tend to stay, actively participate, and recommend their campus to others (Albert & Merunka, 2013). However, research integrating these four variables into one complete model in the context of PHEI in Indonesia is still very limited. Therefore, this study aims to fill this gap and provide theoretical and practical contributions in building sustainable student loyalty.

2. Literature Review

2.1 Customer Experience

The concept of customer experience first emerged in the mid-1980s. Concurrently with the main literature in consumer behavior that viewed consumers as rational decision-makers, a new experimental approach offered an original view of consumer behavior (Fusco et. al., 2023). Hong (2016) (Bartsch et al. 2021)defines customer experience as the cognitive and affective outcome of customer exposure or interaction with people, processes, technology, products, services, and other outputs of the company and argues that customer experience acts as a competitive differentiator that makes companies competitive compared to their rivals. Kavitha et. al. (2018) state that customer experience increases a company's market share and further clarifies how to do so. In line with Kavitha & Haritha (2018) customer experience management increases customer loyalty, which in turn increases patronage and reduces switching behavior. Srivastava dan Kaul 2016) manage customer experience in any institution as the most important component in creating customer loyalty.

Otnes et. al. (2012) affirm that proficient customer experience management in any higher education institution must make efforts to attract and retain students. Once new students are enrolled, the service experience must be managed in such a way that it will result in a memorable experience and favorable word-of-mouth recommendations. Customer experience is considered a strategy to foster loyalty, satisfaction, positive word-of-mouth referrals, reduce complaints, and increase retention (Fernandes & Pinto, 2019). Therefore, private higher education institutions must create a 'wow' factor so that students defend, recommend, and refer their PHEI to others.

2.2 Customer Value Co-creation in Private Higher Education Institutions

Customer Value Co-creation is the joint creation of value between customers and companies to collaboratively build service experiences that have higher value for customers (Wong & Lai, 2019). According to Foroudi et al. (2019) customer value co-creation is an interactive behavior between company members and customers that leads to future behavior, decision-making, sharing, or repurchasing. According to value co-creation theory, companies allow customers to build their experiences according to their context (Wong & Lai, 2019).

According to Hollebeek et. al. (2019) consumer engagement can drive co-creation of value, a process where individuals actively participate in creating shared value. In other words, Customer Value Co-creation can be understood as a process where customers and service providers interact through service encounters to create shared value, meaning service agents and customers take turns to jointly create value and emotional impact, which affects behavior (Heinonen et. al., 2023). In addition to Customer Value Co-creation, previous research has shown that self-efficacy plays an important role in adaptive information sharing (Ngoc Hoi , 2023). The concept of value co-creation is based on the service-dominant logic (SDL) theory, which highlights the active role of customers in business and creating personalized experiences by collaborating with service providers. When a company adopts a service-focused perspective, it builds relationships with consumers to create personalized value propositions to meet specific

needs, which leads to continuous improvement in service and company performance (Chuang dan Chen 2015).

2.3 Brand Love

According to Khan, et. al. (2020) brand love is characterized by consumers' feelings of joy towards a brand. The brand is already in their hearts so that whenever they make a purchase, other brands are not considered (Suartina et al. 2022) and customers always feel comfortable shopping at that specific place (Coelho et. al., 2019). Brand love from consumers can build a higher level of brand loyalty and more positive WOM (Coelho et. al., 2019). Love for a brand is one of the key components of brand loyalty (Arbouch,et. al., 2019). Various studies show that Brand Love has a significant positive effect on customer loyalty. Research by Suartina et al. (2022) proves that the higher the level of Brand Love consumers have, the more likely they are to remain loyal to the brand and repeat purchases. This is reinforced by the theory that Brand Love not only creates emotional attachment but also increases customer commitment to the brand.

Research by (Prebensen, et. al. (2017) shows that consistent positive experiences with a brand can strengthen Brand Love. Satisfying experiences will create a deep impression, encouraging customers to associate the brand with positive emotions, and ultimately increasing their loyalty to the brand. All these findings confirm that marketers must understand and leverage Brand Love in their strategies. Building Brand Love is not only rooted in product marketing but also includes creating sustainable and relevant relationships with customers.

2.4 Customer Loyalty

Customer loyalty is the basis for developing a sustainable competitive advantage, which is the goal of a company's marketing strategy (Almomani, 2019). From a company's perspective, attitudinal customer loyalty is manifested in the form of positive word of mouth, recommending and encouraging their peers, while behavioral loyalty is manifested in the form of repurchase (Lee et. al., 2019). Customer loyalty refers to the extent to which customers remain loyal to a particular brand, product, or service over time (Makudza, 2021). Pula (2022) links customer loyalty with customer satisfaction and loyalty behavior. They found that a pleasant shopping experience does not necessarily lead to satisfaction and loyalty because it is a post-consumption effect, while happiness occurs before consumption. Customer loyalty is influenced by factors such as experience.

E. Hwang, et. al. (2019) examined the attitudinal and behavioral dimensions of customer loyalty, noting that attitudinal loyalty consists of trust, psychological or emotional attachment, and switching costs, while behavioral loyalty involves cooperation (e.g., willingness to help the company and cooperate with it to achieve common goals) and word-of-mouth recommendations (e.g., promotion, positive feedback, and referrals).

3. Methodology

This research uses a quantitative approach to collect and analyze data. Data will be obtained through surveys designed to measure related variables, such as customer interaction, Customer Experience (CE), Value Co-Creation (CVCC), Brand Love (BL), and Customer Loyalty (CL). This study uses a quantitative approach with a causality design. The research population is active students from several PHEI in West Jakarta. Data collection was carried out through questionnaires adapted from validated scales. The data analysis technique uses Structural Equation Modeling (SEM) with the help of SmartPLS software. Questionnaires will be distributed online to respondents who are students from private campuses in the West Jakarta area. This questionnaire includes questions that measure respondents' perceptions of customer interaction and its impact on the variables studied. In Data Analysis, statistical

techniques such as regression analysis and Structural Equation Modeling (SEM) are used to analyze the data obtained. This helps researchers to test the relationships between variables identified in the research model. Regression analysis provides a better understanding of the relationship between independent and dependent variables in the context of marketing and customer behavior (Khabib et. al., 2022). With the understanding and steps mentioned above, this research can provide in-depth insights into the dynamics of customer interaction and its implications for loyalty in the private university environment.

This research model focuses on building student loyalty through student interaction and value co-creation. There are 2 (two) main theories underlying this research, namely Customer Loyalty Theory and Value Co-Creation Theory. This Customer Loyalty Theory explains the importance of loyalty as a result of satisfaction or positive experience gained from a brand or institution. In the context of higher education, satisfied students tend to show higher loyalty to their universities. Customer loyalty consists of repeated behavior as a result of positive experiences (L. Oliver, 1999). This model also shows that by involving students in their learning process, institutions not only provide information but also create a deeper and more satisfying experience. This helps create loyalty because students see value in the education they receive. When consumers become co-creators in the experience, they feel more connected and committed to the brand or service (Grönroos 2006). This model visually depicts how student Customer Experience can encourage them to engage in value co-creation, which in turn will increase their love for the institutional brand, and ultimately strengthen their loyalty to the higher education institution.

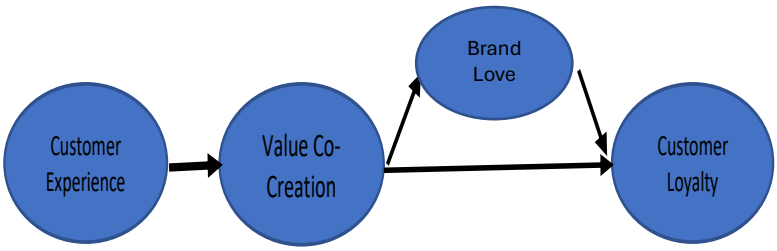

Figure 1. Research Model

4. Result and Discussions

Hypothesis testing in this study was conducted using the Structural Equation Modeling (SEM) approach with the help of SmartPLS software. The following table is the result of hypothesis testing:

Table 1. Structural Model Results of Hypothesis Testing

Relationship	Path Coefficient	Significance (p-value)
Customer Experience → Value Co-Creation	0.62	< 0.001
Value Co-Creation → Brand Love	0.58	< 0.001
Brand Love → Student Loyalty	0.66	< 0.001
Value Co-Creation → Student Loyalty	0.45	< 0.01

The research results show that Customer Experience (CE) has a positive and significant effect on Customer Value Co-Creation. This means that the more positive students' experiences are in undergoing academic and non-academic activities, the greater the likelihood that they

will be involved in value co-creation with the institution. Student experience includes emotional, functional, and social aspects built through direct and digital interactions with lecturers, campus staff, and the learning environment. These findings are consistent with research by Lazrak, et. al. (2024) who state that personalization in higher education experiences encourages student participation in co-creation. Students who feel "cared for" and "humanized" will tend to want to provide feedback, participate in campus activities, and contribute ideas for the institution's progress. Students' emotional and interactive experiences trigger the emergence of a commitment to participate in building institutional value (Lazrak et. al., 2024)

Furthermore, value co-creation is proven to have a significant positive effect on brand love. When students are actively involved in campus activities, organizational decision-making, or academic collaboration, they tend to form a stronger affection for the campus. This involvement creates a sense of ownership and identity that merges with the institution. (Hollebeek et. al., 2019) support this finding, stating that the emotional engagement resulting from co-creation creates a strong foundation for brand love. In the context of PHEI, this is very important given that student loyalty is not solely based on academic reputation, but on emotional attachment. Brand love grows from emotional relationships built through collaborative and participatory interactions (Hollebeek et. al., 2019).

The research results also confirm that brand love has a significant effect on student loyalty. Students who love their institution tend to show high loyalty in the form of an intention to continue their studies, actively promote the institution to others, and become part of an active alumni community. According to Batra, et. al. (2012) emotional attachment to a brand encourages loyal behavior such as repurchase intention and word of mouth. In higher education, forms of loyalty can include recommending the campus to junior students, involvement in alumni activities, or post-study donations. Brand love creates a strong attachment that transcends momentary satisfaction and becomes the basis for long-term loyalty (Batra et. al., 2012).

The next finding shows that value co-creation also directly contributes to student loyalty. The collaborative process in building a learning environment makes students feel valued and have a place in the institution. This encourages social and emotional attachment, which forms the basis of loyalty. Prahalad & Ramaswamy (2004) state that value co-creation strengthens the relationship between organizations and consumers because it creates relevant and personally meaningful value. In the context of PHEI, this participatory model can be a competitive advantage to build a loyal student base. When students become co-creators, their loyalty is not only functionally based, but also value and identity based (Prahalad & Ramaswamy, 2004).

In the context of Private Higher Education Institutions in Indonesia, this research confirms that student loyalty is not only determined by academic quality, but also by the quality of interactions, the experience provided, and emotional involvement. As PHEI face high student retention challenges, strategies involving co-creation and brand love become a promising alternative to conventional promotional strategies. This approach aligns with global trends in higher education that position students as active partners ("student as partner") rather than passive consumers (Bovill, 2020). In practice, this can be realized through student involvement in curriculum, campus services, lecturer evaluation, and campus organizational activities.

5. Conclusion

From the results of this study, it can be concluded that building a positive customer experience, involving students in co-creation, and fostering brand love are effective strategies to increase student loyalty in PHEI. The practical implications of this research indicate that

PHEI management needs to invest in experience-based and student participation strategies to strengthen sustainable emotional relationships.

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THE EFFECT OF CURRENT RATIO, SALES GROWTH, AND DEBT TO EQUITY RATIO ON RETURN ON ASSET IN INFRASTRUCTURE COMPANIES LISTED ON THE INDONESIA STOCK EXCHANGE FOR THE PERIOD 2019-2023

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Abstract

This study analyzes the effect of Current ratio (CR), Sales Growth (SG), and Debt to equity ratio (DER) on Return on asset (ROA) in infrastructure companies listed on the Indonesia Stock Exchange (IDX) for the 2019-2023 period. The method used is panel data regression with STATA 17 software, and the sample was obtained through purposive sampling.
The results show that CR has a negative and insignificant effect on ROA, SG has a negative and significant effect, while DER has a positive and significant effect. This indicates that liquidity does not always improve profitability, while Sales Growth without operational efficiency can decrease ROA, and optimal debt utilization can enhance profitability.
Companies are advised to manage liquidity effectively, improve operational efficiency in Sales Growth, and optimize capital structure. Future research is expected to extend the observation period and include additional independent variables

Keywords: *Current ratio, Sales Growth, Debt to equity ratio, Return on asset, Profitability*

1. Introduction

Profitability is a key indicator in assessing a company's financial performance, especially in the infrastructure industry, which plays a strategic role in national economic development. Infrastructure companies listed on the Indonesia Stock Exchange (IDX) contribute to the development of public facilities such as toll roads, airports, and energy networks. These projects play a crucial role in improving accessibility and connectivity between regions, ultimately accelerating economic growth and increasing the attractiveness of foreign investment.

In evaluating financial performance, Return on Asset (ROA) is often used as a primary indicator of profitability because it measures the company's efficiency in using its assets to generate profit. Based on data collected from 69 infrastructure companies on the IDX, there were significant fluctuations in ROA during the 2019-2023 period. The year 2021 was the worst period, with ROA reaching -11.74, reflecting the impact of the crisis due to the COVID-19 pandemic. However, the economic recovery in the following years showed an improving trend, with ROA turning positive again in 2023 at 4.58.

Several financial factors can influence a company's profitability, including Current Ratio, Sales Growth, and Debt to Equity Ratio (DER). The Current Ratio indicates the company's ability to meet its short-term obligations. Some studies show a relationship between Current Ratio and ROA, but the results are still varied. Some studies indicate that an excessively high Current Ratio can signal idle assets, thereby reducing the effectiveness of resource utilization (Hasudungan, 2023), while other studies show no significant influence (Ega Reynando Gamara et al., 2022).

Another influential factor is Sales Growth, which measures the growth of a company's revenue from year to year. Economic theory states that an increase in sales contributes to

profitability because it allows companies to increase net profit through economies of scale (Dinda Putri Sacharissa dan Helliana, 2023). However, there are also studies concluding that Sales Growth has no significant influence on ROA (Iksan et al., 2023), leading to debate regarding this variable.

Furthermore, the Debt to Equity Ratio (DER) reflects a company's funding structure and the extent to which it relies on debt to finance its operations. Some studies show that DER influences profitability (Napitupulu et al., 2020), but there are also those that find DER has no significant influence on ROA (Alfin Syahrin, 2022). This indicates an inconsistency in previous research results and opens up opportunities for further investigation.

Based on the identified research gap, this study aims to analyze the influence of Current Ratio, Sales Growth, and Debt to Equity Ratio on Return on Asset in infrastructure companies listed on the Indonesia Stock Exchange for the period 2019-2023. This study seeks to provide new insights into the factors affecting the profitability of infrastructure companies, as well as contribute to management's decision-making in optimizing their financial strategies. Thus, this research is expected to add to the literature related to the influence of financial ratios on the financial performance of infrastructure companies, and bridge previous research gaps related to the variables studied.

2. Literature review

2.1 Financial Management

Financial management is a crucial aspect of company operations because it directly relates to the acquisition, use, and management of funds (Herlianto, 2022). The main objective of financial management is to ensure that the company has sufficient funding sources, allocates funds optimally, and maximizes shareholder value (Bajpai, 2023). To maintain financial stability, companies must implement effective financial strategies to avoid the risk of bankruptcy and ensure sustainable business growth. In the context of this research, there are several theories that support the relationship between financial variables and profitability, namely Signaling Theory and Pecking Order Theory.

2.2 Related Theories

Signaling Theory, as proposed by Spence (1973), explains that financial information provided by the company to the market can influence the decisions of investors and other stakeholders (Brigham & Houston, 2018). This theory emphasizes that companies can send positive or negative signals to investors through their financial policies and performance. For instance, financial ratios like a high Current Ratio (CR) can signal that the company has good liquidity, but on the other hand, it might indicate that assets are not being utilized efficiently. Similarly, an increase in Sales Growth (SG) can be a signal that the company is developing, but if it is not accompanied by operational efficiency, it can have a negative impact on profitability. Meanwhile, Pecking Order Theory, developed by Myers and Majluf (1984), states that companies have a hierarchy of funding preferences, prioritizing retained earnings as the primary source of funding, followed by debt, and lastly, issuing new shares (Abdullazade, 2020). In the context of this research, this theory is relevant to the Debt to Equity Ratio (DER), where companies prefer debt financing before issuing new shares. This is due to the company's desire to avoid information asymmetry that can lead to negative market reactions. If debt is well managed, it can increase company profitability, but if excessive, it can increase financial risk.

2.3 Current Ratio

Current Ratio (CR) is used to measure a company's liquidity, which is the industry's ability to meet its short-term obligations using current assets. A high CR indicates that the industry has assets to pay its debts, but if it is too high, it may suggest that assets are not being utilized optimally.

2.4 Sales Growth

Sales Growth (SG) is used to measure the growth in a company's sales revenue from period to period. An increase in SG can indicate business expansion and better competitiveness, but if it is not accompanied by operational efficiency, it can increase costs and reduce profitability.

2.5 Debt to Equity Ratio

Debt to Equity Ratio (DER) shows the extent to which a company uses debt in its capital structure compared to its own equity. This ratio is important for understanding the company's level of financial leverage. Controlled use of debt can increase profitability, but excessive debt can increase financial risk.

2.6 Return On Asset

Return on Asset (ROA) is used as an indicator of profitability in this study. ROA measures how effectively a company uses its assets to generate profit. The higher the ROA, the better the company's financial performance.

Several studies have examined the influence of financial ratios on profitability, particularly Return on Asset (ROA). The Current Ratio has a varied influence on ROA, depending on the industry. A high CR can reflect good liquidity, but in some cases, it may indicate inefficient cash management (Hasanudin & Lukito, 2022). Sales Growth positively contributes to profitability because it reflects an increase in market share and company competitiveness (Edisan & Edison, 2021). However, other studies show that sales growth does not always have a significant impact on ROA because it is influenced by other factors such as cost structure and operational efficiency (Aprilia & Kusumawati, 2020). Meanwhile, a high DER can increase profitability if debt is well managed, but it also risks lowering profitability if interest burdens are too high (Hasanudin & Lukito, 2022).

3. Methodology

3.1 Sample and Data Collection

The methodology of this research covers sample and data collection, variable measurement, and data analysis. The sample in this study consists of infrastructure companies listed on the Indonesia Stock Exchange (IDX) during the 2019-2023 period. Sample selection was carried out using the purposive sampling method, with specific criteria such as companies that consistently published annual financial reports and had positive profitability values during the research period, resulting in 23 companies forming the sample for this study. The data used is secondary data obtained from the companies' financial reports published through the official IDX website (www.idx.co.id). Data was collected through the documentation method, by reviewing financial reports and relevant literature to support this research.

3.2 Measurement

Return on Asset (ROA)

ROA is used to measure the company's efficiency in utilizing its assets to generate net profit. ROA is calculated using the following formula:

$$ROA = (Net\ Profit / Total\ Assets) \times 100$$

Current Ratio (CR)

CR is used to measure the company's ability to meet short-term obligations with its current assets. CR is calculated using the following formula:

$$CR = (Current\ Assets / Current\ Liabilities) \times 100$$

Sales Growth (SG)

SG measures the increase in company sales from one period to another. SG is calculated using the following formula:

$$SG = ((Sales_t - Sales_{(t-1)}) / Sales_{(t-1)}) \times 100$$

Debt to Equity Ratio (DER)

DER is used to assess the extent to which a company uses debt in financing its assets compared to its own capital. DER is calculated using the following formula:

$$DER = (Total\ Debt / Equity)$$

Data Analysis

This study uses quantitative data analysis techniques with panel data regression to test the relationship between independent and dependent variables. The analysis was conducted using STATA 17 software to ensure the accuracy and validity of the research results. The regression model used in this study is:

$$ROA_{it} = \alpha + \beta_1 CR_{it} + \beta_2 SG_{it} + \beta_3 DER_{it} + \varepsilon_{it}$$

Classical assumption tests were performed to ensure that the data met the requirements of classical linear regression, including normality test, multicollinearity test, heteroskedasticity test, and autocorrelation test. Hypothesis testing was carried out using the t-test and F-test to assess the significance of the independent variables' influence on the dependent variable. The coefficient of determination (R^2) was used to measure the extent to which the independent variables can explain the variation of the dependent variable in this research model.

4. Results and discussions

4.1 Influence of Current Ratio on Return on Asset

Based on the test results, this study shows that the relationship between Current Ratio and Return on Asset (ROA) is negative and insignificant. This means that Current Ratio has no significant influence on Return on Asset (ROA). Although a higher Current Ratio indicates better company liquidity, which should positively impact the company's ability to generate profit from its assets, the results of this study show that the Current Ratio has no significant influence on Return on Asset (ROA).

Its relevance to Signaling Theory can be explained in that while higher liquidity can send a positive signal to investors and creditors, if the liquidity is too high, it could be perceived as a negative signal that the company is not utilizing its assets efficiently. In other words, the company might be more focused on maintaining cash reserves or unproductive assets, which actually reduces its profitability. Furthermore, excessive use of liquidity can lead to high opportunity costs, where the company does not invest in more profitable projects. According to previous research, the Current Ratio has a negative and insignificant influence on the Return on Asset (ROA) variable (Rahman et al., 2021). This is further supported by other research

which also states that the Current Ratio partially has no influence and is insignificant on Return on Asset (Ega Reynando Gamara et al., 2022).

4.2 Influence of Sales Growth on Return on Asset

on the test results, this study shows that Sales Growth has a negative and significant influence, meaning it has an impact. Although the company experiences higher sales growth, this actually tends to decrease the company's ability to generate profit from its assets.

This negative relationship can perhaps be understood by linking it to the Pecking Order Theory, which states that companies prefer internal funding (such as retained earnings) rather than using debt or new equity to finance expansion. When companies focus on rapid sales growth, they may neglect efficiency in asset utilization to support that growth. Additionally, aggressive strategies to increase sales can trigger an increase in operational costs or investments that are not necessarily offset by a proportional increase in profits, which in turn reduces ROA. This research is supported by the findings of another study stating that sales growth has no influence on Return on Asset (Apriliawati et al., 2023). This indicates that an increase in sales is not always directly proportional to an increase in company profitability.

4.3 Influence of Debt to Equity Ratio on Return on Asset

Based on the test results, this study shows that the Debt to Equity Ratio has a positive and significant influence on Return on Asset (ROA). This means that the higher a company's debt-to-equity ratio, the greater its ability to generate profit from its assets.

This positive influence can be understood through the Pecking Order Theory, where companies that have difficulty obtaining funds from external sources are more inclined to increase their debt as an alternative source of funding. With debt financing, companies can expand their operational scale and accelerate growth, which ultimately has the potential to increase ROA. However, this can also indicate that the company has a high level of willingness to take risks by using debt to increase profitability. Nevertheless, companies need to consider the optimal proportion of debt to remain within safe limits. Debt in these infrastructure companies can be considered safe because, despite a relatively high debt ratio, its impact on ROA is still positive and significant. However, companies still need to be cautious, especially those with very high DER, as the risk of interest burden can reduce profitability if not well managed.

Overall, these test results indicate that in the context of infrastructure companies, although an increase in debt can help improve asset efficiency, other factors such as sales growth and liquidity tend to have a more complex impact on profitability. The findings of this study are in line with previous research which shows that the Debt to Equity Ratio (DER) has a significant impact on Return on Asset (Khakim, 2022). This indicates that the level of leverage or the use of debt in a company's capital structure influences the efficiency of asset utilization in generating profits.

5. Conclusion

Based on the research findings, which aimed to determine the influence of Current Ratio (CR), Sales Growth (SG), and Debt to Equity Ratio (DER) on Return On Asset (ROA) in infrastructure companies listed on the Indonesia Stock Exchange during the period 2019-2023, it can be concluded that these financial variables have different impacts on company profitability.

The Current Ratio (CR) showed a negative and insignificant influence on Return On Asset (ROA). This indicates that an increase in CR does not necessarily lead to an increase in

company profitability. Although a high CR reflects better liquidity conditions, it could also signal that the company is not optimally utilizing its current assets to generate profit efficiently. Excessively high liquidity may suggest that the company holds too many unproductive assets, thereby reducing potential gains.

Sales Growth (SG) had a negative and significant influence on Return On Asset (ROA). This finding indicates that an increase in sales growth is not always directly proportional to company profitability. If sales growth is not accompanied by operational efficiency and good cost management, then an increase in revenue can actually depress profitability due to high operational burdens. Therefore, companies need to pay attention to more efficient growth strategies to increase profits without incurring excessive costs.

The Debt to Equity Ratio (DER) showed a positive and significant influence on Return On Asset (ROA), indicating that the higher the DER, the greater the likelihood for a company to increase its profitability through debt financing. Well-managed use of debt allows companies to expand operations and enhance asset efficiency, which ultimately has a positive impact on profitability. However, companies must also consider the optimal limit for debt utilization to avoid excessive financial risk.

Overall, this research affirms that liquidity management, sales growth strategies, and capital structure play crucial roles in determining the profitability of infrastructure companies. Therefore, companies need to adjust their financial strategies by considering the balance between liquidity, operational efficiency, and optimal debt utilization to enhance financial performance sustainably.

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WHAT DETERMINES UNAS JAKARTA'S MASTER OF MANAGEMENT STUDENTS IN LIVING THEIR CALLING IN WORK?

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Abstract

Living a calling in pursuing a profession is a fairly important career choice, and it also influences the possibility of effective career management and overall well-being. The role of calling in the world of work is increasingly relevant for today's young generation because these young people are more often looking for meaning in their work compared to previous generations. A total of 43 students of the Master of Management Study Program at UNAS Jakarta, most of whom are young workers, became respondents to this study. This study further examines the role of the work meaning factor in mediating the influence of understanding a calling on living a calling. The results of the study: perceiving a calling has a positive and significant effect on living a calling and work meaning. Work meaning has a positive and significant effect on living a calling and can mediate (partial mediation) the effect of the perceiving a calling variable on living a calling in Master of Management students at UNAS Jakarta.

Keywords: *perceiving a calling, work meaning, living a calling*

1. Introduction

Recognizing whether a client or employee perceives a calling in their work not only helps predict their level of engagement at work, including enthusiasm, willingness to sacrifice, job satisfaction, and reduced absenteeism but also provides important insights into the extent to which they fit into their current or future work environment (Ehrhardt & Ensher, 2021). By assessing a client or employee's approach to work, we can develop strategies to better align their current tasks with their perceived calling.

Calling is now considered a key concept in understanding subjective career success, workplace well-being, and overall well-being (Hirschi, Keller, & Spurk, 2018). (Hirschi, Keller, & Spurk, 2018). Although definitions of calling vary in the research literature, it generally refers to the meaning derived from work, the inner drive to pursue a particular profession, and an other-focused orientation (Hult, Lappalainen, & Kangasniemi, 2021). The concept of calling is becoming increasingly important for younger generations, as they are more likely to seek meaning in their work than previous generations (Hult, Lappalainen, & Kangasniemi, 2021). At the same time, however, the world of work is experiencing high levels of uncertainty—characterized by job fragmentation, livelihood insecurity, and minimal protection of workers' rights—which particularly affects young workers in precarious employment.

Employees who leave their calling for recognition or work in other fields often experience decreased satisfaction and increased cynicism about their work (Hirschi, Keller, & Spurk, 2018). Those who leave their professions for financial security may face identity confusion. Therefore, it is important to examine factors that reinforce the experience of living a calling, such as perceiving a calling and work meaning, to understand the role of these variables and their impact on employees' long-term well-being throughout their careers.

2. Literature review

2.1. Perceiving a Calling

When someone begins to feel a calling in their career path (perceives a calling), the ideal next step is to pursue opportunities that allow them to truly live out that calling (Duffy, Dik, & Douglass, 2018). One of the important findings in research on calling is that there is a significant difference between simply perceiving a calling and living it in everyday work (Duffy, Spurk, & Perez, 2022). In reality, many people do not have full freedom to pursue the work they feel is their calling, so to survive, they often accept jobs that are less aligned with their values or aspirations (Duffy, Dik, & Douglass, 2018).

2.2. Work Meaning

Lysova et al. present a multilevel and integrative review of how organizations can facilitate meaningful work (Schnell & Hoffmann, 2020). Although interpretations of what meaningful work is vary, empirical evidence consistently shows that when work is perceived as meaningful, it has positive impacts not only on employees but also on employers (Duffy, Dik, & Douglass, 2018). Several studies, including meta-analyses, support a positive relationship between meaningful work and outcomes such as engagement, job satisfaction, intent to stay, and mental health. In addition, meaningful work is closely related to meaning in life, organizational climate, depression levels, and employee health experiences (Schnell & Hoffmann, 2020).

2.3. Living A Calling

Living a calling appears to have a positive impact on individual well-being, particularly in the way work impacts family dynamics (Duffy, Spurk, & Perez, 2022)**.** Findings suggest that those who truly live a calling are more resilient to the adverse effects of burnout and exploitation, and can maintain high levels of job satisfaction, underscoring the importance of living a calling for both the individual and the organization (Hirschi, Keller, & Spurk, 2018).

3. Methodology

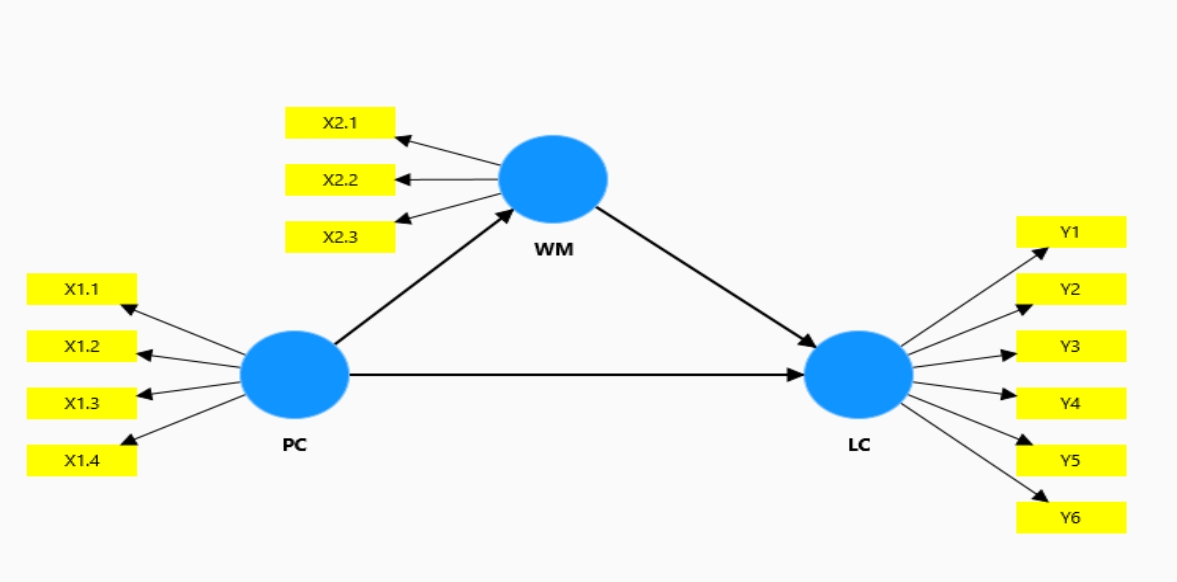
This study uses a quantitative approach with a survey method. Data were collected through questionnaires filled out by students of the Master of Management Study Program, Faculty of Economics and Business, Universitas Nasional (UNAS) Jakarta, who were included in the research sample. The survey method explores data through questionnaires or structured interviews, with to generalize the population based on a predetermined sample (Creswell, 2010). Through questionnaires, the study attempts to capture the tendency of attitudes or opinions of the population represented by the sample (Creswell, 2010). The questionnaire in this study was designed to assess the variables of perceiving a calling, work meaning, and living a calling. This study used the Brief Calling Scale (BCS) to measure the variable of work meaning (Dik, Eldridge, & Dufy, 2012).

Meaningful work acts as a key psychological condition linking job characteristics such as skill variety, task identity, and task significance to a variety of work outcomes, including intrinsic motivation, job performance, job satisfaction, and employee absenteeism and turnover rates, as described in the Job Diagnostic Survey (JDS) model by Hackman and Oldham (Schnell & Hoffmann, 2020).

Spreitzer in his 1995 study examined the concept of empowerment in the workplace and defined it through three items to measure the meaningful dimension of empowerment (Schnell & Hoffmann, 2020). Then, May, Gilson, and Harter in 2004 in a study on work engagement, added items from other sources to further explore the context of meaningful work. They adopted the three items used by Spreitzer and added one item from Hackman and Oldham to enrich the assessment (Schnell & Hoffmann, 2020).

This study used the Living Calling Scale (LCS) to measure the variable of living a calling (Duffy, Spurk, & Perez, 2022). This scale consists of six items that assess the extent to which a person feels called to their profession, and how much they are living out their calling in their current job (Duffy, Spurk, & Perez, 2022). In this study, the LCS was used to measure the level of implementation of respondents' calling. Furthermore, the data were analyzed using Partial Least Squares (PLS) through SmartPLS software. PLS is a type of second-generation structural equation modeling, also known as variance-based SEM or composite-based SEM. This approach has developed rapidly since the 1980s and differs from covariance-based SEM because it focuses on maximizing the variance of latent constructs rather than minimizing the difference in SEM covariance (Budhiasa, 2016).

Data processing uses the help of SmartPLS software, which provides output to help provide interpretation of research results using previously built theories and hypotheses. Outer Model tests for reflective indicators and Inner Models are of course carried out first. Figure 3.1. is the SmartPLS Modeling of this study.



Source: Results of primary data processing using SmartPLS, 2025.

Gambar 3.1. *Modelling Smart*PLS

The research hypotheses include:

Hypothesis 1: Perceiving a calling has a positive effect on living a calling in Master of Management students at UNAS Jakarta.

Hypothesis 2: Work meaning has a positive effect on living a calling in Master of Management students at UNAS Jakarta.
Hypothesis 3: Perceiving a calling has a positive effect on work meaning in Master of Management students at UNAS Jakarta.
Hypothesis 4: Work meaning can mediate the effect of perceiving a calling on living a calling in
Master of Management students at UNAS Jakarta.

4. Results and discussions

The first Outer Model Test in Tables 4.1. and 4.2. provides the results of the Validity Test which is part of Convergent Validity, namely the Loading Factor which is > 0.7 and the Average Variance Extracted (AVE) is more than 0.5. The acceptable AVE is 0.50 or higher which indicates that the construct explains at least 50 percent of the variance of its items, so the Loading Factor and AVE values have met the Validity Test requirements (Hair, Risher, Sarstedt, & Ringle, 2019).

Table 4.1. Loading Factor

Outer Loadings - Matrix			
	LC (Living a Calling)	PC (Perceiving a Calling)	WM (Work Meaning)
X1.1		**0,743**	
X1.2		**0,781**	
X1.3		**0,829**	
X1.4		**0,810**	
X2.1			**0,805**
X2.2			**0,931**
X2.3			**0,812**
Y1	**0,787**		
Y2	**0,768**		
Y3	**0,823**		
Y4	**0,733**		
Y5	**0,833**		
Y6	**0,806**		

Source: Results of primary data processing using SmartPLS, 2025.

Table 4.2. Cronbach's Alpha and Composite Reliability

Construct Reliability and Validity

	Cronbach's Alpha	**rho_A**	**Composite Reliability**	**Average Variance Extracted (AVE)**
Living a Calling	**0,882**	**0,888**	**0,910**	**0,628**
Perceiving a Calling	**0,800**	**0,801**	**0,870**	**0,626**
Work Meaning	**0,808**	**0,826**	**0,887**	**0,725**

Sumber: Hasil olah data primer menggunakan SmartPLS, 2024.
Source: Results of primary data processing using SmartPLS, 2025.

The results of the Cronbach's Alpha Reliability Test in Table 4.2 show test results that are more than the reliable limit provisions, which are greater than 0.6 for all constructs, because reliability values between 0.60 and 0.70 are considered acceptable in exploratory research (Hair et al., 2019). Other reliability test data in Table 4.2 show a composite reliability (CR) value> 0.7, which means that this research instrument has high reliability. This composite reliability

(CR) value shows the internal consistency value, which if the value is high indicates the consistency value of each indicator in measuring its construct.

Next, the Validity Test includes Discriminant Validity, which assesses the extent to which a construct is empirically different from other constructs in the structural model. are in Table 4.3. namely HTMT, Fornell-Larcker Criterion in Table 4.4, and Cross Loadings in Table 4.5.

Table 4.3. Heterotrait-monotrait ratio (HTMT)

Discriminant validity – Heterotrait-monotrait ratio (HTMT) - Matrix

	Living a Calling	Perceiving a Calling	Work Meaning
Living a Calling			
Perceiving a Calling	0,783		
Work Meaning	0,721	0,716	

Source: Results of primary data processing using SmartPLS, 2025.

The HTMT (the heterotrait-monotrait) correlation ratio value, it is suggested that the threshold value is lower than 0.90 or 0.85 is considered to have a good discriminant validity value (Hair et al., 2019). So this research model has a good discriminant validity value because it has a value of < 0.85. The AVE root value in Table 4.4. Fornell-Larcker Criterion which shows a greater than correlation between latent variables, then this research model has a good discriminant validity value (Hair et al., 2019).

Table 4.4. Fornell-Larcker Criterion

Discriminant Validity

	Living a Calling	Perceiving a Calling	Work Meaning
Living a Calling	0,792		
Perceiving a Calling	0,661	0,791	
Work Meaning	0,618	0,583	0,852

Source: Results of primary data processing using SmartPLS, 2025.

Cross loading value is one method to measure discriminant validity, and the indicator used must show a higher loading value on the construct in question than its loading value on other constructs (Hair et al., 2019). The cross loading value is in Table 4.5. shows that the loading value of the Living a Calling variable is greater than the loading value on Perceiving a Calling and Work Meaning, so it can be stated that it has a good discriminant validity value. Likewise, the loading value of the Perceiving a Calling and Work Meaning variables is greater than the loading value of the other two variables.

Table 4.5. Cross Loadings

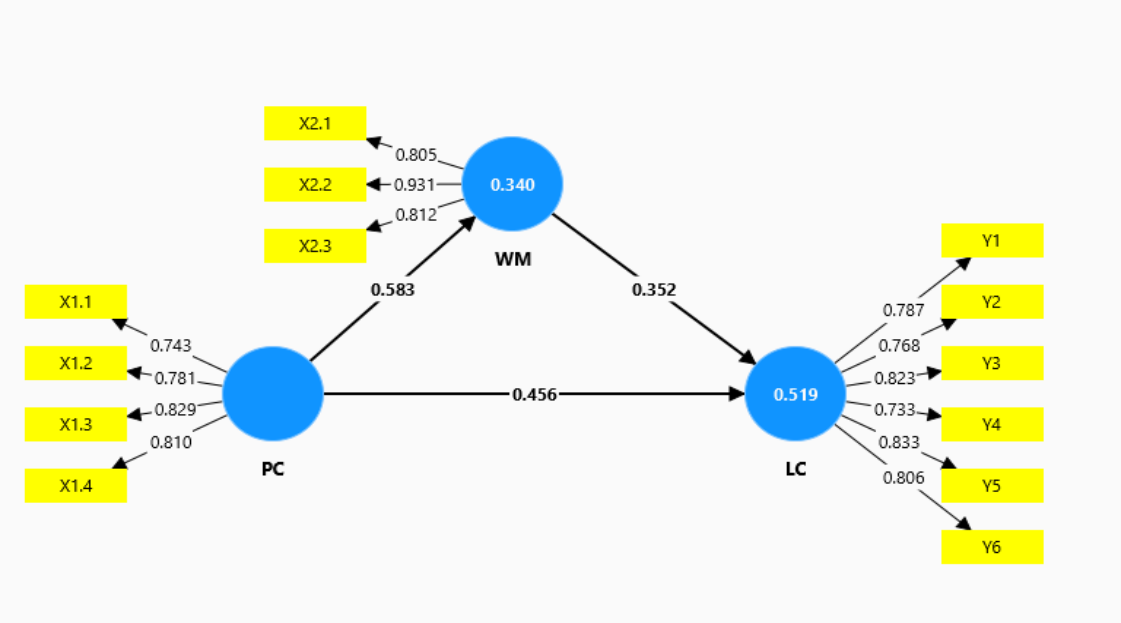
Discriminant validity – Cross loadings

	LC	PC	WM
X1.1	0,538	0,743	0,418
X1.2	0,485	0,781	0,563
X1.3	0,532	0,829	0,473
X1.4	0,539	0,810	0,380
X2.1	0,430	0,523	0,805
X2.2	0,569	0,588	0,931
X2.3	0,578	0,366	0,812
Y1	0,787	0,514	0,568

Y2	**0,768**	0,478	0,489
Y3	**0,823**	0,560	0,445
Y4	**0,733**	0,426	0,316
Y5	**0,833**	0,588	0,510
Y6	**0,806**	0,553	0,564

Source: Results of primary data processing using SmartPLS, 2025.

The results of the research data bootstrapping are displayed in the research data processing results graphic in Figure 4.1. This shows that all indicators of the research variables are valid.



Source: Results of primary data processing using SmartPLS, 2025.

Figure 4.1. Bootstrapping Result Display

Furthermore, Table 4.6. illustrates the determination coefficient value of the Living a Calling variable determined by the perceiving a calling variable and the work meaning variable of 49,50% and the influence of 50.50% is estimated to be determined by other variables not examined in this study. Other results from Table 4.6. are the determination coefficient value of the work meaning variable determined by perceiving a calling variable of 32.40% and the rest of 67,60% is estimated to be influenced by other variables not examined. The large influence of other variables on the work meaning variable, which is 67,60%, opens up opportunities for further research in subsequent studies.

Table 4.6. Coefficient of Determinant

R Square

	R Square	R Suare Adjusted
Living a Calling	0,519	0,495
Work Meaning	0,340	0,324

Source: Results of primary data processing using SmartPLS, 2025.

Structural model evaluation includes Multicollinearity Test (Inner model VIF), Path Coefficient Significance Test (Direct and Indirect Effects) and Effect Size f Square. Structural model evaluation is related to testing the hypothesis of influence between research variables (Hair et al., 2019).

Table 4.7. Inner model VIF

Collinearity statistics (VIF) – Inner model - Matrix

	Living A Calling	Perceiving A Calling	Work Meaning
Living A Calling			
Perceiving A Calling	1,516		1,000
Work Meaning	1,516		

Source: Results of primary data processing using SmartPLS, 2025.

Inner VIF (Variance Inflated Factor) values below 5 indicate no multicollinearity between variables (Hair et al., 2019).

Table 4.8. Direct Effect

Path Coefficients

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
Perceiving a Calling -> Living a Calling	0,456	0,453	0,152	2,993	**0,003**
Perceiving a Calling -> Work Meaning	0,583	0,598	0,146	3,982	**0,000**
Work Meaning -> Living a Calling	0,352	0,366	0,113	3,118	**0,002**

Source: Results of primary data processing using SmartPLS, 2025.

Table 4.9. Indirect Effect

Specific Indirect Effects

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
Perceiving a Calling -> Work Meaning -> Living a Calling	0,205	0,219	0,096	2,142	**0,032**

Source: Results of primary data processing using SmartPLS, 2025.

The f Square value is shown in Table 4.10. This f Square value shows that the f2 value greater than 0.35 is categorized as a strong influence of the latent predictor variable (exogenous latent variable) at the structural level, such as the strong influence of perceiving a calling variable of 0.516 on work meaning. Furthermore, values between 0.15 and 0.35, are categorized as moderate, as shown in Table 4.10 on the influence of the perceiving a calling variable of 0.285 and work meaning of 0.170 on living a calling. Meanwhile, the f2 value between 0.02 and 0.15 is categorized as a weak influence of the latent predictor variable (exogenous latent variable) at the structural level (Hair et al., 2019).

Tabel 4.10. f Square Value

f Square

	Living a Calling	Perceiving a Calling	Work Meaning
Living a Calling			
Perceiving a Calling	**0,285**		**0,516**
Work Meaning	**0,170**		

Source: Results of primary data processing using SmartPLS, 2025.

Hypothesis testing 1: the variable perceiving a calling has a positive and significant effect on the variable living a calling, with a PValue of 0.003 <0.5. Therefore, hypothesis 1 is accepted.

Hypothesis testing 2: the variable work meaning has a positive and significant effect on the variable living a calling because it has a PValue of 0.002 <0.5. Therefore, hypothesis 2 is accepted.

Hypothesis testing 3: the variable perceiving a calling has a positive and significant effect on the variable work meaning because it has a PValue of 0.000 <0.5. Based on these results, hypothesis 3 is accepted.

Hypothesis testing 4: the work meaning variable can mediate the influence of the perceiving a calling variable on the living a calling variable, with a PValue of 0.032 <0.05. The direct influence of the perceiving a calling variable on the living a calling variable has a positive and significant effect, so the work meaning variable with an indirect effect result of 0.205 in Table 4.9 can mediate both variables (partial mediation). So hypothesis 4 can be accepted.

Tabel 4.11. Fit Model

Model Fit

	Saturated Model	Estimated Model
SRMR	0,097	0,097
d_ULS	0,855	0,855
d_G	0,623	0,623
Chi-Square	132,425	132,425
NFI	0,649	0,649

Source: Results of primary data processing using SmartPLS, 2025.

SRMR or Standardized Root Mean Square Residual, Hair et al (2019) stated that this value is a measure of model fit. SRMR values between 0.8 - 0.1 indicate an acceptable model fit. The SRMR value in Table 4.11 shows a rounded value of 0.1 indicating that the fit of this research model is quite fit. Furthermore, based on the explanation from the SMARTPLS site, the limitations or criteria for model fit include: NFI is defined as 1 minus the Chi² value of the proposed model divided by the Chi² value of the null model. NFI produces a value between 0 and 1. So the closer the NFI is to 1, the better the fit, and NFI values above 0.9 usually indicate an acceptable fit (Ringle et al., 2022). The NFI value from this study in Table 4.11 is 0.649, which is a value that is quite close to the number 1, so the model fit is quite good. NFI represents an additional measure of fit and is an alternative in measurement.

Previous research shows that perceiving a calling is closely related to increased meaningful experiences and satisfaction in career, work, and life as a whole (Duffy, Dik, & Douglass, 2018). The findings of this study show that perceiving a calling has a positive and significant effect on work meaning, with PValues = 0.000 (<0.05), and shows an effect strength of 0.516 indicating a strong influence of the variable perceiving a calling on work meaning.

The work meaning variable has a positive and significant effect on the living a calling variable because it has a PValue of 0.002 <0.5. reflected in the respondents' answers to the question: If you feel you are living a calling in your current job, what do you feel are its characteristics? Most respondents answered that they felt enthusiastic about doing their work.

Previous studies have confirmed that there is a directional relationship between the variables of perceiving a calling, work meaning, and living a calling. Using a sample of working adults and testing specific hypotheses, it is known that work meaning mediates the relationship between perceiving a calling and living a calling. This analysis shows that the

position of work meaning as a mediator is the most appropriate in the model (Duffy, Dik, & Douglass, 2018). This is by the results of this study that work meaning can mediate the influence of the variable of understanding a calling (perceiving a calling) on living a calling, with PValues of 0.032 <0.05.

5. Conclusion

This study is entitled "The Effect of Perceiving a Calling on Living a Calling Mediated by Work Meaning, on Master of Management Students at UNAS Jakarta". The results of the study indicate that the variable perceiving a calling has a positive and significant effect on living a calling, with PValues of 0.003. Perceiving a calling has a positive and significant effect on work meaning, with PValues of 0.000. The variable work meaning has a positive and significant effect on the variable living a calling, with PValues of 0.002 and can mediate (partial mediation) the effect of the variable perceiving a calling on living a calling on Master of Management students at UNAS Jakarta. This research model based on the results of data processing is stated to have a fairly good model fit.

Further research to be conducted for research with the same theme, is suggested to be able to capture the perceptions and thoughts of respondents better to increase the number of indicators that have been used in this study. The next research variable that is interesting to study in relation to living a calling is the career commitment variable as a predictor variable and mediates the influence of perceiving a calling on living a calling.

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THE EFFECT OF COMPETENCE AND PERFORMANCE APPRAISAL OF INTERNAL AUDITORS ON THE EFFECTIVENESS OF THE INTERNAL CONTROL SYSTEM WITH AUDITOR INDEPENDENCE AS A MODERATING VARIABLE (CASE STUDY AT BANK RAKYAT INDONESIA TBK)

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Abstract

This study aims to examine how the relationship between the independent variables, namely competence and performance appraisal of internal auditors, affects the dependent variable, namely the effectiveness of the internal control system with auditor independence as a moderating variable. The type of data that researchers use is primary data. The population in this study were internal auditors at Bank Rakyat Indonesia Tbk. The saturated sampling method is used to collect data from respondents. The method used is measurement model evaluation (outer model), structural model evaluation (inner model) and hypothesis testing using the help of a computer program, SmartPLS. The results of this study indicate that internal auditor competence has a positive effect on the effectiveness of the internal control system, internal auditor performance appraisal has a positive effect on the effectiveness of the internal control system. Auditor independence as a moderating variable is able to moderate but weaken the relationship between internal auditor competence and the effectiveness of the internal control system and moderating variables are able to moderate internal auditor performance appraisal on the effectiveness of the internal control system.

Keywords: *Internal Auditor Competence, Internal Auditor Performance Appraisal, Internal Control System Effectiveness, Auditor Independence.*

1. Introduction

In the current era of globalization and rapid development of the business world, business competition is increasingly competitive and complex. This requires company leaders or management to manage their operational activities effectively and efficiently in order to achieve predetermined goals. One of the important pillars in managing operational activities effectively and efficiently is an effective internal control system. As stated by Nurcahyo (2023), the internal control system is one of the important frameworks used by management to ensure the successful achievement of goals. This system serves to ensure that business operations run effectively, efficiently, and accountably, and mitigate various risks that can hinder the achievement of company goals. By carrying out daily activities according to procedures and adequate controls, the company can generate profits as expected, which in turn will support the survival and sustainable growth of the business.

Implementing an effective internal control system is not an easy task. This system is hampered by various obstacles and limitations. One of the main inhibiting factors is human error, both in following procedures, carrying out controls, and understanding established policies and rules. Even though the company has provided clear training and guidance to employees, the risk of errors cannot be completely avoided given the imperfect nature of humans. In addition, implementing a strong internal control system also requires a large investment, both in terms of time, human resources, and financial funds. Therefore, companies

need to conduct periodic cost-benefit evaluations to ensure that the benefits obtained are worth the costs incurred. The benefits of an internal control system include protection of company assets, compliance with regulations, and efficiency and effectiveness of business operations.

A case that occurred at Bank Rakyat Indonesia (BRI) in 2020-2021 indicates weaknesses in the internal control system. An employee misused funds with an unethical and illegal modus operandi. The employee managed to open a number of credit cards using fake identities, where the photo used was his own, but the identity listed belonged to someone else. With these illegally obtained credit cards, the employee managed to access and use Rp 5.1 billion in funds from the state-owned bank. This fraudulent act was not committed alone. The employee worked together with his spouse, making them a married couple involved in this abuse. The couple, Febrina Retno and Hadel, even made 41 fake ID cards by still utilizing their own photos but using other people's identities. Based on information from detik.com (May 15, 2024), this case shows that there are still weaknesses in the internal control system at Bank Rakyat Indonesia that allow large-scale fraud to occur.

The fraud that occurred at Bank Rakyat Indonesia indicates a lack of internal control. This condition requires BRI management to immediately pursue policies and corrective measures to improve the effectiveness of its internal control system. One of the efforts that can be taken, according to Agusiady (2017), is to involve the role of internal auditors who have knowledge, abilities, and experience in the field of accounting, and to appraise their performance on a regular and continuous basis. According to Kurnia et al. (2014) in Anggraini (2020) state that competent internal auditors will be able to detect control weaknesses early and provide appropriate improvement recommendations. Competence supported by prudence is very important for an auditor to have in order to make it easier for auditors to work, especially to detect internal violations. I Kadek Agus Dharma Yolga et al. (2024) state that competence is sufficient and explicit knowledge and ability to conduct audits objectively, carefully and thoroughly. In carrying out the audit process, auditors need good knowledge, experience, education and training because with this, auditors are better able to detect fraud at the beginning of the examination.

Periodic appraisal of internal auditor performance allows management to evaluate the extent to which internal auditors have made a significant contribution to improving the effectiveness of business processes and mitigating company risks, thereby helping enhance decision-making quality and business sustainability (The Institute of Internal Auditors, 2024). Internal auditor performance appraisal serves a critical purpose: to evaluate how effective internal auditors are in achieving predetermined goals and to ensure that their contributions significantly impact the entire organization. This appraisal is not merely an evaluation, but a strategic tool to ensure the internal audit function operates optimally and delivers substantial added value to the company. Through this process, management can identify areas needing improvement and develop targeted strategies to address identified weaknesses. It also provides internal auditors with constructive feedback that can be used to enhance their future performance.

Theoretically, the competence and performance appraisal of internal auditors are believed to increase the effectiveness of the internal control system. However, there is a research gap or inconsistency in the results of various previous studies that examine this matter. Some researchers such as Purnama & Indra (2019), Dwi Alvianti et al. (2019), and Razila (2020) found that internal auditor competence had a significant effect, while other researchers such as Jastika (2018) and Sugandi (2017) found the opposite result. Likewise, for the internal auditor performance appraisal variable, there are differences in results where research by Yukmi et al. (2020), Meliling (2016), and Alamsyah (2015) state a significant effect, but Wardah (2015) found no significant effect..

2. Literature review

4.3. Attribution Theory

Attribution theory explains that individual behavior is not only influenced by external factors, but also by factors from within the individual. Internal factors include ability, motivation, confidence, and personality, while external factors include luck, social situations, and the work environment. In the decision-making process, individuals tend to make attributions, which are judgments about the causes of a behavior or event that can be situational (environmental) or dispositional (self). In auditing, this understanding helps auditors evaluate whether the behavior they observe in clients is a result of personal intentions and competence, or due to environmental pressures and work situations.

In an organizational context, attribution theory plays an important role in helping management understand the causes of employee behavior, particularly when there is a decline in performance. If the decline is caused by internal factors such as lack of ability or motivation, then solutions may include training or changes in workload. However, if the cause is external, such as time pressure or an unsupportive work environment, then interventions can include rearranging work schedules or improving the work atmosphere. Thus, attribution theory is not only used to understand individual behavior, but also forms the basis for designing more effective managerial strategies and internal control systems.

4.4. Theory of Planned Behavior (TPB)

The Theory of Planned Behavior (TPB) developed by Ajzen is an extension of the Theory of Reasoned Action (TRA), which aims to explain how a person's beliefs can influence intentions and ultimately actual behavior. TPB states that a person's intention to perform an action is the main predictor of the action itself, and the intention is influenced by three main factors: attitude towards behavior, subjective norms, and perceived behavioral control. Attitudes are formed through an individual's evaluation of the benefits or risks of an action, while subjective norms relate to the social influence of people who are important in the individual's life.

Meanwhile, perceived behavioral control describes the extent to which individuals feel able to control the implementation of these behaviors, including the availability of resources, time, and opportunities. In the context of auditing and internal control, the TPB is a useful framework to explain auditors' behavior, such as the extent to which they intend to conduct audits according to professional standards, and how these intentions are influenced by the support of the organizational environment and perceptions of their own abilities. The TPB emphasizes that strong intentions supported by adequate behavioral controls are likely to translate into effective action.

4.5. Effectiveness of the Internal Control System

The effectiveness of the internal control system refers to the extent to which the system is able to ensure that organizational activities run in accordance with predetermined objectives, comply with regulations, and protect organizational assets. An effective control system should include a sound control environment, careful risk assessment, adequate control activities, good information and communication systems, and continuous monitoring processes. Evaluation of the effectiveness of this system is usually carried out by internal auditors to assess the extent to which the system is able to prevent and detect errors or irregularities.

These components must be designed and implemented thoroughly and tailored to the characteristics of the organization. For example, a good control environment is reflected in an

organizational culture that upholds ethics and integrity, a clear organizational structure, and transparent and fair HR policies. In practice, a good internal control system will help the organization achieve operational efficiency, accuracy of financial statements, and compliance with legal regulations. Therefore, internal control is not only the responsibility of auditors, but also an integral part of the organization's strategic management.

4.6. Internal Auditor Competence

Internal auditor competence is very important in determining the success of the audit function in an organization. This competence includes mastery of auditing standards, technical skills, understanding of the organization's structure and operations, and communication and analytical skills. Competent auditors are able to detect risks appropriately, develop effective audit strategies, and provide recommendations that are relevant and value-added to the organization. In addition, auditors also need to have integrity and commitment to professional ethics in every step of the audit.

To support competency improvement, auditors need to attend ongoing training, obtain professional certifications such as CIA (Certified Internal Auditor) or QIA (Qualified Internal Auditor), and continuously update knowledge on current audit practices. High competency enables auditors to not only verify data and processes, but also become management's strategic partner in improving organizational governance. Therefore, developing auditor competence is not an option, but a necessity in facing increasingly complex audit challengest.

4.7. Internal Auditor Performance Appraisal

Internal auditor performance appraisal is a systematic process of evaluating how effectively and efficiently auditors fulfill their duties and responsibilities. It considers various dimensions such as the quality and quantity of work, timeliness in task completion, and the auditors' technical knowledge and skills. This process is essential to ensure that internal auditors contribute optimally to the organization's objectives and to identify areas for improvement through training or strategic adjustments.

Moreover, performance appraisals serve as a motivational tool and support managerial decision-making in the audit department's human resource management. When auditors are aware that their performance is being objectively reviewed, they are more likely to maintain and enhance their performance. Consequently, conducting regular and transparent appraisals not only enhances the effectiveness of the internal audit function but also fosters a productive and accountable organizational culture.

4.8. Auditor Independence

Auditor independence is a fundamental principle in conducting audits that ensures the objectivity and integrity of the audit process. An independent auditor is not influenced by management interests, external pressure, or personal relationships with the audited entity. This independence consists of two main aspects, namely independence in fact and in appearance. Independence in fact indicates that the auditor is mentally unbiased and remains neutral, while independence in appearance emphasizes that the auditor appears impartial in the eyes of the public.

In practice, strong independence allows auditors to provide honest, accurate and trustworthy opinions and recommendations. Without independence, the quality of audit results may be compromised, as auditors may hide findings or report information that is not in line with reality. Therefore, maintaining and strengthening independence is very important, both through organizational rules that guarantee auditor autonomy, as well as by auditors' personal

ethics and commitment to professional standards. Independent auditors are more effective in detecting fraud and objectively assessing the effectiveness of internal control systems.

4.9. Linkages Between Research Variables

Internal auditor competence, performance appraisal, and independence are closely linked to the effectiveness of the internal control system. Competent auditors whose performance is regularly appraised are better equipped to carry out their audit functions effectively, provide relevant recommendations, and support management in strengthening internal controls. However, this role can only be fully realized if auditors perform their duties independently. Independence serves as a key moderating factor, reinforcing the relationship between auditor competence, performance, and the effectiveness of the system.

Under ideal conditions, auditors who are competent, objectively appraised, and have high independence will produce credible audit reports and make a real contribution to achieving organizational goals. Conversely, if independence is not maintained, then even though the auditor has high competence, the audit results can be distorted by internal or external party pressure. Therefore, organizations must ensure that the internal control system is not only supported by qualified human resources, but also a work environment that guarantees the freedom of auditors to carry out their duties professionally and objectively.

3. Methodology

3.1 Object of Research

This research focuses on collecting valid data to solve problems related to competence, performance appraisal, and the effectiveness of the internal control system at Bank Rakyat Indonesia Tbk. The object selection is based on the availability of relevant data and information needed to explore the research focus.

3.2 Research Plan and Phases

The planning and stages are organized to facilitate the systematic implementation of the research according to a predetermined schedule, which is presented in the form of a work plan table.

3.3 Research Data

The study used primary data obtained from respondents through questionnaires, observation, and documentation. The research population included all internal auditors of Bank Rakyat Indonesia, and the sampling technique used the saturated sampling method because all populations were sampled. The data collection technique was carried out through a questionnaire using a Likert scale to measure respondents' perceptions of the variables studied.

3.4 Operational Definition and Measurement of Variables

This research uses three types of variables:

Independent variables: Internal auditor competence (X1) and internal auditor performance appraisal (X2), as measured by a 5-point Likert scale.

Dependent variable: The effectiveness of the internal control system (Y), which is the result or effect of the independent variable.

Moderating variable: Auditor independence (Z), which plays a role in strengthening or weakening the relationship between the independent and dependent variables. Each variable is defined operationally to facilitate measurement and analysis.

3.5 Data Presentation Method

Data analysis was conducted using the Partial Least Square (PLS) approach with the help of SmartPLS software, which is suitable for research with a limited number of samples. PLS involves a structural model (inner model) to test the relationship between latent variables, and a measurement model (outer model) to see the representation of indicators on latent variables. The advantage of SmartPLS also lies in its user-friendly interface, making analysis easy even for researchers who are not statisticians.

4. Results and discussions

4.1 Research Results

This research was conducted on internal auditors of Bank Rakyat Indonesia (BRI) with a quantitative approach, involving 45 respondents who all returned the questionnaire (100% response rate). Respondents are dominated by women (64%), aged 25-34 years (42%), have an undergraduate education (78%), and have 1-5 years of work experience (40%). The study examines the effect of internal auditor competence (X1) and internal auditor performance appraisal (X2) on the effectiveness of the internal control system (Y), with auditor independence (Z) as a moderating variable.

Descriptive analysis showed that all variables had mean values above 4 and small standard deviations, indicating normal and homogeneous data distribution. Convergent and discriminant validity tests confirm that all indicators are valid. All loading factor values were > 0.7 and AVE values > 0.5. Reliability was tested through composite reliability and Cronbach's alpha, which were all > 0.9, indicating very high reliability. The R-square value of 0.701 indicates that X1 and X2 explain 70.1% of the variance in Y.

The hypothesis test results show that:

H1: Internal auditor competence has a significant positive effect on the effectiveness of the internal control system ($\beta = 0.279$; $p = 0.025$).

H2: Internal auditor performance appraisal has a significant positive effect on the effectiveness of the internal control system ($\beta = 0.491$; $p = 0.001$).

H3: Auditor independence negatively moderates the effect of auditor competence on the effectiveness of the internal control system ($\beta = -0.269$; $p = 0.008$).

H4: Auditor independence positively moderates the effect of performance appraisal on the effectiveness of the internal control system ($\beta = 0.269$; $p = 0.031$).

4.2 Discussion

The results showed that internal auditor competence has a significant influence on the effectiveness of the internal control system at BRI. This is in line with attribution theory and theory of planned behavior, which emphasize the importance of ability, motivation, and organizational norms in shaping effective behavior. High competence allows internal auditors to carry out controls accurately and efficiently, which increases confidence in the internal control system.

Internal auditor performance appraisal is also proven to have a significant effect on the effectiveness of the internal control system. Auditors with high performance appraisals tend to have greater motivation and commitment in carrying out their duties, which directly contributes to improving the effectiveness of the control system. Support from management and organizational social norms also strengthen this relationship.

Interestingly, auditor independence as a moderating variable shows two different directions of influence. In H3, independence weakens the relationship between auditor competence and internal control effectiveness. This could be due to the distance or communication barriers arising from being too independent, which in turn hinders collaboration and the exchange of important information.

Conversely, in H4, auditor independence strengthens the relationship between performance appraisal and the effectiveness of the internal control system. Independent auditors can provide objective performance appraisals, free of pressure from any party, so that their recommendations are more accepted and implemented by management. Thus, independence is crucial in appraising performance fairly and having a positive influence on the internal control system.

5. Conclusion

Based on the results of research conducted on Bank Rakyat Indonesia's internal auditors, it can be concluded that the effectiveness of the internal control system is influenced by internal auditor competence, internal auditor performance appraisal, and auditor independence as a moderating variable. First, the competence of internal auditors is proven to have a positive and significant effect on the effectiveness of the internal control system. This shows that the higher the level of knowledge, skills, and expertise of internal auditors, the more effective the internal control system will be. The competence of auditors plays an important role in ensuring that the entire audit process runs accurately, efficiently, and in accordance with applicable standards. Second, internal auditor performance appraisal also has a positive effect on the effectiveness of the internal control system. Auditors who get good performance appraisals generally have high motivation and dedication in carrying out their duties, which is reflected in their commitment to the implementation of high-quality supervision and control. A good performance appraisal not only encourages auditors to improve their performance, but also increases positive perceptions of internal control within the organization.

Furthermore, auditor independence is proven to moderate the relationship between competence and auditor performance appraisal on the effectiveness of the internal control system, but with a different direction of influence. On the one hand, auditor independence weakens the effect of internal auditor competence on the effectiveness of the internal control system. This indicates that too high a level of independence can actually hinder collaboration between auditors and management, and reduce the effectiveness of communication and exchange of important information, which ultimately reduces the effectiveness of the internal control system. On the other hand, auditor independence strengthens the relationship between internal auditor performance appraisal and the effectiveness of the internal control system. Independent auditors are perceived as being more capable of delivering objective evaluations, free from external influence, thereby enhancing the accuracy, transparency, and reliability of audit results. These findings highlight the importance of maintaining a balanced level of independence, allowing auditors to collaborate effectively without compromising their integrity and objectivity.

Thus, it can be concluded that the effectiveness of the internal control system at Bank Rakyat Indonesia is strongly influenced by the quality of internal auditor resources, especially

in terms of their competence and performance. However, the role of independence as a counterweight needs to be managed proportionally. Independence should not be too low to reduce auditor objectivity, but also should not be too high to inhibit essential cooperation and communication. This study emphasizes the importance of capacity building and performance appraisal of internal auditors coupled with wise management of independence as a strategic effort in strengthening an effective, reliable and sustainable internal control system in the banking environment.

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THE ROLE OF FAMILY IN ENHANCING FINANCIAL CAPABILITY AMONG YOUTH: A STUDY OF FAMILY MODERATION IN FINANCIAL LITERACY AND FINANCIAL DECISION-MAKING

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Abstract

This study examines the impact of financial capability – comprising financial awareness, experience, skills, and knowledge – on financial decision-making among youth in Jayapura, Papua, Indonesia, while exploring the moderating role of family decision-making dynamics. A total of 229 respondents aged 17 to 25 completed a structured questionnaire, and the data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM). The results indicate that financial awareness significantly enhances financial knowledge, which in turn is a strong predictor of sound financial decision-making. Financial experience contributes substantially to the development of financial skill; however, financial skills alone do not exert a direct influence on decision-making behavior. Notably, family decision-making significantly moderates the relationship between financial knowledge and financial decision-making, underscoring the importance of sociocultural context in shaping youth financial behavior. These findings highlight the necessity of comprehensive financial education programs that integrate both individual financial competencies and familial influences. This study contributes to the financial capability literature by emphasizing the role of family as a contextual factor in financial decision-making processes among young adults.

Keywords: *financial capability, financial decision-making, family influence*

1. Introduction

Young adults, particularly university students aged 18 to 24, are undergoing a critical period in their personal and financial development. This transitional stage is characterized by increasing responsibilities in managing personal finances, such as budgeting, saving, and making informed financial decisions. Although access to financial services has expanded, many students continue to struggle with overspending and inadequate financial planning. According to the 2024 Financial Literacy Survey conducted by Indonesia's Financial Services Authority (OJK), the national financial literacy index stood at 65.43%, indicating considerable room for improvement-especially among the youth segment.

Consumerist behavior is increasingly prevalent among university students, often driven by social lifestyle expectations and the convenience of digital payment systems. Patterns such as frequent café visits and impulsive online shopping reflect limited financial self-control and a lack of long-term financial planning. The widespread use of digital financial services, including Buy Now Pay Later (BNPL) options and peer-to-peer lending platforms, further compounds this issue. As of June 2024, OJK reported that the total value of online loans reached IDR 47 trillion, with Generation Z (aged 12-27) contributing IDR 26.87 trillion. Alarmingly, this demographic also accounted for the highest proportion of non-performing loans, amounting to IDR 763.65 billion. Moreover, more than 60% Gen Z borrowers reportedly used credit not for emergencies but to support lifestyle-related consumption.

Rahman et al. (2024) revealed that financial literacy among Indonesian university students remains relatively low, with only 45.39% of key financial knowledge questions answered

correctly. This raises a critical question: why do students with access to financial products and information still make suboptimal financial decisions? One theoretical framework that may help explain this phenomenon is the Theory of Planned Behavior (Ajzen, 1991), which posits that behavior is shaped not only by individual attitudes and knowledge but also but subjective norms and perceived behavioral control-many of which are formed within the family context.

The family serves as a primary socialization agent, shaping financial attitudes, values, and behaviors from an early age. Informal financial education through practices such as allowance management, budget discussions, and the involvement of children in household financial decisions has been shown to positively influence financial capability in adulthood. Rufaidah and Setiyono (2023) found that financial education delivered within the family enhances financial self-efficacy, which in turn supports better financial management. Similarly, Rahardi et al. (2023) observed that parental financial socialization is significantly associated with students' financial literacy.

Beyond direct influence, families may also play a moderating role in the relationship between financial literacy and financial decision-making. Individual with comparable levels of financial knowledge may arrive at different decisions depending on the quality of financial communication and support within the household. Ayuninggar et al. (2024) emphasize that family socioeconomic status and parenting styles significantly shape students' ability to apply financial knowledge in real-world settings.

This study aims to examine the moderating role of family decision-making in the relationship between financial literacy and financial decision-making among university students. More specifically, it seeks to determine whether high levels of financial literacy consistently lead to rational financial behavior, or whether such outcomes are contingent upon familial support, upbringing, and financial dialogue. The findings are expected to contribute to the formulation of more effective financial education strategies by highlighting the importance of family-based financial socialization in addition to formal instruction.

2. Literature review

4.10. Financial Literacy and Its Determinants

Financial literacy has been widely recognized as a multidimensional construct encompassing various interrelated domains. Numerous scholars conceptualize it as a combination of knowledge, skills, attitudes and behavior. The Organization for Economic Co-operation and Development (OECD) and the International Network on Financial Education (INFE) define financial literacy as "a combination of awareness, knowledge, skill, attitude and behavior to make financial decisions" (Hung et al., 2012). Similarly, Hung et al. (2009) highlight the dynamic interplay between knowledge, skill and behavior in shaping financial capability.

Atkinson and Messy (2012) propose a comparable framework, emphasizing the integration of knowledge, behavior, and attitude. In line with this perspective, the OECD (2020) operationalized financial literacy by incorporating these three elements in cross-national surveys across Asia, Europe, and Latin America. Zokaityte (2017) further argues that financial literacy entails a range of measurable indicators that reflect consumers' understanding, ability, and disposition in managing financial resources.

In the Indonesian context, Dewi et al. (2020) offer an expanded definition of financial literacy that includes awareness, experience, knowledge, skills, capability, goals, and behavior-underscoring its role in facilitating sound financial decision-making. Empirical studies (Hung et al., 2009; Atkinson & Messy, 2012; Frijn et al., 2013; Lusardi & Mitchell, 2014; Grohmann et al., 2018; Mountain et al., 2020; Dewi et al., 2020) provide consistent support for the

multidimensional nature of financial literacy and highlight the interconnectedness of its subcomponents.

4.11. Family Decision-Making in Financial Context

Recent research increasingly emphasizes the influence of family in shaping individual financial behavior. As a primary agent of socialization, the family transmits financial values, norms, and decision-making practices through both explicit teaching and modeling. Jorgensen and Salva (2010) identify three core mechanisms of family financial socialization: direct instruction, observational learning, and interpersonal discussion. These mechanisms contribute significantly to the formation of financial competence, particularly during adolescence and emerging adulthood.

Building on this foundation, Gudmunson and Danes (2011) introduce the Family Financial Socialization Theory, which posits that early-life interactions with parents regarding financial matters have a lasting impact on an individual's financial behaviors and outcomes. Pinto et al. (2005) further elaborate on this by emphasizing that financial decision-making within household is influenced not only by knowledge and experience but also by relational dynamic, including authority patterns and negotiation between family members.

Gender roles and generational hierarchies within the household also play a critical role in shaping financial responsibilities and decision outcomes (Ward & Lynch, 2019). Whether decision-making processes are centralized (e.g., dominated by one parent) or collaborative can affect financial efficiency and the attainment of long-term financial goals. Jorgensen & Savla (2010) found that families engaging in cooperative decision-making report higher levels of financial satisfaction and alignment in household financial objectives.

In addition, several studies indicate that family characteristics such as the presence of children, parental education level, and the frequency of intergenerational communication are significantly associated with youth financial literacy (Shim et al., 2010; Gudmunson & Danes, 2011). Families that prioritize transparency and collaborative planning tend to foster better financial preparedness and decision-making capacity in younger generations.

Drawing from the financial literacy framework developed by Dewi et al. (2020), this study introduces family decision-making as a moderating variable to investigate how intrafamily dynamics influence the relationship between financial awareness, experience, knowledge, and skill, in shaping youth financial decision-making.

3. Methodology

4.1.Theoretical framework

This study is grounded in the Theory of Planned Behavior (TPB) developed by Ajzen (1991), which posits that individual behavior is influenced by three key components: attitudes toward the behavior, subjective norms, and perceived behavioral control. Financial decision-making, as a form of planned behavior, is not merely determined by individual knowledge and intentions, but also shaped by external factors such as social influence and internal capacity for self-regulation. In this context, financial capability is conceptualized as a multidimensional construct comprising financial awareness, experience, skill, and knowledge (Dewi et al., 2020). These dimensions are considered to contribute significantly to rational financial behavior, particularly among youth transitioning into adulthood.

Moreover, family decision-making is introduced as a moderating factor based on the theory of financial socialization (Gudmunson & Danes, 2011). This framework recognizes the family as a primary context where individuals acquire financial norms, values, and practices.

The interaction between financial capability and family influence is essential to understanding youth financial decision-making within a sociocultural context.

4.2. Conceptual framework

The conceptual model (Figure 1) illustrates the hypothesized relationships between financial capability components and financial decision-making, with family decision-making (FDM) acting as a moderating variable. The arrows represent direct effects of financial awareness on knowledge, experience on skill, and subsequently knowledge and skill on decision-making. Moderation paths examine whether family dynamics influence the strength of these relationships.

Hypothesis:

H1: Financial awareness positively influences financial knowledge
H2: Financial Experience positively influences financial skill
H3: Financial knowledge positively influences financial decision-making
H4: Financial skill positively influences financial decision-making
H5: Family decision-making moderates the relationship between financial knowledge and financial decision-making
H6: Family decision-making moderates the relationship between financial skill and financial decision-making

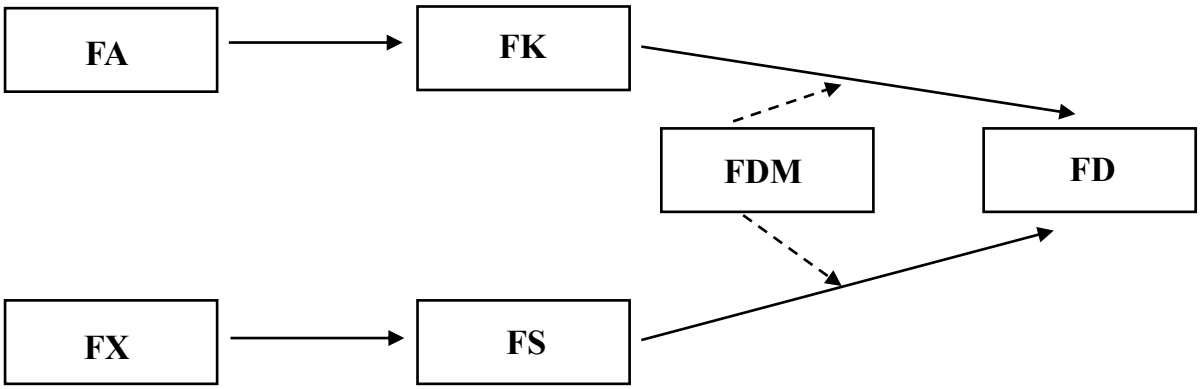


Figure 1. Research paradigm: financial literacy

4.3. Instrumentation

Sample and Data Collection

This study involved 229 youth participants residing in Jayapura, Papua, Indonesia. Following Hair et al. (2017), the recommended minimum sample size for structural equation modeling (SEM) is between 5 and 10 times the number of indicators. With 30 indicators included in the measurement model, a sample size ranging from 150 to 200 respondents is considered adequate. Therefore, the collected sample of 299 participants meets the minimum requirement for PLS-SEM analysis.

Data were gathered using structured questionnaires distributed through both face-to-face interviews and self-administered online surveys. Purposive sampling was employed to ensure that respondents met the following criteria: aged between 17 and 25 years, and residing in urban areas of Jayapura.

Measures

The measurement instruments were adapted from Dewi et al. (2020) and designed to capture the following laten constructs:

- Financial Awareness (FA) – 5 items
- Financial Experience (FX) – 5 items
- Financial Skill (FS) – 5 items
- Financial Knowledge (FK) – 5 items
- Financial Decision (FD) – 5 items
- Family Decision-Making (FDM) – 5 items (moderating variable)

All items were measured using a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree).

Data Analysis

The data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS 4 software. A two-step approach was employed, comprising the evaluation of the measurement model followed by the structural model.

Measurement Model Evaluation

The reliability and validity of the constructs were assessed using the following criteria:

- Outer Loadings > 0.70 (indicator reliability)
- Average Variance Extracted (AVE) > 0.50 (convergent validity)
- Cronbach's Alpha and Composite Reliability (CR) > 0.70 (internal consistency)
- Discriminant Validity, confirmed using the Heterotrait Monotrait Ratio (HTMT) with values < 0.90

Structural Model Evaluation

Once the measurement model was validated, the structural model was assessed using the following procedures:

- Variance Inflation Factor (VIF): Evaluated for multicollinearity among predictor constructs. VIF values below 5 indicate acceptable levels
- Path Coefficients: Estimated using a bootstrapping procedure with 5,000 resamples. The significance of each path was assessed through t-values, p-values and confidence intervals
- Coefficient of Determination (R^2): Used to evaluate the explanatory power of endogenous constructs. R^2 values of 0.25, 0.50, and 0.75 indicate weak, moderate, and substantial levels, respectively
- Effect size (f^2): Indicates the individual contribution of each exogenous variable. Values of 0.02, 0.15, and 0.35 represent small, medium, and large effects, respectively
- Predictive Relevance (Q^2): Assessed using the blindfolding techniques; values greater than 0 indicate that the model has predictive relevance for the endogenous variables
- Moderation Analysis; Conducted using interaction terms (FDM x FK and FDM x FS) to evaluate the moderating role of family decision-making in the relationship between financial capability variables and financial decision-making.

4. Results and discussions

The evaluation of the measurement model aims to assess the reliability and validity of the latent constructs used in the study. As recommended by Hair et al. (2019), four key indicators were examined: outer loadings, internal consistency reliability (Cronbach's Alpha and Composite Reliability), convergent validity (Average Variance Extracted or AVE), and discriminant validity (HTMT). Table 1 summarizes the results of the measurement model

assessment, including the outer loadings (OL), Cronbach's Alpha (CA), Composite Reliability (CR), and AVE for each construct. All outer loadings exceeded the threshold value of 0.70, indicating strong indicator reliability. One item under Financial Decision (FD1) had a slightly

Table 1 Outer Loading (OL), Cronbach's Alpha (CA), Composite Reliability (CR), and AVE for each measurement variable

Latent Variables	Code	Measurement variable	OL	CA	CR	AVE	Result
Financial Awareness (FA)	FA2	Before shopping, I usually prepare a list of my needs.	0.786	0.809	0.875	0.636	Valid & Reliable
	FA3	I compare the benefits and risks before choosing financial products.	0.812				Valid & Reliable
	FA4	I seek financial information from the internet, social media, or webinars.	0.818				Valid & Reliable
	FA5	I often discuss financial issues with my family or close friends.	0.773				Valid & Reliable
Financial Experience (FX)	FX1	I have an emergency fund to be used in unforeseen situations.	0.701	0.718	0.824	0.541	Valid & Reliable
	FX2	I regularly record my income and expenses.	0.802				Valid & Reliable
	FX3	I have experience managing money from scholarships, part-time jobs, or small business.	0.726				Valid & Reliable
	FX5	I have invested in capital markets such as stocks or mutual funds.	0.708				Valid & Reliable
Financial Skill (FS)	FS1	I am able to prepare a monthly spending budget.	0.824	0.839	0.891	0.673	Valid & Reliable
	FS2	I regularly check my savings or investment account statements.	0.878				Valid & Reliable
	FS3	I can calculate loan interest or expected returns from basic investments.	0.792				Valid & Reliable
	FS5	I evaluate my debts periodically to avoid late payments.	0.783				Valid & Reliable
Financial Knowledge (FK)	FK2	I understand that high-return investments usually carry high risks.	0.847	0.810	0.875	0.638	Valid & Reliable
	FK3	I frequently engage in discussions about economic and financial issues.	0.725				Valid & Reliable
	FK4	I understand the difference between needs and wants in spending.	0.784				Valid & Reliable
	FK5	I am aware of the role of formal and informal financial institutions.	0.834				Valid & Reliable
Family Decision Making (FDM)	FDM1	I am usually involved in important decision-making discussions in the family.	0.814	0.819	0.879	0.646	Valid & Reliable
	FDM2	My parents communicate decisions after allowing room for discussion.	0.812				Valid & Reliable
	FDM3	In my family, conflicts are resolved through open discussion.	0.794				Valid & Reliable
	FDM5	I often discuss future financial plans with my parents.	0.794				Valid & Reliable
Financial Decision (FD)	FD1	I often make financial decisions without prior planning.	0.649	0.711	0.808	0.514	Valid & Reliable
	FD2	I have regretted purchasing something without considering its benefits.	0.739				Valid & Reliable
	FD3	I tend to make impulsive purchases.	0.721				Valid & Reliable
	FD5	I consider the long-term impact before making financial decisions.	0.754				Valid & Reliable

Data processing result using SmartPLS 4

lower loading (0.649), but it was retained due to the construct's overall acceptable CR and AVE values, which is considered acceptable in PLS-SEM analysis.

Regarding internal consistency reliability, all constructs achieved Cronbach's Alpha values above 0.70, with the lowest value found in Financial Decision (0.711) and the highest in Financial Skill (0.839). Composite Reliability (CR) values ranged from 0.808 to 0.891, surpassing the recommended minimum of 0.70 and confirming the internal consistency of each construct. Convergent validity was also satisfied, as all constructs recorded AVE values greater than 0.50. The AVE scores ranged from 0.514 (Financial Decision) to 0.673 (Financial Skill), indicating that each construct was able to explain more than 50% of the variance in its indicators.

This study used the Heterotrait-Monotrait Ratio of Correlations (HTMT) as recommended by Henseler et al. (2015). HTMT values below 0.90 indicate that each latent construct is empirically distinct from the others.

Table 2 Heterotrait-Monotrait Ratio (HTMT)

	FA	FD	FDM	FK	FS	FX	FDM x FS	FDM x FK	Result
FA									Valid
FD	0.675								Valid
FDM	0.711	0.549							Valid
FK	0.892	0.884	0.566						Valid
FS	0.728	0.493	0.431	0.725					Valid
FX	0.887	0.608	0.602	0.804	0.873				Valid
FDM x FS	0.070	0.103	0.090	0.045	0.124	0.103			Valid
FDM x FK	0.272	0.340	0.254	0.281	0.079	0.082	0.683		Valid

Data processing result using SmartPLS 4

As shown in Table 2, all HTMT values among the main constructs and interaction terms are below the recommended threshold. The highest HTMT value (0.884) was observed between Financial Knowledge (FK) and Financial Decision (FD), which remains within the acceptable range. Interaction terms (FDM × FS and FDM × FK) demonstrated low HTMT values with all main constructs, confirming that the moderating variables are distinct and do not overlap with the predictor constructs.

These findings collectively confirm that the latent variables used in this study are both valid and reliable, allowing for further analysis of the structural model.

Following the confirmation of the measurement model's validity and reliability, the next stage involved assessing the structural (inner) model. The evaluation covered collinearity testing, hypothesis testing through path coefficients, effect size (f^2), and the explanatory power of the model as reflected in R^2 values.

Variance Inflation Factor (VIF) values were examined to detect multicollinearity among predictor constructs. As shown in Table 3, all VIF values are below the conservative threshold of 5, indicating that collinearity is not a concern in this model (Hair et al., 2019). The highest VIF value was observed in the interaction term FDM × FK (2.167), which remains well within the acceptable limit.

Table 3 Variance Inflation Factor (VIF)

	VIF
FA -> FK	1.000
FDM -> FD	1.339
FDM x FK -> FD	2.167
FDM x FS -> FD	1.973
FK -> FD	1.934
FS -> FD	1.658
FX -> FS	1.000

Data processing result using SmartPLS 4

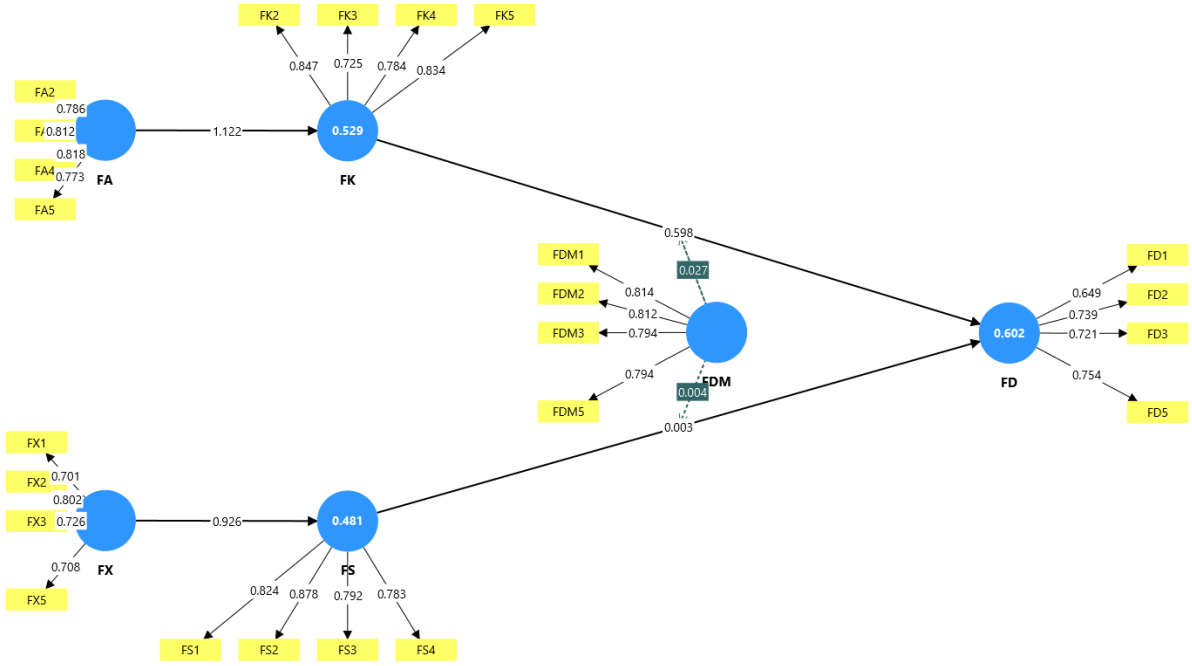
The structural path relationships were assessed using bootstrapping with 5,000 subsamples. Table 4 presents the path coefficients, t-statistics, p-values, and effect sizes (f^2). The results indicate several significant relationships:

Table 4 Path Coefficients and Hypothesis Testing

	Path Coefficient	T statistics	P values	f-square
FA -> FK	0.727	18.569	0.000	1.122
FDM -> FD	0.133	2.687	0.007	0.033
FDM x FK -> FD	-0.119	2.444	0.015	0.027
FDM x FS -> FD	0.049	0.897	0.370	0.004
FK -> FD	0.679	13.179	0.000	0.598
FS -> FD	-0.041	0.689	0.491	0.003
FX -> FS	0.693	17.402	0.000	0.926

Data processing result using SmartPLS 4

- Financial Awareness significantly influences Financial Knowledge ($\beta = 0.727$, $p < 0.001$), with a large effect size ($f^2 = 1.122$).
- Financial Knowledge significantly affects Financial Decision ($\beta = 0.679$, $p < 0.001$), also with a substantial effect size ($f^2 = 0.598$).
- Financial Experience strongly predicts Financial Skill ($\beta = 0.693$, $p < 0.001$), with a large effect size ($f^2 = 0.926$).
- Financial Skill not significantly affects Financial Decision ($\beta = -0.041$, $p = 0.491$), indicating a negligible direct influence. ($f^2 = 0.598$).
- Family Decision Making positively influences Financial Decision ($\beta = 0.133$, $p = 0.007$), albeit with a small effect size ($f^2 = 0.003$).
- The moderating effect of FDM × FK on Financial Decision was significant ($\beta = -0.119$, $p = 0.015$), suggesting that family dynamics alter the influence of financial knowledge on decisions ($f^2 = 0.027$).
- Conversely, the interaction between FDM × FS and Financial Decision was not significant ($\beta = 0.049$, $p = 0.370$), indicating that the moderation effect does not apply to financial skill in this context.



Data processing result using SmartPLS 4

Figure 2 Structural measurement model path coefficient

The R-square (R^2) value is used to assess the explanatory power of the structural model in predicting the variance of endogenous (dependent) variables. Based on the R Square table 3, the result of the analysis:

Table 5 Coefficient of Determination (R^2)

	R-square	R-square adjusted
FD	0.602	0.593
FK	0.529	0.527
FS	0.481	0.478

Data processing result using SmartPLS 4

- The Financial Decision (FD) variable has an R^2 value of 0.602, with an adjusted R^2 of 0.593. This indicates that approximately 60.2% of the variance in financial decision-making can be explained by its predictors, reflecting a moderate level of explanatory power.
- The Financial Knowledge (FK) variable shows an R^2 of 0.529 and an adjusted R^2 of 0.527, suggesting that about 52.9% of its variance is explained by the exogenous variables. This also falls under the moderate category.
- The Financial Skill (FS) variable obtained an R^2 of 0.481 and an adjusted R^2 of 0.478, which means that 48.1% of its variance is explained by the predictors. This is interpreted as weak to moderate explanatory power.

These values demonstrate that the model explains a substantial proportion of variance in financial-related outcomes among youth respondents.

Predictive relevance was assessed using the Q^2predict values obtained through the blindfolding procedure. As shown in Table 6, all endogenous constructs demonstrated Q^2 values greater than zero, indicating that the model has satisfactory predictive capability

Table 6 Predictive Relevance (Q^2)

	Q^2predict
FD	0.339
FK	0.522
FS	0.470

Data processing result using SmartPLS 4

Specifically, Financial Knowledge ($Q^2 = 0.522$) and Financial Skill ($Q^2 = 0.470$) showed high levels of predictive relevance. Financial Decision also exhibited a strong predictive relevance with $Q^2 = 0.339$, which falls within the substantial threshold. These results confirm that the exogenous variables in the model possess adequate predictive power for their respective endogenous outcomes.

The findings of this study provide new insights into the dynamics between financial capability and financial decision-making among young adults, with particular attention to the moderating role of family decision-making (FDM). Consistent with the framework of financial literacy proposed by Dewi et al. (2020), the results reveal that each component of financial capability—awareness, experience, knowledge, and skill—plays a distinct role in shaping financial behavior.

Firstly, financial awareness was found to have a strong and significant influence on financial knowledge ($\beta = 0.727$, $p < 0.001$; $f^2 = 1.122$), confirming previous studies that emphasize the foundational role of awareness in promoting financial understanding (Lusardi & Mitchell, 2014). Awareness indicators such as planning purchases and seeking financial information appeared to significantly enhance students' financial knowledge, including concepts such as risk-return trade-offs and financial institutions. This aligns with the premise of the Theory of Planned Behavior (Ajzen, 1991), which suggests that increased awareness contributes to more favorable financial attitudes and perceived behavioral control.

Secondly, financial knowledge significantly predicted financial decision-making ($\beta = 0.679$, $p < 0.001$; $f^2 = 0.598$), reinforcing the assertion that cognitively equipped individuals are more likely to engage in responsible financial behavior (Atkinson & Messy, 2012). Students who understood core concepts in finance demonstrated stronger decision-making ability, such as avoiding impulsive purchases or planning with long-term consequences in mind.

Third, the path from financial experience to financial skill ($\beta = 0.693$, $p < 0.001$; $f^2 = 0.926$) was both statistically and practically significant. This indicates that exposure to real-life financial activities—such as managing savings, budgeting from scholarships or part-time income, and engaging with financial platforms—contributes to the development of practical financial skills. This supports findings by Grohmann et al. (2018), who assert that experiential learning plays a critical role in translating theoretical literacy into actionable competence.

However, an unexpected result emerged regarding the influence of financial skill on financial decision-making. The relationship was found to be non-significant ($\beta = -0.041$, $p = 0.491$; $f^2 = 0.003$), suggesting that skill alone, without contextual reinforcement or support, may not directly influence financial choices among students. This result diverges from prior expectations and implies that skills such as budgeting or tracking debt may not be sufficient in guiding behavior unless mediated by other factors—such as attitudes, emotional readiness, or external guidance.

The role of family decision-making was observed to be both direct and interactive. FDM showed a modest but significant direct effect on financial decision-making ($\beta = 0.133$, $p =$

0.007; $f^2 = 0.033$), implying that students who are involved in family discussions about money are more likely to exhibit thoughtful financial behavior. This finding supports the view that family interaction enhances financial self-efficacy (Rufaidah & Setiyono, 2023) and reinforces social norms that shape long-term habits (Gudmunson & Danes, 2011).

Most notably, the interaction effect between FDM and financial knowledge was statistically significant ($\beta = -0.119$, $p = 0.015$; $f^2 = 0.027$), suggesting a moderating role of family in the translation of knowledge into decisions. Interestingly, the negative coefficient implies that in families with strong decision-making structures, the impact of individual knowledge may be dampened—perhaps due to reliance on parental input or deference to family authority. This interaction reflects the complex interplay between individual agency and familial norms, especially within collectivist cultures such as Papua. It also supports the assertion of Ayuninggar et al. (2024) that family context mediates the effectiveness of formal financial education.

In contrast, the interaction between FDM and financial skill was not significant ($\beta = 0.049$, $p = 0.370$), suggesting that family influence may not enhance the utility of technical skills in decision-making. This may be due to the nature of financial skill being more mechanical or transactional, requiring less negotiation or shared values compared to financial knowledge.

The overall model demonstrated satisfactory explanatory power, with R^2 values indicating moderate predictability for financial decision-making (0.602), financial knowledge (0.529), and financial skill (0.481). In addition, all Q^2 values were positive and well above the threshold of 0, confirming the model's predictive relevance (Hair et al., 2019).

Taken together, these results highlight the multifaceted nature of financial behavior among youth. While knowledge and experience are critical, their effectiveness depends on the socio-familial context in which financial decisions are made. This underscores the importance of incorporating family-based approaches into financial education programs, particularly in regions where family dynamics play a central role in shaping individual values and behaviors.

5. Conclusion

This study explored the relationship between financial capability—comprising financial awareness, experience, skills, and knowledge—and financial decision-making among youth in Jayapura, Papua, Indonesia, with a specific focus on the moderating role of family decision-making. Using a PLS-SEM approach on data collected from 229 participants, the findings reveal several important insights.

First, financial awareness was found to significantly enhance financial knowledge, which in turn emerged as the strongest predictor of sound financial decision-making. Financial experience also played a vital role in developing financial skills; however, these skills did not directly translate into improved financial decisions. Notably, the moderating effect of family decision-making was significant only in the relationship between financial knowledge and financial decisions, suggesting that family dynamics can either strengthen or weaken the impact of financial literacy on behavior.

These findings highlight the multifaceted nature of financial decision-making among young people and the importance of integrating sociocultural dimensions—particularly family influence—into financial education strategies. For policy-makers, educators, and development practitioners, the results underscore the need for financial literacy programs that extend beyond the individual and involve family structures to foster more sustainable financial behaviors in youth.

Future research could benefit from examining similar models across different cultural contexts, socioeconomic groups, or educational levels to further generalize and validate these findings.

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THE INFLUENCE OF PRODUCT REVIEWS AND PRODUCT KNOWLEDGE ON GENERATION Z CONSUMER PURCHASING DECISIONS: A STUDY ON SOMETHINC PRODUCTS AT TIK TOK SHOP

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Abstract

This study aims to analyze the influence of product reviews and product knowledge on the purchasing decisions of Generation Z for Somethinc products on Tik Tok Shop. With the rapid development of the digital era and increasingly easy access to information, reviews from other users have become an important factor in shaping perceptions and building trust in products. The population of this study consists of Generation Z individuals residing in Semarang City, with a total of 100 respondents determined using the Lemeshow formula. The research data was collected by distributing questionnaires to Generation Z individuals in Semarang City. The analytical methods used in this study include multiple linear regression analysis, simultaneous significance test (F-test), and partial significance test (T-test). The results of the processed data show that product reviews have a positive and significant effect on purchasing decisions, and product knowledge also has a positive and significant effect on purchasing decisions. Based on these findings, it can be concluded that product reviews and product knowledge simultaneously have a positive and significant influence on purchasing decisions. The total influence is 56.8%, while the remaining 43.2% is influenced by other variables not included in this study.

Keywords: ***Product Reviews, Product Knowledge, Purchase Decisions, Generation Z***

1. Introduction

The development of digital technology today has transformed the way consumers interact with brands and products. One significant change is the increasing role of social media platforms in influencing consumers' purchasing decisions, particularly among the younger generation who frequently use social media. One of the trending platforms in Indonesia is Tik Tok, as evidenced by the data presented below, taken from (Hutahaean, 2025).

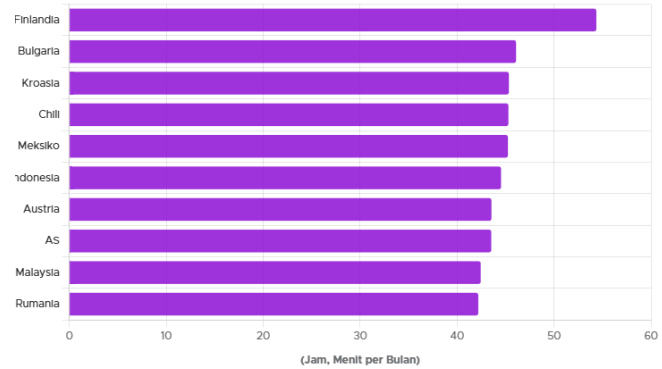

Figure 1. Top 10 Countries Spending the Most Time on Tik Tok
Source: GoodStats (2025)

Hutahaean (2025) stated that Indonesia ranks among the top 10 countries spending the most time on Tik Tok, with an average usage of 44 hours and 54 minutes, significantly exceeding the

global recommended limit of 90 minutes during waking hours. By occupying the 6th position, it is evident that Tik Tok has become a prevailing trend in Indonesia and is widely favored, similar to several other countries around the world. This platform has experienced rapid development and has now introduced the Tik Tok Shop feature, which combines entertainment content with direct shopping activities, also known as e-commerce (Ceci, 2025).

Marketing strategies that focus on consumer experience, such as product reviews or customer testimonials, can enhance a product's appeal in the market (Kotler et al., 2008). A product review refers to a consumer's evaluation and satisfaction level when using a product or service, typically shared through a story or written feedback (Nur Aziz & Munandar, n.d.). This phenomenon is particularly effective in attracting the attention of Generation Z (Gen Z), a cohort known for actively seeking information and online reviews before making a purchase. Gen Z uses such reviews to assess the quality and reliability of products, reviews generated by other users, whether in the form of photos, videos, or written content, hold significant power in shaping perceptions and influencing the purchase intentions of other consumers (Smith & Anderson, 2018). This aligns with the concept of electronic word of mouth (e-WOM), where information shared by fellow consumers online has a substantial impact on purchasing decisions (Chevalier & Mayzlin, 2006).

Product knowledge refers to a consumer's understanding of a product or service, which is interpreted and utilized as a basis for making decisions or taking further action. Product knowledge is considered an essential element communicated by producers to provide consumers with guidance and considerations regarding the offered product (ST Rahmah et al., 2024). Based on this statement, it can be concluded that product knowledge is highly important for consumers, as it helps them make informed decisions and offers comprehensive and structured insights into the product.

There are also studies that examine how Generation Z responds to social media platforms such as Instagram, Tik Tok, and others as a medium for online shopping. Generation Z tends to purchase products based on values and authenticity. They prefer brands that support ethics, sustainability, and transparency. For them, shopping is not merely a transaction, but a reflection of personal values and beliefs. In light of this, sellers and producers often rely on influencers or individuals who have used the product to share their experiences through videos as a form of promotion on social media. Visual and interactive platforms allow Gen Z to connect more deeply with brands, creating opportunities for storytelling and authentic engagement that foster purchase intention (Wibowo & Ayuningtyas, 2025).

Somethinc is one of the local skincare brands established in 2019 by Irene Ursula, an entrepreneur in the beauty industry with experience in similar products (Putri, 2021).Somethinc offers a wide range of products, resulting in diverse consumer reviews shared across social media platforms (Andata & Iflah, 2022). Today, Somethinc has become one of the most favored skincare brands among Generation Z due to its high product quality and its identity as a local Indonesian brand. In 2022, Somethinc ranked first as the best-selling skincare product on e-commerce platforms (Fatma, 2024).

Table 1. Top 10 Best-Selling Skincare Brands on E-Commerce Platforms

Brand	Sales Revenue
Somethinc	53.2B
Scarlett	40.9B
Ms Glow	29.4B
Avoskin	28.0B
Whitelab	25.3B
Azarine	22.8B

Wardah	18.3B
Erha	11.5B
Emina	7.4B
Bio Beauty Lab	5.4B

Source: Compas (2022)

Previous studies conducted by several authors have examined purchasing decisions of skincare products by involving the variable of product reviews on e-commerce platforms (Nur Aziz & Munandar, n.d.;Talitha Syahada Munaf et al., 2025;Zagita & Dewi, 2025) this research has the opportunity to further examine skincare purchasing decisions that are influenced by other consumer product reviews on one of the local skincare brands, Somethinc. However, what distinguishes it from previous research, in this study there is the addition of one variable, namely Product Knowledge, which will be one of the factors of Generation Z's purchasing decisions on Somethinc products at Tik Tok Shop.

2. Literature review

2.1 *Purchase Decision*

Purchase decision is a process that consumers go through in selecting, buying, and using a product or service. According to Kotler & Keller (2016), purchase decisions are influenced by internal factors such as motivation, needs, attitudes, and perceptions, as well as external factors such as social, cultural, and personal influences from people around them. In the context of e-commerce, purchase decisions can also be affected by digital elements such as product reviews and product knowledge, which are now easily accessible online. A purchase decision is part of consumer behavior that involves a series of activities to obtain and choose products or services. This process not only includes the act of purchasing itself but also involves stages before and after the purchase decision is made (Tjiptono & Diana, 2020).

2.2 The Influence of Product Reviews on Purchase Decisions

Product reviews are a form of feedback provided by previous consumers, offering information about the quality and their experience using the product. Consumers may give feedback in the form of written comments or star ratings on a scale of 1 to 5. If a product is considered good, the star rating tends to be closer to 5. These ratings help potential buyers determine which product to purchase, as they indirectly provide a general overview of product quality and seller service. A study by Nur Aziz & Munandar (n.d.) showed that product reviews have a positive and significant influence on consumer behavior when shopping on the Shopee e-commerce platform. This demonstrates that consumers tend to rely on product reviews from other users to minimize risk and boost their confidence in purchasing a product.
H1: *Product reviews have a positive influence on Generation Z's purchase decisions for Somethinc products on Tik Tok Shop.*

2.3 The Influence of Product Knowledge on Purchase Decisions

Product knowledge refers to the understanding and information that consumers possess and comprehend regarding a product. It plays a crucial role in influencing purchase decisions, as consumers with greater knowledge tend to be more confident in selecting products that match their needs. This is because consumers are able to evaluate the benefits, quality, and suitability of a product based on the information they have. A study conducted by Agustino & Syaifullah (2020) revealed that product knowledge has a positive and significant effect on purchase

decisions. Consumers with more knowledge about a product are more likely to make accurate and satisfying purchase decisions. Product knowledge encompasses the information and understanding consumers have about a product's characteristics, including its function, quality, and advantages, which shape their perception and attitude toward the product (Lamb et al., 2018)

H2: *Product knowledge has a positive influence on Generation Z's purchase decisions for Somethinc products on Tik Tok Shop.*

3. Methodology

This study will employ a quantitative approach, involving two independent variables: product review (X1) and product knowledge (X2), with the dependent variable being purchase decision (Y). The researcher will utilize SPSS for Windows Version 16.0 as the tool for data analysis and will use a questionnaire as the instrument for data collection.

Table 2. Variable Operationalization

Variable	Indicator	Description	Scale
Product Review	Valence (review sentiment) refers to whether the review is classified as positive, negative, or neutral. Depth (review depth) refers to how detailed and informative the review is.	(Mudambi & Schuff, 2010)	Likert
Product Knowledge	• Knowledge of product attributes • Knowledge of product benefits • Knowledge of satisfaction provided by the product	*According to Peter and Olson, as cited in (Sanita et al. (2019)*	Likert
Purchase Decisions	• Need Recognition • Information Search • Evaluation of Alternatives • Purchase Decision • Post-Purchase Behavior	(Kotler & Keller, 2016)	Likert

This study involves all members of Generation Z, defined as individuals born between 1997 and 2012, who have previously purchased Somethinc cosmetic products through Tik Tok Shop, as the population. However, the exact number of this population cannot be determined due to the lack of accessible data showing the total number of consumers who have made such purchases on the platform. Therefore, since the population size is unknown, the researcher applied the Lemeshow formula to determine the sample size. With a desired precision level of

10%, the final rounded sample size is 100 respondents. The data will be analyzed through validity and reliability testing (Andata & Iflah, 2022).

$$n = d\frac{z^2 a^p\ (1-p)}{d^2}$$

$$n = \frac{1{,}96^2 . 0{,}5\ (1-p)}{0{,}1^2}$$

$$n = \frac{3{,}8416 . 0{,}25}{0{,}01}$$

$$n = 96{,}04 = 100$$

Explanation:
n = sample size
Z = Z value at 95% confidence level (1.96)
p = maximum estimated proportion (0.5)
d = margin of error (10% or 0.1)

4. Results and discussions

4.1 Respondent Profiles

The respondents in this study are consumers aged between 13 and 28 years old who are active Tik Tok users residing in Semarang City. The total number of respondents in this study is 100 individuals. The sample was collected through a questionnaire distributed to the respondents. Respondent profiles were classified based on their name, age, and level of Tik Tok usage activity. The following are the results obtained from the distributed sample:

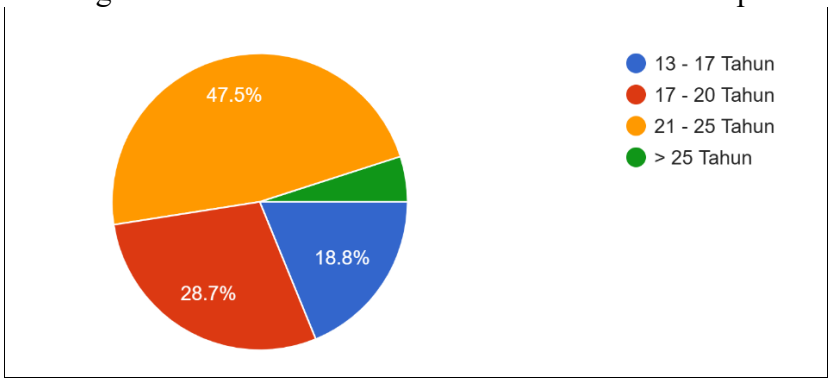

Figure 2. Age Distribution of Respondents
Source: Researcher data results (2025)

Based on the chart above, out of 100 respondents, 47.5% or 48 individuals are aged between 21 and 25 years. Respondents aged 17 to 20 years make up 28.7%, equivalent to 29 individuals. Those aged 13 to 17 years account for 18.8% or 19 individuals, while respondents over the age of 25 represent 5% or 4 individuals.

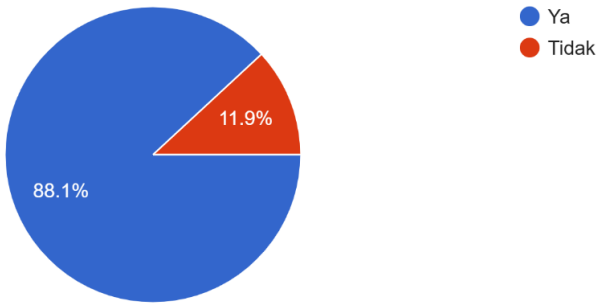

Figure 3. Respondents' Level of Activeness in Using Tik Tok
Source: Researcher data results (2025)

Based on the chart above, the majority of Generation Z respondents are active Tik Tok users. Out of 100 respondents, 89 individuals (88.1%) are considered active in using Tik Tok, while the remaining 11 respondents (11.9%) are classified as less active in using the platform.

4.2 Validity Test Results

Table 3. Validity Test Results

Research Variable	Dimention	Statement items	r-count	Description
Product Review (X1)	*Valence* (review sentiment)	X1.1	0.556	**Valid**
		X1.2	0.635	**Valid**
		X1.3	0.588	**Valid**
		X1.4	0.622	**Valid**
		X1.5	0.754	**Valid**
	Depth (review depth)	X1.6	0.716	**Valid**
		X1.7	0.676	**Valid**
		X1.8	0.673	**Valid**
		X1.9	0.343	**Valid**
		X1.10	0.646	**Valid**
Product Knowledge (X2)	Knowledge of product attributes	X2.1	0.579	**Valid**
	Knowledge of product benefits	X2.2	0.645	**Valid**
	Knowledge of product attributes	X2.3	0.687	**Valid**
	Knowledge of product benefits	X2.4	0.697	**Valid**
		X2.5	0.701	**Valid**
	Knowledge of satisfaction provided by the product	X2.6	0.697	**Valid**
		X2.7	0.676	**Valid**
		X2.8	0.695	**Valid**
		X2.9	0.748	**Valid**
		X2.10	0.703	**Valid**

Purchase Decision (Y)	Information Search	Y.1	0.574	**Valid**
		Y.2	0.633	**Valid**
		Y.3	0.768	**Valid**
		Y.4	0.682	**Valid**
	Purchase Decision	Y.5	0.574	**Valid**
	Need Recognition	Y.6	0.600	**Valid**
		Y.7	0.719	**Valid**
	Post-Purchase Behavior	Y.8	0.720	**Valid**
		Y.9	0.708	**Valid**
	Evaluation of Alternatives	Y.10	0.699	**Valid**

Source: SPSS Output 16.0 (2025)

Based on the data above, it is found that all three variables have correlation values greater than the critical r-value, which is 0.197. Therefore, it can be concluded that the instruments used in this study are valid.

4.3 Descriptive Analysis Result

The purpose of this descriptive analysis is to understand the respondents' responses to each variable, namely Product Review, Product Knowledge, and Purchase Decision. This analysis is used to determine the frequency and average score of the 100 responses, and whether they fall into the categories of *strongly disagree*, *disagree*, *agree*, or *strongly agree*. The following is the range guideline used in the descriptive analysis:

CR = (m-n) / k → CR = (4-1) / 4 = 0,75

Explanation:
RS = Category Range
m = Maximum Score
n = Minimum Score
k = Number of Categories

Referring to the data above, the categorization of respondents' answers is described as follows:

Table 4. Score Range Guidelines

Mean Score	Category
1.00 – 1.75	Strongly Disagree
1.76 – 2.50	Disagree
2.51 – 3.25	Agree
3.26 – 4.00	Strongly Agree

1.00 – 1.75 : *Strongly Disagree* – Indicates that the variable is still very low or minimal.
1.76 – 2.50 : *Disagree* – Indicates that the variable is still low and may serve as an area for evaluation.

2.51 – 3.25 : *Agree* – Indicates that the variable is already at a high and acceptable level.
3.26 – 4.00 : *Strongly Agree* – Indicates that the variable is at a very high and excellent level.

These categories serve as a reference in determining the overall interpretation of respondent responses.

Table 5. Descriptive Analysis of the Product Review Variable

Statement	Average	Interpretation
I often watch product reviews of Somethinc on Tik Tok.	3.34	Strongly Agree
Reviews from influencers and content creators influence my perception of Somethinc products.	3.31	Strongly Agree
Honest and detailed reviews make me interested in purchasing Somethinc products.	3.52	Strongly Agree
Positive reviews from other users encourage me to consider making a purchase.	3.61	Strongly Agree
I trust the product reviews of Somethinc on Tik Tok.	3.25	Agree
I find Tik Tok reviews more convincing than regular advertisements.	3.37	Strongly Agree
Review videos help me understand the strengths and weaknesses of Somethinc products.	3.49	Strongly Agree
Reviews that show a clear before-and-after result make me more confident to try Somethinc products.	3.38	Strongly Agree
I rarely buy products without checking reviews first.	3.19	Agree
Tik Tok reviews are my main reference when choosing Somethinc products.	3.31	Strongly Agree
Total Average	**3.38**	**Strongly Agree**

Source: processed by author (2025)

Based on the results in Table 2, the overall average score for the product review variable is 3.38, indicating that respondents generally *strongly agree* with the statements under this variable. This suggests that the majority of respondents gave a positive assessment of the role of product reviews, especially those from Tik Tok in influencing their purchase decisions. The highest average score was found in the item *"Positive reviews from other users encourage me to consider making a purchase"*, with a value of 3.61, reflecting a very high level of respondent agreement. This indicates that other users' experiences have a significant influence in shaping perceptions and encouraging purchase behavior. Meanwhile, the statement with the lowest score was *"I rarely buy products without checking reviews first"*, with an average of 3.19. Although it had the lowest score, it still falls within the *agree* category, showing that there is room for further improvement in this area.

Table 6. Descriptive Analysis of the Product Knowledge Variable

Statement	Average	Interpretation
I am familiar with various products from the Somethinc brand.	3.42	Strongly Agree
I know the functions of each Somethinc product I use.	3.21	Agree
I am aware of the ingredients used in Somethinc products.	2.94	Agree
I know how to properly use Somethinc products.	3.32	Strongly Agree
I can match Somethinc products with my skin condition.	3.37	Strongly Agree
I read the product descriptions and ingredients of Somethinc before making a purchase.	3.34	Strongly Agree
I feel I have enough information about Somethinc products before buying them.	3.24	Agree
I often view educational accounts that discuss skincare, including Somethinc.	3.23	Agree
I feel more confident in purchasing Somethinc products because of my skincare knowledge.	3.16	Agree
I have prior experience or knowledge about similar products.	3.28	Strongly Agree
Total Average	**3.25**	**Agree**

Source: processed by author (2025)

Based on the average score of all statements related to product knowledge of Somethinc, the overall mean value is 3.25, which falls into the *Agree* category. This indicates that, in general, respondents have a fairly good level of knowledge about Somethinc products, particularly regarding product usage and selecting products that suit their skin needs. The statement with the highest average score is *"I am familiar with various products from the Somethinc brand"*, which received a score of 3.42, placing it in the *Strongly Agree* category. This finding suggests that most respondents are well-acquainted with the different product variants offered by Somethinc, reflecting the brand's effectiveness in building product awareness among consumers, especially Generation Z. Meanwhile, the lowest average score was found in the statement *"I am aware of the ingredients used in Somethinc products"*, with a score of 2.94, although it still falls within the *Agree* category. This result highlights an opportunity for Somethinc to further enhance the communication of information regarding the ingredients used in its products.

Table 7. Descriptive Analysis of the Purchase Decision Variable

Statement	Average	Interpretation
I purchased Somethinc products due to the influence of reviews on Tik Tok.	3.17	Agree
I consider reviews before buying Somethinc products.	3.49	Strongly Agree

I feel more confident in making a purchase after understanding the benefits of Somethinc products.	3.41	Strongly Agree
I compare reviews from multiple sources before making a purchase.	3.59	Strongly Agree
I immediately purchased Somethinc products after seeing a convincing review.	3.17	Agree
I bought the product because I knew it was suitable for my skin.	3.39	Strongly Agree
I purchased Somethinc out of necessity, not because of a trend.	3.40	Strongly Agree
I am satisfied with my purchase decision after seeing the results.	3.36	Strongly Agree
I will repurchase Somethinc products if the results meet my expectations.	3.45	Strongly Agree
Reviews and my product knowledge strongly influence my purchase decisions.	3.47	Strongly Agree
Total Average	**3.39**	**Strongly Agree**

Source: processed by author (2025)

Based on Table 3, the total average score for the purchase decision variable is 3.39, which falls into the *Strongly Agree* category. This indicates that, in general, respondents have a strong level of confidence in their purchasing decision-making process for Somethinc products, influenced by product reviews and their own knowledge. The statement with the highest average score is *"I compare reviews from multiple sources before making a purchase"*, with a score of 3.59, which also falls into the *Strongly Agree* category. This finding highlights that consumers are highly active in seeking comparisons and references before making decisions, particularly in the context of online purchases through platforms such as Tik Tok Shop. Meanwhile, the lowest average scores appear in two statements: *"I purchased Somethinc products due to the influence of reviews on Tik Tok"* and *"I immediately purchased Somethinc products after seeing a convincing review"*, each with a score of 3.17, which still falls under the *Agree* category. This suggests that although product reviews do have an influence, respondents tend not to make immediate purchase decisions solely based on them, indicating a more cautious and evaluative approach to online shopping.

4.4 Reliability Test Results

Table 8. Reliability Test Results

Variable	*Cronbach's Alpha* Value	Description
Product Review (X1)	0,807	*Reliable*
Product Knowledge (X2)	0,871	*Reliable*
Purchase Decision (Y)	0,854	*Reliable*

Source: SPSS Output 16.0 (2025)

Based on the table above, it can be seen that all three variables in this study have Cronbach's Alpha values greater than 0.6. Therefore, it can be concluded that the instruments used in this research are reliable.

4.5 Multiple Linear Regression

Table 9. Multiple Linear Regression Analysis

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients
		B	Std. Error	Beta
1	(Constant)	6.785	2.502	
	ReviewProduct	.396	.085	.379
	ProductKnowledge	.426	.073	.472

a. Dependent Variable: KeputusanPembelian

Source: SPSS Output 16.0 (2025)

$$\mathbf{Y = 6.785 + 0.396X_1 + 0.426X_2}$$

This equation can be interpreted as follows: the constant value of 6.785 indicates that if both *Product Review (X_1)* and *Product Knowledge (X_2)* are equal to zero (or held constant), the *Purchase Decision (Y)* would still increase by 6.785. The coefficient of 0.396 for *Product Review* means that if the *Product Review (X_1)* variable increases by one unit, the *Purchase Decision (Y)* will increase by 0.396, assuming that the other independent variable remains constant. Similarly, the coefficient of 0.426 for *Product Knowledge* indicates that if the *Product Knowledge (X_2)* variable increases by one unit, the *Purchase Decision (Y)* will increase by 0.426, assuming the other variable remains constant.

4.6 Result of t-Test

Table 10. Result of t-Test

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	6.785	2.502		2.711	.008
	ReviewProduct	.396	.085	.379	4.678	.000
	ProductKnowledge	.426	.073	.472	5.821	.000

a. Dependent Variable: KeputusanPembelian

Source: SPSS Output 16.0 (2025)

Based on the table above, the hypothesis testing results for each independent variable on the dependent variable are as follows: The *t-count* for the Product Review (X_1) variable is 4.678, which is greater than the *t-table* value of 1.660, and the significance value is 0.000 < 0.05. Therefore, H_0 is rejected and H_a is accepted, indicating that the Product Review (X_1) variable has a positive and significant effect on the Purchase Decision (Y) variable. Similarly, the *t-count* for the Product Knowledge (X_2) variable is 5.821, which is also greater than the *t-table* value of 1.660, with a significance value of 0.000 < 0.05. Hence, H_0 is rejected and H_a is accepted, meaning that the Product Knowledge (X_2) variable also has a positive and significant effect on the Purchase Decision (Y) variable.

4.7 Coefficient of Determination Analysis

Table 11. Coefficient of Determination Analysis

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.754[a]	.568	.559	2.685

a. Predictors: (Constant), ProductKnowledge, ReviewProduct

b. Dependent Variable: KeputusanPembelian

Source: SPSS Output 16.0 (2025)

Based on the output results, the R-squared (R^2) value is 0.568, which can be interpreted as $R^2 = 0.568 \times 100\% = 56.8\%$. This result indicates that Product Review and Product Knowledge contribute 56.8% to the purchase decision of Somethinc products on Tik Tok Shop. The remaining 43.2% is influenced by other variables that are not included in this study.

4.4 F-Test Results

Table 12. F-Test Results

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	909.437	2	454.719	63.064	.000[a]
	Residual	692.199	96	7.210		
	Total	1601.636	98			

a. Predictors: (Constant), ProductKnowledge, ReviewProduct

b. Dependent Variable: KeputusanPembelian

Source: SPSS Output 16.0 (2025)

The SPSS output shows that the F-count value is 63.064, which is greater than the F-table value of 3.09, with a significance level (Sig.) of 0.000, which is less than 0.05. This indicates that, simultaneously, the variables Product Review (X_1) and Product Knowledge (X_2) have a significant effect on the Purchase Decision (Y).

5. Conclusion

Based on the analysis and discussion of this study, it can be concluded that product reviews and product knowledge have a positive and significant influence on the purchase decisions of Generation Z consumers regarding Somethinc products on Tik Tok Shop. Not only do these variables have a simultaneous effect, but each independent variable also has a partial positive and significant impact on purchase decisions among Generation Z consumers aged 13 to 28 years. This finding indicates that the better the product reviews and product knowledge, the higher the likelihood of purchase decisions being made by consumers. The partial test results show that product reviews play a crucial role in shaping consumer perceptions and stimulating purchase interest, particularly through honest, detailed reviews from other users or influencers on social media. In addition, product knowledge also significantly affects purchase decisions. Consumers who are well-informed about the benefits, ingredients, and usage of a product tend to feel more confident in selecting and purchasing the product. The descriptive analysis also reveals that positive reviews increase consumer consideration in purchasing, and that Somethinc has successfully embedded product information in the minds of its consumers. Consumers actively seek out comparative reviews on Tik Tok Shop to support their purchase decisions.

6. Recommendation

Based on the research findings, several recommendations can be proposed. For Somethinc, it is recommended to continue strengthening its marketing strategy through user and influencer

reviews on Tik Tok, as they have been proven to significantly influence purchase decisions. Reviews that showcase real user experiences, convincing results, and honest testimonials can enhance consumer trust. Additionally, efforts should be made to improve consumer education regarding product ingredients and benefits. This can be achieved through informative content on social media or clearer product labeling, considering that knowledge about product composition received the lowest average score among the product knowledge indicators. Furthermore, the creativity of review content should be enhanced to make it more engaging and appealing. Attractive and well-crafted video reviews can capture consumer interest more effectively, which in turn influences their purchase decisions regarding Somethinc products on Tik Tok Shop.

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UNCOVERING THE FINANCIAL SECRETS OF MSMES: THE ROLE OF KNOWLEDGE, ATTITUDE, AND PERSONALITY IN FINANCIAL MANAGEMENT OF CULINARY ENTREPRENEURS IN MERJOSARI

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Abstract

This study aims to analyze the influence of financial knowledge, financial attitudes, and personality on the financial management behavior of culinary MSME (Micro, Small, and Medium Enterprises) actors in Merjosari Subdistrict, Malang City. Using a quantitative method with an explanatory research approach, data were collected from 93 respondents determined using the Slovin formula and selected through random sampling. The data were analyzed using multiple linear regression. The results show that all three variables simultaneously have a significant influence on financial management behavior. Partially, financial knowledge has the most dominant influence, followed by financial attitudes and personality, all of which have a positive and significant effect. These findings emphasize the importance of enhancing financial literacy and attitudes, as well as fostering personality traits that support better financial management among MSMEs.

Keywords: *Financial Knowledge, Financial Attitude, Personality, Financial Management, Culinary MSMEs.*

1. Introduction

MSMEs are a key pillar of the Indonesian economy, as reflected in their significant contribution to employment and national economic growth (Anastasya, 2023). Among the various MSME sectors, the culinary sector shows great and sustainable potential in supporting economic stability (Sinari et al., 2022). Advances in innovation and the use of digital technology have also opened up opportunities for culinary businesses to enhance their competitiveness, both in domestic and international markets, as highlighted by Sandiaga Uno (Yunia, 2021).

In Lowokwaru District, Malang City, the culinary MSME sector has experienced significant growth, especially in Merjosari Village, which has 121 culinary businesses out of a total of 175 registered businesses (Merjosari, 2023). However, most business operators still face fundamental challenges in financial management. Observations indicate that many SMEs have not yet separated personal and business finances, and lack effective strategies or preparations to address financial risks.

The sustainability and success of MSMEs greatly depend on their ability to manage finances effectively, including optimal asset utilization and sound financial decision-making (Ariadin & Safitri, 2021). However, practices in the field still show that many SME operators are unable to separate personal and business finances, which ultimately impacts operational stability and business sustainability (KEMENKOPUKM, 2022).

Financial knowledge, financial attitude, and personality together shape financial management behavior (Tampubolon & Rahmadani, 2022); (Handayani et al., 2022); (Ristati et al., 2022); (Nisa et al., 2020). Financial knowledge serves as the foundation for rational and

appropriate financial decision-making, while financial attitudes reflect an individual's orientation and behavior in handling and managing their financial resources. Additionally, personality characteristics also influence financial management patterns, as each personality type tends to exhibit different financial behavior tendencies.

This study aims to examine the influence of financial knowledge, attitudes toward finance, and personality characteristics on the financial management practices of MSME actors in the culinary sector, particularly in Merjosari Village, Lowokwaru District, Malang City.

2. Literature Review

Financial management encompasses a series of activities involving budget planning, cash management, monitoring cash flow, and cost control (Suriani, 2022). These activities focus on managing financial resources for consumption and investment needs, taking into account risk factors and individual characteristics (Triani & Wahdiniwaty, 2019); (Cahya et al., 2021). Effective control is a crucial component in ensuring that funds are allocated according to plan. Simply put, financial management reflects how individuals manage their finances, including psychological aspects and personal habits, to ensure that financial goals are achieved (Cahya et al., 2021). Financial management measurement generally includes the dimensions of fund utilization, cash management, savings, and liability management (Wahyudi & Tristiarto, 2022).

Financial management encompasses a series of activities involving budget planning, cash management, cash flow monitoring, and cost control (Suriani, 2022). These activities focus on managing financial resources for consumption and investment needs, taking into account risk factors and individual characteristics (Triani & Wahdiniwaty, 2019); (Cahya et al., 2021). Effective control is a crucial component in ensuring that funds are allocated according to plan. Simply put, financial management reflects how individuals manage their finances, including psychological aspects and personal habits, to ensure the achievement of financial goals (Cahya et al., 2021). Financial management measurement generally covers the dimensions of fund use, cash management, savings, and liability management (Wahyudi & Tristiarto, 2022).

Financial literacy is a combination of knowledge, skills, and confidence that shapes individuals' attitudes and actions in managing their finances effectively to achieve prosperity (OJK, 2024). Triani and Wahdiniwaty (2019) state that this understanding reflects an individual's capacity to plan, manage, and anticipate risks to financial assets in order to make optimal decisions. Suriani (2022) adds that mastery of financial aspects also includes the skill of using financial tools. Meanwhile, Chen & Volpe (1998) measure financial literacy through four main indicators, namely: general understanding of finance, management of savings and liabilities, insurance protection, and knowledge of investment.

Adequate financial knowledge enables individuals to make more informed economic decisions, including managing income, expenses, savings, and investments. A higher level of knowledge improves the ability to manage finances effectively, which directly contributes to good financial management behavior (Handayani et al., 2022). This knowledge encompasses daily experiences as well as skills in using financial instruments. Research by Tampubolon and Rahmadani (2022) and Handayani et al. (2022) shows that financial literacy has a positive and significant impact on financial management behavior. Thus, mastery of financial aspects is a crucial factor in improving the quality of financial management, especially for SME actors.

Financial attitude is defined as an individual's behavior in financial matters, which includes fund management, personal budgeting, and investment decision-making (Suriani, 2022). This attitude reflects perceptions, mindsets, beliefs, and views that reveal an individual's character and are shaped by psychological factors (Triani & Wahdiniwaty, 2019). Furthermore, Austin & MN (2021) state that financial attitudes reflect an individual's perspective and evaluation of their financial condition, which then influences actions to maintain financial stability through wise decisions. Furnham (1984) measured financial attitudes through six dimensions: obsessive tendencies toward money, views of money as power, efforts to obtain money, feelings of never having enough, saving habits, and views of money as a source of security.

Positive financial attitudes, such as living simply, being responsible with finances, and being aware of the importance of planning, play an important role in shaping good financial management behavior. These attitudes influence how individuals respond to financial conditions and make decisions in managing their finances (Tampubolon & Rahmadani, 2022). Djou (2019) emphasizes that the better an individual's attitude toward money, the better the ability of SME actors to manage their finances. This finding is supported by Handayani et al. (2022) and Putri & Siregar (2022), who show that financial attitudes have a positive and significant influence on financial management behavior. Thus, financial attitudes are a crucial element in determining the quality of SME financial management.

Personality is a complex combination of physical and psychological aspects that continuously interact with a dynamic environment, forming distinctive behavioral patterns that are active, evolving, and consistent in achieving individual goals (Mujito & Ganif, 2019). Sunaryo (2004) emphasizes that personality reflects the overall pattern of an individual's actions as a response and adaptation to internal and external stimuli. Satrio et al. (2020) add that personality is a set of distinctive traits that create harmony in a person's feelings, thoughts, and actions. Personality measurement based on McCrae's (2002) Big Five Personality theory includes five main dimensions: openness to new experiences, conscientiousness and caution, social activity (extraversion), ability to work together (agreeableness), and emotional stability (neuroticism).

Personality traits, such as neatness and discipline, have a significant influence on financial habits, including the ability to save regularly and prepare a financial budget. Orderly and disciplined traits are generally correlated with more effective financial management (Nisa et al., 2020). If the character of SME actors is poor, this can have a negative impact on long-term productivity. This finding is supported by research by Tampubolon & Rahmadani (2022) and Putri & Siregar (2022), which shows that character has a positive relationship with financial management behavior. Thus, the better a person's character, the more optimal their financial management.

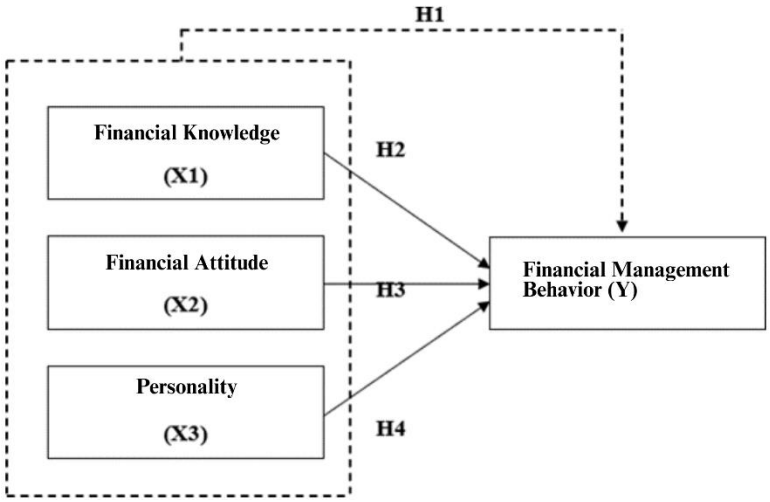

Image 1. Research Model

3. Methodology

The research approach used in this study is a quantitative approach with explanatory research. According to Sugiyono (2019), quantitative research is systematic, structured, and uses numerical data to explain the relationship between variables. Explanatory research aims to explain the causal relationship between independent and dependent variables through testing previously formulated hypotheses.

The population in this study is MSME actors in the culinary industry in Merjosari Village, Lowokwaru District, Malang City, East Java. Based on data from Merjosari Village, there are 121 MSME units.

In this study, the sampling technique used was random sampling. Random sampling is a technique for determining samples at random. The Slovin formula was used to calculate the sample size with a tolerance level of 5%. From this calculation, the sample to be used consisted of 93 MSME units in Merjosari Village.

4. Result And Discussion

Table 1. Validity And Realibility Test Result

Variable	Statement Item	r Hitung	r Tabel	Description	*Cronbach's Alpha*	Description
Financial Knowledge (X1)	1	0,884	0,2039	Valid	0,86	Reliabel
	2	0,871	0,2039	Valid		
	3	0,766	0,2039	Valid		
	4	0,884	0,2039	Valid		
	5	0,871	0,2039	Valid		
	6	0,766	0,2039	Valid		
	7	0,739	0,2039	Valid		
	8	0,871	0,2039	Valid		
	1	0,363	0,2039	Valid	0,79	Reliabel

Variable	Statement Item	r Hitung	r Tabel	Description	*Cronbach's Alpha*	Description
Financial Attitude (X2)	2	0,465	0,2039	Valid		
	3	0,363	0,2039	Valid		
	4	0,363	0,2039	Valid		
	5	0,450	0,2039	Valid		
	6	0,577	0,2039	Valid		
	7	0.363	0,2039	Valid		
	8	0.527	0,2039	Valid		
	9	0.516	0,2039	Valid		
	10	0.546	0,2039	Valid		
	11	0.379	0,2039	Valid		
	12	0.527	0,2039	Valid		
Personality (X3)	1	0.817	0,2039	Valid	0,93	Reliabel
	2	0.810	0,2039	Valid		
	3	0.793	0,2039	Valid		
	4	0.717	0,2039	Valid		
	5	0,793	0,2039	Valid		
	6	0,817	0,2039	Valid		
	7	0.817	0,2039	Valid		
	8	0.810	0,2039	Valid		
	9	0.793	0,2039	Valid		
	10	0.740	0,2039	Valid		
Financial Management Behavior (Y)	1	0.731	0,2039	Valid	0,85	Reliabel
	2	0.814	0,2039	Valid		
	3	0.676	0,2039	Valid		
	4	0.731	0,2039	Valid		
	5	0.814	0,2039	Valid		
	6	0.676	0,2039	Valid		
	7	0.536	0,2039	Valid		
	8	0.689	0,2039	Valid		

Source: Primary Data Processed, 2025

Based on the table, it can be concluded that each statement on all variables, both independent and dependent, shows an adequate level of validity. This is reflected in the calculated r value > table r or 0.2039. Then, based on the reliability test results, the four research variables have a Cronbach's alpha value > 0.60, so that the entire instrument is declared reliable.

Table 2. Normality Test Result

One-Sample Kolmogorov-Smirnov Test		Unstandardized Residual
N		93
Normal Parameters[a,b]	Mean	.0000000
	Std. Deviation	2.04388446
Most Extreme Differences	Absolute	.054
	Positive	.054
	Negative	-.050
Test Statistic		.054
Asymp. Sig. (2-tailed)		.200[c,d]

a. Test distribution is Normal.
b. Calculated from data.
c. Lilliefors Significance Correction.
d. This is a lower bound of the true significance.

Source: Primary Data Processed, 2025

The asymptotic significance value (2-tailed) of all variables is 0.200, which is greater than the probability of 0.05. Thus, it can be stated that the data used in this study can be normally distributed because the asymptotic significance value (2-tailed) is 0.200, so it can be stated that the assumption of normality can be fulfilled.

Table 3. Heteroscedasticity Test Result

No	Variable	Sig.	A	Description
1	Financial Knowledge (X1)	0.205	0,05	Heteroscedasticity Free
2	Financial Attitude (X2)	0.716	0,05	Heteroscedasticity Free
3	Personality (X3)	0.223	0,05	Heteroscedasticity Free

Source: Primary Data Processed, 2025

It has a significance value above 0.05, so it can be concluded that the data is free from heteroscedasticity. This indicates that the regression model used meets the assumption of homoscedasticity, so the regression analysis results can be interpreted more accurately.

Table 4. Multicollinearity Test Result

Independent Variable	*Tolerance*	VIF	Description

Financial Knowledge (X1)	0.708	1.412	Multicollinearity Free
Financial Attitude (X2)	0.726	1.377	Multicollinearity Free
Personality (X3)	0.637	1.571	Multicollinearity Free

Source: Primary Data Processed, 2025

The multicollinearity test results show that all independent variables have tolerance values > 0.1 and VIF < 10. Thus, there is no indication of multicollinearity in the regression model, so the model used meets the assumptions of feasibility for further analysis.

Table 5. Multiple Linear Analysis

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	5.561	2.670		2.083	.040
	FINANCIAL KNOWLEDGE	.189	.054	.204	3.482	.001
	FINANCIAL ATTITUDE	.310	.070	.256	4.429	.000
	PERSONALITY	.440	.045	.599	9.696	.000
a. Dependent Variable: FINANCIAL MANAGEMENT BEHAVIOR						

Source: Primary Data Processed, 2025

Based on the results in Table 4.14, the following multiple linear regression model equation data was obtained:

Y= 5.561 + 0.189X1 + 0.310X2 + 0.440X3 + e

The multiple linear regression equation can be explained as follows:

1. a = The constant value of 5.561 indicates that if the variables of financial knowledge (X1), financial attitude (X2), and personality (X3) are considered constant (no change), then the value of financial management behavior (Y) will remain positive at 5.561.
2. b1 = The regression coefficient value for the financial knowledge variable (X1) of 0.189 indicates a positive relationship. This shows that if financial knowledge (X1) increases, the financial management behavior variable (Y) will also increase. The magnitude of the influence of financial knowledge (X1) on financial management behavior (Y) is indicated by the t value = 3.482 and sig. = 0.001, which is significant at the 0.05 level.
3. b2 = The regression coefficient value for the financial attitude variable (X2) is 0.310, indicating a positive relationship. This means that as financial attitude (X2) increases, the financial management behavior variable (Y) also increases. The influence of financial attitude (X2) on financial management behavior (Y) is indicated by t = 4.429 and sig. = 0.000, which is also significant at the 0.05 level.
4. b3 = The regression coefficient value for the personality variable (X3) of 0.440 indicates a positive relationship with financial management behavior (Y) among all variables. An increase in personality (X3) will significantly contribute to an increase in financial management behavior (Y), with a t-value of 9.696 and a significance level of 0.000, which is significant at the 0.05 level.

Table 6. F Test Result

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1395.501	3	465.167	107.721	.000[b]
	Residual	384.327	89	4.318		
	Total	1779.828	92			

Source: Primary Data Processed, 2025

Based on the F test results in Table 4.15, it can be seen that the significance value is 0.000, which means that the Sig. value is less than 0.05. Thus, conclusions can be drawn based on the hypothesis (H1) of financial knowledge, financial attitude, and personality on the financial management behavior of MSME actors in the culinary industry in Merjosari Village.

Table 7. T Test Result

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	5.561	2.670		2.083	.040
	FINANCIAL KNOWLEGDE	.189	.054	.204	3.482	.001
	FINANCIAL ATTITUDE	.310	.070	.256	4.429	.000
	PERSONALITY	.440	.045	.599	9.696	.000
a. Dependent Variable: FINANCIAL MANAGEMENT BEHAVIOR						

Source: Primary Data Processed, 2025

From the results of this t-test, all independent variables, namely financial knowledge (X1), financial attitude (X2), and personality (X3), were found to have a positive and significant influence on financial management behavior.

Table 8. Coefficient of Deternibation Test Result (Adjusted R^2)

Model	R	*R Square*	*Adjusted R Square*	*Std. Error of the Estimate*
1	.885[a]	.784	.777	2.078

Source: Primary Data Processed, 2025

These results indicate that the percentage of interpretation of the variables of financial knowledge, financial attitude, and personality towards financial management is 77.7%, which can be categorized as strong. In other words, 77.7% of the variation in financial management behavior can be explained by these three variables, while the remaining 22.3% is explained by other variables not included in this study.

The results of the study indicate that financial knowledge, financial attitudes, and personality simultaneously have a positive and significant effect on the financial management behavior of culinary MSME actors in Merjosari Village. The findings from the F-test support the acceptance of the hypothesis, which states that the three independent variables contribute to the formation of effective financial management behavior.

Partially, financial knowledge plays an important role in shaping the ability of MSME actors to plan and manage their finances more strategically, including awareness of the importance of investment as part of business development. This shows that MSME actors have

begun to adopt more structured and planned financial concepts, as supported by the research of Tampubolon and Rahmadani (2022).

Financial attitudes also have a significant influence on financial management behavior. SME actors exhibit a cautious attitude toward expenditures and a high awareness of maintaining business financial stability. However, there is room for improvement in the consistency of long-term financial planning. This finding aligns with the results of Handayani et al. (2022), which emphasize the importance of financial attitudes in supporting healthy financial management.

Meanwhile, the personality of SME actors, particularly in terms of openness to new ideas and experiences, also shows a significant influence. Individuals with open and adaptive personalities tend to be more capable of accepting input and adjusting financial strategies according to business needs. This aligns with the findings of Tampubolon and Rahmadani (2022), which highlight the important role of personality in shaping financial management behavior.

Overall, the three variables of financial knowledge, financial attitude, and personality work together to shape wise and sustainable financial management behavior. These results are reinforced by the research of Handayani et al. (2022) and Desi, (2022), which concluded that all three simultaneously have a positive effect on the effectiveness of SME financial management.

The t-test results indicate that financial knowledge has a positive and significant effect on the financial management behavior of culinary MSME actors in Merjosari Village, thus accepting the second hypothesis (H2). The higher the understanding of MSME actors regarding financial concepts, including long-term planning such as investment, the better the financial management of their businesses. This finding aligns with the theory proposed by Triani & Wahdiniwaty (2019) and is supported by research conducted by Handayani et al. (2022) and Tampubolon & Rahmadani (2022), which demonstrate that financial literacy has a tangible contribution in enhancing financial management behavior.

The t-test results indicate that financial attitudes have a positive and significant effect on the financial management behavior of culinary MSME actors in Merjosari Village, thus accepting the second hypothesis (H2). MSME actors who have positive financial attitudes, such as prudence in spending and awareness of the importance of planning, tend to be more capable of managing business finances in a planned and efficient manner. This finding aligns with Ajzen's (2002) behavioral belief theory, which states that an individual's belief in the benefits of a behavior will form a positive attitude and influence their actions. This result is also supported by the research of Handayani et al. (2022) and Putri & Siregar (2022), which shows that financial attitudes significantly contribute to the financial management behavior of SME operators.

The t-test results indicate that personality variables have a positive and significant effect on the financial management behavior of culinary MSME actors in Merjosari Village, thus accepting the third hypothesis (H3). Adaptive personalities, openness to input, and disciplined and cautious traits have been proven to encourage more effective financial management. This aligns with Ajzen's (2002) theory of perceived behavioral control, which emphasizes the role of self-confidence and environmental influences in shaping behavior. These findings are supported by research by Handayani et al. (2022) and Tampubolon & Rahmadani (2022), who state that personality significantly contributes to the effectiveness of SME financial management.

5. Conclusion

The results of the study indicate that financial knowledge, financial attitudes, and personality simultaneously have a positive and significant effect on the financial management

behavior of MSME actors in the culinary industry in Merjosari Village. Partially, these three independent variables also show a significant effect. High financial knowledge encourages MSME actors to be more aware in managing their finances, including the importance of investment and fund reserves. Positive financial attitudes, such as being frugal and responsible with expenses, also strengthen more planned financial management. Open, disciplined, and adaptive personalities are also proven to support wiser and more sustainable financial behavior. These findings reinforce previous studies and emphasize the importance of psychological and cognitive aspects in the financial management of micro-businesses.

This study has several limitations, including the absence of classification based on MSME levels, which may affect differences in financial knowledge levels. Additionally, the study only used three independent variables, so it does not account for other factors that may influence the results. Finally, the use of a questionnaire as the sole data collection instrument may introduce response bias from respondents that does not reflect actual conditions.

For MSME operators in the culinary industry in Merjosari Village, it is recommended to enhance financial knowledge through more in-depth training, particularly in investment planning and business fund reserves. Positive financial attitudes need to be further strengthened through education on risk management and long-term planning. Personal characteristics such as openness to feedback, discipline, and resilience in facing business challenges need to be continuously developed through business networks, seminars, and training.

For future researchers, it is recommended to add other variables such as financial literacy, financial experience, and self-control to enrich the findings. Additionally, the use of data triangulation methods such as interviews or observations can enhance the accuracy of results and the validity of research data.

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THE EFFECT OF SOCIAL MEDIA MARKETING, PRODUCT QUALITY AND ONLINE CUSTOMER REVIEWS ON PURCHASING DECISIONS (CASE STUDY AT ONLINE SHOP SYAMILLAHIJAB)

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Abstract

The development of e-commerce in Indonesia has driven changes in consumer behavior, including the purchase of hijab products through social media. Syamillahijab, as one of the local brands, utilizes digital marketing strategies, product quality, and customer reviews as its main attractions. This study aims to analyze the influence of social media marketing, product quality, and online customer reviews on consumer purchasing decisions. The research approach used is quantitative with an explanatory research method. A total of 85 respondents were selected using purposive sampling, and data were collected through online questionnaires. Data analysis was carried out using multiple linear regression with SPSS version 25. The results show that simultaneously, all three independent variables have a significant influence on purchasing decisions. However, partially, only online customer reviews have a significant influence on purchasing decisions, while social media marketing and product quality do not show a significant effect. These findings indicate that customer reviews play a crucial role in shaping consumer perception and decision-making in the context of online shopping. This research provides practical implications for business actors to focus their strategies more on managing customer reviews in a positive and consistent manner.
Keywords: Purchasing Decision, Social Media Marketing, Product Quality, Online Customer Review, E-Commerce.

1. Introduction

In recent years, rapid developments in the world of e-commerce in Indonesia have changed the way people shop. Consumer behaviour has increasingly shifted from offline to online purchases, driving fierce competition among businesses to dominate the digital market. Various e-commerce platforms such as Shopee, Tokopedia, Lazada, and Blibli are competing aggressively, with Shopee emerging as one of the most dominant players. According to data from Sirclo, the number of Shopee visitors increased from 55.9 million in 2017 to 96.5 million in 2021, a 72% increase over three years, demonstrating how the platform has successfully attracted a large number of consumers through its user-friendly interface and effective digital marketing strategies (Pertiwi, 2020).

Amidst the growth of e-commerce, the Muslim fashion industry, particularly hijabs, has also experienced an increase in popularity. Hijabs have evolved from being merely a religious obligation to becoming an important part of the lifestyle and identity of Muslim women, especially among Generation Z. The need for fashionable, functional hijabs that reflect the latest trends has created a huge opportunity for businesses to market their products through social media In this context, social media marketing has become one of the most vital strategies implemented by businesses, including local brands like Syamillahijab.

Syamillahijab is a local hijab brand that actively uses social media in its marketing strategy. Their products are mostly marketed digitally and have a loyal and participatory customer base. Social media is not only used for promotion, but also to build a community and create more personal relationships with consumers. Social media marketing enables two-way interaction between the brand and consumers, strengthening engagement, and increasing trust and loyalty, which ultimately can influence purchasing decisions. Previous research supports the importance of social media marketing. Tsaqifah (2023) found that social media marketing, electronic word of mouth, and brand image significantly influence purchase intention towards Lafiye hijab products.

However, in addition to social media marketing, there are other factors that play a role in shaping consumer purchasing decisions, namely product quality. Product quality is a key aspect that determines whether consumers will repurchase or even recommend the product to others. Quality encompasses various dimensions such as durability, reliability, features, and suitability to customer expectations. Research by Yuniwinarti et al. (2023) also supports this, where product quality, price, and promotions significantly influence purchasing decisions for Rabbani Syar'i hijabs.

In addition to product quality, customer reviews or online customer reviews are also an important element that cannot be ignored in the consumer decision-making process, especially in the context of online shopping. Reviews from other customers are considered more objective and trustworthy because they reflect real-life experiences with the product or service. Modern consumers tend to seek social validation before purchasing a product, and online reviews provide a source of information that can help them feel more confident in making their decision. These three factors—social media marketing, product quality, and online customer reviews—interact with each other to influence consumer purchasing decisions. In reality, consumers do not consider just one factor, but rather a combination of various information they obtain, whether through social media, previous experiences, or other customer testimonials. Therefore, it is important for businesses to understand how these three factors work together in the consumer purchasing process in order to design effective marketing strategies.

Syamilahhijab, as one of the growing local brands, is an interesting case to study because, in addition to actively conducting social media marketing, this brand also demonstrates competitive product quality and has a customer base that frequently provides open reviews on various digital platforms. Therefore, the selection of Syamillahijab as the research object is based on these characteristics, which enable researchers to obtain relevant, current, and applicable data in answering the research objectives.

Based on this background, this study aims to examine and evaluate the extent to which social media marketing, product quality, and online customer reviews influence consumer purchasing decisions at Syamilahhijab. This study is expected to contribute both theoretically and practically. Theoretically, the results of this study are expected to enrich the literature on consumer decision-making patterns in the online marketing environment, particularly in the Muslim fashion sector. Practically, the results of this study can serve as a reference and evaluation material for business actors, particularly hijab brand owners, in developing effective marketing approaches that are focused on consumer orientation and desires.

2. Literature Review

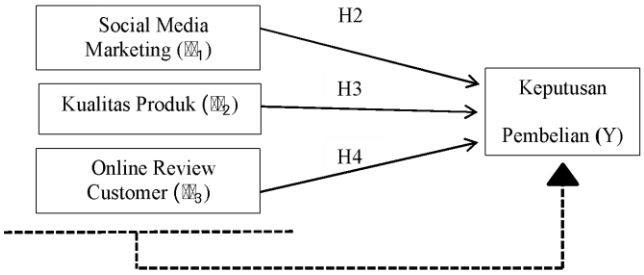
Understanding consumer behaviour in making purchasing decisions is the main theoretical basis for this study. The theory used is the Consumer Decision Model developed by Engel, Kollat, and Blackwell, known as the Engel-Blackwell-Miniard Model. This model

describes that the consumer decision-making process takes place in stages, starting from the identification of needs, information search, evaluation of various options, decision to purchase, product use, to the evaluation stage after the purchase is made. In the initial stage, consumers become aware of the discrepancy between actual conditions and desired conditions, followed by information search and evaluation of available options. This process culminates in the decision to purchase a specific product and concludes with an evaluation of satisfaction with the purchase made (Hidayat et al., 2016 in Junaid Kamaruddin & Pebianti, 2023).

In the context of digital marketing, one important factor influencing purchasing decisions is social media marketing strategy. Kotler and Keller (2012:568) define social media as a platform that allows consumers to exchange information in various formats, such as text, images, sound, and video. This medium has become the primary tool for two-way communication between producers and consumers. Furthermore, Carr and Hayes (2015) refer to social media as an online-based platform that enables individuals to communicate and present themselves to a wider audience, either directly or at a later time. Social media marketing itself is understood as the process of promoting products or services through social media by leveraging the power of online communities. Weinberg (2009:3-4) explains that promotion through social channels has higher potential than traditional advertising because it involves a larger and more interactive community.

In addition to promotional factors, product quality is also an important variable in determining consumer purchasing decisions. According to Tjiptono (2015:153), product quality is the totality of product characteristics and attributes that influence its ability to meet consumer needs, both explicit and implicit. Product quality encompasses aspects such as reliability, durability, comfort, and utility, which ultimately determine how well the product can satisfy consumer expectations. If consumers are satisfied with product quality, the likelihood of repeat purchases increases, as does the tendency to recommend the product to others. The next factor that influences purchasing decisions is online customer reviews. In the digital age, customer reviews play a central role in shaping potential consumers' perceptions of a product or service. According to Ichsan (2018), online customer reviews are consumers' opinions about a product conveyed through digital media, and are usually honest because they are based on the personal experiences of previous users. These reviews can provide additional information for potential buyers about the quality, performance, and reliability of a product. High ratings and informative reviews increase trust, while low ratings can reduce purchasing interest. Abdillah (2024) echoes this sentiment, emphasising that interactive features in e-commerce, including customer reviews, provide sellers with opportunities to expand their market and build consumer trust more quickly and efficiently.

These three factors, namely social media marketing, product quality, and online customer reviews, play a complementary role in influencing the purchasing decision-making process, from the information evaluation stage and consideration of alternatives to the moment when consumers actually decide to purchase a particular product. Understanding the interaction between these three factors is important for businesses, especially in designing integrated, consumer-based marketing strategies.



Pict 1. Conceptual Framework

Information :

= Explain Partially

= Explain Simultaneously

X_1 = Social Media Marketing

X_2 = Product Quality

X_3 = Customer Online Review

Y = Purchase Decisions

3. Methodology

This study uses a quantitative approach with explanatory research. The purpose of explanatory research is to obtain an explanation of the causal relationship between variables through testing previously formulated hypotheses. This approach is considered appropriate because the researcher wants to know the extent to which social media marketing, product quality, and online customer reviews influence consumer purchasing decisions at Syamillahijab stores. The quantitative method was chosen because it is based on the philosophy of positivism, which focuses on objective measurement using standardised research instruments. The data collected consists of numerical values and is analysed using quantitative statistical techniques with SPSS software version 22.0 for Windows, as explained by Sugiyono (2019:16) within the framework of quantitative research methodology.The research location was at Syamillahijab store, located at Jl. Simpang Sidodadi No. 50 RT. 07 RW. 01, Panggungrejo Village, Kepanjen Subdistrict, Malang Regency. The research was conducted from November to March 2025.

The population in this study includes all members of the community or consumers who have made purchases at Syamillahijab and are active users of social media. Considering efficiency and resource limitations, the researcher employed a non-probability sampling technique with a purposive sampling approach, meaning that the sample was selected based on specific criteria. The criteria for respondents in this study include: (1) consumers who have shopped at Syamillahijab, and (2) consumers who actively use social media. This technique is considered appropriate because it can capture respondents who are relevant and in line with the research objectives.

The sample size in this study was determined using Malhotra's formula, which suggests calculating the sample size based on the number of indicators multiplied by five. In this study, there were four variables described in 17 indicator items, so the minimum number of respondents was 17 × 5 = 85 people. Respondents were obtained through the distribution of online questionnaires using Google Forms, which were shared through various social media platforms such as WhatsApp, Instagram, Facebook, and email.

4. Result and Discussions

This study uses primary data as its main source, namely data collected directly from respondents through the use of questionnaires as research instruments. The questionnaires were compiled based on indicators from each research variable and used a five-point Likert scale, ranging from 'Strongly Disagree' (1) to 'Strongly Agree' (5). The selection of the Likert scale aims to facilitate respondents in assessing the statements compiled, as well as to simplify the quantification process in statistical analysis.

Table 1. Likert Scale Scores

Description	Abjad	Skor
Strongly Agree	SS	5
Agree	S	4
Neutral	N	3
Disagree	TS	2
Strongly Disagree	STS	1

The characteristics of the respondents in this study reflect the active consumer population of the Syamillahijab online store, who are within the productive age range and tend to use social media in their daily activities, including shopping. Of the 85 respondents successfully collected through the online distribution of questionnaires, the majority were from the 20 to 22 age group, numbering 35 people or 41.18%. This age group is closely associated with fashion trends and high engagement in digital activities. Additionally, respondents aged 17–19 and over 23 each numbered 25 individuals, or 29.41%. This data indicates that Syamillahijab users are fairly evenly distributed, though still dominated by younger demographics. In terms of brand awareness, it was found that 47.1% of respondents learned about Syamillahijab through social media, 45.9% through friend recommendations, and the remainder through advertisements. This finding strongly indicates that social media plays a significant role in creating consumer awareness and engagement with local brands, while word-of-mouth recommendations also remain highly influential in shaping perceptions and purchasing decisions.

Validity testing aims to evaluate whether each item in the questionnaire truly represents the construct to be measured. Based on the results of data processing using SPSS software, it was found that all statements designed as part of the study instrument had correlation values (calculated r) greater than the table r value at a significance level of 5% (table r ≈ 0.213). Therefore, all items are deemed valid. This high validity serves as evidence that the instrument used is capable of accurately capturing respondents' perceptions and attitudes toward each variable, namely Social Media Marketing, Product Quality, Online Customer Reviews, and Purchase Decisions. This strengthens the reliability of the data used in further analysis and provides a strong methodological foundation for the research conclusions.

Table 2. Validity Test

Variable	Item	r hitung	r tabel 5%	Sig.	Criteria
Buying Decisions (Y)	Y1	0,907	0,1775	0.000	valid
	Y2	0,925	0,1775	0.000	valid
	Y3	0,929	0,1775	0.000	valid
	Y4	0,900	0,1775	0.000	valid
Social Media Marketing	X_1.1	0,863	0,1775	0.000	valid
	X_1.2	0,827	0,1775	0.000	valid
	X_1.3	0,786	0,1775	0.000	valid
	X_1.4	0,810	0,1775	0.000	valid
Quality Product	X_2.1	0,790	0,1775	0.000	valid
	X_2.2	0,846	0,1775	0.000	valid
	X_2.3	0,834	0,1775	0.000	valid
	X_2.4	0,810	0,1775	0.000	valid
	X_2.5	0,854	0,1775	0.000	valid
Online Review Customer	X_3.1	0,897	0,1775	0.000	valid
	X_3.2	0,918	0,1775	0.000	valid
	X_3.3	0,914	0,1775	0.000	valid
	X_3.4	0,902	0,1775	0.000	valid

To test the internal consistency of the items used in the questionnaire, reliability testing was conducted using Cronbach's Alpha technique. The results showed that all four variables had alpha values above 0.8, namely Social Media Marketing at 0.829, Product Quality at 0.875, Online Customer Reviews at 0.856, and Purchase Decisions at 0.832. Thus, it can be concluded that all research variables have a very good level of reliability.

Table 3.Reliability Test

Variable	*Cronbach's Alpha*	Criteria	Description
Buying Decisions (Y)	0,933	Cronbach's Alpha > 0,6	Reliabel
Social Media Marketing (X_1)	0,839	Cronbach's Alpha > 0,6	Reliabel
Quality Product (X_2)	0,884	Cronbach's Alpha > 0,6	Reliabel
Online Customer Review (X_3)	0,928	Cronbach's Alpha > 0,6	Reliabel

Normality testing was conducted to ensure that the residuals from the regression model followed a normal distribution. This procedure uses the Kolmogorov-Smirnov method, with a significance level of 0.200, which exceeds the threshold of 0.05. Based on these results, it can be concluded that the data in this study is normally distributed, meaning that one of the basic principles underlying linear regression analysis has been met, so the regression model used is statistically valid.

Table 4. Normality Test

One-Sample Kolmogorov-Smirnov Test		
		Unstandardized Residual
N		85
Normal Parameters[a,b]	Mean	.0000000
	Std. Deviation	1.93099131
Most Extreme Differences	Absolute	.081
	Positive	.081

	Negative	-.079
Test Statistic		.081
Asymp. Sig. (2-tailed)		.200[c,d]
a. Test distribution is Normal.		
b. Calculated from data.		
c. Lilliefors Significance Correction.		
d. This is a lower bound of the true significance.		

Multicollinearity testing was conducted to determine whether there was a high correlation between independent variables that could interfere with the accuracy of the regression model. The test results show that all variables have a Tolerance value > 0.10 and a Variance Inflation Factor (VIF) value < 10. This indicates that there is no multicollinearity between the independent variables in the model, so all variables can be used simultaneously in multiple regression analysis without distorting the interpretation results.

Table 5. Multicollinearity Test

Variable	Nilai *Tolerance*	Nilai VIF	Pass Requirement	Description
Social Media Marketing (X1)	0,304	3,293	Nilai *Tolerance* > 0,1 VIF < 10	There is no Multicollinearity
Quality Produk (X2)	0,277	3,606	Nilai *Tolerance* > 0,1 VIF < 10	There is no Multicollinearity
Online Customer Review (X3)	0,403	2,484	Nilai *Tolerance* > 0,1 VIF < 10	There is no Multicollinearity

Heteroscedasticity testing was conducted to identify whether there were differences in residual variance between observations in the regression model. Based on the Glejser test, all independent variables showed significance values above 0.05, indicating that there were no signs of heteroscedasticity in the model. This condition is reinforced by the results of the scatterplot observation, which shows that the points are scattered randomly and do not form a specific pattern. Thus, the assumption of homoscedasticity has been fulfilled and the regression model is suitable for drawing conclusions.

Table 4. 1 Heteroscedasticity test

Variable	sig.	Reference Value	Description
Social Media Marketing (X_1)	0,660	> 0,05	There is no Heteroscedasticity
Kualitas Produk (X_2)	0,907	> 0,05	There is no Heteroscedasticity
Online Customer Review (X_3)	0,708	> 0,05	There is no Heteroscedasticity

Multiple linear regression analysis was applied to determine the extent of the influence of each independent variable on the dependent variable, namely Purchase Decision. Based on the regression results, the following equation was obtained: $Y = 6.109 + 0.082X_1 + 0.084X_2 + 0.394X_3$. From this equation, it can be seen that Online Customer Reviews have the highest coefficient, 0.394, meaning they have the greatest influence on purchase decisions compared to the other two variables. The coefficients for Social Media Marketing and Product Quality are relatively small, at 0.082 and 0.084 respectively. This indicates that, in the context of Syamillahijab, online customer reviews available on social media and marketplaces play a more significant role in building trust and encouraging consumers to make purchases than promotional activities or product quality itself.

Table 6. Multiple Linear Regression Test

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.012	1.141		-.011	.991
	TOTALX1	.094	.113	.082	.829	.409
	TOTALX2	.067	.102	.068	.657	.513
	TOTALX3	.801	.091	.756	8.790	.000
a. Dependent Variable: TOTALY						

Simultaneous testing aims to evaluate whether all independent variables collectively have a significant effect on the dependent variable. Based on the analysis results, a calculated F value of 9.152 was obtained with a significance level of 0.000, which is well below the threshold of 0.05. Therefore, it can be concluded that Social Media Marketing, Product Quality, and Online Customer Reviews simultaneously have a significant effect on consumer purchasing decisions.

Table 7. Simultaneous Test (F)

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	616.465	3	205.488	84.939	.000[b]
	Residual	195.959	81	2.419		
	Total	812.424	84			
a. Dependent Variable: TOTALY						
b. Predictors: (Constant), TOTALX3, TOTALX1, TOTALX2						

Partial tests were conducted to assess the extent to which each independent variable had a separate influence on purchasing decisions. The test results showed that Online Customer Reviews had a significance value of 0.000 (<0.05), which means that they had a significant influence on purchasing decisions. Conversely, the variables Social Media Marketing (sig = 0.592) and Product Quality (sig = 0.597) did not show a significant partial influence. These results indicate that, in the context of this study, reviews from previous customers are the primary consideration for potential buyers, surpassing the effects of social media marketing strategies or the quality of the products offered. Trust in authentic testimonials from fellow users is a key factor in shaping consumer confidence.

Table 8. Partial Test (t)

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.012	1.141		-.011	.991
	TOTALX1	.094	.113	.082	.829	.409
	TOTALX2	.067	.102	.068	.657	.513
	TOTALX3	.801	.091	.756	8.790	.000
a. Dependent Variable: TOTALY						

The coefficient of determination in this model has an Adjusted R Square value of 0.229, which means that 22.9% of the variation in purchasing decisions can be explained by the three independent variables used in the study, namely Social Media Marketing, Product Quality, and Online Customer Reviews. The remaining 77.1% is explained by other factors not examined in this study. Nevertheless, this value can still be considered satisfactory for a social study involving consumer perceptions, and indicates that the model plays a role in providing relevant added value in explaining the purchasing behaviour of Syamillahijab consumers.

Table 9. Test Coefficient of Determination

Model Summary[b]				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.871[a]	.759	.750	1.555
a. Predictors: (Constant), Totalx3, Totalx1, Totalx2				
b. Dependent Variable: Totaly				

This study aims to determine the influence of social media marketing, product quality, and online customer reviews on consumer purchasing decisions at Syamillahijab. The results of the analysis using multiple linear regression show that simultaneously, all three independent variables have a significant influence on purchasing decisions, but partially, only online customer reviews have a significant influence. These findings provide an interesting insight into the dynamics of consumer behaviour in the digital age, particularly in the context of local Muslim fashion products.

Based on the results of data analysis, Social Media Marketing does not show a significant influence on consumer purchasing decisions. Although many respondents actively follow Syamillahijab's social media accounts, this engagement has not been successfully converted into purchasing actions. This indicates a gap between the level of awareness or engagement and actual purchasing decisions. These findings contradict the results of a study conducted by Basit et al. (2023), which concluded that Social Media Marketing significantly influences purchasing decisions for clothing brands in Malaysia. In that study, active consumer engagement on social media helped build brand equity and increase consumer trust in the products.

This discrepancy can be explained through the Engel-Blackwell-Miniard Model (1968), which explains that the consumer purchasing decision process occurs through a number of stages, starting from identifying needs, searching for information, evaluating various options, deciding to buy, to evaluating after the purchase is made. Social Media Marketing most likely only plays a role in the early stages, namely creating awareness and facilitating information search. However, if the content presented does not resonate emotionally or functionally, consumers are not motivated to proceed to the evaluation or purchase stage. Therefore, moving forward, Syamillahijab needs to strengthen its content marketing strategy by prioritising customer testimonials, tutorials, and relevant storytelling to build emotional connection and trust in the product.

The results of the study also show that the Product Quality variable has no significant influence on purchasing decisions. In fact, descriptively, the majority of respondents agreed that they consider quality in their purchases. This finding indicates the possibility that Syamillahijab consumers have not fully grasped the superior quality of the products offered, or it could be that quality is not a major consideration in purchasing Muslim fashion products on online platforms.

These results contradict the research of Yuniwinarti et al. (2023) which found that Product Quality has a significant effect on purchasing decisions on the Rabbani hijab model. In this study, good product quality strengthens brand image and builds customer loyalty. Meanwhile, in the context of Syamillahijab, it is possible that price variables, design trends, or testimonials are more dominant in influencing purchasing decisions. Based on consumer

behaviour theory, purchasing decisions can be influenced by internal factors such as motivation and perception, as well as external factors such as culture and trends. Therefore, it is important for Syamillahijab to evaluate the extent to which its product quality advantages are effectively communicated through social media or other digital channels.

The Online Customer Review variable is the only factor that significantly influences purchasing decisions in this study. The majority of respondents stated that they often read online reviews before deciding to buy products from Syamillahijab. This shows that customer reviews have an important role in shaping consumer perceptions and beliefs about a product. Positive reviews not only increase trust, but also serve as social proof that strengthens consumer perceptions of brand quality and credibility.

These results are consistent with studies conducted by Wulandari et al. (2023) which found that Online Customer Review has a positive and significant influence on purchasing decisions at Shopee Marketplace for fashion products. In the digital era, consumers increasingly rely on the experiences of others as a guide in making decisions. Consumers tend to consider reviews from other users as a more objective source of information than promotional content created by companies.

Simultaneously, the three independent variables in this study, namely Social Media Marketing, Product Quality, and Online Customer Review, have proven to have a significant influence on purchasing decisions. This is obtained from the results of the F test which indicates a significance value below 0.05. This means that although partially not all variables have an effect, the three of them together form a model that is relevant in describing variations in consumer purchasing decisions. With a coefficient of determination of 22.9%, this model is able to explain almost a quarter of the overall factors that influence purchasing decisions, while the rest can come from other factors such as price, promotion, brand, or shopping experience.

This finding supports the view of Marketing Mix theory (Kotler & Keller, 2016) that consumer purchasing decisions are the result of a combination of various factors, both product (product quality), communication (promotion through social media), and customer experience (customer experience through reviews). Thus, marketers cannot rely on one strategy alone, but must build synergies between product quality, digital communication strategies, and good customer experience to produce maximum purchase conversions.

5. Conclusions

From the results of the studies that have been carried out, it can be concluded that together the variables of social media marketing, product quality, and online customer reviews have a significant influence on consumer purchasing decisions at the Syamillahijab online store. However, partially, only online customer reviews show a significant influence on purchasing decisions. Social media marketing and product quality, despite their theoretically important role in marketing, did not have a significant impact in this study.

These findings confirm the importance of the power of consumer testimonials in the purchase decision-making process, especially in the e-commerce ecosystem. Online reviews from previous customers are a highly trusted source of information and a key consideration before making a purchase. This shows that digital reputation management is a key element that businesses like Syamillahijab.

Meanwhile, the insignificant effect of social media marketing and product quality on purchasing decisions can be caused by several factors, such as a lack of differentiation of digital marketing content or consumer expectations that have been formed on product quality. This is an important note for Syamillahijab to evaluate marketing strategies that are more creative and

innovative, and strengthen the image of quality through a more personalised approach to consumers. This research has several limitations. First, limited field access caused by the distance of the research location so that direct observation of marketing and service activities is not carried out thoroughly. Secondly, limitations in respondent participation were also an obstacle because some respondents were not willing to provide complete information for personal reasons, which had an impact on the accuracy of the generalisation of findings.

Based on this, the researcher suggests that future studies consider using sampling techniques that produce a larger number of respondents, such as random sampling techniques. In addition, it is recommended to add other variables that have not been analysed in this study, such as brand image, customer trust, or promotion, in order to expand the understanding of the factors that influence purchasing decisions more comprehensively. The findings in this study are expected to provide practical benefits for businesses in developing marketing strategies based on customer reviews and paying attention to how consumer perceptions are formed through digital communication. On the other hand, the theoretical contribution of this study is also expected to enrich the literature in the field of consumer behaviour and digital marketing.

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ANALYSIS OF THE BASIC PRINCIPLES OF THE INTERNAL AUDIT PROFESSION IN IMPROVING THE QUALITY OF IJE AUDITORS

(STUDY TO THE STATE GENERAL INSPECTORATE (IJE), DILI, EAST TIMOR)

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Abstract

This study analyzes the influence of fundamental principles of the internal auditing profession on auditor quality at the General State Inspection (IJE) in Dili, Timor-Leste. The factors examined include integrity, objectivity, confidentiality, and competence. The research employs a quantitative approach using multiple linear regression analysis based on data collected trough questionnaires. The results indicate that integrity, objectivity, and confidenceility have a significant positive impact on auditor quality, whereas competence does not show a significant effect. These flindings emphasize the importance of adhering to processional ethics in enhancing the professionalism of internal auditors. Therefore, strengthening training programs and implementing stricter audit standards are strategic steps to improve auditor performance in the public sector of Timor-Leste.
Keywords : Internal Auditor, Auditor Quality, Integrity, Objectivity, Confidentiality, Competence

1. Introduction

According to Purnomo (2020), audit quality is a key indicator that allows quality audits to be carried out with complete consistency, with reference to applicable professional standards and regulations. High audit quality can protect auditors from legal liability. The quality of the audit is a characteristic that describes the results of an auditor's work based on the basic principles of professional ethics of the auditor: integrity, objectivity, independence, confidentiality, competence and the use of SPAP as a reference in the implementation of the auditor's work. The task of preparing an audit program and reviewing audits and audit reports to determine whether there are material errors in financial reporting.

In the public sector, such as Timor-Leste, the State General Inspectorate (IJE) has a major responsibility to ensure the efficiency, transparency and compliance of state institutions. IJE's internal auditors face significant challenges in carrying out their work, including limited resources, training, and expertise. This affects the quality of the examiner and is a key factor in the success of the exam. A qualified auditor must have integrity, objectivity, competence, and confidentiality. Therefore, strategic steps are needed to improve the quality of auditors through continuous training and skills development.

Auditing is the acquisition and evaluation of evidence regarding statements about economic activities or events objectively, with the aim of determining the level of conformity between statements about economic activities or events with predetermined criteria, and communicating the results to users interested in the process (Mulyadi, 2011: 9). The accounting profession in Timor-Leste is also highly dependent on the trust of accounting service users in the quality of services provided. Auditors have an integrity duty to ensure that they base their opinions on the available evidence. The auditor must provide effective and satisfactory audit results to service users. To achieve effective audit results, auditors must respond to pressures,

both from themselves and from outside, such as when clients want the auditor to deliver good results despite facts or evidence found regarding the services provided, even if the company is exposed.

According to Pinto et al., (2020) Phenomena related to audit quality in Timor Leste, especially in audit activities conducted by the General Inspectorate of State (IJE), reveal indications of irregularities in the management of public transfer funds from the Prime Minister's Office to Centro Nacional Chega (CNC. IP). In an audit conducted in 2019, auditors examined the use of the funds, including the procurement of five vehicles and ten mobile phone units. From the results of the audit, several important findings were found. First, one in five vehicles purchased, namely RAV-branded vehicles, is known to use personal license plates even though the procurement funds are sourced from the government budget. The auditor considered this to be inappropriate, because vehicles purchased with government funds should use official government license plates. Meanwhile, four other vehicles used government license plates as they should. Second, the procurement of ten cell phone units for $900 each was also in the spotlight of the auditors. The auditor argued that the purchase of phones at an expensive price was inefficient, considering that phones with more affordable prices were adequate for work communication needs. After completing the audit, IJE conveyed its findings to CNC. IP as the client. However, CNC. IP refused to accept the results of the audit and reported it to the Comissão Anti Corrupção (CAC). Unfortunately, this report could not be further followed up by the CAC. This reflects the challenge of ensuring accountability and follow-up on audit results within the government.

By focusing on improving the quality of auditors, IJE can strengthen its role as an independent regulator in the public sector. A qualified auditor can not only identify operational weaknesses, but also provide strategic recommendations to improve the performance of an agency. This helps achieve efficiency, transparency, and public trust in the management of government resources. Therefore, the resulting audit report will be an important tool to drive positive change in Timor-Leste's public sector.

Conducting an audit is not an easy thing, because it requires high professional skills and abilities to find weaknesses or problems in an institution. Therefore, the internal auditor at the State General Inspectorate (IJE) must work closely with people from relevant backgrounds such as accounting, economics, finance, statistics, taxation and law to produce quality audits, while special training is required before an employee can carry out his duties as an auditor to ensure that they have knowledge, technical skills and professionalism in accordance with professional standards and codes of ethics, which ultimately creates responsible and professional auditors to guarantee the running of the institution.

Based on the code of ethics for professional auditing, every profession must apply and respect the ethics of the profession without exception, this respect is usually accompanied by sanctions for violators, such as sending warning letters, or even dismissal (Lina & Ahluwalia, 2021). Basic principles such as integrity, objectivity, confidentiality, competence are established. These principles aim to guarantee the quality of audits or improve good governance. Based on this principle, the institution must provide training to teams or employees who do work in the field of auditing, to improve their skills or professionalism and knowledge.

Integrity is needed so that auditors can act honestly and decisively in conducting audits. Objectivity is necessary so that the auditor can act properly without being affected by pressure or requests from certain parties interested in the results of his audit, and the auditor's competence is supported by the knowledge and skills necessary to carry out his work well (Sukriah, et. al.2009). Confidentiality is necessary so that the auditor can ensure that the information obtained is not published without permission, unless there is a professional or legal obligation to publish the information.

2. Literature Review

Agency Theory

According to Fakhriyyah & Mawardi (2020), agency theory is a derivative of game theory that designs contracts between principals and agents to overcome conflicts of interest or agency conflicts to conduct better transactions. This agency relationship occurs when one or more people hire another person to perform a service and then delegate decision-making authority to that agent. Therefore, when they are hired, the shareholder must delegate his power to them as an agent, as the holder of decision-making power. Alternatively, an agent is a party that acts as a decision-maker in the business to improve the principal's well-being. The manager's and shareholders' goals are the same: to increase the value of the company by increasing shareholder wealth. However, managers do not always act in the interests of shareholders or against the wishes of shareholders thus creating conflicts between the company's managers and shareholders. Shareholders as owners are parties who employ officials or agents. Regarding the delegation of authority from the principal to the agent, problems often arise between the shareholders and the agent.

Quality Auditor

Wardani et al. (2022:46) stated that audit quality can be defined as the auditor's ability to find and report significant findings (which fall into the category of violations) in the client's accounting system. Therefore, to achieve good audit quality, the audit process must be considered. In appointing an auditor to carry out his duties, he must consider the ability, independence, and professionalism of each individual. From the above definition, it can be concluded that it is necessary to improve auditor behavior when reporting findings (material) that are included in the scope of violations, and it is a necessity for every auditor to maintain the quality of his audit. Based on good auditor quality indicators, according to Clara (2019) several audit quality indicators, among others: 1. Reporting all clients, 2. Understanding of the client's accounting information system, 3. Guided by *auditing* principles and accounting principles in client work, 4. Prudence in decision-making.

Basic principles of the Auditor Profession

According to Devota and Priono (2021), the audit profession is a profession that can be sustainable if it gains the trust of the public Public trust is very necessary for an auditor because it reflects integrity, professionalism, and competence in the implementation of audit tasks. Auditors must have audit quality that is in accordance with IAPI standards and ensure alignment between the interests of management and owners. The auditor conveys his assessment in the form of an opinion that reflects the company's image and becomes the basis for decision-making for stakeholders. In addition, auditors must adhere to professional codes of ethics and be professionally skeptical in conducting audits.

Definition of Integrity

Integrity is a behavior that must be applied by honest, fair and sincere auditors in what they do. Auditors must be able to provide an appropriate, reliable assessment and be able to comply with applicable laws and regulations (Karyadi 2022). Integrity can be interpreted as public trust and indeed there is a reference to the decisions taken. Integrity is an internal factor that may be influenced by performance. The auditor fulfills his obligations The review must be carried out with an attitude of integrity so that it can produce quality control results. According to Yohanes (2020:50), the indicators of auditor integrity are:1. Honest and transparent, 2. Courage, 3. Wise attitude, 4. Responsibility.

Objectivity

Saad (2021) Objectivity is a mental attitude that an auditor must have in order to be honest, fair and impartial, not to have a conflict of interest and not to be influenced by other auditors to do so. According to the definition of objectivity above, objectivity is a mentality that must be adopted by auditors to ensure that they can trust themselves. The variable of objectivity exists after expert Rustendi (2017), who defines indicators to measure objectivity as: 1. Truth, 2. Openness, 3. Free from Conflict.

Concealment

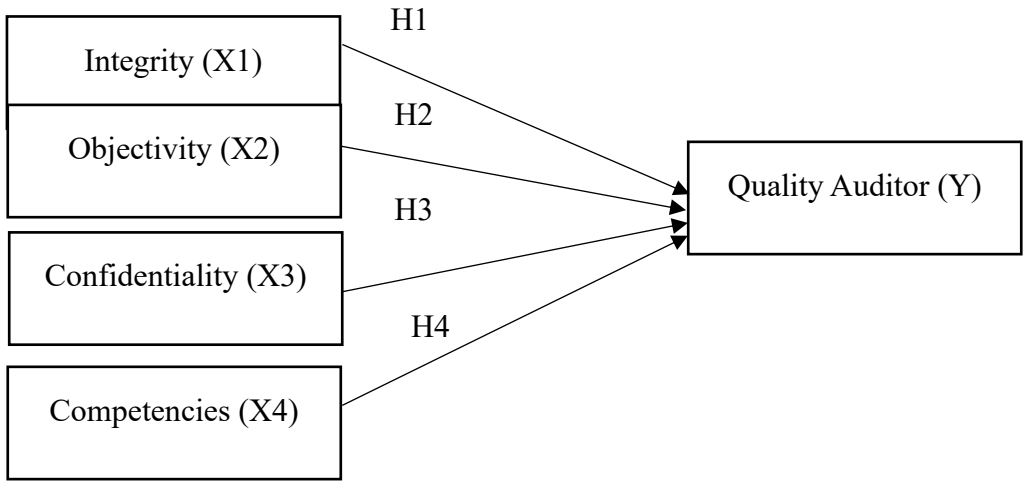
According to *Institute of International Auditors,* (2019) Confidentiality means that every internal auditor must maintain professional confidentiality with respect to facts, information, or documents used in the exercise of his professional abilities. The internal auditor is not allowed to disclose any facts, information or documents for his personal benefit or for the benefit of any third party who has a direct or indirect interest in the activities carried out by the internal auditor. Internal auditors in certain circumstances may disclose the facts, information, or documents received to an external party if determined by the applicable legal norms or if the party is authorized to do so (BPKP, 2018). According to PER/04/M.PN/03/2008, the indicators to measure confidentiality are:

1. Be careful with the information you receive.
2. Use and disclosure of information**.**

Competence

According to Fachruddin & Tjg (2020), competence is the ability to complete an exam assignment based on adequate knowledge, training, skills, and experience within a certain period of time. This ability is critical for auditors to quickly and accurately identify fraud or technical tricks used to commit fraud. A competent attitude is a sufficient skill, especially to conduct an objective audit. Experience is not the only measure of competence and expertise, but other aspects are also necessary for good decision-making. According to Harahap & Pratama, (2020) defines the indicators that are the measure or reference of auditors, namely: 1. Personal quality, 2. General knowledge, 3. Special skills.

Conceptual Framework



3. Research Methods

Types and Locations of Research

The type of data used in this study is quantitative data using multiple linear regression analysis. Quantitative approaches are approaches used to collect and analyze data to answer research questions and test hypotheses that have been generated before. This approach relies on numerical measurements for the calculation and uses statistics to make generalizations of existing populations (Sampieri, et al., 2013:5). The quantitative data in this study is data processed from auditors' answers that meet the sample criteria in the *State General Inspection (IJE).*

Population and Research Sample

According to Sugiyono (2017:215), population is a generalized area consisting of objects or subjects that have certain attributes and characteristics that are studied by researchers and concluded from them. Based on the correct definition of population and title, the population used in this study consists of all employees who carry out the function of internal auditor *at the State General Inspection* (IJE). Samples are part of the population that will be used as objects for conducting research and testing data. The method used is a saturated sample. Sugiyono (2016:85) saturated *sampling* is a technique of collecting samples from all members of the population as samples.

Sources and Methods of Data Collection

According to Sugiyono (2019:141), the data collection technique can be carried out by distributing questionnaires, according to variables related to the title. Therefore, the data collection method used by the researcher is a questionnaire. A data collection technique that involves presenting respondents with a series of questions or written statements. Then the validity and reliability of Sugiyono, (2019:142) will be tested. In this tool, a tool will be used to measure the answers to questionnaire questions, namely by *the Likert scale* method with a value range of 1 to 5.

Data Analysis Methods

According to Ghozali (2016: 57-147), before applying the hypothesis test, the first thing that is done is a multiple linear regression test. At this stage, it is necessary to carry out validity and reliability tests, as well as preliminary tests such as normality tests, multicollinearity tests and heteroscedasticity tests to test the interaction between variables such as free variables and bound variables.

4. Results And Discussion

(Results of Descriptive Statistical Analysis Research)

Variable	Minimum	Maximum	Mean	Std. Deviation
Integrity	3	4	3,61	0,495
Objectivity	4	5	4,77	0,425
Concealment	4	5	4,94	0,250
Competence	4	5	4,23	0,425
Quality of IJE Auditors	3	4	3,26	0,445
N	31			

Source: Data processed, 2024

It is known that the average response of respondents to the integrity variable is 3.61 with a minimum value of 3 and a maximum of 4. The average response of respondents to the objectivity variable was 4.77 with a minimum value of 4 and a maximum of 5. The average response of respondents to the confidentiality variable was 4.94 with a minimum value of 4 and

a maximum of 5. The average response of the competency variable respondents was 4.23 with a minimum score of 4 and a maximum of 5. The average response of respondents to the auditor quality variable was 3.26 with a minimum score of 3 and a maximum of 4. The standard deviation value on the integrity variable was 0.495; the objectivity variable is 0.425; the confidentiality variable is 0.250; competency variable of 0.425; and the auditor quality variable was 0.445. The standard deviation value in this study explains the respondents' responses to each variable that varies. This value explains that each research variable has less varied data because it is still far from the average value.

Data Quality Test

A. (Results of Data Validity Test Research)

Items	Corrected Item-Total Correlation	r Table (5%)	Information
X1.1	0,79	0,35	Valid
X1.2	0,81		Valid
X1.3	0,88		Valid
X1.4	0,79		Valid
X1.5	0,83		Valid
X1.6	0,80		Valid
X1.7	0,82		Valid
X1.8	0,86		Valid
X1.9	0,65		Valid
X1.10	0,81		Valid
X1.11	0,59		Valid
X2.1	0,45	0,35	Valid
X2.2	0,41		Valid
X2.3	0,76		Valid
X2.4	0,52		Valid
X2.5	0,68		Valid
X3.1	0,68	0,35	Valid
X3.2	0,61		Valid
X3.3	0,68		Valid
X3.4	0,70		Valid
X3.5	0,76		Valid
Y1.1	0,62	0,35	Valid
Y1.2	0,65		Valid
Y1.3	0,61		Valid
Y1.4	0,63		Valid
Y1.5	0,66		Valid
Y1.6	0,55		Valid

Y1.7	0,51		Valid
Y1.8	0,53		Valid
Y1.9	0,48		Valid
Y1.10	0,37		Valid
Y1.11	0,35		Valid

Source : Data processed, 2024

Based on the results of the validity test, each item in the tested variable shows a Corrected Item-Total Correlation value greater than r of the table (0.35), so it can be concluded that all items used are valid. In the integrity variable, the validity value ranges from 0.59–0.88, while in the objectivity variable it ranges from 0.41–0.76. For the confidentiality variable, the value obtained was in the range of 0.61–0.76, while the competency variable showed a range of 0.60–0.89. Finally, the auditor quality variable has a validity value between 0.35–0.66. Thus, all items in this study can be considered valid and feasible to use for the measurement of each variable.

B. Reliability Test (Results of the Reliability Test of Research Variables)

Variable	***Cronbach's Alpha***	**Information**
Integrity (X1)	0,952	Reliable
Objectivity (X2)	0,771	Reliable
Confidentiality (X3)	0,861	Reliable
Competencies (X4)	0,959	Reliable
Quality Auditor (Y)	0,853	Reliable

Source: Data processed, 2024

Reliability testing on the research variables, namely integrity (X1), objectivity (X2), confidentiality (X3), competence (X4) and auditor quality (Y), were obtained *Cronbach's Alpha* Each research variable > 0.70, so it is concluded that overall the research variable is reliable.

Normality Test (Results of Normality Testing

(Normality Test of One-Sample Kolmogorov-Smirnov Test Method)

		Unstandardized Residual
N		31
Normal Parameters, b	Mean	0E-7
	Std. Deviation	1.43177862
Most Extreme Differences	Absolute	.100
	Positive	.100
	Negative	-.057
Kolmogorov-Smirnov Z		.557

Asymp. Sig. (2-tailed)	.916

a. Test distribution is Normal.
b. Calculated from data.
Source : Data processed, 2024

Based on the display of the results of the normality test using *the One Sample Kolmogorov-Smirnov Z (K-S) Test* method, it shows that the value of K-S Z is 0.557 and the probability value is 0.916 > 0.05. The results of the residual value test explained that the residual test data was normally distributed.

Classic Assumption Test

A. Multicollinearity Test

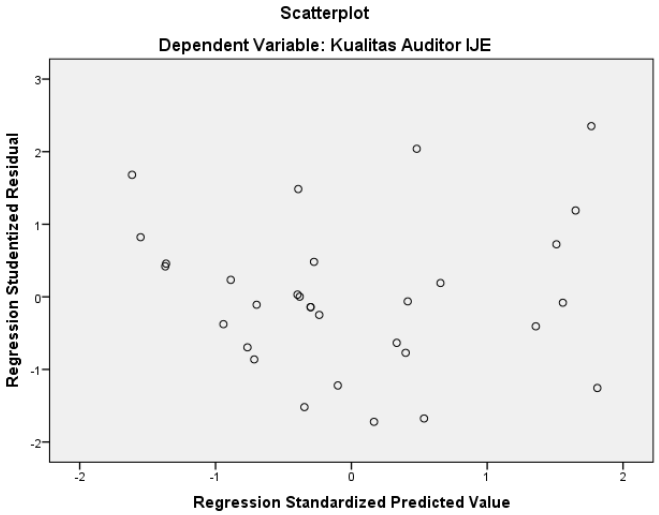
Coefficient

Type		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIVID
1	(Constant)	-29.481	8.377		-3.519	.002		
	Integrity	.320	.076	.411	4.197	.000	.912	1.096
	Objectivity	1.114	.209	.545	5.318	.000	.833	1.200
	Concealment	.798	.319	.247	2.503	.019	.896	1.116
	Competence	.218	.130	.187	1.679	.105	.710	1.409

a. Dependent Variable: Quality of IJE Auditors
Source : Data processed, 2024

The results of the test on the existence or absence of correlations between independent variables in the model used in the study obtained *a tolerance value* of the variables of integrity, objectivity, confidentiality, and competence greater than 0.10 and a VIF (*Variance Inflation Factor*) value of less than 10. These results indicate that there is no correlation between the free variable or no symptoms of mulitikolinearity in the regression so that the model used in assessing the quality of auditors is a good regression model.

B. Heteroscedasticity Test



Source : Data processed, 2024

The visualization results displayed on *Scatterplot* (Appendix 3) indicates that the data is spread above and below the zero point (0). The distribution of points also does not form a pattern, so it is concluded that the data do not have heteroscedasticity in the regression model. It can be explained that the regression model is a model that is suitable for predicting the quality of auditors on the input of integrity variables, objectivity, confidentiality and competency variables.

Hypothesis Test

A. F Test (Simultaneous Test Results (Model Fit))

NEW ERA

Type		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	208,500	4	52,125	22,037	0.000b
	Residual	61,500	26	2,365		
	Total	270,000	30			

a. Dependent Variable: Quality of IJE Auditors

b. Predictors: (Constant), Competence, Integrity, Confidentiality, Objectivity

Source: Data processed, 2024

In the results of the F test or fit model, a sig value of 0.000 < 0.05 was obtained, meaning that together the variables of integrity, objectivity, confidentiality, and competence had an effect on the quality of the auditor.

B. (Determination Coefficient Test (R2 Test))

Model Summaryb

Type	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.879a	0,772	0,737	1,538

a. Predictors: (Constant), Competence, Integrity, Confidentiality, Objectivity

b. Dependent Variable: IJE Auditor Quality

Source: Data obtained, 2024

Table 4.12 also provides information about the *R Square* value (coefficient of determination) of 0.772 (77.2%). The percentage *of R square* indicates that the quality of auditors is influenced by integrity, objectivity, confidentiality, and competence of 77.25% while the remaining 22.75% is influenced by variables that are not studied.

C. (Partial Test Result (t))

Coefficient

Type		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIVID
1	(Constant)	-29.481	8.377		-3.519	.002		
	Integrity	.320	.076	.411	4.197	.000	.912	1.096
	Objectivity	1.114	.209	.545	5.318	.000	.833	1.200
	Concealment	.798	.319	.247	2.503	.019	.896	1.116
	Competence	.218	.130	.187	1.679	.105	.710	1.409

a. Dependent Variable: Quality of IJE Auditors
Source : Data processed, 2024

1. The constant coefficient of -29.481 explains that the variables of integrity, objectivity, confidentiality and competence are zero or without input of independent variables can reduce the quality of auditors by 29.481.
2. The integrity coefficient is β2 (0.320) with a sig value (0.000,) explaining that if there is an input of 1 integrity variable, the quality of the auditor will increase by 0.320. Partially, the integrity variable affects the quality of the auditor (*p-value* < 0.05) with the direction of influence being positive (hypothesis accepted)
3. The objectivity coefficient is β2 (1.114), with a value of sig (0.000), explaining that if there is an input of 1 objectivity variable, the quality of the auditor will increase by 1.114. Partially, the objectivity variable had an effect on the quality of the auditor (*p-value* < 0.05) with the direction of influence being positive (hypothesis accepted)
4. The confidentiality coefficient is β2 (0.798), with a sig value (0.019), explaining that if there is an input of 1 confidentiality variable, the quality of the auditor will increase by 0.798. Partially the confidentiality variable affects the quality of the auditor (*p-value* < 0.05) with the direction of influence being positive (hypothesis accepted)
5. The competency coefficient is β2 (0.218), with a sig value (0.105), explaining that if there is an input of 1 competency variable, the quality of the auditor will increase by 0.218. Partially, the competency variable had no effect on the quality of the auditor (*p-value* > 0.05) with a positive influence direction (hypothesis rejected).

5. Discussion

The Influence of Integrity on the Quality of Auditors

Based on the results of the study, it was shown that the integrity value of β2 (0,320) With a GIS value (0.000,) shows that the results of the research were obtained that the integrity variable had a positive effect on the quality of the auditor (*p-value* < 0.05) means that the higher the level of integrity of an auditor, the better the quality of his work. The findings in the study

are in accordance with the research of Ahda & Sudarno (2018); Yoga, et al., (2024) that integrity has a positive effect on the quality of auditors. An auditor with integrity will report findings honestly, even if it may not please the client or the audited party. This ensures that audit reports are more accurate and free from manipulation. Auditors with integrity will comply with the professional code of ethics that prioritizes objectivity and independence in conducting audits. This encourages more objective and reliable audit results. According to Natali, et al., (2024) auditors who are known to have high integrity tend to gain more trust from clients, the public, and regulators. This trust is important to maintain the reputation and quality of audit work. Integrity is an attitude of a person based on principles, values, and abilities that include honesty in underpinning public trust (Evia, et al., 2022). Integrity in research is based on the honesty, courage, wisdom, and responsibility of the auditor.

The Influence of Objectivity on the Quality of Auditors

Based on the research variables, it shows that the objectivity value β2 (1.114), with a value of sig (0.000), shows that the results of the study are obtained that the objectivity variable has a positive effect on the quality of the auditor (*p-value* < 0.05) which means that the more objective an auditor is in conducting assessments and decision-making, the better the quality of the audit produced. The results of the study are in line with the findings of Yoga, et al., (2024) who stated that objectivity affects the quality of auditors. An objective auditor will conduct the assessment without being influenced by any party, including clients or other stakeholders. This helps to produce more accurate and trustworthy audit findings. Objective auditors will rely on relevant and accountable evidence in the audit process, thus avoiding decisions driven by subjective factors or personal preferences. Objectivity is based on the auditor's ability to do his or her job without being influenced by personal interests and fact-based disclosure of conditions. High objectivity encourages auditors to avoid conflicts of interest or influence from outside parties that can lead to audit results that are not objective or less accurate. Objectivity is also closely related to the independence of auditors. An objective auditor will not be influenced by personal or professional relationships that could undermine the quality of the audit.

The Effect of Confidentiality on the Quality of Auditors

Based on the research variables, it was shown that the confidentiality value β2 (0.798), with a sig value (0.019) showed that the results of the study concluded that the confidentiality variable had a positive effect on the quality of the auditor (*p-value* < 0.05) meaning that the higher the level of confidentiality maintained by the auditor, the better the quality of the audit produced. The findings of the study are in accordance with the research of Ahda & Sudarno (2018) which states that confidentiality shows a significant positive impact on audit quality. When auditors keep client information confidential well, clients will feel safer and trust that their sensitive data will not be misused or leaked. This trust will allow auditors to work more effectively and obtain more accurate information for audits. Well-maintained confidentiality helps to avoid situations where audit information is used for the benefit of a particular individual or group. This maintains the objectivity and independence of the auditor, which in turn improves the quality of audit results. Keeping the information obtained during the audit confidential, the auditor prevents the information from falling into the wrong hands, which can damage the reputation or financial results reported by the client. Confidentiality is part of the code of ethics that auditors follow in carrying out their professional duties. Adhering to these principles of confidentiality, auditors demonstrate that they adhere to professional standards and maintain the quality and integrity of audit results. Confidentiality in the context of an audit is based on the auditor's obligation to keep the information obtained during the audit process

from being disseminated without lawful permission, both to outside parties and other unauthorized parties.

The Influence of Competency on the Quality of Auditors

Based on the research variables, it was shown that the competency value β2 (0.218), with a sig value (0.105), showed that the results of the study were obtained without a significant influence of competence on the quality of auditors (*p-value* > 0.05). These results are not in line with Rizky & Astuti (2023) who stated that competence affects audit quality. Competency is an important factor in an auditor's work, in this study, there is no evidence to suggest that auditor competence directly improves the quality of audit results in a positive direction. Some reasons for competence do not have a positive effect on auditor quality such as integrity, objectivity, confidentiality, or external factors such as organizational support or a stricter regulatory environment have a greater influence on audit quality.

In this case, competence is not enough to guarantee better quality. There are several factors that are still lacking that can cause competence to not affect the quality of auditors at IJE, such as lack of professional skepticism in implementing competencies, time pressure budgets limiting the application of competencies, accountability, lack of responsibility in utilizing competencies, work experience is more influential than academic competence, the relevance of competencies is not always in accordance with regulations and the needs of the public sector. Competencies typically include technical knowledge and skills, but audit quality may be more influenced by practical experience or the ability to apply those skills in real-world situations, which are not entirely dependent on formal competencies. Auditors with high competence are not always able to apply their skills consistently in all audit situations, which can lead to variations in audit quality even if their competence is quite high. The research conducted has not been able to accurately measure or identify auditor competence in certain contexts, or there are other variables that are more relevant in influencing audit quality that reduce the influence of competence. According to Karismanda, et al., (2023) stated that competencies that have formal/non-formal knowledge, abilities and professional orientation are not things that affect audit quality.

6. Conclusions, Limitations, And Suggestions

Conclusion

1. The integrity of internal auditors has a positive and significant effect on the quality of auditors in the *General Inspectorate of the State of IJE*
2. The objectivity of internal auditors has a positive effect on the quality of auditors in the *General Inspectorate of the State of IJE*
3. The confidentiality of internal auditors has a positive effect on the quality of auditors in *the General Inspectorate of the State of IJE*
4. The competence of internal auditors has no effect on the quality of auditors in the *General Inspectorate of the State of IJE*
5.

Limitations

1. The limitations of the study respondents so that the results obtained only reflect a small group and cannot generalize the findings to a large population.
2. The influence of external factors cannot be controlled, such as the occurrence of discussions when filling out questionnaires.

3. The questionnaire provided limits the respondents' answers so that it can affect the variation of answers.

Suggestion

1. To improve accuracy and allow the results of the study to be generalized to a wider population, it is recommended that the number of respondents be multiplied and include individuals from shared backgrounds.
2. In advanced research, stricter methods can be applied to reduce the influence of outside factors, such as ensuring respondents fill out questionnaires individually without discussion or using online questionnaires with a specific time constraint.
3. In order to make the variety of answers given by respondents wider and reflect their views in more depth, it is recommended to improve the questionnaire used.

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READING THE CONSUMPTION PATTERNS OF COLLEGE STUDENTS TOWARDS SOMETHINC LOCAL PRODUCTS: THE INFLUENCE OF E-PROMOTION, PRICE, AND PRODUCT QUALITY IN THE OFFICIAL STORE

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Abstract

This study aims to analyze the influence of e-promotion, price, and product quality on the purchasing decisions of local brand Somethinc, both simultaneously and partially. The respondents were 80 female students living in Lowokwaru District, Malang City, who had purchased Somethinc products from official marketplace stores. A quantitative method with a survey approach and questionnaire distribution was used. The results of multiple linear regression analysis showed that e-promotion, price, and product quality simultaneously have a significant effect on purchasing decisions. Partially, each variable also significantly influences purchasing decisions. This study suggests that businesses should focus on engaging e-promotion strategies, affordable pricing, and maintaining product quality to increase consumer loyalty.

Keywords: E-Promotion, Price, Product Quality, Purchase Decision, Local Product, Somethinc

1. Introduction

The local beauty industry in Indonesia has experienced significant growth in recent years. The emergence of various local brands offering competitive skincare and cosmetic products has made the beauty market increasingly dynamic. One notable local brand that has successfully captured the attention of young consumers, particularly female students, is Somethinc. This brand is recognized for its product innovation, aggressive digital promotion strategies, affordable pricing, and high-quality formulations tailored to Indonesian skin needs.

With the widespread use of social media and e-commerce platforms such as Shopee and Tokopedia, e-promotion has become a crucial factor in influencing consumer purchasing decisions. Female students, as part of the digital-native generation, are highly responsive to online marketing campaigns including discounts, cashback offers, social media content, and product reviews. Additionally, price and product quality remain key considerations in their decision-making process.

Female students in Lowokwaru District, Malang City — home to major universities such as Brawijaya University, Islamic University of Malang, and Muhammadiyah University of Malang — represent a potential market for local beauty products. Understanding the factors that influence their purchasing decisions is essential for the development of effective marketing strategies.

Based on this background, this study aims to examine the influence of e-promotion, price, and product quality on purchase decisions of the local brand Somethinc. The findings are

expected to contribute to the improvement of digital marketing strategies, particularly for local beauty brands in Indonesian.

2. Literature Review

Consumer behavior theory explains how individuals make decisions to purchase, use, and evaluate products to meet their needs (Kotler & Keller, 2016). These decisions are influenced by both internal (psychological, personal) and external (social, cultural, and marketing) factors.

Purchase decision is the consumer's process of choosing among product alternatives (Kotler, 2018). Key indicators include product choice, brand preference, timing, purchase quantity, and purchase channel (Septyadi et al., 2022)

E-promotion refers to promotional strategies conducted via digital platforms such as social media, websites, or e-commerce. This approach is effective in engaging younger audiences due to its speed, reach, and interactivity (Kotler & Keller, 2016). Indicators include searchability, content information, speed, and effectiveness.

Price is the monetary value that consumers must pay to acquire a product. Affordable and value-aligned pricing can enhance consumer interest and purchasing decisions (Tjiptono, 2017). Indicators include affordability, value-for-money, competitiveness, and discounts.

Product quality reflects a product's ability to satisfy consumer needs, including performance, reliability, durability, and aesthetics (Garvin, 1987). High quality enhances customer satisfaction and loyalty.

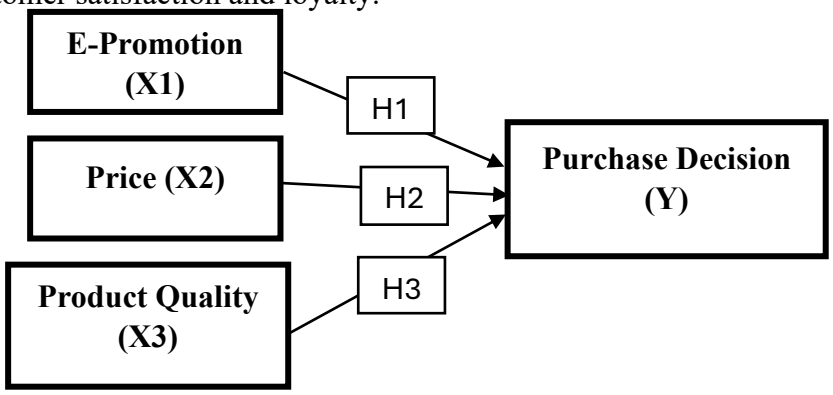

Image 1 Independent Variables:

Hipotesis

H1: E-promotion, price, and product quality simultaneously have a significant influence on the purchase decision of Somethinc products

H2: E-promotion has a partial and significant influence on the purchase decision of Somethinc products

H3: Price has a partial and significant influence on the purchase decision of Somethinc products

H4: Product quality has a partial and significant influence on the purchase decision of Somethinc products.

3. Methodology

This study uses a quantitative approach with an explanatory research design. Explanatory research aims to examine the influence among variables and explain the causal relationship between the independent variables (e-promotion, price, and product quality) and the dependent variable (purchase decision of Somethinc products). A quantitative approach was chosen because the collected data is numerical and analyzed statistically.

According to Sugiyono (2021), the population is a generalization area consisting of objects or subjects that have certain qualities and characteristics determined by the researcher to be studied and from which conclusions are drawn. The population does not always need to be large in number, but it must represent all elements relevant to the research based on specific criteria. In this study, the population consists of all active female students residing in Lowokwaru District, Malang City, who have purchased Somethinc products through official stores on e-commerce platforms.

A sample is a subset of the population that possesses the same characteristics (Sugiyono, 2021). A sample is used because it is not feasible for the researcher to study the entire population, especially when the number is large. Therefore, the sample must accurately represent the population so that the research findings can be generalized. In this study, the sample consists of 80 respondents, determined using Malhotra's formula, which suggests five times the number of indicators ($5 \times 16 = 80$).

The sampling technique used in this research is *purposive sampling*, which is a non-probability sampling method where the sample is selected based on specific considerations or criteria relevant to the objectives of the study. According to Sugiyono (2021), purposive sampling is a technique where the researcher determines the sample based on particular characteristics of the population that are believed to best represent the whole.

The operational definition of variables in this study aims to explain each variable clearly, along with the measurement indicators and scale used. This research consists of three independent variables, namely e-promotion (X_1), price (X_2), and product quality (X_3), and one dependent variable, namely purchase decision (Y):

E-Promotion (X_1) refers to digital promotional activities carried out by the company through electronic media such as social media, marketplaces, and official websites to attract consumer interest. The indicators used to measure this variable include: ease of accessing promotional information, clarity of promotional content, attractiveness of the promotion, and effectiveness of digital media promotion:

1) Ease of finding promotional information
2) Clarity of promotional content
3) Attractiveness of promotion
4) Effectiveness of digital promotion

Price (X_2) is the amount consumers must pay to obtain Somethinc products. A suitable and competitive price can influence purchase decisions. The indicators used for this variable include: price affordability, alignment between price and product quality, price competitiveness with other brands, and availability of discounts:

1) Price affordability
2) Price-quality match
3) Price competitiveness
4) Discounts offered

Product Quality (X_3) refers to how well Somethinc products meet consumer expectations and needs. High product quality increases satisfaction and influences purchase decisions. The indicators include: product performance, product reliability, product durability, and product appearance (aesthetics).

1) Product performance
2) Product reliability
3) Product durability
4) Product appearance or aesthetics

Purchase Decision (Y) is the result of the consumer's evaluation process in selecting and buying a product. The indicators for this variable include: decision to purchase Somethinc products, brand selection, quantity purchased, and frequency of purchase:

1) Decision to buy
2) Brand preference
3) Quantity of purchase
4) Purchase frequency.

4. Results and Discussion

Table 1 Validity The Result

Variable	Statement	r-Count (Pearson Correlation)	r-Table N=80, a=5%	Description
E-Promotion (X1)	X1.1	0,793	0,219	Valid
	X1.2	0,735		Valid
	X1.3	0,769		Valid
	X1.4	0,723		Valid
Price (X2)	X2.1	0,741	0,219	Valid
	X2.2	0,701		Valid
	X2.3	0,756		Valid
	X2.4	0,692		Valid
Product Quality (X3)	X3.1	0,596	0,219	Valid
	X3.2	0,729		Valid
	X3.3	0,777		Valid
	X3.4	0,861		Valid
Purchase Decision (Y)	Y.1	0,649	0,219	Valid
	Y.2	0,757		Valid
	Y.3	0,722		Valid
	Y.4	0,724		Valid

The test results in table, it can be concluded that the calculated r value of all variables can be said to be more than r table (r count> r table). So it can be concluded that all statement items from each variable are said to be valid.

Table 2 Reliability The Result

No.	Variable	*Cronbach Alpha*	Criteria	Description
1	*E-Promotion* (X1)	0,674	0,60	Reliable
2	Price (X2)	0,743	0,60	Reliable
3	Product Quality (X3)	0,696	0,60	Reliable
4	Purchase Decision (Y)	0,732	0,60	Reliable

Based on the test results in table, it can be concluded that the Cronbach Alpha value of all statement items for each variable is more than 0.60. So all statement items from each research variable can be said to be reliable.

Table 3 Normality The Result

One-Sample Kolmogorov-Smirnov Test		
		Unstandardized Residual
N		80
Normal Parameters[a,b]	Mean	.0000000
	Std. Deviation	1.12270604
Most Extreme Differences	Absolute	.086
	Positive	.077
	Negative	-.086
Test Statistic		.086
Asymp. Sig. (2-tailed)		.200[c,d]
a. Test distribution is Normal.		
b. Calculated from data.		
c. Lilliefors Significance Correction.		
d. This is a lower bound of the true significance.		

Based on the normality test results in table, it can be concluded that Asymp Sig. (2-tailed) is 0.20> 0.05 where the data in this study shows that the data is normally distributed.

Table 4 Multicolinearity The Result

Independent Variable	Tolerance Value	VIF	Description
E-Promotion (X1)	0.678	1.475	Non Multikolinearitas
Price (X2)	0.651	1.536	Non Multikolinearitas
Product Quality (X3)	0.668	1.498	Non Multikolinearitas

Referring to the multicollinearity test results presented in Table, it can be concluded that the independent variables in this study have a VIF value < 10 or a tolerance value > 0.10 so that it can be said that there are no multicollinearity symptoms between the variables in this study.

Table 5 Heteroscedasticity The Result

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.392	1.159		1.201	.234
	E-Promotion X1	.044	.060	.101	.731	.467
	Price X2	-.050	.060	-.119	-.840	.403
	Product Quality X3	-.023	.064	-.050	-.356	.722
a. Dependent Variable: Abs_RES						

Based on the results of the heteroscedasticity test in table, it can be concluded that the significance value of the variables X1, X2, and X3> 0.05, so this study is free of heteroscedasticity.

Table 6 Multiple Linear Analysis

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.527	1.834		1.923	.058
	E-Promotion X1	.245	.096	.259	2.565	.012
	Price X2	.306	.094	.333	3.236	.002
	Product Quality X3	.251	.102	.250	2.463	.016
a. Dependent Variable: Y						

The regression equation obtained from this study is as follows

$$Y = 3{,}527 + 0{,}245\ X1 + 0{,}306\ X2 + 0{,}251\ X3 + e$$

Based on the multiple linear regression test results, the interpretation is as follows:

1. The constant value (a) is 3,527 (positive), meaning that if the values of e-promotion (X_1), price (X_2), and product quality (X_3) are zero, then the purchase decision (Y) will be 3,527. This represents the baseline level of purchase decision when no influence from the independent variables is present.

2. The regression coefficient of e-promotion (X_1) is 0,245, which means that for every one-unit increase in e-promotion, the purchase decision will increase by 0,245 units. Conversely, a decrease in e-promotion will lead to a decrease in purchase decision by the same amount.
3. The regression coefficient of price (X_2) is 0,306, indicating that each one-unit increase in price variable will increase the purchase decision by 0.2306 units. If price is perceived as too high or uncompetitive, purchase decisions may decrease by the same margin.
4. The regression coefficient of product quality (X_3) is 0.251, suggesting that a one-unit increase in product quality will increase the purchase decision by 0.251 units. On the other hand, a decrease in product quality will likely lead to a decrease in purchase decision as well.

Table 7 F Test Result

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	90.410	3	30.137	23.001	.000[b]
	Residual	99.577	76	1.310		
	Total	189.988	79			
a. Dependent Variable: Y						
b. Predictors: (Constant), X3, X1, X2						

It is known that the F-count value is 45.732 with a significance level of 0.000 < 0.05. This means that H_0 is rejected and H_1 is accepted, indicating that e-promotion, price, and product quality simultaneously have a significant influence on the purchase decision of Somethinc products among female students in Lowokwaru District, Malang City.

Table 8 Result of the t-test

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.527	1.834		1.923	.058
	E-Promotion X1	.245	.096	.259	2.565	.012
	Price X2	.306	.094	.333	3.236	.002
	Product Quality X3	.251	.102	.250	2.463	.016
a. Dependent Variable: Y						

The results of the t-test show that:

1) E-Promotion (X_1) has a significance value < 0.05, which means that e-promotion has a positive and significant partial effect on purchase decision. Thus, H2 is accepted.
2) Price (X_2) has a significance value < 0.05, indicating that price has a positive and significant partial effect on purchase decision. Therefore, H3 is accepted.

3) Product Quality (X_3) also has a significance value < 0.05, indicating that product quality significantly influences purchase decision. Hence, H4 is accepted.signifikan

Table 9 Coefficient of Determination Test Result (Adjusted R^2)

Model Summary[b]				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.690[a]	.476	.455	1.14465
a. Predictors: (Constant), X3, X1, X2				
b. Dependent Variable: Y				

The result of the coefficient of determination test (Adjusted R^2) in Table 4.16 shows a value of 0.455 or 45.5%. This indicates that the variables e-promotion (X_1), price (X_2), and product quality (X_3) are able to explain 45.5% of the variation in purchase decision (Y). Meanwhile, the remaining 54.5% is influenced by other factors not included in this study, such as influencer promotions, personal consumer experiences, brand image, customer reviews, and the influence of social media and peer environment. These factors may be considered for future research..

The results of this study indicate that the variables of e-promotion, price, and product quality simultaneously have a significant influence on the purchase decision of the local brand Somethinc. This conclusion is based on the multiple linear regression analysis which showed positive coefficient values for all three independent variables. The e-promotion variable has a coefficient of 0.245, suggesting that the more effective the digital promotion strategy, the higher the tendency of consumers to make a purchase. The price variable has a coefficient of 0.306, indicating that competitive and appropriately perceived pricing encourages increased purchasing decisions. Meanwhile, the product quality variable has a coefficient of 0.251, showing that good product quality aligned with consumer expectations also strengthens purchase decisions. Therefore, it can be concluded that these three variables collectively contribute to influencing consumer purchasing decisions and are key factors that businesses must consider to enhance product appeal and drive sales.

Based on the results of this study, it is found that the variable e-promotion, when tested partially using the t-test, shows a positive and significant influence on the purchase decision variable. This means that the more effective the e-promotion strategy implemented, the greater the consumer's tendency to purchase Somethinc's local products. These findings are consistent with previous research conducted by Andhifa Eka Putri & Surianto (2024) and Ardana et al. (2024), who also concluded that e-promotion has a positive and significant effect on purchase decision.

Based on the results obtained in this study, it is found that the price variable, when tested partially using the t-test, shows a positive and significant influence on the purchase decision variable. This indicates that the more appropriate and affordable the price offered, the greater the likelihood that consumers will decide to purchase Somethinc’s local products.

These findings are in line with the results of previous studies conducted by Sari et al. (2020), Batubara et al. (2022), Safitri (2023), and Karimah et al. (2024), all of which stated that price has a positive and significant effect on purchase decision

Based on the results obtained in this study, it is found that the product quality variable, when tested partially using the t-test, shows a positive and significant influence on the purchase decision variable. This implies that the better the perceived product quality, the more likely consumers are to make a purchase of Somethinc's local products.

These results are consistent with previous studies conducted by Hulima et al. (2021), Batubara et al. (2022), Safitri (2023), and Karimah et al. (2024), all of which concluded that product quality has a positive and significant effect on purchase decision

5. Conclusion

The variables e-promotion, price, and product quality simultaneously have a positive and significant influence on the purchase decision of Somethinc's local products. This indicates that all three variables collectively contribute to influencing consumer buying behavior. E-promotion, partially, has a positive and significant effect on purchase decision. Attractive and accessible digital promotion strategies have been proven to enhance consumer interest. The price variable also has a positive and significant partial effect on purchase decision. Affordable pricing aligned with consumer perceptions of product value encourages purchasing decisions. The product quality variable has a positive and significant partial effect on purchase decision. High-quality products that meet expectations drive consumers to purchase and may foster brand loyalty.

This study was conducted on a single, specific population group, namely female students residing in Lowokwaru District, Malang City. The researcher suggests that future studies should involve a broader and more diverse population. This study focused only on three variables, namely e-promotion, price, and product quality. In reality, there are still many other variables that may influence purchase decisions. This study examined only one local product brand, which is Somethinc. Although this brand is quite popular among female students and within the local cosmetics market, each brand has its own strategies in terms of e-promotion, pricing, and product quality. Therefore, the findings of this study may not necessarily apply to other local product brands.

Based on the results of this study, it is recommended that Somethinc continues to enhance the effectiveness of its e-promotion strategies by adopting more personalized approaches, such as targeted social media and digital campaigns. Additionally, the company should maintain a pricing strategy that aligns with the purchasing power of students, particularly female consumers. Maintaining product quality must remain a top priority, and the company should continuously pay attention to ingredient composition, safety, efficacy, and customer satisfaction through testimonials and reviews

Future research is encouraged to broaden the scope of the population and sample to include more diverse regions and consumer segments. It is also important to include additional variables to enrich the research findings and provide a more comprehensive understanding of the factors influencing purchase decisions.

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THE EFFECT OF BRAND IMAGE, PRODUCT QUALITY AND BRAND TRUST ON PURCHASE DECISIONS AT SKINCARE SKINTIFIC PRODUCTS (STUDY ON STUDENTS AT MALANG CITY)

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Abstract

This research aims to analyze and explain the effect of brand image, product quality and brand trust on purchasing decisions for skincare products among Malang City students. This study employs a quantitative approach, untilizing the Maholtra formula to determine the sample size due to the uncertainty surrounding the population size. Based on the result of the Maholtra formula, the sample size was 105 respondents. To solve the problem in this study, SPSS 24 was used to analyze various tests, such as validity, reliability, and adjusted R^2 determination coefficient tests. The results show that brand image, product quality and brand trust influence purchasing decisions. Brand image, product quality and brand trust significantly affect purchasing decisions.

Keywords: Brand Image, Product Quality, Brand Trust, Purchase Decision

1. Introduction

The cosmetics industry in Indonesia is currently experiencing rapid growth, as reflected in a significant increase in revenue from 2021 to 2024, which is projected to rise by 48%. By 2024, the Indonesian cosmetics market is expected to generate USD 1.94 billion in revenue, compared to USD 1.31 billion in 2021(Kemenperin, 2024). This phenomenon represents a trend or lifestyle that has become an integral part of Indonesian society, both for women and men, with the market expanding and the demand for skincare products increasing. This trend is predominantly driven by women in the use of skincare products (Chairina et al., 2023).

In the midst of intense competition, both from domestic and international cosmetic industries, it is essential to develop effective marketing strategies to maintain existence. One brand that has successfully capitalized on this opportunity is Skintific, a Canadian skincare brand that entered Indonesia in 2021. By introducing the latest technological innovations, Skintific offers high-quality products that are certified halal and BPOM (Indonesian Food and Drug Authority). These certifications are crucial factors for consumers when choosing skincare products. Specifically, it indicates that Skintific, through its marketing strategy, has successfully maximized its brand presence among consumers, with significant efforts to influence and shape purchasing decisions.

To address these challenges, the Theory of Planned Behavior is needed to monitor human behavior by considering intentions, attitudes, subjective norms, and behavioral control. The decision-making or problem-solving process is an action taken to achieve goals as a key step in resolving issues. In this context, the purchasing decision is one of the steps in a longer process that involves identifying consumer needs and emotions when making a purchase (Kotler & Armstrong, 2015). The success of this brand is closely tied to the importance of factors such as brand trust, product quality, and brand image, which are believed to influence consumer purchasing decisions. (Schiffman & Kanuk, 2010) state that brand image is the external aspect of a product or service, including information, opinions, and perceptions about the product. It encompasses the perceptions built by the brand in an emotional or social connection with consumers.

Furthermore, there is a close relationship between brand perception and the quality of the product provided by the manufacturer. Product quality is one of the main positioning tools in marketing, influencing its ability to satisfy customers (Kotler & Armstrong, 2015). Factors that affect product quality include performance, features, characteristic dimensions, technical suitability, consumption, and aesthetic quality. In this context, the trust buyers place in the product's expertise to meet quality and fulfill promises while prioritizing their needs is essential (Rusmanida, 2020). Specifically, it indicates that brand trust plays a significant role in consumer decision-making when purchasing a product.

This study identifies a research gap in the findings of (Rahayu et al., 2024), who stated that product quality influences purchase decisions. However, (Lestari & Wismantoro, 2024) found the opposite, presenting conflicting results. On the other hand, (Lombok & Samadi, 2022) showed that brand trust influences purchase decisions, whereas (Herviani et al., 2020) found the opposite. Therefore, this study aims to re-examine the impact of each variable—brand image, product quality, and brand trust—on purchase decisions.

2. Literature Review

In this study, the Theory of Planned Behavior (TPB) is used as the grand theory, which explains human behavior by considering intentions, attitudes, subjective norms, and behavioral control. Observations of how an individual or group acts when choosing and evaluating products are known as consumer behavior (Ajzen, 1991). This indicates a strong relationship with purchasing decisions, as it explains how a person's intention to purchase a product or service is formed.

Consumer purchasing decisions in the cosmetic industry are influenced by three key factors: brand image, product quality, and brand trust. Brand image encompasses consumer perceptions of quality, value, and emotional connections with the brand, which has been shown to significantly affect purchasing decisions. Research by (Firmansyah, 2019) and (Lestari & Wismantoro, 2024) indicates that a positive brand image increases consumer interest in making a purchase, as consumers are more likely to choose brands they trust. In addition, product quality is another critical factor in influencing purchasing decisions. Product quality, which includes performance, durability, and reliability, impacts consumer perceptions and increases the likelihood of purchasing the product (Kotler & Armstrong, 2015). (Rahayu et al., 2024) and (Tjiptono, 2008) emphasize that higher-quality products are more likely to be purchased because they meet consumer expectations.

Brand trust also plays a significant role in purchasing decisions, where consumers tend to prefer brands they trust to fulfill the quality promises made. Brand trust positively influences loyalty and customer retention, which ultimately drives repeat purchasing decisions(Kotler & Armstrong, 2015);(Lombok & Samadi, 2022). Studies show that these three factors—brand image, product quality, and brand trust—interact simultaneously and mutually influence purchasing decisions. For instance, (Sitohang & Siagian, 2024) and (Herviani et al., 2020) found that the combination of these three factors significantly affects consumer purchasing decisions. However, there are some inconsistencies, as seen in (Lestari & Wismantoro, 2024), where product quality did not always affect purchasing decisions. Therefore, this study aims to reassess the impact of brand image, product quality, and brand trust on purchasing decisions for Skintific products among university students in Malang.

3. Methodology

This study uses a quantitative method to objectively test hypotheses with numerical data that can be statistically analyzed. The survey was conducted using Google Forms, which were distributed through social media platforms (WhatsApp and Instagram). The population consists of university students in Malang City, selected because they align with the research findings

from the (ZAP Beauty Index, 2024) which states that the largest group of skincare users is women aged 15-27. This age group represents the typical age of university students.

The data were collected using (Malhotra, 2008) formula, with a sample size of 105 respondents chosen through purposive sampling. This method was selected because it involves sampling based on specific criteria (Sugiyono, 2019) , including: university students from Malang City, users and purchasers of Skintific skincare products at least once, and females aged 15-27. After collecting the data, it was analyzed using descriptive statistical methods and SPSS version 24 software.

4. Result and Discussion

The variables of product quality, brand trust, and brand image have an r calculated value that exceeds the r table value. As a result, the items in the questionnaire are valid, as shown in Table 1 below:

Tabel 1. Validity test result

Variable	Item	R Count	R Table	Description
Purchase Decision	Y1	0.719	0.191	Valid
	Y2	0.762	0.191	Valid
	Y3	0.716	0.191	Valid
	Y4	0.748	0.191	Valid
	Y5	0.762	0.191	Valid
	Y6	0.747	0.191	Valid
Brand Image	X1.1	0.779	0.191	Valid
	X1.2	0.805	0.191	Valid
	X1.3	0.832	0.191	Valid
	X1.4	0.751	0.191	Valid
Product Quality	X2.1	0.767	0.191	Valid
	X2.2	0.702	0.191	Valid
	X2.3	0.734	0.191	Valid
	X2.4	0.806	0.191	Valid
	X2.5	0.733	0.191	Valid
	X2.6	0.660	0.191	Valid
	X2.7	0.743	0.191	Valid
Brand Trust	X3.1	0.811	0.191	Valid
	X3.2	0.832	0.191	Valid
	X3.3	0.802	0.191	Valid
	X3.4	0.807	0.191	Valid

Source:data processed 2025

The variables of brand trust, product quality, brand image, and purchase decision all have a Cronbach's Alpha value greater than 0.6, indicating that they are reliable

Tabel 2. Reliability test result

No.	Variables	Cronbach's Alpha	Description
1	Purchase Decision	0.832	Reliable
2	Brand Image	0.800	Reliable
3	Product Quality	0.854	Reliable
4	Brand Trust	0.828	Reliable

Source:data processed 2025

The purpose is to determine how the regression model, independent variables, and dependent variables are normally distributed, so a normality test is used (Ghozali, 2018) . If the significance value is greater than 0.05, the data is considered to be normally distributed. Conversely, if the significance value is less than 0.05, the data is considered to be not normally distributed.

Tabel 3. Normality test result

One-Sample Kolmogorov-Smirnov Test		
		Unstandardized Residual
N		105
Normal Parameters[a,b]	Mean	.0000000
	Std. Deviation	1.54737745
Most Extreme Differences	Absolute	.060
	Positive	.046
	Negative	-.060
Test Statistic		.060
Asymp. Sig. (2-tailed)		.200[c,d]

Source:data processed 2025

The purpose of the multicollinearity test is to determine whether the independent variables in a multiple linear regression model are highly correlated with each other (Ghozali, 2018). For a regression model to be free from multicollinearity, the Variance Inflation Factor (VIF) should be around 1 and not exceed 10, and the tolerance value should be close to 1 or greater than 0.05.

Tabel 4. Multicollonearity test result

variable	Tolerance	VIF	Description
X1	.306	3.264	Multicollinearity Free
X2	.229	4.362	Multicollinearity Free
X3	.320	3.122	Multicollinearity Free

Source:data processed 2025

The heteroscedasticity test is used to determine whether the residuals in a regression model show unequal variance across observations. In this test, heteroscedasticity is considered absent if the significance value of the independent variables is greater than 0.05, and it is considered present if the significance value of the independent variables is less than 0.05.

Tabel 5. Heteroscedasticity test result

variable	Sig.	Description
X1	.364	Heteroscedasticity Free
X2	.825	Heteroscedasticity Free
X3	.444	Heteroscedasticity Free

Source:data processed 2025

The results of the multiple linear regression test can be summarized as follows:
a. The constant (a) is 4.329, indicating that if Brand Image (X1), Product Quality (X2), and Brand Trust (X3) are assumed to be 0, the value of the Purchase Decision variable (Y) would be 4.329.
b. The regression coefficient for Brand Image (X1) is 1.251, indicating that for every increase of 1 unit in the Brand Image variable (X1), the Purchase Decision (Y) will increase by 1.251 units, or vice versa.
c. The regression coefficient for Product Quality (X2) is 0.311, indicating that every increase of 1 unit in the Product Quality variable (X2) will result in an increase in Purchase Decision (Y) by 0.311 units, or vice versa.
d. The regression coefficient for Brand Trust (X3) is -0.579, indicating that for every decrease of 1 unit in the Brand Trust variable (X3), the Purchase Decision (Y) will decrease by 0.579 units, or vice versa.

Tabel 6. Multiple Linear Regression Analysis result

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.429	1.245		3.557	.001
	X1	1.251	.110	.847	11.332	.000
	X2	.311	.083	.356	3.766	.000
	X3	-.579	.074	-.542	-7.833	.000

Source:data processed 2025

In essence, this test explains whether each independent variable, or all the independent variables in the model, simultaneously affect the dependent variable. If the significance is greater than 0.05, it means that the variables of product quality, brand trust, and brand image do not impact the purchase decision. Conversely, if the significance is less than 0.05, it indicates that these variables do have an impact on the purchase decision.

Tabel 7. Test F result

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	684.458	3	228.153	133.930	.000[b]
	Residual	172.056	101	1.704		
	Total	856.514	104			
a. Dependent Variable: Y						
b. Predictors: (Constant), X3, X1, X2						

Source:data processed 2025

In essence, this test describes the influence of each independent variable on interpreting the dependent variable. If the significance t-value is greater than 0.05, it means that the variables of brand trust, product quality, and brand image do not affect the purchase decision variable. Conversely, if the t-value is less than 0.05, it indicates that these variables do impact the purchase decision.

Tabel 8. Test t result

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.429	1.245		3.557	.001
	X1	1.251	.110	.847	11.332	.000
	X2	.311	.083	.356	3.766	.000
	X3	-.579	.074	-.542	-7.833	.000
a. Dependent Variable: Y						

Source:data processed 2025

1. According to the analysis results in Table 8, the Brand Image (X1) variable has a relevance value of 0.000 < 0.05, indicating that the Brand Image (X1) variable has a significant impact on the Purchase Decision (Y) variable.
2. According to the analysis results in Table 8, the Product Quality (X2) variable has a relevance value of 0.000 < 0.05, indicating that the Product Quality (X2) variable significantly impacts the Purchase Decision (Y) variable.
3. According to the analysis results in Table 8, the Brand Trust (X3) variable has a significance value of 0.000 < 0.05, indicating that the Brand Trust (X3) variable has a significant impact on the Purchase Decision (Y) variable.

Tabel 9. Coeffiecient of Determination *(Adjusted R²)* result

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.894[a]	.799	.793	1.30519
a. Predictors: (Constant), X3, X1, X2				

Source:data processed 2025

According to Table 9, the Adjusted R^2 value is 0.799, or 79.9%. This indicates that 79.9% of the variance in Purchase Decision is explained by the variables of Brand Image (X1), Product Quality (X2), and Brand Trust (X3), while the remaining 20.1% is influenced by variables not included in this study.

5. Conclusion

This study shows that product quality, brand image, and brand trust simultaneously influence purchase decisions. Individually, brand trust, product quality, and brand image are all significantly relevant to purchase decisions. It can be concluded that brand image creates the first impression in the consumer's mind, influencing their decision to purchase. Product quality is highly valued, especially when it includes safe and guaranteed ingredients suitable for different skin types, which certainly attracts consumers. Meanwhile, brand trust tends to provide consumers with confidence and assurance. As a result, consumers have a positive view of the Skintific brand, which holds certifications and makes claims that align with what is promised.

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ANALYSIS OF MPX II OIL PRODUCT INVENTORY CONTROL USING ECONOMIC ORDER QUANTITY (EOQ) AND FISHBONE METHODS AT PSJ OIL DISTRIBUTOR IN CIMAHI CITY

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Abstract

PSJ Oil Distributor has an out-of-stock problem with its most sold product, MPX II. This condition hinders sales and meeting the needs of salespeople. This study analyzes inventory control and improvement efforts using the economic order quantity (EOQ) method. This type of research uses a qualitative approach and Fishbone analysis, while data collection involves observation, interviews, and documentation. Based on the analysis results, the EOQ method is more economical than the company's method. The results of the calculation of this method result in a smaller total inventory cost of 18.57%. This research provides information to companies related to other calculations, such as safety stock and POM QM software applications that can be used to control the company's inventory to be more optimal.

Keywords: *Inventory Control, Economic Order Quantity, Fishbone*

1. Introduction

Running an oil business provides an opportunity to meet the needs of customers who have vehicles, even though during the pandemic, there has been a decline, especially in the economy, but the opportunity for oil sales is still running, because it is also accompanied by the sale of motorcycles whose demand is stable every month. (Ministry of Industry, 2022). However, the abundance of oil traders makes prices and quality vary for the sake of competition in the field, which is sometimes unhealthy, so price and quality become problematic (Vedhitya, 2021). However, the national automotive industry has a broad and positive influence on the sustainability of its development, so that the automotive market in Indonesia provides promising prospects for business opportunities in the oil lubricant market. et (Muhammad Hiru, 2020).

The researcher chose the MPX II product because daily conditions sometimes occur in inventory shortages, and experience significant gaps or differences. It even hinders the rapid turnover of sales and the fulfillment of needs for salespeople, so that the warehouse part must make spending decisions on partners to meet the needs of orders, or be delayed by waiting for the spending budget to be collected (Zariah, 2023). In 2025, the researcher conducted observations and interviews again and found a decrease in sales with the current economic situation in Indonesia, based on data from the Central Statistics Agency (BPS) showing deflation and a decline in people's purchasing power in early 2025. Sales from suppliers to shopping centers tend to be negative from December 2024 to February 2025, and only improve ahead of Eid (Ashri, 2025). Termination of cooperation with partners, lack of marketing, salespeople, and EOQ methods have not been fully applied by the Distributor. With such circumstances, a way is needed so that this business with inventory in its warehouse can run effectively and efficiently, in order to support optimal inventory and a smooth business. Sales also do not experience obstacles in the availability of goods, can always meet demand, and can face economic conditions no matter what. Therefore, this study aims to analyze the inventory

control of MPX II oil products at PSJ Oil Distributors, with an effort to improve inventory control using the Economic Order Quantity (EOQ) and Fishbone.

2. Literature review

2.1 Inventory handling

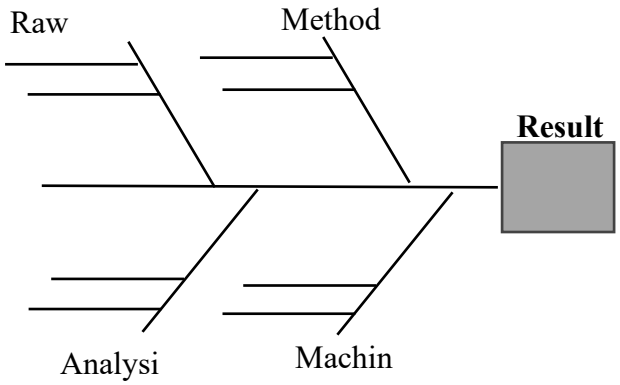
In controlling the inventory of services such as distributors who are engaged in the wholesale and retail business, inventory management is very important. Inventory control often makes the difference between success and failure, so to avoid depreciation or depreciation that occurs, inventory control is needed (Heizer & Render, 2015). Similarly, from a study conducted by Putra & Rofita (2020), Inventory control is a set of control policies to determine the level of inventory that must be maintained, when orders to increase inventory should be placed and how large orders should be held, the amount or level of inventory required varies for each factory company, depending on the production volume, the type of company and the process.

2.2 *Economic order quantity (EOQ)*

EOQ or economic order quantity is one of the methods that can be used in inventory control in order to create an economical and optimal inventory control calculation. Barnes (2017) says that Economic Order Quantity (EOQ) is the optimum quantity of any item that should be ordered from a supplier, and Slack & Brandon-Jones (2018) say the EOQ approach attempts to find the best balance between the advantages and disadvantages of holding stock. It is concluded that Economic Order Quantity (EOQ) is the optimal amount of goods to order in order to create the best balance between profit and loss in the storage of goods inventory. This research can be said to be successful if the total inventory cost generated from the use of the EOQ method is smaller than the total inventory cost generated by the company, including a calculation of the inventory safe point and when to buy back.

2.3 *Fishbone/ cause and effect diagram*

According to Heizer & Render (2015), cause and effect diagram: A device that identifies the elements of the process (cause) that affect an outcome.



Picture 1 Fishbone/ Cause-and-Effect Diagram

The operations manager begins the determination of the "cause" with four categories called "4M", including materials, machinery, people, and methods. These four categories provide a good list for inspection to do the initial analysis. Each cause is linked to each category that is united in separate bones along the branch, and often through a process of brainstorming (Heizer & Render, 2015). Then the study conducted by Thahira (2023), Fish bone analysis is used to categorize various potential causes of a problem or subject matter in an easy-to-understand and neat way.

3. Methodology

3.1 Research Design

This research aims to provide a solution to a problem using steps called research methods. The research method is an empirical analysis conducted to analyze phenomena in a real-life context. When there is a gap, the source of evidence is used (Dzimińska, 2020). The method used is a qualitative descriptive method with an analytical approach. Descriptive research is research that tries to describe a research activity on certain objects in a systematic and explicit way (Hermawan, 2019).

3.2 Objects of Research

The research object chosen in the preparation of this research is PSJ Oil Distributor, which is a company engaged in the distribution of motorcycle oils to workshops and directly to consumers, as well as meeting a small part of the needs of the sector.

3.3 Research informants

In this study, the analysis unit studied was the manager/manager of the operational and marketing department, as well as several employees at PSJ Oil Distributor, as a source of supporting information.

3.4 Population Determination Techniques, Samples, and Data Collection Instruments

Expressions described by Sovereign (2018) In qualitative research, it does not use a population, because qualitative research departs from certain cases that occur in certain social situations, and the results of the study will not be applied to the population, but are transferred to other places in social situations that have similarities to the social situation in the case studied. The social situation observed in this study is the control of oil supplies, with the informants being the warehouse and administration divisions. Then, the sampling used is sampling purposive because it is easy to use, and the resulting bias is relatively small. In this research, the researcher himself is the main instrument in obtaining data, determining the focus of the research, selecting sources, conducting observations in the field, and conducting documentation studies, which are then processed by the researcher.

3.5 Data collection techniques

Researchers must pay attention to data collection techniques, because data collection techniques will affect the results that will be obtained by the researcher later, which must be in accordance with the purpose and obtain data that is accurate with what is needed by the researcher. Gusnita & Mariana (2020) The data collection technique is the most strategic step in research because the main objective of research is to get data. In qualitative research, data collection was carried out in natural conditions (Natural setting), primary data sources, and data collection techniques using observation and in-depth interviews, as well as documentation. The data collection technique is part of the steps in obtaining primary data needed by researchers in their research, including observation, interviews, and documentation. The data collection techniques used in this study are:

3.6 Data Analysis Techniques

The process of examining, comparing, separating, and reassembling different parts of a dataset to draw conclusions about trends and issues in the overall dataset (Gora, 2019). According to Fitrah & Luthfiyah (2018) "Qualitative data is analyzed using qualitative data analysis of an interactive model consisting of three steps, namely, data reduction, data presentation, and conclusion drawn".

Reduction, activity data summarizes data, selects the main things, focuses on important things, looks for themes and patterns, and then discards those that are not important. In the process of data reduction, the author separates the data on out-of-stock & focuses on the MPX

II oil products that have been obtained. Among the data is the focus of research, with data that is not related to the research.

Data display, this qualitative research presents data in the form of brief descriptions, charts, relationships between categories, and the like. Makes it easier to understand what is happening, and plan the next activity based on what has been understood. The data display in this study is in the form of graphs, flowcharts, tables so that it can reflect the existing conditions at the time this research is carried out.

Conclusion drawing/verification, the researcher conducted data analysis and conclusions by manually calculating according to the formula, and also using POM-QM for Windows version 5 software.

3.7 Validity and Reliability Tests

In this study, testing the validity and reliability of the data was carried out using triangulation to check the validity and reliability of the data. According to Gaffar (2020)"Triangulation is a data validity check technique that utilizes something else. Triangulation with sources means comparing and double-checking the degree of trust of information obtained through time, sources, and techniques". According to Sugiyono (2018) There are three triangulations, which include:

Source triangulation plays a role in testing the credibility of data by checking data that has been obtained through several sources. The data that has been analyzed by the researcher to produce a conclusion, then an agreement (member check) is asked with three data sources, consisting of several sources as data sources and informants.

Triangulation techniques play a role in testing the credibility of data by checking it from the same source with different techniques, namely interviews, then checked with observation and documentation.

Time triangulation is often an influence on the credibility of the data collected in the interview technique, such as in the morning when the interviewee is still fresh, there are not many affairs or busy work, so that the data provided will be more valid and credible.

4. Results and Discussion

4.1 Results

The use of the economic order quantity (EOQ) method at PSJ Oil Distributors supports efforts to improve the control of their inventory in the warehouse to be better. The following is data analysis and conclusion drawing by manually calculating according to the formula and application of POM QM software. The following is MPX II oil inventory data at PSJ Cimahi oil distributors from November 2021 to March 2025.

Table 1 MPX II Oil Inventory Data at Central Cimahi PSJ Oil Distributors for November 2021 – March 2025

MPX II OIL INVENTORY DATA (01/11/21-31/03/25)							
Year	**Moon**	**Initial Inventory (Per Box)**	**Purchase (per box)**	**Frequency (Times)**	**Total stock (per Box)**	**Sales (Per Box)**	**Final Stock (Per Box)**
2021	November	34	15	1	49	21	28
2021	December	28	40	3	68	59	9
2022	January	9	75	4	84	50	34
2022	February	34	62	3	96	40	56
2022	March	56	63	3	119	70	49

MPX II OIL INVENTORY DATA (01/11/21-31/03/25)							
Year	**Moon**	**Initial Inventory (Per Box)**	**Purchase (per box)**	**Frequency (Times)**	**Total stock (per Box)**	**Sales (Per Box)**	**Final Stock (Per Box)**
2022	April	49	81	4	130	90	40
2022	May	40	75	4	115	83	32
2022	June	32	84	4	116	88	28
2022	July	28	70	3	98	75	23
2022	August	23	60	3	83	48	35
2022	September	35	20	1	55	41	14
2022	October	14	30	2	44	34	10
2022	November	10	50	3	60	40	20
2022	December	20	42	2	62	29	33
2023	January	33	25	1	58	32	26
2023	February	26	19	1	45	24	21
2023	March	21	61	3	82	38	44
2023	April	44	25	1	69	41	28
2023	May	28	32	2	60	29	31
2023	June	31	29	2	60	27	33
2023	July	33	29	2	62	26	36
2023	August	36	23	1	59	22	37
2023	September	37	18	4	55	15	40
2023	October	40	34	5	74	19	55
2023	November	55	33	5	88	21	67
2023	December	67	26	5	93	21	72
2024	January	72	23	5	95	15	80
2024	February	80	12	3	92	11	81
2024	March	81	17	4	98	15	83
2024	April	83	33	5	116	18	98
2024	May	98	8	2	106	12	94
2024	June	94	6	2	100	10	90
2024	July	90	10	3	100	13	87
2024	August	87	13	3	100	10	90
2024	September	90	9	2	99	14	85
2024	October	85	9	2	94	8	86
2024	November	86	9	2	95	8	87
2024	December	87	9	2	96	5	91
2025	January	91	7	2	98	8	90
2025	February	90	4	1	94	7	87
2025	March	87	17	4	104	10	94
Total		**2,164**	**1,307**	**114**	**3,471**	**1,247**	**2,224**
Average		**52.78**	**31.88**	**2.78**	**84.66**	**30.41**	**54.24**

Source: PSJ Cimahi Oil Distributor Data, reprocessed 2025

Based on the table above in December 2021, September and October 2022, PSJ Oil Distributors experienced stock the end of the slight, namely 9, 14 and 10 which caused the lack of fulfillment of the demands of the sales, Because based on an interview with the warehouse

division that stock which is only that can at least fill 1 or 2 cars sales not yet sales Other. Supporting research conducted (Hikam, 2022), if the company experiences such a thing, it is necessary to control inventory in order to be able to plan the optimal sales level and when consumers buy large quantities can be served by all, even though the updated December 2024 and February 2025 experienced a drastic decrease in sales of 5 and 7 boxes, business operations are also less than optimal such as the turnover of goods being slowed down, so inventory control must be considered again.

Refer to the journal Indah et al. (2018) First, you need to know what types of fees exist in the order fee at the PSJ Cimahi Oil Distributor, which is described in Table 2.

Table 2 MPX II Product Order Fee in November 2021- March 2025

No.	Fee Type	Details
1.	Wifi (IDR 336,300 / Month x 22 Months) + (IDR 253,350 / Month x 19 Months)	IDR 12,212,250
2.	Postage	IDR 0
3.	Receipt of Goods/ Unloading (Driver, Kenek, Snacks and Drinks) (IDR 190,000/ per order x 40 times) + (IDR 100,000/ per order x 1 time) + (IDR 10,000/ per order x 53 times) + (IDR 0/ per order x 20 times)	IDR 8,230,000
	Total	IDR 20,442,250

Source: PSJ Cimahi Oil Distributor Data, reprocessed 2025

To calculate the cost of one order for MPX II oil products at Distributor PSJ, as follows:

$$\text{Cost of one order} = \frac{\text{Total cost of ordering}}{\text{Frequency of ordering}}$$

$$= \frac{\text{IDR } 20{,}442{,}250.00}{114} = \text{IDR } 179{,}317.98$$

Based on the calculation above, the cost of one order of MPX II oil products is IDR 179.317,98. Then, the next step is to also know the types of costs that exist in the storage costs of the PSJ Cimahi Oil Distributor, described in table 3.

Table 3 MPX II Product Storage Costs in November 2021- March 2025

No.	Fee Type	Details
1.	Electricity (IDR 175,000/ Month x 22 Months) + (IDR 183,333/ Month x 19 Months)	IDR 7,333,333
2.	Rent (IDR 2,200,000/ Month x 22 Months) + (IDR 1,200,000/ Month x 19 Months)	IDR 71,200,000
3.	Labor and Warehouse maintenance costs (IDR 2,100,000/ Month x 22 Months) + (IDR 1,100,000/ Month x 19 Months)	IDR 67,100,000
	Total	IDR 145,633,333

Source: PSJ Cimahi Oil Distributor Data, reprocessed 2025

To calculate the storage cost per unit of MPX II oil product at PSJ Oil Distributor, as follows:

$$\text{Storage cost} = \frac{\text{Total storage cost}}{\text{Total raw material requirement}}$$

$$= \frac{\text{IDR } 145{,}633{,}333.33}{1.247 \text{ boxes}} = \text{IDR } 116{,}786.96 \text{ /boxes}$$

Based on the calculation above, the storage cost per unit of MPX II oil products at PSJ Cimahi Oil Distributor is IDR116,786.96/ box.

Furthermore, it can be calculated how much the company's policy is in determining the cost of inventory of MPX II oil products at PSJ Cimahi Oil Distributors based on previous data. Refer to journals Rokim et al. (2022) The formula for calculating total cost is as follows:

$$TC = O\frac{S}{Q} + c\frac{Q}{2}$$

Information:
O = Cost per message
S = Material use (in units) for a period
Q = Most economical order quantity
C = Carrying cost per unit

$$TC = O\frac{S}{Q} + c\frac{Q}{2}$$

$$TC = \text{IDR } 179{,}317.98\frac{1.247 \text{ boxes}}{31{,}87 \text{ boxes}} + \text{IDR } 116{,}786.96\frac{31{,}87 \text{ boxes}}{2}$$

= IDR 7,014,529.83 + IDR 1,861,470.13

= IDR 8,875,999.96

So, the calculation above, the total inventory cost from what is usually done by the PSJ Cimahi Oil Distributor is IDR 8,875,999.96 which still has not implemented the EOQ method.

- Determining the optimal number of orders based on the calculation of the EOQ formula. Refer to the journal Rokim et al. (2022) The formula for calculating EOQ is as follows:

$$EOQ = \sqrt{\frac{2 \times R \times oc}{cc}}$$

Information:
R = Number of discharges in units during the production period
OC = Cost per message
CC = Storage cost per unit

$$EOQ = \sqrt{\frac{2 \times R \times oc}{cc}}$$

$$EOQ = \sqrt{\frac{2 \times 1.247 \times \text{IDR } 179{,}317.98}{\text{IDR } 116{,}786.96}} = 61.88 \approx 62 \text{ Boxes}$$

From the calculation above, it can be seen that the optimal number of orders in each order for MPX II oil products is 62 boxes.

- Determining Safety Stock (SS). After determining the optimal number of orders based on the calculation of the EOQ formula, the next step is to determine safety stock. Refer to journals Rokim et al. (2022) The formula to calculate it is as follows:
  SS = (Maximum Usage – Average Usage) x Lead Time

The company's actual data for the maximum usage is 90 boxes, the average usage is 84.65 boxes based on Table 4.1, and the Lead Time is 2.5 days from ((1+2+3+4)/4).

SS = (90 – 84.65) x 2.5 = 13.35 ≈ 13

Based on the calculation above, the amount of inventory that must be prepared by the warehouse to prevent shortages is as many as 13 boxes.

- Menentukan Reorder Point (ROP), Refer to the journal Rokim et al. (2022) The formula to calculate it is as follows:
  ROP = (d x L) + SS

Information:
d = Need level
L = Lead Time
SS = Safety Stock

To calculate the reorder point according to Putra & Rofita (2020), obtained first the use per day with the following formula, and the number of working days (t) is known to be 1,038 days in 41 months according to the data.

Information:
d = usage per day
t = number of working days
D = usage per year

$$d = \frac{D}{t}$$

$$d = \frac{1,247}{1,038} = 1.20 \text{ box}$$

Then the ROP reorder points are:
ROP = (d x L) + SS
= (1.20 so x 2.5 hari) + 13.35 boxes
= 16.36 ≈ 16 Boxes

Based on the calculation above, it can be seen that the reorder point of MPX II oil products at PSJ Oil Distributors is 16 boxes.

- Determining the Frequency of Bookings, References to journals Rokim et al. (2022) The formula for calculating the frequency of bookings is as follows:

$$I = \frac{D}{EOQ}$$

Information:
I = Frequency of orders in one year
D = Number of material requirements for a year
EOQ = Number of material purchases per order

$$I = \frac{D}{EOQ}$$

$$I = \frac{1,247}{61.88} = 20.15 \approx 20 \text{ times}$$

Based on the calculation above, it can be seen that the frequency of ordering MPX II oil products at PSJ Oil Distributors is 20 times, which means that the company should place orders 12 times a year.

- Determining the Total Cost (TC), Refer to the journal Rokim et al. (2022) The formula for calculating total cost is as follows:

$$TC = O\frac{S}{Q} + c\frac{Q}{2}$$

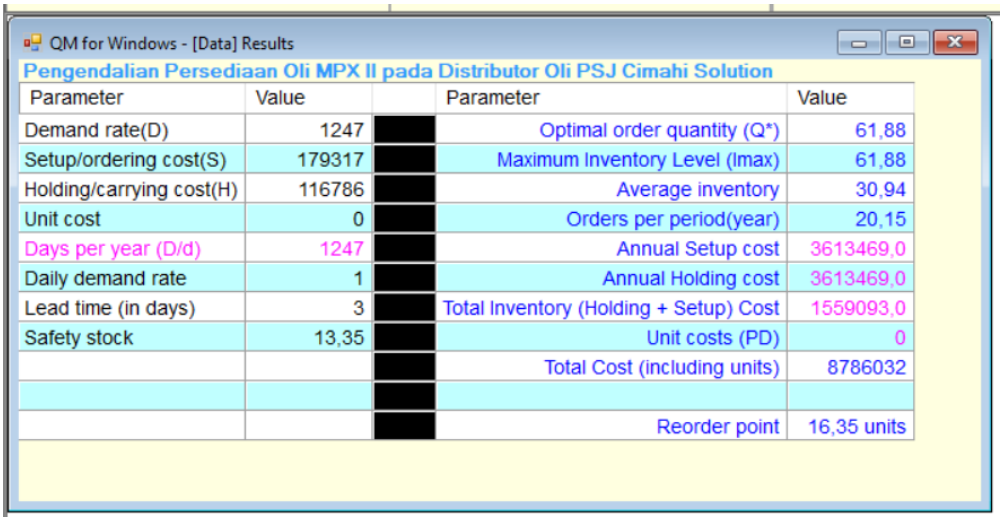
Information:
O = Cost per message
S = Material use (in units) for a period
Q = Most economical order quantity
C = Carrying cost per unit

$$TC = O\frac{S}{Q} + c\frac{Q}{2}$$

$$TC = \text{IDR } 179{,}317.98 \frac{1{,}247 \text{ boxes}}{61.88 \text{ boxes}} + \text{IDR } 116{,}786.96 \frac{61.88 \text{ boxes}}{2}$$
$$= \text{IDR } 3{,}613{,}493.84 + \text{IDR } 3{,}613{,}493.84$$
$$= \text{IDR } 7{,}226{,}987.69$$

Based on the calculation above, it can be seen that the total cost of inventory of MPX II oil products at PSJ Oil Distributors using the economic order quantity (EOQ) method is IDR 7,226,987.69.

- Defining EOQ with Software Data analysis and conclusion drawing using POM-QM software for Windows version 5. Supporting previous research, namely (Amaliah & Fajar 2023) Which states that the POM-QM software for Windows is an alternative to a tool that can make calculations and decision-making easier.



Picture 1 Account Economic Order Quantity (EOQ) using POM QM for Windows
Source: Data processing results, 2025

The results of the calculation using the POM-QM for Windows software version 5 show the same results as the calculations that have been made by the researcher from economic order quantity (EOQ), safety stock, reorder point, order frequency, and total cost.

4.2 Discussion

- Control of the inventory of MPX II oil products at PSJ Oil Distributors using the Economic Order Quantity (EOQ) Method

Refer to journals Putra & Rofita (2020) The following is a comparison table of the company's policy calculation with the results of the researcher's calculation using the economic order quantity (EOQ) and software POM QM.

Table 4 Comparison of Cost Components at PSJ Cimahi Oil Distributor

No.	Cost Component	Result		
		Company Policy	EOQ Method	Software POM QM
1.	Optimal Booking Quantity	31.87 boxes	61.88 boxes	61.88 boxes
2.	Safety Stock (SS)	0	13.35 boxes	13.35 boxes
3.	Return Booking Point (ROP)	5 boxes	16.36 boxes	16.35 boxes

No.	Cost Component	Result		
		Company Policy	EOQ Method	Software POM QM
4.	Booking Frequency	33 times	20,15 times	20.15 times
5.	Total Cost of Inventory (TC)	IDR 8,875,999.96	IDR 7,226,987.69	IDR 7,226,938

Source: data processing results, 2025

Based on the table above, the total inventory cost, according to the company's policy, is IDR 8,875,999.96 while the total inventory cost using the economic order quantity (EOQ) method manually generates IDR 7,226,987.69 and in applied POM QM software generates IDR 7,226,938 18.57% smaller than using the company's policy. So that economic order quantity (EOQ) can minimize total inventory costs and order costs that are more optimal than the company's policies. With these results, the company should use the economic order quantity (EOQ) method and apply it consistently compared to the company's previous policy because it is proven to minimize the cost of inventory of MPX II oil products.

- Control of the inventory of MPX II oil products at PSJ Oil Distributors using the Fishbone Method

After analysis of the data collected by the researcher, and calculation with the economic order quantity (EOQ), the discussion of using the fishbone analysis to find all possible actual causes of problems in the inventory control of PSJ Cimahi Oil Distributors. Supporting research conducted (Thahira, 2023) with the analysis, fishbone is able to determine the obstacles that occur, while according to (Shamsan et al., 2024) It is to be able to explore the potential causes that occur systematically.

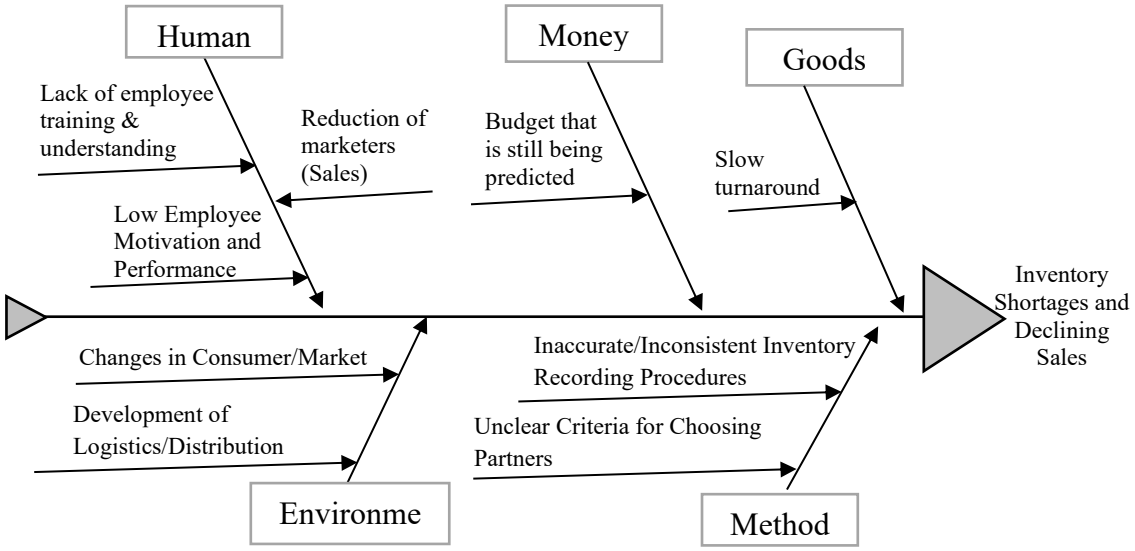


Figure 2: Fishbone Diagram

Based on the Fishbone picture, the result of the lack of inventory and the decrease in sales of MPX II oil products is due to the first person who has not complied with the SOPs, the lack of good instruction and communication that is consistent so that it requires training or understanding of employees and often changes of employees, aka no one wants to settle for 1 year more than 1 or 2 people who have been and a reduction in marketers. Second, from money because the budget is still divided, which is not yet a fixed budget. Third, in cases where there are goods that are late to leave. Fourth, from the method because it has not been consistent in applying EOQ, even though it has been recommended during the first year of research, and also

due to the termination of business partners, so it is necessary to select partners again. Fifth, the environment is due to changes in consumer/market behavior and thus decreases.

5. Conclusion

Based on the results of the analysis and discussion, there is a shortage of inventory and a decrease in sales of MPX II oil products at PSJ Cimahi Distributors. From the Fishbone diagram analysis, there are five causative factors from the categories of people, money, goods, methods, and the environment. To support the control of the inventory of MPX II oil products, the EOQ method can be consistently implemented because this method can reduce the total cost of MPX II oil product inventory by eighteen points, fifty-seven percent of the company's policy.

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QUALITY CONTROL ANALYSIS OF BABYTERRY FABRIC AT CV. MENUJU SUKSES MANDIRI

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Abstract

This study analyzes the quality control of Babyterry fabric products at CV. Menuju Sukses Mandiri, a textile company located in Soreang, West Java. The study aims to examine the planning, implementation, evaluation, and improvement efforts in the quality control process. The company faced issues with fluctuating defect rates, peaking at 11,2% in January 2024, far above the acceptable threshold of 1%. To address this, the Six Sigma method with the DMAIC (Define, Measure, Analyze, Improve, Control) approach was applied to identify the root causes of defects and implement data-driven corrective actions. The research findings indicate that product defects are primarily caused by machine wear and human error. Through statistical analysis, the Sigma level in the production process was found to range from 2.0 to 5.1, reflecting variability in quality performance. The implementation of Six Sigma resulted in a significant improvement in product quality, particularly durng the period from June to September 2024, when the defect rate decreased to 0.5%. this study concludes that the Six Sigma methodology can effectively improve production quality and reduce defects rates if consistently applied, accompanied by adequated employee training and regular machine maintenance.

Keywords: *Quality Control, Babyterry, Six Sigma, DMAIC, Textile Industry, Defect Rate, Production Efficiency.*

1. Introduction

The increasingly competitive dynamics of global business, driven by rapid advances in science and technology, require every company to constantly innovate and implement adaptive strategies (Nugroho & Nugroho, 2019; Sudarta, 2022). In the context of the manufacturing industry, attention to product quality is fundamental to maintaining competitiveness and meeting market expectations (Safitri & Fajrin, 2019). The integration of digital technologies, such as the Internet of Things (IoT) and big data analytics, has been proven to improve operational efficiency and significantly reduce product defects, even by up 20% in some cases (Budiartami & Wijaya, 2019; Utomo & Setiastuti, 2019; Wahyuni, 2020).

CV. Menuju Sukses Mandiri, a family-owned textile company located in Soreang, Bandung Regency, West Java, was established in 2021. The company produces various types of fabrics, including lotto, hyget, fleece, and Babyterry. With a target defect rate of no more than 1%, the company strives to maintain optimal quality and meet customer standards. Despite implementing optimal quality control and meeting customer standards.

Babyterry fabric is the flagship product of CV. Menuju Sukses Mandiri, with the highest production volume compared to other types of fabric. During the 2023-2024 period, total Babyterry fabric production reached 191,999.62 Kg. However, this high production volume was accompanied by fluctuating defect ratesthat often exceeded the company's tolerance limit of 1%. Field data showed tha the defect rate for Bbayterry fabric reached its highest level of

11.2% in January 2024 and 11.1% in November 2023. Conversely, from June to September 2024, the defect rate decreased significantly to 0.5%, indicating an improvement in quality control implementation. However, the average defect rate for Babyterry products during the 2023-2024 period remained at 3.3%, indicating that quality control is not yet optimal and requires further improvement.

2. Literature Review

2.1 Operations Management

Operations management is a discipline that manages all activities involved in transforming inputs into outputs in the form of goods or services. These activities are crucial for the manufacturing industry to create products that have market value and competitiveness (Parinduri et al., 2020).

2.1.1 Operations Management Functions

Operations management has seveeral vital functions that are interrelated to achieve operational efficiency and affectiveness Heizer, Render, dan Munson (2020).

- Product Design: Designing products and services that meet consumer needs.
- Process Design: determining efficient and effective production processes.
- Quality Management: Ensuring the quality of products/services produced.
- Capacity Planning: adjust production capacity to match demand.
- Iventory Management: Managing inventory from raw materials to finished products.
- Scheduling: Preparing production and operational schedules.
- Maintenance: Keeping machines and systems running optimally.

Stevenson (2018) adding other important functions such as forecasting (projecting market demand), location planning (determining the best location), layout design (organizing workspaces for efficiensy), and supply chain management (managing relationships with suppliers and distribution).

2.1.2 Operations Management Objectives

The main objective of operations management is to produce goods and services efficienly, with quality that meets consumer expectations. Assauri (2014) detailing the objectives of operations management as follow:

- Efficiency: Minimizing production costs and time through optimal use of resources.
- Quality: Ensuring products and services meet established standards, reducing defect rates, and enhancing customer satisfaction.
- Flexility: Adapting to changes in market demand and customer needs.
- Reliability: Enahancing the reliability of production and delivery processes for cosistent and timely results.
- Innovation: Driving innovation in products and processes to enhance competitiveness.
- Cost Control: Managing and controlling operational costs to improve profitability.
- Customer Service Improvement: Enhancing customer experience through timeley delivery and high-quality products.
- Sustainability: Integrating environmentally friendly and sustainable practices.

2.2 Quality Control

Quality control is a systematic process that aims to ensure that the products and services produced meet spesifications and customer expectations (Wahyuni, 2020). Feigenbaum (2018) defined as an integrated system for managing quality throughout the organization. The implementation of quality control is essential for companies to create products that meet established standards and compete in the market (Chandra & Ratnamurni, 2022)

2.2.1 Quality Control Objectives

Accoridng to Assauri (2018), the objectives of quality control include:

- Create products that meet established quality standards.
- Minimize operational and inspection costs.
- Reduce design and production costs.

2.2.2 Quality Control Factors

Several factors influence the success of quality control. Feigenbaum (2018) identifying factors such as integrated systems, the involvement of all parties (employees), and continuous improvement. Juran (2018) emphasizing the importance of quality planning, operational control, continuous improvement, top management involvement, and employee training and education.

2.2.3 Quality Control Measures

Quality control measures generally follow a cycle PDCA (Plan-Do-Check-Act) introduced by Juran (2014) :

- Plan: Identify quality objectives, product specifications, and strategies to achieve them.
- Do: Implementing plans bu involving employees, ensuring procedures are followed, and providing training.
- Check: Evaluate the results of plan implemetation using analytical tools and compare them with standards.
- Act: Update existing plans or develop new plans for sustainable breeding basedon the results of the evaluation.

2.3 Six Sigma and the DMAIC Method

Six Sigma is a method or technique for quality control and improvement that aims to reduce variation in processes and increase customer satisfaction by identifying and eliminating the causes of defects (Gasperz, 2016). Six Sigma specifically focuses on reducing the number of defective products through a data-driven statistical analysis approach, making it more effective in improving production process efficiency and reducing costs associated with replacing products that do not meet quality standards (Kaouthar, 2021).

The DMAIC (Define, Measure, Analyze, Improve, Control) method is the core framework in Six Sigma implementation, which aims to achieve continuous improvement until the Six Sigma target is reached (Rahman et al., 2017). Each step in DMAIC has specific objectives and tools:

2.3.1 Define

This stage focuses on defining the problem, project objectives, scope, and customer needs. The tools used include Voice of Customer (VoC) to identify customer needs and expectations, as well as the preparation of a Project Charter (Juran, 2016). Examples of Critical to Quality

(CTQ) factors may include defect rate (<3%), product weight accurancy (tolerance ±5 grams), and delivery speed (≤ 3 days from order date).

2.3.2 Measure

This stage aims to measure current process performance in order to understand the baseline. Important activities include collecting quantitative information about quality performance. Tools used include Check Sheets (for systematically collecting data), histogram (to visualize data distribution), control charts (to monitor process stability), and process mapping (to analyze workflow and control points) (Juran, 2016). Defect rates are often calculated using Defects Per Million Opprtunities (DPMO) and converted to Sigma Levels.

2.3.3 Analyze

This stage idetnifies the root causes of problems using the data that has been collected. Commonly used tools include Fishbone Diagrams (Ishikawa) to map the main causes, 5 Whys Analysis to explore the underlying causes, Pareto Charts to identify the most impactful causes, and Scatter Plots to see the relationship between variables (Istiyanto et al., 2021).

2.3.4 Improve

This stage focuses on developing and implementing solutions to improve processes. Solutions are developed to eliminate the root causes of quality issues and achieve significant performance improvements. The tools used include Brainstorming (generating solution ideas), Design of Experiments (DOE) to systematically test changes, Process Simulation to evaluate the impact of changes, and Kaizen for the implementation of small, continuous changes (Juran, 2016).

2.3.5 Control

This final stage ensures that the improvements implemented are sustainable and that the process remains under control. It involves continuous performance monitoring and prevention of quality issues from recurring. The tools used include Control Charts (to track process stability after improvements), updated Standard Operating Procedures (SOPs), Dashboards (to display performance metrics), and Failure Mode and Effect Analysis (FMEA) to analyze risks in the new process (Juran, 2016).

2.4 Previous research

Previous studies have applied the Six Sigma method to quality control and product defect reduction in various industries.

(Adi Juwito & Ari Zaqi Al-Faritsy, 2022) Using Six Sigma to reduce product defects at Makmur Santosa SME, identifying the lack of regular machine inspections and low employee accuracy as contributing factors.

(Mahardhika & Al-Faritsy, 2023) Minimizing batik cap production defects using a combination of Six Sigma and Kaizen, with a focus on printing defects.

(Dermawan et al., 2021) successfully minimized product defects in souvenirs produced by the Mata Kayu Art home industry using Six Sigma with the DMAIC approach.

3. Methodology

3.1 Research Method

This study uses a descriptive qualitative approach. Qualitative methods were chosen because they allow researchers to understand phenomena in depth in their natural context, with the researcher as the key instrument. (Sugiyono, 2022). A descriptive approach is used to describe

in detail how Babyterry product quality control is implemented at CV. Menuju Sukses Mandiri, including planning, implemetation, evaluation, and improvement efforts.

3.2 Operationalization of Variables

Variable operationalization is used to define the attributes or characteristics that will be studied and measured in this study (Sugiyono, 2019; Silaen, 2018). The main variable in this study is "Babyterry product quality control".

Babyterry product quality control indicators

1) Product quality control objectives
   - Create products in accordance with established standards
   - Reduce product defect rates
   - Optimize production efficiency
2) Product quality control factors
   - Employee training
   - Cleanliness and orderliness of the production environment
   - Development and implementation of SOPs (Standard Operating Procedures)
3) Stages of Product Quality Control
   - Inspection of raw materials before production
   - Regular monitoring of the production process
   - Inspection of finished products before packaging
4) Implementation of Product Quality Control Objectives
   - Production carried out in accordance with established standards
   - Implementation of established procedures
   - Reduction of measurable product defect rates
5) Implementation of product quality control stages
   - Establishment of clear quality standards
   - Establishment of planned production activities
6) Implementation of product quality control tools
   - Implementation of the Six Sigma DMAIC method
7) Evaluation of Babyterry product quality control
   - Comparing the results of quality control planning and implementation
8) Product quality improvement efforts
   - Implementation of long-term improvements
   - Employee involvement in the quality improvement process.

3.3 Population and Sample

In qualitative research, the term "population" refers to a "social situation" consisting of place, actors, and activity that interact synergistically(Sugiyono, 2019). In this context, the social situation is the production environment of CV. Menuju Sukses Mandiri, with a focus on the quality control activities of Babyterry products.

Samples in qualitative research are referred to as informants, participants, or informants, not statistical respondents, because the aim is to generate theory or deep understanding (Sugiyono, 2018). In this study, informant samples were selected using purposive sampling, which involves

selecting informants based on specific criteria relevant to the research focus. The informants selected were:

1. Head of the Quality Control (QC) Department
2. Production Operator
3. Production Manager

These three informants were selected because they have direct knowledge and experience related to planning, implementing, evaluating, and improving the quality of Babyterry products at CV. Menuju Sukses Mandiri.

3.4 Data Collection Techniques

Data collection techniques are crucial for obtaining objective and accurate data (Sugiyono, 2022). This study uses a combination of primary and secondary data:

1. Literature research: collection of secondary data through literature studies, namely studying and reviewing various references, journals, books, and other documents relevant to operations management, quality control, and Six Sigma.
2. Field research: direct collection of primary data at the research location, including:
    - Interviews: conducted in-depth with key informants (QC Manager, Production Operator, Production Manager) using a structured interview guide to gather information about the planning, implementation, evaluation, and improvement efforts of quality control for Babyterry products.
    - Observations: direct observation of production processes and quality control activities at CV. Menuju Sukses Mandiri to understand real conditions, work procedures, and interactions between production elements.
    - Documentation: Collection of data from internal company documents, such as production reports, defective product data, standard operating procedures (SOPs), and records related to quality control.

3.5 Data Analysis Techniques

Data analysis in this study uses a qualitative approach, which focuses on the interpretation of words, sentences, schemes, and images (Sugiyono, 2019). The raw data collected will be processed and analyzed to develop an understanding and formulate solutions to existing problems. The data analysis steps follow the interactive Miles and Huberman approach, which includes (Hardani, A. H., Suryani, D., & Lestari, 2020):

1. Data reduction: the process of simplifying, categorizing, and discarding irrelevant data to produce meaningful information. This involves selecting data that is relevant to the research objectives.
2. Data display: Organizing a set of data systematically and in an easily understandable manner, often in the form of narratives, tables, or flowcharts, to facilitate drawing conclusions.
3. Conclusion Drawing and Verification: Finding meaning in the reduced and presented data by identifying relationships, similarities, or differences, and verifying the conclusions drawn.

3.6 Triangulation

To improve the validity and reliability of the findings, this study will apply triangulation techniques, namely:

1. Methodological triangulation: Using various data collection methods (interviews, observation, documentation) to test the consistency of information.
2. Data triangulation: Comparing data obtained from various informant sources (QC Head, Production Operator, Production Manager) to ensure the accuracy and completeness of information.

4. Results and Discussions

4.1 Quality control planning for Babyterry products at CV. Menuju Sukses Mandiri

The planning stage is the foundation of quality control. Based on an interview with Mr. Fuji, Head of Production (March 19, 2025), quality control during the production process is a very important component in producing high-quality products that meet specifications. The quality control planning for Babyterry fabric products at CV. Menuju Sukses Mandiri includes objectives, factors, stages, and quality control tools.

4.1.1 Objectives of Babyterry Product Quality Control

Based on an interview with Mr. Heri, Head of Quality Control (QC) (March 19, 2025), the main objective of quality control planning at CV. Menuju Sukses Mandiri is to increase the company's profit margin by reducing the number of defective or substandard products.

1. Achieving the specified quality standards
   The company strives to ensure that Babyterry products meet the specified specifications. This process involves inspecting raw materials, preparing production and machinery, following SOPs during production, monitoring the process, inspecting the final product, repairing/analyzing defects, and packaging and storing the product. Each stage is closely monitored to minimize errors and ensure product quality.
2. Reducing the defect rate of products
   Quality control aims to minimize defective products. This begins with the selection of high-quality raw materials, careful monitoring of the production process, and prevention of errors caused by employee negligence or machine damage through training and routine maintenance.
3. Optimizing product efficiency
   Quality control also aims to improve production efficiency. This is achieved through systematic production planning and implementation, minimizing waste, and ensuring that products are produced optimally, with high quality, and on time.

4.1.2 Factors Affecting the Quality Control of Bebyterry Products

Factors affecting quality control of Babyterry products at CV. Menuju Sukses Mandiri:

1. Employee training
   The company provides ongoing training to improve employees' skills and understanding of production procedures, Babyterry quality standards, and machine operation. The aim is to minimize work errors and reduce defect rates.
2. Cleanliness and orderliness of the production environment
   A clean and well-organized work environment is considered important to reduce the risk of operational errors, improve workplace comfort and safety, and motivate employees.

3. Development of Standard Operating Procedures (SOPs)
   SOPs serve as guidelines for employees to consistently perform each production stage in accordance with standards. The presence of SOPs helps reduce variability and unwanted errors.

4.1.3 Babyterry Product Quality Control Stages

Quality control stages for Babyterry products at CV. Mneuju Sukses Mandiri:

1. Obtaining and inspecting raw materials
   The crucial first step is to ensure that raw materials are of high quality and meet specifications through rigorous inspection before being used in production.
2. Supervising the production process
   Supervision is conducted to ensure that each production stage is carried out in accordance with procedures and SOPs, including monitoring raw material usage, machine operation, and task execution by workers.
3. Conducting inspections on finished products
   Final inspections are conducted before products are packaged and distributed. The QC team checks visual aspects, texture, dimensions, and durability of the products. Products that do not meet standards are separated for improvement or rejection.

4.1.4 Babyterry product quality control tools

Tools used in planning quality control for Babyterry products:

1. Babyterry product inspection
   Conducted by the QC team, paying attention to fabric quality and texture, neatness of stitching and finishing, color and size, as well as product cleanliness.
2. Recording of finished products
   Documenting the quantity and condition of finished products as a basis for evaluating quality and process efficiency.

4.2 Implementation of Quality Control for Babyterry Products at CV. Menuju Sukses Mandiri

After careful planning, CV. Menuju Sukses Mandiri proceeded to the quality control implementation stage. Based on an interview with Mr. Fuji (March 19, 2025), quality control implementation in the production process is crucial to producing high-quality products.

4.2.1 Implementation of Babyterry Product Quality Control Objectives

The implementation of quality control at CV. Menuju Sukses Mandiri aims to reduce the number of defective products and ensure that every Babyterry product meets quality standards, thereby increasing the company's efficiency and profits.

1. Babyterry products comply with standards
   Production is carried out in accordance with established standards, from the selection of raw materials to finishing, with regular supervision by QC to ensure compliance with SOPs.
2. Production in accordance with procedures
   All production processes are carried out in accordance with established procedures and operational standards, through the implementation of SOPs, direct supervision by supervisors, and regular evaluations.
3. Reducing defect rates

The company is committed to reducing defect rates through a strict quality control system at every stage of production, as well as regular training for employees to improve their skills and attention to detail.

4.2.2 Implementation of Bbayterry product quality control stages

The implementation of quality control stages includes:

1. Establishment of quality standards
   CV. Menuju Sukses Mandiri establishes quality standards as the main guideline, covering technical specifications such as thickness, fiber strength, texture softness, and color conformity. This aims to ensure product quality consistency.
2. Establishment of production activities
   Production activities are planned systematically, including scheduling, raw material management, workflow, and responsibilities. Each stage is designed for efficiency and effectiveness, as well as compliance with SOPs.

4.3 Evaluation of Babyterry product quality control at CV. Menuju Sukses Mandiri

An evaluation was conducted to assess the effectiveness of Babyterry's product quality control and identify areas for continuous improvement. Based on an interview with Mr. Heri (March 19, 2025), the evaluation was conducted through analysis of production data, product defect rates, and the effectiveness of SOP implementation. Inspection results and consumer feedback were also taken into consideration.

4.3.1 Consistency between planning and implementation

Table 4.1 Consistensy between planning and implementation

NO	Indicator	Suitability	Description	Corrective action
1.	Manufacturing products in accordance with established standards	Not yet compliant	Defective products reached 11.2% (January 2024)	Improve the quality of monitoring and final evaluation of production
2.	Efforts to reduce disability rates	Not yet compliant	Disability rates remain volatile and have been very high at times.	Apply improvements consistently with Six Sigma
3.	Optimizing product efficiency	Not yet compliant	Many defects due to machine & human error	Workflow evaluation and operator training
4.	Providing training to employees	Not yet compliant	Human resource accuracy is still low, training is limited	Regular quality training & SOP
5.	Maintaining cleanliness and order in the production environment	In accordance with	Already implemented by the production department	Maintained

NO	Indicator	Suitability	Description	Corrective action
6.	Developing SOPs (Standard Operating Procedures)	In accordance with	The SOP has been prepared by QC and the Production Manager.	Regular updates
7.	Inspection of raw materials to be used	In accordance with	Raw material inspection is carried out by QC	Continue & document
8.	Supervising the production process	Not yet compliant	Weak oversight in early 2024	Improve supervision and documentation
9.	Inspecting production results	In accordance with	QC conducts final inspection	Improve sampling methods
10.	Implementation of Babyterry production in accordance with the standards set by the company	Not yet compliant	Frequent quality deviations	Optimize quality gates and random testing
11.	The company ensures that production is carried out in accordance with established procedures.	Not yet compliant	Non-compliance with SOPs occurred at the beginning of the year.	SOP training & internal audit
12.	Company measures to reduce the defect rate in Babyterry production	Not yet compliant	Fluctuating defect from 11.2% to 0.5%	Actively implement control charts
13.	Implementation of quality standards in the production of Babyterry products	In accordance with	The standard has been set at 1% defect rate.	Need to strengthen implementation
14.	Implementation of the determination of Babyterry product production activities	In accordance with	Clear scheduling and stages of activities	Maintained
15.	Implementation of the Six Sigma method (Define, Measure, Analyze, Improve, Control)	Not yet compliant	Already planned, implementation still in its early stages	Accelerate implementation & training of DMAIC
16.	Comparing the implementation and planning of quality control for Babyterry products	Not yet compliant	A comprehensive comparative evaluation has not yet been conducted.	Create a periodic evaluation matrix.
17.	Quality improvement efforts can be sustained over the long term.	Not yet compliant	No long-term control system yet	Establish a sustainability

NO	Indicator	Suitability	Description	Corrective action
				monitoring system
18.	The company's improvement efforts involve employees in improving the quality of Babyetrry products.	Not yet compliant	Involvement is still minimal	Involve employees in brainstorming and evaluation
19.	Application of the Six Sigma method (Define, Measure, Analyze, Improve, Control)	Not yet compliant	Still in the planning stage, not yet comprehensive	Full implementation of DMAIC with supporting data

4.4 Efforts to Improve the Quality of Babyterry Products at CV. Menuju Sukses Mandiri

In order to improve product quality and reduce defect rates, CV. Menuju Sukses Mandiri implements the Six Sigma approach using the DMAIC (Define, Measure, Improve, Control) methodology.

4.4.1 Define

At this stage, the company identified the high defect rate of Babyterry products as a major issue affecting customer satisfaction and cost efficiency. Common defects included weaving, color differences, and size discrepancies. The goal of the improvement was to reduce the product defect rate to the expected quality standard (<1%).

4.4.2 Measure

Historical data on product defect rates was collected and analyzed based on defect type, frequency, and related departments. This measurement aims to obtain a quantitative picture of current process performance (baseline sigma level). Based on the available data, the average DPMO is 2,377.21 with a Sigma Level of 5.1. However, in January and November 2024, the DPMO reached 100,356.92 and 99,999.04, with Sigma Levels of 2.0 and 2.5. This indicates poor quality. Conversely, from June to September 2024, DPMO dropped sharply to around 5,000 with a Sigma level of 5.0, indicating a significant improvement.

4.4.3 Analyze

Root cause analysis was conducted using the root cause analysis method, fishbone diagram, and 5 Whys analysis. The results of the analysis showed that product defects were caused by:

- Suboptimal machine settings
- Lack of operator skills in executing procedures\Inconsistent raw materials
- Insufficient quality control during the process. These factors are prioritized in the improvement plan.

4.4.4 Improve

Based on the results of the analysis, the company implemented corrective measures, including:

- Retraining employees to improve their skills and accuracy.
- Rescheduling machine maintenance to prevent damage and wear.
- Improving raw material quality control to ensure consistency.
- Adding quality control points throughout the production process

- Implementing a direct feedback system for quick response to problems.

4.4.5 Control

After the improvements were implemented, the company implemented a control system to maintain process stability. The use of control charts was implemented to monitor the stability of the production process. Periodic quality audits were conducted to evaluate the effectiveness of the corrective actions and ensure quality standards remained consistent. SOP documents were also updated in accordance with the improvement results in order to serve as long-term guidelines. The application of the Six Sigma method succeeded in reducing DPMO by more than 100,000 to around 4,900, with the sigma level increasing from 2.0 to 5.0, indicating a significant improvement in production quality efficiency. (Singh & Rangnekar, 2020)

5. Conclusion

This study aims to analyze the quality control of Babyterry products at CV. Menuju Sukses Mandiri by applying the Six Sigma DMAIC method. Based on the results of the analysis conducted, several conclusions can be drawn as follows:

1. Careful quality control planning
   CV. Menuju Sukses Mandiri has carried out comprehensive quality control planning, including goal setting, influencing factors, stages, and quality control tools. The purpose of this planning is to achieve set quality standards, reduce the level of product defects, and optimize production efficiency. the preparation of clear SOPs and employee training are key in ensuring consistent implementation.
2. Effective implementation of quality control
   The implementation of quality control in the company demonstrates a strong commitment to product quality. The production process is carried out in accordance with established procedures, with close supervision from the QC team. Nonetheless, there are challenges in implementation, especially in certain months where the product defect rate increases. This indicates the need for more attention to machine maintenance and employee training.
3. Continuous evaluation
   Quality control evaluations are conducted periodically to assess the effectiveness of the implemented system. The data shows that despite fluctuations in the defect rate, the company managed to reduce the defect rate from 11.2% to 0.5% after the implementation of improvements. This evaluation is important to identify areas for improvement and ensure that quality standards are maintained.
4. Continuous improvement efforts
   The implementation of the Six Sigma method with the DMAIC approach has had a positive impact on the quality control of Babytery products. Through root cause analysis, the company was able to identify and address the problems that caused the defects. The corrective actions taken, such as employee training, machine maintenance, and improved quality control, have proven effective in improving product quality. Employee involvement in the improvement process was also a key success factor.

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THE IMPACT OF CORPORATE SOCIAL RESPONSIBILITY AND ENVIRONMENTAL PERFORMANCE ON FINANCIAL PERFORMANCE: EMPIRICAL STUDY OF PALM OIL PLANTATION COMPANIES LISTED ON THE INDONESIAN STOCK EXCHANGE

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Abstract

The Indonesian palm oil industry faces immense social and environmental pressures. As the world's largest producer of palm oil, Indonesia has long relied on land clearing for plantation expansion—one of the primary causes of deforestation. As a result, palm oil companies are increasingly being pushed to adopt sustainable practices. The objectives of this research are twofold: first, to examine the effect of Corporate Social Responsibility on Financial Performance. Second, to assess the impact of Environmental Performance on Financial Performance. The research population consists of palm oil plantation companies listed on the Indonesia Stock Exchange. A total of 22 companies were selected, with the study period covering three years, from 2021 to 2023, resulting in 66 sample for observations. The research adopts a quantitative approach using secondary data. Data were analyzed using SPSS 27 version, with the sampling technique based on purposive sampling. The results showed that Corporate Social Responsibility does not have a significant effect on Financial Performance, as indicated by a significance value of 0.710, which is greater than 0.05. Similarly, Environmental Performance also shows no significant effect on Financial Performance, with a significance value of 0.858, also exceeding 0.05. These results suggest that companies actively engaged in Corporate Social Responsibility activities do not necessarily achieve better financial performance. Likewise, companies with high environmental performance scores do not automatically exhibit superior financial outcomes. Nevertheless, both Corporate Social Responsibility and Environmental Performance remain strategic tools for companies to enhance their image, reputation, and compliance with applicable regulations, which are expected to contribute positively to long-term financial performance.

***Keywords*:** *Corporate Social Responsibility, Environmental Performance, Financial Performance*

1. Introduction

Sustainability has become a top agenda in today's global business world. Various surveys indicate that most corporate executives worldwide recognize the importance of sustainability aspects. Integrating sustainability principles into corporate strategy is considered essential to meet the demands of increasingly environmentally conscious investors, the demands of consumers for eco-friendly products, and compliance with government regulations in various countries. Sustainable business strategies have been shown to attract top talent, reduce operating costs, and increase profits for companies. In other words, sustainability is no longer just a slogan but a key factor for companies to remain relevant and competitive in the long run (World Economic Forum, 2022). There is no longer any doubt among business leaders that environmental and social issues must be included in the company's strategic agenda. Many companies have now moved beyond incremental improvements toward more bold and systemic steps to create positive impact for the planet and society (Winston, 2022).

The concepts of Corporate Social Responsibility and Environmental Performance occupy a central position in the effort to create long-term value for companies. Effective implementation

of CSR helps companies gain trust from stakeholders and build a positive corporate image. Research indicates that consumers tend to respond positively to companies committed to CSR. In other words, well-planned and sustained CSR programs can become a long-term investment that increases firm value through stronger stakeholder relationships and a good public reputation (Merliyana & Anggraeni, 2023). Similarly, strong Environmental Performance has been shown to positively affect a company's value and financial performance. Empirical research finds that companies with superior environmental performance tend to have higher firm value. A study in Indonesia found that good Environmental Performance directly creates higher firm value (as measured by Tobin's Q) even without extensive environmental disclosures, indicating that a strong commitment to being environmentally friendly provides economic benefits in the form of increased market value of the company (Utomo et al., 2020).

The palm oil industry is a strategic sector for Indonesia, both economically and socially. As the world's largest palm oil producer, Indonesia makes this sector a backbone of the economy, with palm oil being one of the country's largest export commodities, contributing an average of USD 20 billion per year in foreign exchange and providing jobs for millions of people. However, the palm oil industry also faces sustainability challenges and negative environmental scrutiny. Palm oil plantation expansion is often linked with deforestation and environmental damage, threatening biodiversity and the habitats of key species such as orangutans, tigers, and elephants, as well as triggering carbon emissions that contribute to climate change (InfoSAWIT, 2024). In recent years, sustainability standards and certifications such as the Roundtable on Sustainable Palm Oil (RSPO) and the Indonesian Sustainable Palm Oil (ISPO) have emerged to encourage palm oil companies to adopt environmentally friendly practices and social transparency. Additionally, Indonesia's Financial Services Authority (Otoritas Jasa Keuangan/OJK) has issued regulations requiring publicly listed companies, including those in the plantation sector, to prepare sustainability reports as part of implementing sustainable finance. These measures underscore that Corporate Social Responsibility and Environmental Performance have become important prerequisites for the sustainability of palm oil businesses in Indonesia.

Furthermore, global market dynamics are beginning to have a real impact on the palm oil industry regarding sustainability issues. Strict international regulations can directly affect the market access of Indonesian palm oil companies. For example, as reported by Aisyah Sileuw (2025), the European Union passed an Anti-Deforestation Regulation (EU Deforestation Regulation, EUDR) in 2023, effective from late 2025. This regulation mandates that all commodity products (including palm oil) entering the EU market must be proven deforestation-free after 2020, with land legality, complete documentation, and strict traceability systems. Considering that around 47% of the EU's palm oil imports come from Indonesia, this policy poses a serious challenge for the national palm oil industry. Palm oil companies that fail to meet global sustainability standards risk losing access to key export markets, which would negatively affect their financial performance. In other words, poor Environmental Performance can now result in concrete market sanctions, whereas companies that proactively adopt sustainable practices could maintain or even expand their market share internationally.

Although the relationships among Corporate Social Responsibility, Environmental Performance, and Financial Performance have been widely studied, the findings remain diverse and leave research gaps, especially in the specific context of the Indonesian palm oil industry. Research by Paramitha (2019) found that improved financial performance of companies can be a positive result of good Environmental Performance, especially when balanced with effective CSR implementation. These findings are consistent with stakeholder theory and resource-based view theory, which state that investments in social and environmental areas will increase competitive advantage and long-term firm value. Most previous studies have examined cross-

sector companies, such as in manufacturing or banking, or have used general proxies without considering the unique characteristics of the palm oil sector.

This study is proposed to address this research gap. It aims to combine global understanding of business sustainability with the specific conditions of the Indonesian palm oil industry. Focusing on palm oil companies listed on the IDX provides measurable empirical contributions, considering that public companies are required to disclose Corporate Social Responsibility and Environmental Performance information through annual reports, sustainability reports, and PROPER ratings. It is expected that the results of this research can confirm whether Corporate Social Responsibility and Environmental Performance significantly affect Financial Performance in the palm oil sector. The findings will fill a gap in the literature and serve as valuable input for the management of palm oil companies, investors, and policymakers in formulating sustainability strategies that align with economic performance.

2. Literatur Review

2.1 Corporate Social Responsibility

Corporate Social Responsibility is essentially a requirement for a company to interact with local communities as part of the broader society (Rudito & Famiola, 2019: 1). According to the World Business Council for Sustainable Development (WBCSD) cited in Rudito & Famiola (2019: 112), CSR is a business commitment to contribute to sustainable economic development by working with employees, their families, local communities, and society at large to improve quality of life. Carroll (1979: 499), as cited in Kartini (2020: 5), provides a well-known definition of CSR, categorizing it into four responsibilities: economic responsibilities, legal responsibilities, ethical responsibilities, and discretionary responsibilities.

Many international and Indonesian companies now publish sustainability reports developed by the Global Reporting Initiative (GRI). Every company inevitably has some social impact in its operations. GRI divides these social impacts into four categories: human rights, labor, community, and product responsibility (Kartini, 2020: 30). Kotler and Lee (2005), as cited in Kartini (2020: 63), identify six categories of CSR activities: cause promotions, cause-related marketing, corporate societal marketing, corporate philanthropy, community volunteering, and socially responsible business practices. Through these Corporate Social Responsibility activities, Corporate Social Responsibility reporting becomes strategic in shaping stakeholder opinion and enhancing the company's reputation. Corporate Social Responsibility reports may be published on company portals, included in annual reports, or presented at formal forums such as seminars, discussions, and conferences. Many Corporate Social Responsibility reports span dozens to hundreds of pages, as they detail Corporate Social Responsibility initiatives and highlight the company's reputation (Kartini, 2020:56).

According to Glautier and Underdown (1986: 484–485), as cited in Taufiq (2022: 151), there are three approaches that can be used as guidelines for measurement in social accountability reporting:

a. Descriptive Approach
   All social activities of the company are described in narrative form, without quantification in monetary units.
b. The Cost of Outlay Approach
   All social activities are quantified in monetary terms. Unlike the descriptive approach, cost-based reporting allows comparability between different years.
c. The Cost Benefit Approach
   Both the costs and benefits of social activities are disclosed. This approach is ideal, but in practice it is difficult to implement because there is no established measurement for the benefits yielded from the incurred costs of social activities.

ISO has anticipated how to handle and manage issues at the intersection of profit, people, and planet through ISO 26000 on the implementation of Corporate Social Responsibility. According to the ISO website (www.iso.org), there are 7 core issues in CSR implementation, which include:

a. Organizational governance
b. Human rights
c. Labour practices
d. The environment
e. Fair operating practices
f. Consumer issues
g. Community involvement and development

2.2 Financial Performance

According to Government Regulation of the Republic of Indonesia No. 22 of 2021 concerning the Implementation of Environmental Protection and Management, Article 1 Paragraph 1 states that the environment is a unified space encompassing all objects, powers, conditions, and living beings—including humans and their behavior—that influence nature itself, the continuity of life, and the welfare of humans and other living organisms. Furthermore, this regulation is elaborated by the Regulation of the Minister of Environment and Forestry of the Republic of Indonesia No. 4 of 2021 regarding the List of Businesses and/or Activities Required to Have an Environmental Impact Analysis (AMDAL), Environmental Management Efforts (UKL), and Environmental Monitoring Efforts (UPL), or a Statement of Capability in Environmental Management and Monitoring (SPPL). In the appendix of this ministerial regulation, it is stated explicitly that businesses involved in palm oil cultivation and palm oil industries must prepare an Environmental Impact Analysis (AMDAL), Environmental Management Efforts (UKL), and Environmental Monitoring Efforts (UPL), or a Statement of Capability in Environmental Management and Monitoring (SPPL), due to their potential to cause social conflicts, air pollution, and a reduction in surface water quality.

Environmental Performance is a crucial metric for a company's success (Alexopoulos et al., 2011, as cited in Almunawwaroh, 2020: 12). Improving Environmental Performance can be a potential source of competitive advantage, leading to more efficient processes, higher productivity, lower compliance costs, and new market opportunities. Indonesia has implemented a corporate environmental performance rating program (PROPER) to evaluate companies' environmental management. This is regulated by the Indonesian Ministry of Environment and Forestry Regulation No. 1 of 2021 on the Corporate Environmental Performance Rating Program. The PROPER rating used in this study categorizes companies as follows:

a. Gold, Companies that achieve the green rank for two consecutive years and have flagship social innovation programs.
b. Green, Companies that have undertaken environmental management efforts beyond mere legal compliance.
c. Blue, Companies that have managed the environment in compliance with legal requirements.
d. Red, Companies whose environmental management efforts do not comply with legal requirements.
e. Black, Companies that cause pollution and/or environmental damage through actions or negligence.

PROPER rankings are set by the Indonesian Ministry of Environment and Forestry based on evaluations by the PROPER Advisory Council.

2.3 Financial Performance

A company's Financial Performance can be assessed through financial statements. According to Abd'rachim (2008: 9), financial statement analysis involves using accounting information to make business and investment decisions. Financial analysis is designed for entrepreneurs, investors, and creditors who must understand how to interpret and analyze financial statements. These statements report the company's financial position at a point in time and its operating results over past periods. Financial ratio analysis is designed to help evaluate the financial statements. Ratio analysis uses data from the balance sheet and income statement and is divided into five categories: liquidity ratios, asset management ratios, debt management ratios, profitability ratios, and market value ratios.

Profitability is a company's ability to generate earnings. The most important measure of profitability is net income. Investors and creditors are particularly interested in evaluating a company's ability to earn profits now and in the future (Abd'rachim, 2008: 16). In this study, The profitability ratios used as indicators include:

a. Gross Profit Margin
   Measures gross profit per rupiah of sales (gross profit divided by sales). It gauges the company's efficiency in generating profit from production before other operating expenses.

$$\text{Gross Profit Margin} = \frac{\text{Gross Profit}}{\text{Net Sales}} \text{ x } 100\%$$

b. Net Profit Margin
   Measures net profit per rupiah of sales (net profit divided by sales). It reflects the company's ability to control costs and expenses relative to sales.

$$\text{Net Profit Margin} = \frac{\text{Net Profit}}{\text{Net Sales}} \text{ x } 100\%$$

c. Return on Equity
   Indicates management's success in maximizing the return on shareholders' investment, focusing on income relative to equity invested. ROE is calculated as net profit divided by equity.

$$\text{Return on Equity} = \frac{\text{Net Profit}}{\text{Equity}} \text{ x } 100\%$$

d. Return on Asset
   Measures return on total assets after interest and taxes. It shows management's efficiency in using company assets to generate profit. A higher ROA indicates more effective use of assets.

$$\text{Return on Asset} = \frac{\text{Net Profit}}{\text{Assets}} \text{ x } 100\%$$

2.4 The Impact of Corporate Social Responsibility on Financial Performance

Studies on the relationship between Corporate Social Responsibility and financial performance have shown mixed findings. Nuru et al. (2022) conclude that Corporate Social Responsibility has a significant positive impact on return on assets (ROA) and return on equity

(ROE), while its effect on firm value (Tobin's Q) is weaker and sometimes insignificant. Similarly, Cherian et al. (2020) in India found that Corporate Social Responsibility has a significantly positive impact on ROA and ROE in the manufacturing sector, using panel regression data from 50 companies over 7 years. In contrast, Ji, Sheng, & Wan (2023) studied startups in China and found that Corporate Social Responsibility activities directed at secondary stakeholders (such as charity) had no significant impact on financial performance and even had a weak negative effect. Only Corporate Social Responsibility to primary stakeholders (e.g. employees and customers) was shown to improve financial performance.

2.5 The Impact of Environmental Performance on Financial Performance

The impact of Environmental Performance on financial performance is also not uniform. Kaakeh and Gokmenoglu (2022) studied Chinese companies during the COVID-19 pandemic and found that Environmental Performance generally had no significant effect on ROA under normal conditions, but had a significantly positive effect during the economic crisis caused by the pandemic. This implies that environmental commitment can add value under extreme conditions but is less appreciated when the economy is stable. Meanwhile, Tjandrakirana et al. (2023) studied 30 companies in Indonesia's health sector and found that Environmental Performance (measured by PROPER and sustainability reports) has a significantly positive effect on ROA ($p = 0.02$). These findings suggest that companies with strong environmental management tend to be more efficient and profitable.

2.6 The Impact of Corporate Social Responsibility and Environmental Performance on Financial Performance

When Corporate Social Responsibility and Environmental Performance are combined in one model, the results become more complex. Sarfraz et al. (2023) found that in Pakistan's manufacturing sector, the combination of Corporate Social Responsibility, green innovation, and Environmental Performance has a significant positive effect on financial performance and corporate sustainability.

2.7 Theoretical Framework

To understand the relationship between Corporate Social Responsibility, Environmental Performance, and financial performance, this study builds a strong theoretical foundation. The theoretical framework provides the conceptual basis for scientific argumentation and helps formulate research hypotheses. The grand theory used in this research is Stakeholder Theory, which explains why companies need to pay attention to social and environmental aspects as part of a sustainability strategy aimed at increasing economic value. Stakeholder Theory posits that a company is not solely an entity operating for its own benefit but must provide value to stakeholders (shareholders, creditors, consumers, suppliers, government, communities, analysts, and others). A company's existence heavily depends on the support it receives from these stakeholders (Ghozali, 2020:136).

According to Ghozali (2020) Supporting theories are strengthen and complement the framework through more operational perspectives, including:

a. Legitimacy Theory
   Based on the idea that there is a social contract between an organization and the society in which it operates.

b. Signal Theory
   Describes actions taken by a sender to influence the behavior of a receiver.
c. Resource-Based View Theory

A managerial framework used to identify strategic resources that a company can utilize to achieve a sustainable competitive advantage.

The grand and supporting theories are relevant in the context of public companies, especially in Indonesia's palm oil sector. Therefore, the next section will explain the logic of the relationships among the variables, from both normative and practical perspectives, which form the basis for developing the conceptual model and research hypotheses.

2.8 Research Hypotheses

Based on theory and literature review, the conceptual framework posits that Corporate Social Responsibility and Environmental Performance (independent variables) have a direct effect on Financial Performance (dependent variable). The research hypotheses are formulated as follows:

a. H1: Corporate Social Responsibility has a positive effect on Financial Performance
b. H2: Environmental Performance has a positive effect on Financial Performance
c. H3: Corporate Social Responsibility and Environmental Performance has a positive effect on Financial Performance

3. Methodology

3.1 Research Design

This study uses a quantitative approach with a causal-comparative design because it aims to test the influence of Corporate Social Responsibility and Environmental Performance on the companies' financial performance. The causal-comparative approach is chosen because it focuses on cause-and-effect relationships among variables. The data used are secondary, so the researcher did not collect primary data through surveys or interviews. A quantitative approach is appropriate because the goal is to analyze statistical relationships between variables using numerical data.

3.2 Population and Sample

The population consists of all palm oil plantation companies listed on the IDX, totaling 22 companies. Sampling was done using purposive sampling based on the following criteria: companies must be listed on the IDX, have complete financial data for 2021–2023, disclose CSR cost information, and have PROPER ratings during the study period. All 22 companies met these criteria. With data from three years (2021, 2022, 2023) for each company, a total of 66 panel data observations were obtained.

3.3 Data Collection

Data sources are official publications. Financial data used to calculate GPM, NPM, ROA, and ROE were obtained from company annual reports and financial statements. CSR data were measured by the total cost spent by companies on CSR programs, obtained from annual or sustainability reports. Environmental Performance data were measured using PROPER scores published by Indonesia's Ministry of Environment and Forestry. PROPER data were collected from official publications of the Ministry.

3.4 Data Analysis

Data were analyzed using SPSS version 27. The analysis procedure included the following main steps:

a. Descriptive Statistics: To present basic characteristics of each variable, such as mean, median, standard deviation, minimum, and maximum. Descriptive analysis helps to understand data distribution and identify any outliers.

b. Classical Assumption Tests: Conducted to ensure that the multiple linear regression model is valid. The classical assumption tests performed include:
   - Normality Test: Using Kolmogorov-Smirnov and Shapiro-Wilk tests to check if the regression residuals follow a normal distribution. Data are considered normally distributed if the test significance (p-value) is greater than 0.05.
   - Multicollinearity Test: Checking for collinearity among independent variables by calculating the Variance Inflation Factor (VIF) for each variable. A VIF greater than 10 indicates significant multicollinearity.
   - Autocorrelation Test: The autocorrelation test is specifically used for time series data, which are data collected over a certain period, such as financial statements. If the Asymp. Sig. (2-tailed) value is greater than the significance level of 0.05, it can be concluded that there is no autocorrelation.
   - Heteroskedasticity Test: Using Park's test to detect the presence of heteroskedasticity (unequal error variance). The regression model is considered free of heteroskedasticity if the test significance is greater than 0.05.

c. Multiple Linear Regression: After classical assumptions are satisfied, multiple regression analysis was performed to test the influence of Corporate Social Responsibility and Environmental Performance on Financial Performance. Each Financial Performance indicator (GPM, NPM, ROA, or ROE) was used alternately as the dependent variable, while CSR and PROPER score were independent variables. Regression results were examined based on coefficient values to determine the direction and strength of influence, the t-test for the partial effect of each independent variable, the F-test for the joint effect of the independent variables, and the coefficient of determination (R^2) to see the proportion of variance in the dependent variable explained by the independent variables. Hypothesis testing was done at a 5% significance level.

4. Results and Discussions

Based on the sampling process, the following data were obtained:

Population and Sample

No	Sample Criteria	Number of Companies	Years	Total
1	Palm oil plantation companies listed on the IDX (2021–2023)	25	3	75
2	Companies lacking CSR cost data or PROPER rating for 2021–2023	-3	3	-9
Total Sample				**66**

Source: Indonesia Stock Exchange, 2025

4.1 Descriptive Statistics

Descriptive Statistics

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
X1	63	69	79829	11227.22	19369.460
X2	63	2	4	3.08	.373
Y	63	-.0178	.5891	.237359	.1208548
Valid N (listwise)	63				

Source: Output IBM SPSS 27, 2025

The results show that the average CSR expenditure is Rp11,227.22 million (Rp11 Billion) with a minimum of Rp69 million and a maximum of Rp79,829 million (Rp79 Billion), reflecting very high variation across companies. The mean Environmental Performance measured by the PROPER score is 3.08 ranging from 2 to 4, indicating that most companies fall in the compliance category (Blue) up to above compliance (Green). The companies' average Financial Performance (measured by GPM, NPM, ROA, and ROE) is 0.237, with a minimum of –0.0178 and a maximum of 0.5891, showing moderate variability in profitability in the palm oil sector during the study period.

4.2 Classical Assumption Tests

Normality Tests

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Unstandardized Residual	.105	63	.079	.975	63	.224

a. Lilliefors Significance Correction

Source: Output IBM SPSS 27, 2025

The regression residuals satisfy the normality assumption, as indicated by the Kolmogorov-Smirnov test (p = 0.079) and the Shapiro-Wilk test (p = 0.224), both greater than 0.05, implying that the residuals are approximately normally distributed

Multicollinearity Tests

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.326	.134		2.437	.018		
	X1	3.393E-7	.000	.054	.401	.690	.899	1.113
	X2	-.030	.044	-.092	-.680	.499	.899	1.113

a. Dependent Variable: Y

Source: Output IBM SPSS 27, 2025

The tolerance values for CSR (X1) and Environmental Performance (X2) are approximately 0.899, with corresponding VIF values around 1.113. A VIF far below 10 and tolerance well above 0.10 indicate that there is no multicollinearity between the Corporate Social Responsibility and Environmental Performance variables.

Autocorrelation Test

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.579[a]	.335	.301	.1009690	1.841

a. Predictors: (Constant), Y_Lag, X2, X1

b. Dependent Variable: Y

Runs Test

	Unstandardized Residual
Test Value[a]	-.01096
Cases < Test Value	31
Cases >= Test Value	31
Total Cases	62
Number of Runs	33
Z	.256
Asymp. Sig. (2-tailed)	.798

a. Median

Source: Output IBM SPSS 27, 2025

The Durbin-Watson statistic is 1.841 (below 2), which could suggest potential positive autocorrelation. However, the Runs Test yields a p-value of 0.798 (> 0.05), indicating no significant pattern of runs (i.e., the residuals appear random). Thus, overall there is no strong evidence of systematic serial autocorrelation in the model

Heteroskedasticity Test

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	.326	.134		2.437	.018
	X1	3.393E-7	.000	.054	.401	.690
	X2	-.030	.044	-.092	-.680	.499

a. Dependent Variable: Y

Source: Output IBM SPSS 27, 2025

The heteroskedasticity test (Park test) shows that all variables have significance values greater than 0.05. This means the assumption of homoscedasticity (constant error variance) is fulfilled. There is no indication of heteroskedasticity in this model

4.3 Multiple Linear Regression

t-Test

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	.326	.134		2.437	.018		
	X1	3.393E-7	.000	.054	.401	.690	.899	1.113
	X2	-.030	.044	-.092	-.680	.499	.899	1.113

a. Dependent Variable: Y

Source: Output IBM SPSS 27, 2025

The t-test results show that CSR (X1) has a significance of 0.690 (> 0.05) with a regression coefficient of 3.393E–7, and Environmental Performance (X2) has a significance of 0.499 (> 0.05) with a negative coefficient of –0.030. Both variables individually have no significant effect on Financial Performance

This finding is consistent with Ji, Sheng & Wan (2023), who found that CSR not directly related to core operations (like charity activities) has no significant impact on financial performance. Similarly, Cherian et al. (2020) found in the context of manufacturing in developing countries that certain CSR aspects (such as public relations) did not directly affect profitability and even showed a weak negative effect. This supports our result, which shows no significant effect of CSR on the financial performance of Indonesian palm oil companies. In terms of Environmental Performance, our result aligns with Kaakeh & Gokmenoglu (2022), who found that Environmental Performance generally does not always have a significant correlation with financial performance except under special conditions (e.g., during an economic crisis). It also aligns with Sarfraz et al. (2023), who stated that significant positive effects of Environmental Performance on financial performance often require strong integration with operational strategies and green innovations—factors that may not be clearly present in the palm oil companies studied.

F-Test

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.002	2	.001	.072	.931[b]
	Residual	.901	59	.015		
	Total	.903	61			

a. Dependent Variable: Y_Lag

b. Predictors: (Constant), X2, X1

Source: Output IBM SPSS 27, 2025

The F-test yields a significance of 0.931 (> 0.05), indicating that Corporate Social Responsibility and Environmental Performance together do not have a significant effect on Financial Performance. The R^2 value is only 0.335, meaning that about 33.5% of the variability in Financial Performance is explained by these two variable

This result supports Tjandrakirana et al. (2023), who found that in simultaneous models CSR does not always contribute significantly, and its effect is often lower compared to other operational variables such as operational efficiency or macroeconomic factors. The relatively low R^2 in this study also suggests that in the context of the palm oil industry, external factors such as global commodity prices, trade regulations, and production costs have a much larger

influence on financial performance than non-financial factors like CSR and Environmental Performance.

5. Conclusion

Based on hypothesis testing for palm oil plantation companies listed on the Indonesian Stock Exchange during 2021–2023, the following conclusions can be drawn:

a. Corporate Social Responsibility has no significant effect on Financial Performance.
b. Environmental Performance has no significant effect on Financial Performance.
c. Corporate Social Responsibility and Environmental Performance together also do not have a significant impact on Financial Performance.

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THE EFFECT OF CYBERLOAFING ON EMPLOYEE PERFORMANCE AT GUNUNG MAS ANGROTOURISM

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Abstract

Behavior cyberloafing is activity use Internet For needs personal during O'clock work that is not related to work, and has the potential to have a negative impact on employee productivity and performance. This study aims to determine the effect of cyberloafing behavior to performance employee operational in Agrotourism Mountain Mr. Method Which used is approach descriptive quantitative, with technique collection data through distribution questionnaire to 56 Respondent from division front office, ticketing, And operator vehicle. Instrument study consist of statement closed with scale Likert five level Which has tested validity And its reliability. Analysis results regression linear simple show existence influence negative And significant between cyberloafing on employee performance, with a constant value of 63.071, a regression coefficient of -0.774, and an R^2 value of 20.9%. It means, 20.9% variable performance influenced by cyberloafing, whereas the rest influenced by other factors. A significance value of 0.000 (<0.05) indicates that the effect is statistically significant. This finding become basis for Agrotourism management Mount Mas for implementing policies for monitoring and managing internet usage in the workplace to maintain performance and quality of service.

Keywords: Cyberloafing, Employee Performance, Agrotourism

1. Introduction

Technological developments in the era of globalization have brought significant benefits to human life, particularly in the areas of communication, education, and the workplace. Modern technological innovations, particularly the internet, have now become a crucial element. No inseparable from routine daily. In context world Work, Internet plays a vital role in supporting efficiency and productivity, and performance such as communicating, accessing data, or performing certain tasks. However, on the other hand, it cannot it cannot be denied that employees also often utilize internet facilities This is for Personal needs during work hours. The internet is indeed a necessary facility for creating effectiveness at work, but it is also important to note that the increasing ease of internet access can cause individuals to become very easily distracted. (Sugito & Wirapraja, 2023).

Ease of internet access and various digital platforms can indeed make work easier, but on the other hand, it can... opens up opportunities for less productive activities, such as cyberloafing. Cyberloafing comes from the word cyber which means the activity of using computer access and internet networks, while the term loafing Cyberloafing is defined as a form of time-wasting activity while working (Tefa & Mahendra, 2022). The definition of cyberloafing is also defined as the actions of employees who consciously and intentionally use their time. access Internet owned by company during O'clock Work For needs personal such as accessing internet sites, viewing emails, accessing social media and other interactive entertainment (Dewinda et al., 2021). In this digital era, the phenomenon of cyberloafing is becoming increasingly common, where employees use work time for non-work activities, such as accessing social media or entertainment sites. This phenomenon is a significant concern for companies in managing. technology so that can increase productivity without cause distraction

which is detrimental (Lim & Teo, 2024).
Internet use also helps improve work efficiency by providing digital tools that support task management, collaboration, and data processing more practically and quickly (Fauzi et al., 2023). However, if internet use in the workplace is not managed with Good, cyberloafing can become problem Which Serious. Cyberloafing can reduce employee performance because of the time that should be used to complete tasks precisely diverted. Besides that, activity This can be annoying focus Work, This can lead to a decline in the quality of work. In the long term, this behavior can impact individual and organizational performance, hindering the company's development and achieving its strategic goals (Monica & Maharani, 2020).
Cyberloafing can be considered as a form of mismanagement of human resource management behavior in an organization, which can have a direct impact on employee performance. When management at Agrowisata Gunung Mas is ineffective in managing the use of time and resources, employees tend to use work time for personal interests, such as surfing the internet or accessing social media (Ermida & Hendriani, 2023). Lack of supervision, unclear policies, or tolerance for this deviant behavior can create an environment that is permissive of cyberloafing . This phenomenon has the potential to reduce employee productivity, which can ultimately affect performance they in workplace, including in Agrotourism Mount Mas. Gunung Mas Agrotourism has not implemented a monitoring system or policy that specifically regulates internet use by employees during working hours. This lack of monitoring allows activity cyberloafing ongoing without limitation Which clear, especially in quiet times for visitors .
Agrotourism is a tourism sector that utilizes agricultural locations or sectors as tourist attractions by presenting views of agricultural areas, agricultural activities such as planting, maintenance, harvesting to processing of harvested produce as well as learning about local customs and culture around agricultural locations. (Prayudi et al., 2019). Draft agrotourism Which combine sector tourist And agriculture No only aims to attract tourists, but to increase public awareness about importance agriculture sustainable And preservation environment. Agrotourism It serves as an educational medium for the public, especially in introducing the importance of the agricultural and ecological sectors (Amalia et al., 2024). Through agrotourism, visitors can better appreciate the environment. process agriculture And understand challenge Which faced farmer in make ends meet food. Matter This important For grow awareness will resilience food and maintain environmental sustainability .
Agrotourism development requires careful planning and a comprehensive strategy. A holistic approach is needed to ensure that agrotourism can develop without sacrificing local environmental and cultural aspects. With good planning, agrotourism can become a sustainable sector and provide long-term benefits for communities and tourists. The success of agrotourism development requires collaboration from various parties, including the government, managers, communities local, And sector private (Turkish et al., 2023). Factor determinant success agrotourism is the quality of Human Resources (HR) involved in it. Quality HR will capable give service Which Good to traveler And explain operational tasks effectively .
Employees who work in the service and rides section at Agrowisata Gunung Mas have an important role in ensuring the satisfaction and comfort of visitors. Employees in part This responsible answer For give service friendly And professional to every visitor, organize and manage queues at rides, ensure the operation of each facility runs safely, and adheres to established standards. With a strategic role, the quality of work of employees in the service and rides section directly contributes to the visitor's tourism experience. The following table contains the number of employees working in the service and rides section at Agrowisata Gunung Mas. This table provides a clearer picture of the distribution of workers in the service

and rides section, which is the main focus of this study.

Table 4Number of Employees in the Operational Division of Gunung Mas Agrotourism

Division	Amount
Front office	11
Ticketing	20
Whana Operator	25
Total	56

Source: HRD Agrowisata Gunung Mas

Based on table on show distribution amount employee Which Work in operational section Agrotourism Mountain Sir Which divided in three division. Front division off five own 11 employees are tasked with providing direct services to visitors, such as providing information, serving the check-in and check-out process, handling complaints, and ensuring customer satisfaction. The ticketing division consists of 20 employees who are responsible for selling entrance tickets and ride tickets. The ride operator division that consists of from 25 person employee, on duty operate And supervise vehicle and guarantee to operate and supervise the rides and ensure the safety and comfort of visitors.

The challenges of modern technology bring potential risks to employee performance, one of which is the phenomenon of cyberloafing . This phenomenon can be a distraction that has a negative impact. on service direct to visitors. Remember that service Which Being friendly, fast, and responsive are important aspects in the nature-based tourism industry, so managing cyberloafing is important to maintain employee focus and ensure a pleasant visitor experience. still quality. Dynamics visit traveler Which fluctuating every the week creates challenges. The high number of visits usually occurs on weekends, namely Friday, Saturday, and Sunday. While on weekdays such as Monday-Thursday, the number of visitors tend decrease Which influence intensity burden Work employee. On when it's busy visitors, employee show dedication Which tall in operate task according to their responsibilities, from serving guests to ensuring facilities run smoothly. The situation is different during low-traffic periods; a reduced workload is often the cause of cyberloafing .

Employee performance is one of the key factors in the operational success of a company, especially in the nature-based tourism industry such as agrotourism. The work results achieved are in accordance with the standards applicable to the job. Performance is assessed through two main aspects, namely efficiency and effectiveness. Employee performance refers to the achievement of work results that meet the established standards, with measurements based on level effectiveness And efficiency. Performance Which optimal is when employee able to work with high effectiveness and maximum efficiency (Suwindia & Wati, 2021). Gunung Mas Agrotourism, which offers a tourism experience based on agriculture and the natural beauty of the mountains, employee performance greatly determines the quality of the visitor experience. Employees are responsible for a variety of tasks, including serving guests, managing tourist facilities, maintaining cleanliness, and security of the tourist area. Employee performance can be influenced by various factors, ranging from quality, quantity, punctuality, and effectiveness. Currently, employee performance at Gunung Mas Agrotourism is experiencing fluctuating conditions.

Study This focused on employee operational, namely employees Which Work in Front Division of five , Ticketing , And Operator Vehicle, Because role employee Which direct Customer-facing staff provide services and tourist experiences. Operational staff have more intensive responsibilities in maintaining interactions with visitors, such as providing information, handling ticket sales, and operating rides. This role guides productivity the high one, communication the good one, And service Which responsive. Therefore, the focus of this research is on operational employees.

This study aims to analyze the effect of cyberloafing on employee performance at Agrowisata Gunung Mas. This study focuses on employees who interact directly with visitors. Cyberloafing , or the behavior of employees using the internet for personal purposes during working hours, has become a common phenomenon in the digital era, especially in company Which give access Internet to his employees. Although on the limit certain behaviors can help reduce work boredom, activity This has the potential to reduce employee performance if done excessively because it can divert attention. focus. No all use Internet Which No related with work can considered as cyberloafing. Activities such as reading the news or watching light entertainment content, to some extent, can serve as a way to relieve stress and provide recovery. psychological (Pious, 2021). Matter This important For support balance between work and employee mental health. Therefore, the management of internet facilities at Agrowisata Gunung Mas must be done wisely. For example, by providing structured break times to access the internet privately, companies can reduce the potential for misuse without sacrificing employee well-being. Proper management requires clear boundaries, so that internet use supports organizational goals. A transparent policy regarding internet use will help maintain a balance between employee needs for rest and responsibilities. they to work, so that reduce impact negative cyberloafing on employee performance at Gunung Mas Agrotourism.

The phenomenon of cyberloafing is significant for research at Gunung Mas Agrotourism, given the tourism industry's reliance on fast and consistent service. As a destination with high tourist traffic, employee service quality is key to creating a satisfying experience for tourists. Besides That, competition Which strict in sector tourist demand efficiency maximum operational efficiency to provide the best service while maintaining the company's competitiveness. Research This aiming For identify as far as where cyberloafing affects employee performance at Agrowisata Gunung Mas, both in terms of productivity and job satisfaction. With the results of this study, companies can develop strategic steps to manage the use of technology in the workplace, thereby supporting the achievement of organizational goals without neglecting employee welfare and needs.

The results of this study are expected to provide a significant contribution to the management of Gunung Mas Agrotourism. in designing the right policy for addressing cyberloafing . With the data and findings obtained, management can identify strategies Which effective For minimize impact negative from activity This. Policy Which more focused and appropriate strategies will help create a more productive work environment, in where employee can utilise technology For support work without being distracted by irrelevant activities.

2. Literature review and hypotheses development

2.1. Cyberloafing

Tefa & Mahendra (2022) Cyberloafing is a form of activity using the internet facilities of

the company/office where you work which is used to access personal interests that are not related to tasks and work carried out during work hours. According to Lim & Teo (2024) Cyberloafing refers to the act of using the internet for personal purposes during working hours. This behavior is often categorized US counterproductive, US it has the potential to disrupt productivity and pose security risks to organizations. However, some studies suggest that Cyberloafing also offers benefits, such US aiding employees' mental recovery and fostering creativity when done in a balanced proportion. Based on the understanding of the experts above, it can be concluded that cyberloafing can be defined as employee behavior that utilizes the company's internet access for personal purposes. personal during O'clock Work. Behavior This covers use Internet For non-work activities such as accessing social media, entertainment sites, or personal email, which if excessive, can be detrimental to work efficiency.

2.2. Employee performance

According to Suwindia & Wati (2021) performance somebody can defined as results The work achieved is in accordance with the standards applicable to the job. Performance is assessed through two main aspects, namely efficiency and effectiveness. Employee performance refers to the achievement of work results that meet established standards, with measurements based on level effectiveness And efficiency. Performance Which optimal is when employee Able to work with high effectiveness and maximum efficiency. According to Silaen et al. (2021), employee performance is the work results or achievements achieved by individuals in carrying out their duties, often referred to as actual performance or job performance . This referring to on ability an employee For operate his responsibility with Good, Good from aspect quality and also quantity, in accordance with role And function Which has been set.

Based on understanding for expert in on can concluded performance employee is the result Work Which achieved individual in accordance with standard Which has determined, with assessment based on two aspect main, that is effectiveness And efficiency. Performance Which optimal happen when an employee is able to work effectively and efficiently in carrying out his duties and responsibilities. In addition, employee performance reflects the individual's ability to fulfill role And function Which has set, Good from aspect quality and also quantity work results. Thus, performance is not only an indicator of individual achievement, but also becomes measure measuring important for organization in evaluate And increase overall productivity .

2.3. Research Hypothesis

The hypothesis describes a short and clear assumption about the relationship or influence between the independent variable and the dependent variable in the research (Yam & Taufik, 2021). Based on the description above, the author can put forward the following hypothesis:

H1 : There is influence negative And significant between behavior cyberloafing to employee performance at Gunung Mas Agrotourism.

H2 : No there is influence between behavior cyberloafing to performance employee at Gunung Mas Agrotourism .

3. Research methods

Researchers use quantitative descriptive research methods. Quantitative descriptive research

is a type of research that analyzes data by describing the information collected. According to Sugiyono (2019), quantitative descriptive, which is consistent with research variables, focuses on actual problems and phenomena that are occurring, and presents research results in the form of meaningful numbers. This study uses approach quantitative with utilise data primary And secondary as a source of information. The main objective of this study is to analyze the effect of cyberloafing activities on employee performance at Agrowisata Gunung Mas.

The object of this research is the employees of Agrowisata Gunung Mas, Front Office, Ticketing division, And Operator Rides, destinations from research This For knowing the relationship between cyberloafing and employee work productivity. Cyberloafing as an X (independent) variable, which describes the behavior of using the internet for personal activities during work hours and employee performance as a Y (dependent) variable, which reflects work results in various aspects. quality, quantity, as well as efficiency time. Unit analysis in study This is The sample consisted of employees from the Front Office, Ticketing , and Ride Operator divisions at Agrowisata Gunung Mas. Data sources were obtained from each respondent individually, where all respondents were employees at Agrowisata Gunung Mas.

4. Results and discussion

Based on the analysis of the research that has been done, the discussion of the analysis of the influence of cyberloafing on the performance of Agrowisata Gunung Mas employees, in this study the unit of analysis is the employees of the Front Office, Ticketing , and Ride Operators with a total of 56 respondents. By using descriptive analysis to describe the state of the cyberloafing variable with employee performance on Agrowisata Gunung Mas employees.

Based on descriptive analysis of the cyberloafing variable , the average value of respondents' responses was 54%. The total number of respondents' responses was in the interval (41% - 60%), so that can concluded that cyberloafing in Agrotourism Mountain Most cyberloafing activities fall into the "occasional" category. The highest average score is found in the " Minor Cyberloafing " indicator , specifically the statement "I use email/ WhatsApp for personal purposes during work hours," with a percentage of 76.79%. This show that use means communication personal like e-mail And WhatsApp during working hours is the most frequent activity carried out by respondents. The lowest average value was found in the Serious Cyberloafing indicator , namely in the statement "I play online games via smartphone at work when it is not crowded with visitors" with a percentage of 42.50%. This indicates that the activity of playing games while working is the Cyberloafing behavior that is least often carried out by respondents. It can be concluded that Cyberloafing behavior in the respondent's work environment tends to be carried out at a moderate level and is more dominant in the form of light activities (minor Cyberloafing) than serious activities (serious Cyberloafing).

Based on descriptive analysis of employee performance variables, the average value of respondent responses was obtained, namely 84.35%. Where the total response of the respondents is in the interval (81% - 100%), so it can be concluded that employee performance at Agrowisata Mountain Sir including in always category. Value average highest there is on the Effectiveness indicator, especially on the statement "I complete my work efficiently and the results are in accordance with company standards" , with a percentage of 87.86%. This shows that respondents feel capable of completing their work efficiently. efficient And still in

accordance with standard Which has set company. Mark lowest average found on the indicator Quantity, namely in the statement "I carry out additional tasks" with Good in accordance directions Which given" Which get score 82.14%. However, this value is still in the high category, indicating that the respondents' ability to handle additional tasks remains quite good. It can be concluded that in general overall, level productivity Work Respondent is at on level tall, Which seen from consistency score tall in fourth indicator main. Matter This reflect that capable employees Work in a way optimal, Good from aspect amount, quality, accuracy time, and also work efficiency .

Based on the classical assumption test, the results of the normality test have a significant value of 0.200 > 0.05. can concluded that mark residual distributed normal or fulfil condition normality test And For results test heteroscedasticity no result happen teroscedasticity then you can known distribution dot, dot, dot data No patterned, spread on And under number 0. Based on analysis regression linear simple obtained results performance employee of 63.071 and Cyberloafing of -0.774 the value of 63.071 means that the constant (a), meaning that if Cyberloafing (X) is zero, then the employee performance value is 63.071. Cyberloafing of -0.774 states that if each increase in Cyberloafing units will decrease employee performance by 0.774 units. The results of the determination analysis obtained the KD value = 20.9% And the rest influenced factors other Which No entered in study this. On test hypothesis partial obtained mark t count as big as -3,774 with mark significance of 0.000, whereas t table on level significance 5% as big as 1.6747, so that it can be concluded that t count < -t table and significance value < 0.05, which means Ho is rejected and Ha is accepted. Thus, there is a negative and significant influence between Cyberloafing on employee performance, which shows that the higher the Cyberloafing behavior carried out by employees, the lower the level of performance.

This is reinforced by previous research conducted by Alfina Damayanti (2022), which also showed that cyberloafing has a significant negative impact on employee performance. The more frequently employees engage in cyberloafing, the higher the likelihood that cyberloafing will affect employee performance. so performance employee will decrease. With say other, every C o n s i s t e n t increases in the intensity of Cyberloafing behavior will have an impact on decreasing the quality and effectiveness of performance, so it is important for companies to pay attention to the factors that trigger Cyberloafing in order to maintain optimal employee performance.

5. Conclusion

1. Cyberloafing Levels in Gunung Agrotourism Mas is in the moderate category, with an average respondent response of 54%. Minor cyberloafing activities , such as using email or WhatsApp for personal purposes during work hours, dominate, with a percentage reaching 76.79%. Meanwhile, serious cyberloafing activities , such as playing online games during work hours, are rare, with a percentage of only 42.50%.
2. Level performance employee is at on category tall, with average response respondents amounted to 84.35%. Achievement highest there is on indicator effectiveness, in where respondents felt able to complete work efficiently and according to company standards

(87.86%). Meanwhile, the lowest value was in the quantity indicator at 82.14%.

3. Regression linear simple show constant as big as 63,071 And coefficient Cyberloafing - 0.774, which means Cyberloafing impact negative to performance. Value R^2 as big as 20.9% indicates the influence of Cyberloafing on performance, the rest is influenced by other factors. By conducting a hypothesis test, the calculated t value is -3.774 < -t table 1.6747 and the significance is 0.000 < 0.05, so Ho was rejected And Ha accepted. It means, there is an influence negative and significant between Cyberloafing and employee performance.

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ANALYSIS OF E-COMMERCE POSITIONING BASED ON E-SERVICE QUALITY (STUDY ON PAKUAN UNIVERSITY MANAGEMENT STUDENTS)

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Abstract

The development of e-commerce has become a very important and significant part of economic growth globally. This study aims to analyze e-commerce positioning based on e-service quality with a focus on the preferences of management students. E-service quality is an important factor in determining the competitiveness of e-commerce, such as Shopee, Tokopedia, Lazada, Blibli, bukalapak analyzing aspects of service quality such as efficiency, privacy, fulfillment, system availability. The research method used is a quantitative survey with purposive sampling technique. Data were obtained from 100 management students who actively use e-commerce services, then analyzed using multidimensional scaling (MDS) techniques to map the relative position of each e-commerce platform. The object of this research is the e-service quality variable with indicators of efficiency, efficiency, privacy, fulfillment, system availability. Based on the results of calculations and data analysis of e-commerce positioning based on e-service quality using the multidimensional scaling method, that overall, Shopee e-commerce is the best because it has advantages in indicators of efficiency, privacy, system availability. Followed by Tokopedia which has a good fullfilment advantage.

Keywords: Positioning, E-Service Quality, E-Commerce, Multidimensional Scalling

1. Introduction

The development of the e-commerce industry has experienced exponential growth and expanded worldwide in the last few decades. This development has become a very important and significant part of global economic growth. This is driven by very dynamic technological developments that have a direct and massive impact on trade activities, both locally, nationally, internationally and multinational.

The e-commerce sector in Indonesia is estimated to experience a growth of 30.5%. This figure is much higher than the global average growth, which is only around 10.4%, or almost three times lower than Indonesia. In the list of the world's fastest growing e-commerce countries, Mexico takes second place with a growth rate of 26.8%, followed by Thailand in third place with a growth of 22.9%. The value of global e-commerce is expected to grow by more than 230% from $1.8 trillion in 2014 to $4.48 trillion by 2021. Furthermore, this growth is projected to increase further to Global e-commerce retail sales increased from $1.5 trillion in 2015 to $3.5 trillion in 2019, and are expected to reach $6.5 trillion by 2023, representing nearly a quarter of total global retail sales (Chen, 2021).

The e-commerce penetration rate in Indonesia has continued to increase since 2021, driven by the increasing adoption of digital technology, changes in consumer behavior that are increasingly accustomed to shopping online, and the development of wider internet

infrastructure. This growth trend continues until 2023, where the e-commerce penetration rate in Indonesia reaches 21.56%, reflecting the growing contribution of the digital trade sector to the national economy and the increasing public confidence in online-based transactions. A study on Shopee's e-commerce penetration strategy shows that marketing strategies such as flash sales, advertising with Brand Ambassadors, and gamification on mobile applications contribute greatly to Shopee's market penetration in Indonesia (Asih, 2024). Research comparing content strategies between Bukalapak and Lazada found that user engagement on social media is a key factor in understanding market behavior and increasing e-commerce penetration (Utami et al, 2019).

E-commerce users in Indonesia, the number of users continues to experience a significant increase from year to year. In 2024, the number of e-commerce users in Indonesia reached 189.6 million. This growth reflects the rapid development of the digital ecosystem in Indonesia, which is driven by the advancement of internet infrastructure, the increasing digital awareness of the public, and the increase in e-commerce platforms that offer convenience and innovation in online shopping activities. With the growing trend, the number of e-commerce users is predicted to continue increasing in the future, along with the widespread adoption of digital technology and the emergence of new innovations from various e-commerce platforms. Shows that the number of Lazada e-commerce visitors has decreased from 2017 to 2020, and the level of engagement has also decreased between 2017-2019 Cahya et al (2022). Regarding e-commerce and purchase interest in vegetable products in Banda Aceh shows that system quality and service factors affect the increase in the number of online buyers in the area Faisal, et al (2020).

Tokopedia is the e-commerce platform most frequently visited by users in Indonesia, with a total of 158.35 million visits. Shopee is in second place with 131.3 million accesses. The high number of visits on these two platforms reflects their dominance in the e-commerce industry in Indonesia, especially in meeting diverse consumer needs. In addition to Tokopedia and Shopee, there are a number of other popular e-commerce platforms that are also widely used by Indonesians.

A survey conducted by Statista and Goodstats shows that most Indonesians now prefer to shop online to fulfill their needs. Clothing and accessories are the most commonly purchased products on the marketplace, with a percentage of 70%, although it has decreased compared to the previous year. Meanwhile, electronic products have also decreased, from 56% to 31%. Display quality and user experience on the website have a significant effect on customer loyalty (Yusuf, 2021). Shopee became the most visited e-commerce site in Indonesia in the first quarter of 2023, with an average of 157.9 million visits per month (Shifa et al, 2024).

Price factors and product attributes also influence purchasing decisions Nurzamzam (2018). Studies on e-marketplaces show that smartphone products continue to experience an increase in ownership and sales on platforms such as Tokopedia, Bukalapak, and Shopee Ambarsari (2018).

The transaction value shows that e-commerce in Indonesia has increased every year. However, in 2023 Indonesian e-commerce transactions reached 453 trillion transactions. The achievement of the transaction value in 2023 is lower than in 2022. The decline in the value of e-commerce transactions in Indonesia in 2023 is due to changes in consumption patterns in society. Bank

Central Asia (BCA) Chief Economist David Sumual sees that the decline in the value of e-commerce transactions is due to the provision of massive discounts. (Kontan.co.id, 2023).

It is noted that consumers aged 26-35 years or the millennial generation are still the largest contributor to the proportion of the number of e-commerce transactions throughout 2022, reaching 46.2%. However, the trend has tended to decreasing in the last two years. Similarly, the second largest contributor to the percentage of e-commerce transactions last year was generation X, or customers aged between 18 and 25 years. Although, the percentage of transactions in this age group decreased between 2020 and 2022. However, over the past two years, the percentage of e-commerce transactions in the 36-45 and 46-55 age ranges has been on the rise. Social factors and online shopping habits have a significant influence on students' intention to use e-commerce Piarna (2020). A study in Bogor City and Regency shows that around 60% of teenagers aged 13-17 have made online purchases. Urban teenagers use e-commerce applications more often than rural teenagers Artheswara and Sulistiawati (2020).

Table 1 *Gross Merchandise Value (GMV) of E-Commerce* in Indonesia

Year	Total (in billion)
2021	48
2022	58
2023	62

Source: Google; Bain & Company; Temasek Holdings; Statista (processed by PDSI, Ministry of Trade).

Gross Merchandise Value (GMV) has continued to increase significantly since 2021, driven by the rise of e-commerce, changes in consumer shopping behavior, and the development of digital infrastructure. This growth trend continued until 2023, when the GMV value was recorded at more than USD 62 billion, reflecting the rapid expansion of the e-commerce sector and increasing public confidence in online transactions. The study found that GMV growth in social commerce such as TikTok is increasing rapidly in Indonesia, driven by users hedonic motivations and more interactive shopping experiences Pranata et al (2024). B2B e-commerce startups in Indonesia, found a downward trend in GMV in the last six months. This was related to customer mis-segmentation and lack of a strong value proposition. The study suggested value-based business model innovation to increase GMV ('Asian Journal of Research in Business and Management', 2023). Indonesia recorded the largest GMV in Southeast Asia for online food delivery services, reaching $3.7 billion in 2020. The main factors driving GMV are ease of access, wide selection, and promotional offers Wilujeng (2023).

Table 2 E-Commerce Top Brand Index Data 2022-2024

E-Commerce	2022	2023	2024
Shopee	59,9 %	-	41,2%
Tokopedia	4,8 %	10,2 %	4,1 %
Lazada	21,8 %	22,5 %	25,1 %
Blibli	5,1 %	6,6 %	14,3 %
Bukalapak	2,50 %	-	2,30 %

Source: *topbrand-award.com,* 2024

Brand Shopee has been the favorite e-commerce in Indonesia for two years, as well as Brand Lazada and Brand Blibli have increased. While e-commerce Brand Tokopedia, Brand Bukalapak has decreased in 2024.

Table 3 Service Quality Data on *E-Commerce*

Reason for choosing *e-commerce*	**Shopee**	**Tokopedia**	**Lazada**	**Bukalapak**	**Blibli**
Product quality	63%	74%	63%	50%	-
Delivery service fastest	45 %	52 %	43 %	30%	-
Tracking feature best delivery tracking feature	18%	29%	16%	11%	11%
Most varied delivery services *variety*	28%	33%	26%	-	25%

Source: mediaindonesia, 2024

The results of the mediaindonesia survey show that the Tokopedia Platform is considered superior in several aspects compared to other e-commerce. Positive ratings were given for product quality, the fastest delivery service, the best delivery tracking feature, and the most varied delivery services. This makes Tokopedia the top choice for consumers in terms of e-commerce. In contrast, Blibli is in the lowest position, with only the best delivery tracking feature and the most varied delivery service.

Table 4 Reasons for Choosing Preferred *E-Commerce* by Gender in 2023

Reasons for choosing e-commerce	**Female**	**Male**
Attractive discount promotions	30%	40%
Shipping promo	30%	18%
Already used to shopping on the site The	22%	24%
Products are more complete	8%	8%
Display interface	4%	3%

Source: populix, 2023

In the study, it was found that there were differences in shopping motivations based on the gender of the respondents. Men tend to be more interested in promos and discounts given directly on the products being sold, this factor is their main driver in making online transactions. On the other hand, women are more motivated to shop online because of promos on shipping

costs, which are considered to significantly reduce their total shopping costs. The survey results show that as many as 30% of female respondents cited shipping promos as their main reason for shopping online, while only 18% of male respondents had similar considerations. Research shows that the better the e-commerce system, product quality, and promotion strategy, the higher the consumer purchase decision Purnamawati et al (2022). more likely to make impulse purchases when there are attractive promotions, especially if they feel they will regret it if they miss the opportunity Luo et al. (2021).

Among students, many have utilized e-commerce platforms, such as Tokopedia, Lazada, Bukalapak, Shopee, and Blibli, for online buying and selling activities. In connection with this phenomenon, the author conducted a pre-survey to understand the use and perception of e-commerce services among students from 30 respondents. The results of the pre-survey, the e-commerce that is often used by Management Study Program students is Shopee, obtaining the highest number of respondents compared to other e-commerce. The results of a pre-survey of 30 student respondents, it was noted that the service attributes of e-service quality, especially in the aspect of efficiency, received a positive response from 16 respondents. Comprehension of positioning and consumer perceptions of e-commerce brands. Based on the above phenomena and problems, the authors took the research title "Analysis of E-commerce Positioning based on E-Service Quality (Case Study of Management Students of the Faculty of Economics and Business, Pakuan University, Class of 2020-2023)".

2. Literature Review

Positioning

Positioning or product placement is an important strategy in marketing that aims to create a unique position for the company in the minds of target customers. This is done by designing the company's offerings and image to be different from competitors, as the result the company can maximize its potential benefits. Positioning involves establishing a detailed marketing mix to ensure the product has a distinct and special impression in the market.

According to Kotler (2018) positioning is an offer and the company's image design is so that the company occupies a unique position (compared to competitors) in the minds of target customers. The end result of positioning is to create the correct proportion of customer purchase value. According to Kotler et al (2018) positioning is the act of designing a company's offer and image in order to get a special place in the mind of the target market. The purpose of positioning is to place the brand in the minds of consumers in order to maximize potential benefits for the Company. According to Ismanto (2020) product placement or positioning includes activities to formulate product placement in competition and establish a detailed marketing mix so that it has a completely different impression from competitors.

E-Service Quality

E-service Quality is the development of the concept of service quality applied in an electronic or internet context. E-service quality aims to assess the effectiveness and efficiency of services provided through online media, including shopping, purchasing and distribution activities.

According to Chase, et al in Mubarak (2019: 18) that 'E-service quality is defined as an extension of a site's ability to facilitate shopping, purchasing and distribution activities effectively and efficiently'. According to Zeithaml, Parasuraman and Malhotra (2019: 18) that 'E-service quality is defined as the ability of a site to provide effective and efficient facilities for online shopping, online purchases and in the acquisition of goods or services'. According to Saragih (2019) e-service quality is a service that is committed to efficiency.

According to Saragih (2019), high-quality e-service quality is a service that is committed to high efficiency, reliable reliability, fulfillment that can meet customer expectations, guaranteed privacy, fast responsiveness from customer service, appropriate compensation and contacts that are provided and easy to contact, especially to serve customer complaints.

The following according to Zeithaml (2009) e-service quality indicators consist of:

1. Efficiency
   Efficiency is the ability of consumers to access the website, find the products needed and information related to these products, and leave the site with minimal effort.
2. Fullfillment
   Fullfillment includes the accuracy of service promises, product stock availability, and product delivery according to the promised time.
3. Privacy
   Privacy is the assurance that shopping behavior data is not given to other parties.
4. System availability
   System availability is the correctness of the technical functions of the site.

Multidimensional Scalling

Multidimensional Scalling is to present objects visually based on their similarities. In addition, another use of this technique is to group objects that have similarities seen from several variables or attributes that are considered capable of grouping these objects according to Singh (2014).

The following are the statistical data measured in the multidimensional scaling method according to Malhotra (2018):

1. Similarity rating: ranking of brands or attributes in terms of similarity using a Likert scale.
2. Preference rating: rank order of the most preferred or least preferred brand or attribute.
3. Stress: lack-of-fit measurement to calculate the stress value, a higher stress value indicates a worse fit.
4. R-square: squared correlation index that shows the proportion of variance.
5. Spatial map: the relationship between brands or attributes referenced to geometric relationships in multidimensional space.
6. Coordinates: shows the position of the brand or stimulus in a spatial map,
7. Unfolding representations of brands and respondents as points in the same space.

According to Ginanjar (2008), to analyze MDS data, values are used that describe the level of similarity or the level of disparity between objects called proximity which is divided into similarity and dissimilarity.

Based on the data type, MDS is divided into two, namely metric multidimensional scaling and non-metric multidimensional scaling.

1. Metric Multidimensional Scaling
   The distance data used in metric multidimensional scaling is ratio data. Metric multidimensional scaling is used to find the set of points in n-dimensional space where each point represents one object so that the distance between points is, where f is a continuous monotonic parametric function.
2. Non-Metric Multidimensional Scaling
   Distance data used in non-metric dual-dimensional scaling is data that is considered to be of ordinal type. For non-metric dual-dimensional scaling, the transformation function only has the limit for all.

Perceptual mapping

According to Ratnawati (2019) perceptual mapping shows where consumers prefer to place products according to how they feel. With a perceptual map, each brand or product occupies a special place (point). Perceptual Mapping according to Gower (2010) is a mapping technique for perceptions owned by consumers. Perceptual maps are often used in marketing to visually study relations between two or more attributes. This is often used by companies to know the actual position and positioning goals of a product, attribute, or even brand. So that they can react to changing market conditions.

Thinking Framework

Several e-commerce companies such as Shopee, Tokopedia, Lazada, Bukalapak, and Blibli compete in an increasingly competitive market. To maintain sustainability, they implement the right marketing strategies, including positioning. Positioning aims to shape consumer perceptions of their brand. herefore e-commerce can differentiate themselves from competitors and attract consumer attention.

The following are indicators that influence positioning based on e-service quality according to Zeithaml et al (2009). Similar indicators to previous research Salma (2020), Nur Arifah (2020) are similar consisting of:

1. positioning based on efficiency
2. positioning based on fulfillment (fullfilment)
3. positioning based on privacy (Privacy)
4. positioning based on system availability.

In this study, researchers used the E-service Quality variable, which will be analyzed using the Multidimensional Scaling (MDS) method to provide an interesting picture of the perceptions of Pakuan University Management students regarding e-service quality. From these student perceptions, an e-commerce competition map will be formed which describes the relative position of various e-commerce platforms.

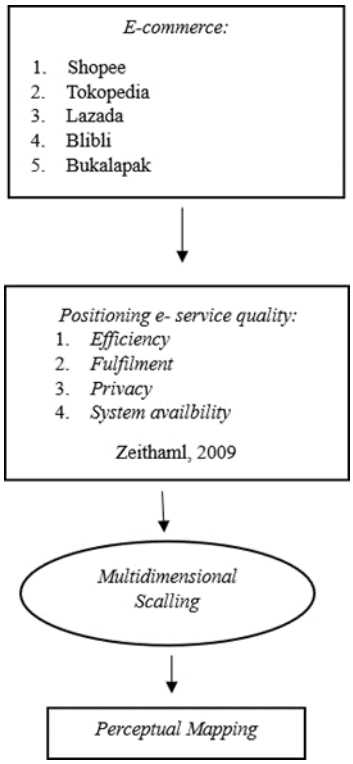


Figure 1 Thinking Framework

3. Research method

The type of research used in this study is descriptive quantitative research with a survey research method that aims to describe existing phenomena in depth and collect data and describe thoroughly the characteristics of the phenomenon or problem to be solved. The research technique used is Multidimensional scalling.

The research object in this study is the e-service quality positioning variable with indicators of efficiency, system availability, privacy, fullfilment. The unit of analysis in this study was obtained from Management Students/Class of 2020 - 2023 who were the target respondents in the Faculty of Economics and Business, Pakuan University area. The research location is at the Faculty of Economics and Business Management Studies, Pakuan University Jl. Pakuan, Tegalega, Central Bogor District, Bogor City, West Java 16129. The research technique is purposive sampling with the Multidimensional scaling method, with 6 steps taken, namely:

1. Formulating the problem
   In conducting Multidimensional Scaling, the purpose of the research results and the selection of brands or stimuli to be studied must be clearly determined. The number of brands included in the study must be done carefully and based on the problem statement, theory and researcher judgment.
2. Obtaining input data
   Entering data for the research from respondents by creating questions in terms of assessments of the selected research objects and in terms of attributes expressed in perceptions by ranking them.
3. Selecting the Multidimensional scaling procedure

The selection of a specific multidimensional scaling procedure depends on whether the perceptual data being scaled or to be analyzed requires both types. The multidimensional scaling procedure assumes that the input data is ordinal but produces metric data.

4. Deciding on the number of dimensions
   The main goal of the multidimensional scaling analysis is to obtain an appropriate spatial map that can represent the input data with as few dimensions as possible.
5. Dimension labeling and configuration interpretation
   After the result of the spatial map, the dimensions need to be labeled. Labeling can help and facilitate viewing the spatial map.
6. Assessing reliability and validity
   Large amounts of data input can cause very random and diverse variability. It is necessary to test the validity and reliability of the resulting multidimensional scaling solution.

4. Results And Discussion

Data Analysis

Multidimensional Scalling

Multidimensional Scalling (MDS) is an analytical method to measure the level of similarity between objects. MDS allows visualization of spatial relationships between data by utilizing data from questionnaires.

Stress (%)	*Criteria Model (%)*
>20%	***Poor***
20-10%	***Fair***
10-5%	***Good***
5-2.5%	***Very Good***
<2.5%	***Perfect***

Source*: Haier,* 2009

Figure 2 MDS Model Criteria

A high stress value indicates that the model is poor, as a result MDS analysis cannot be used in the study. Conversely, the smaller the stress value, the better the monotone relationship formed between inequality and disparities. The accuracy of the MDS analysis results is assessed using the stress measure.

1. Effeciency

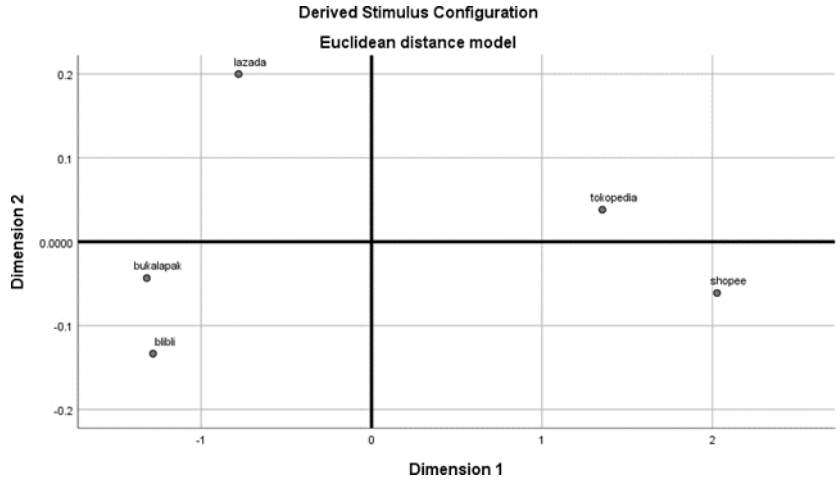
Table 5 Configuration Derived in Two Dimensions

No	*E-commerce*	Stress Value	RSQ	Dimension I	Dimension II
1.	Shopee			1,1732	-,3996
2.	Tokopedia			1,1575	-,2283

3.	Lazada	0,0896	0,99970	,1679	,3315
4.	Blibli			-2,5628	-,2506
5.	Bukalapak			,0642	,5469

Source: data processed, 2024

Shows that the resulting two-dimensional stress model is 0.08 "Good" and the Index Of Fit (RSQ) of 0.99970 this value is included in the sufficient category and the RSQ value is said to be feasible (R Square) > 0.60.



Source: Data processed, 2024

Figure 3 Effeciency Perception Map

In terms of the scale size of each dimension, the figure above shows perceptual mapping on privacy indicators. It can be seen that Bukalapak, Blibli, Lazada e-commerce have similarities with Blibli e-commerce because they are closest and are in the same quadrant. Meanwhile, Shopee, Tokopedia have no similarity with others because each is in a different quadrant. From these results that Shopee is considered superior in consumer perceptions of e-commerce based on (X2.1) protected personal data storage and (X2.2) application and protected shopping behavior data storage.

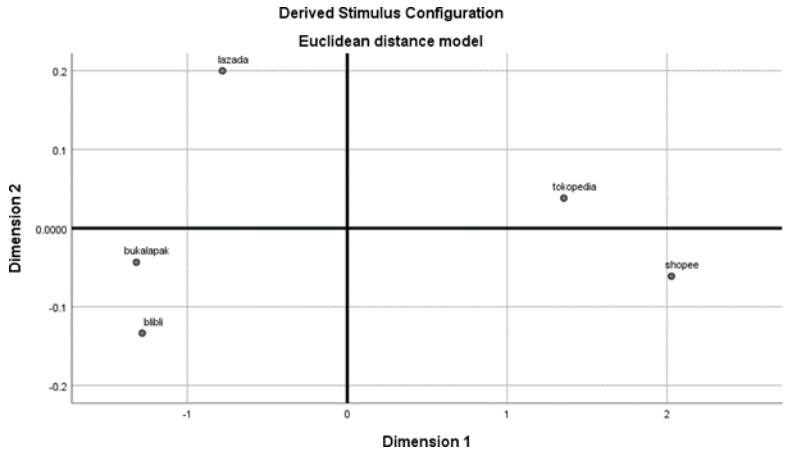
2. Privacy

Table 6 Configuration Derived in Two Dimensions

No	E-commerce	Value Stress	RSQ	Dimension I	Dimension II
1.	Shopee	0,0026	1,00000	2,1581	0,6113
2.	Tokopedia			-1,4549	1,2169
3.	Lazada			-0,2970	-0,8493
4.	Blibli			-0,2029	-0,4880
5.	Bukalapak			-0,2034	-0,4909

Source: data processed, 2024

Shows that the resulting two-dimensional stress model is 0.026 "very good" and the Index Of Fit (RSQ) of 1.00000 this value is included in the sufficient category and the RSQ value is said to be feasible (R Square) > 0.60.



Source: data processed, 2024

Figure 4 Privacy Perception Map

It can be seen that Bukalapak, Blibli, Lazada e-commerce have similarities with Blibli e- commerce because they are closest and are in the same quadrant. Meanwhile, Shopee, Tokopedia have no similarity with others because each is in a different quadrant. From these results that Shopee is considered superior to consumer perceptions of e- commerce based on (X2.1) protected personal data storage and (X2.2) application and protected shopping behavior data storage.

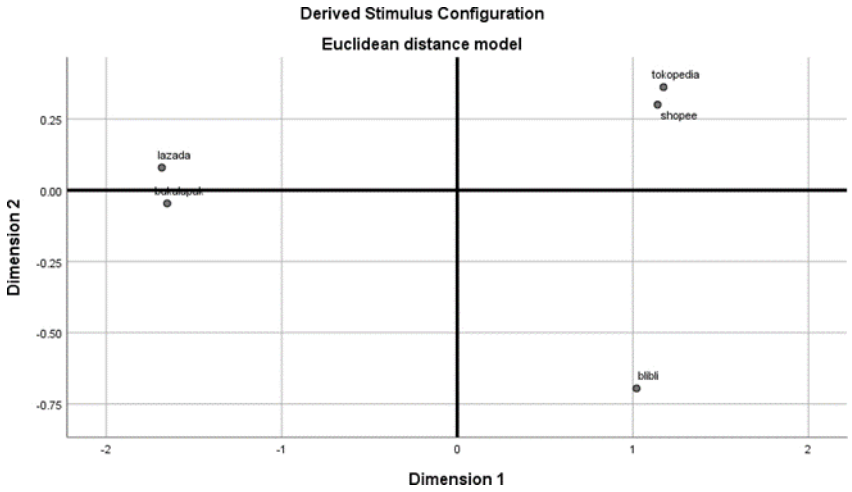
3. Fullfilment

Table 7 Configuration Derived in Two Dimensions

No	E-commerce	Stress Value	RSQ	Dimension I	Dimension II
1.	Shopee	0,1434	0,99938	1,3542	,0381
2.	Tokopedia			2,0271	-,0612
3.	Lazada			-,7803	,1998
4.	Blibli			-1,3188	-,0434
5.	Bukalapak			-1,2822	-,1335

Source: data processed, 2024

Shows that the resulting two-dimensional stress model of 0.1434 is "sufficient" and the Index Of Fit (RSQ) of 0.99938 this value is included in the sufficient category and the RSQ value is said to be feasible (R Square) > 0.60.



Source: data processed, 2024

Figure 5 Fullfillment Perception Map

It can be seen that Bukalapak, Blibli, Lazada e-commerce have similarities with Blibli e-commerce because they are closest and are in the same quadrant. While Shopee, Tokopedia have no similarity with others because each is in a different quadrant. From these results that Tokopedia is considered superior in consumer perceptions of e-commerce based on (X3.1) the ease of the return process that is in accordance with the promise and (X3.2) accurate stock availability, as well as precise delivery estimates.

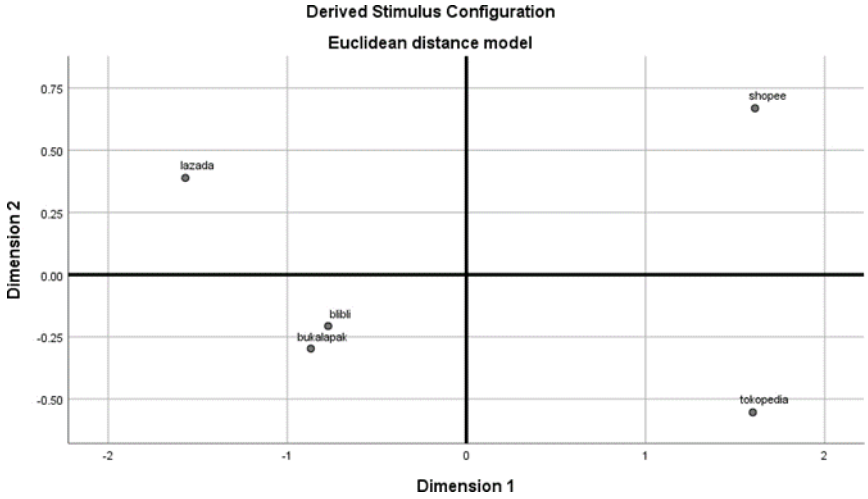
4. System Availability

Table 8 Configuration Derived in Two Dimensions

No	E-commerce	Value Stress	RSQ	Dimension I	Dimension II
1.	Shopee	0,0919	0,99972	1,6110	,6686
2.	Tokopedia			1,5988	,5535
3.	Lazada			-1,5692	,3887
4.	Blibli			-,7721	-,2067
5.	Bukalapak			-,8686	-,2971

Source: data processed, 2024

Shows that the resulting two-dimensional stress model is 0.919 and the Index Of Fit (RSQ) is 0.99972 this value is included in the sufficient category and the RSQ value is said to be feasible (R Square) > 0.60.



Source: data processed, 2024

Figure 6 Perception Map of System Availabilty

It can be seen that Bukalapak, Blibli, Lazada e-commerce have similarities with Blibli e- commerce because they are closest and are in the same quadrant. Meanwhile, Shopee, Tokopedia have no similarity with others because each is in a different quadrant. From these results that Shopee is considered superior in consumer perceptions of e-commerce based on (X4.1) stable platform networks and (X4.2) fast as well as the availability of more complete systems and features.

Discussion

Overall, the results of the Multidimensional Scaling (MDS) method involve analyzing indicators mapped on an interconnected diagram based on the dimensions that have been identified. The results of Multidimensional Scaling processing on five e-commerce based on the perceptions of Pakuan University Management Study Program students Class of 2020-2023.

Table 9 Top 5 E-commerce Ranking Results using the Multidimensional Scaling (MDS) method.

No.	Statement	Shopee	Tokopedia	Lazada	Blibli	Bukalapak
1.	*Effeciency*	1	2	3	4	5
2.	*privacy*	1	2	3	4	5
3.	*fullfilment*	2	1	5	3	4
4.	*System availability*	1	2	5	3	4
Total		5	7	16	14	18
Ranking		1	2	4	3	5

Source: data processed, 2024

1. The first rank was achieved by Shopee e-commerce, which has advantages in efficiency, privacy, and system availability indicators. This shows that Shopee excels in providing good service quality to users. Shopee is known to have high operational efficiency, a secure privacy protection system, and complete system availability to support user transaction needs. The combination of these factors makes Shopee the top choice in e-commerce competition in Indonesia. The results of this study are the same as Silvyana (2022) that Shopee has the most superior attribute value.
2. The second rank is achieved by Tokopedia e-commerce, which has an advantage in the fullfilment indicator. This shows that Tokopedia has a very good ability to meet the needs and expectations of its customers regarding the process of ordering and shipping goods. Tokopedia's fullfilment quality includes product stock accuracy, packaging and shipping speed, and satisfactory service. The high number of Tokopedia customer visitors illustrates that e- service quality and customer satisfaction with Tokopedia are very high (Maulanasyah and Kusumahadi, 2021).
3. The third rank is achieved by Blibli e-commerce, which despite not having significant advantages in the four main indicators, namely efficiency, privacy, fulfillment, and system availability, is still able to compete with better performance than other platforms such as Lazada and Bukalapak. This position indicates that Blibli continues to strive to maintain its competitiveness despite facing intense competition in the Indonesian e-commerce market. With a percentage of 47.7% of the ideal score, Blibli.com can improve the system, as a result e-service quality can match consumer expectations (Nadiawati et al, 2022).
4. The fourth rank is achieved by Lazada e-commerce, which despite not having significant advantages in the four main indicators, namely efficiency, privacy, fulfillment, and system availability, is still able to compete with better performance than other platforms such as Bukalapak. Compared to Bukalapak, Lazada is also superior in efficiency indicators. Lazada is the e-commerce that is in the weakest position because it is perceived by customers as an e-commerce that does not provide good judgment on the four attributes of Salma (2020).
5. The fifth rank is Bukalapak e-commerce. Based on student perceptions, Bukalapak is considered to have no prominent strengths in the four main indicators, namely efficiency, privacy, fulfillment, and system availability. This platform also does not show any noticeable weaknesses, but the absence of specific advantages makes it in the last position. Bukalapak is also known to be lacking in providing trust to consumers, known by the number of respondents 64.4% (Afiqoh, 2023).

Based on the results of the discussion, this research is useful in providing an understanding of market positioning. Positioning analysis helps e-commerce in assessing their comparison with competitors in the aspect of e-service quality. In addition, this research reveals the advantages and disadvantages of each platform based on indicators such as efficiency, privacy, fulfillment, and system availability.

5. Conclusions

Based on the results of calculations and data analysis of e-commerce positioning based on e-service quality using the multidimensional scaling method, it can be concluded that overall, Shopee e-commerce is the best because it has advantages in indicators of efficiency, privacy,

system availability. Followed by Tokopedia which has a good fullfilment advantage. As well as e-commerce Blibli, Lazada, Bukalapak assessment based on the perceptions of students of the Faculty of Economics and Business Management Study Program Class of 2020-2023. The benefits in research to analyze positioning in helping e-commerce in assessing their comparison with competitors in the aspect of e-service quality. In addition, the benefits of this research reveal the advantages and disadvantages of each platform based on indicators such as efficiency, privacy, fulfillment, and system availability.

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THE EFFECT OF GREEN ACCOUNTING, CAPITAL STRUCTURE, AND PROFITABILITY ON FIRM VALUE IN PROCESSED FOOD AND BEVERAGE SUBSECTOR COMPANIES LISTED ON THE INDONESIAN STOCK EXCHANGE FROM 2019 - 2023

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Abstract

The processed food and beverages industry in Indonesia has experienced rapid growth due to increasing consumer demand for practical and ready-to-eat products. However, this growth has also led to environmental concerns, particularly in waste management. To address this, the Ministry of Environment and Forestry has implemented the Environmental Performance Rating Program (PROPER) to assess corporate compliance with sustainable environmental practices. In this context, the application of green accounting plays a vital role in promoting environmental transparency and accountability. Additionally, capital structure and profitability are important factors influencing firm value in the eyes of investors. This study aims to analyze the effect of green accounting, capital structure, and profitability on the firm value of processed food and beverage sub-sector companies listed on the Indonesia Stock Exchange and participating in PROPER from 2019 to 2023. A total of seven companies were selected using purposive sampling. This research employs a verificative approach with an explanatory survey method, utilizing quantitative data. The analysis includes Descriptive Statistics, Classical Assumption Tests (Normality, Multicollinearity, Heteroscedasticity, and Autocorrelation), Multiple Linear Regression, Partial Test (t-test), Simultaneous Test (F-test), and Coefficient of Determination (R^2), processed using IBM SPSS Statistics 25.

Keywords**:** *green accounting, capital structure, profitability, firm value*

1. Introduction

The development of processed food and beverages sub-sector companies is increasing rapidly along with the increasing needs of the community for food and beverages. People nowadays tend to choose fast food because it is more practical, durable, and easy to consume. This makes this sector has a favorable prospect both now and in the future.

The COVID-19 pandemic that hit Indonesia in 2020-2022 had a significant impact on the manufacturing sector, including the processed food and beverages sub-sector which is a driver of the national economy. The decline in sub-sector activity led to an economic slowdown and weakened the growth of this sub-sector compared to previous years (www.gapmmi.id). Nevertheless, the processed food and beverages sub-sector still has a strategic role in supporting the national economy. In 2022, the processed food and beverages sub-sector made a major contribution to the GDP of the non-oil and gas processing industry (www.infopublik.id). In 2023, its role is increasingly visible through its contribution to non-oil and gas industry GDP and national GDP, accompanied by positive growth compared to the previous year (www.indonesia.go.id).

One of the challenges faced by the processed food and beverages sub-sector during the COVID-19 pandemic is the decline in people's purchasing power. This can be seen from household consumption data which has decreased since the second quarter of 2021, with growth recorded at -5.52% (www.katadata.co.id). The impact will still be felt until 2023. The chairman of the Indonesian Food and Beverage Entrepreneurs Association (Gapmmi), Adhi Lukman, revealed that the growth of the processed food and beverages sub-sector only reached 5%, lower

than the initial estimate which was in the range of 6-7%. The weakening of people's purchasing power was caused by the increase in food commodity prices which directly reduced consumption levels, which in turn led to a decline in investor interest. Economic uncertainty during the pandemic has made investors (both domestic and foreign) more cautious about investing in the sector (www.mediaindonesia.com).

A good company must understand the financial and non-financial potential, to achieve company goals there must be many challenges that must be faced, one of which is environmental problems (Putri, et al., 2024). Waste generated can adversely affect the environment and cause pollution. However, there are still many companies that do not care about the environment (www.econusa.id). Based on research from the Science Advance journal, PT Indofood is one of the companies listed as the largest contributor to plastic waste. In addition to companies in Indonesia, there are also large companies such as Coca-Cola, PepsiCo, Netsle, and Danone (www.suaramerdeka.com).

According to data from the Ministry of Environment and Forestry (KLHK), in 2021 Indonesia produced 60 million tons of hazardous and toxic waste (B3) with the manufacturing sector as the largest contributor. B3 waste is generated from primary activities in the company's industrial operations. A total of 2,897 tons of waste from food and beverage sub-sector companies can come from various sources that are often unanticipated, such as used packaging, products that have passed the expiration period, and the remains of production goods that do not pass the quality standard test. (www.kompasiana.com).

This encourages companies to pay more attention to aspects of sustainability in their operations, including the application of the concept of green accounting. According to Arizad (2023), argues that green accounting is the process of reporting the results of an analysis that takes into account both the costs incurred as a result of the company's operational activities that have an impact on society and the environment and includes prevention costs and these costs and can be used in decision making. Green accounting reporting in accordance with government regulations reflects the extent to which the company manages its environmental impacts. To assess the effectiveness of environmental management, companies can participate in the Company Performance Assessment Program in Environmental Management (PROPER), an initiative initiated by the Ministry of Environment and Forestry (KLHK).

2. Literature review

4.12. Signalling Theory

Signaling theory provides insight into how a company conveys accurate and appropriate information to users of financial statements (Sari & Santoso, 2024). Financial statements can send positive or negative signals to parties who have an interest in using financial statements.

One form of signal provided by companies is through green accounting practices, which in this study are measured using environmental performance through PROPER ratings. When PROPER ratings are high, it indicates that companies are concerned about the environment and comply with applicable regulations. This can send a positive signal to investors, which can then increase the value of the company. Conversely, if PROPER ratings are low, investors consider companies to be less concerned about the environment, which can decrease the value of the company.

This theory is related to profitability (return on assets) because if the value (return on assets) increases, the company's value will also increase. The company will be attractive to investors because it is able to generate large profits. Conversely, if the company generates small profits, it will reduce investor interest, which will impact the company's value.

According to Ross (1977)'s signaling theory, a high Debt to Equity Ratio (DER) is not always bad for investors. If a company has good performance and is able to manage its debt,

then a high DER can be a positive signal and have an impact on increasing the company's value. However, if the debt is too large without being balanced by strong financial performance, then investors will see it as a negative signal because it increases the risk of bankruptcy and can decrease the company's value.

4.13. Firm Value

Ramadhayani & Widiyati (2024) state that firm value reflects investors' perceptions of the company as related to its share price. If the share price is high, then the company's value will also increase. According to Yulianti (2024), firm value can be measured using valuation ratios or market ratios. Valuation ratios are comprehensive performance measures for a company, one of which is the Price to Book Value (PBV) ratio. The PBV ratio is the comparison between the market value of shares and the book value of the company's equity. The PBV ratio indicates the company's ability to create value relative to the amount of capital invested (Sari & Santoso, 2024).

4.14. Green Accounting

In their book Green Business, Cohen & Robbins (2011:190) argue that green accounting or environmental accounting is defined as an accounting approach that considers indirect aspects (indirect costs), including the environmental and health impacts of a company's economic activities. Additionally, green accounting can enhance value by evaluating the costs and effectiveness of environmental protection measures and reporting environmental practices more transparently, thereby supporting long-term sustainability (Faranika & Illahi, 2023).

PROPER is a government program aimed at encouraging companies to manage their environmental performance more effectively and efficiently by complying with regulations in a transparent and democratic manner. PROPER assessments are based on a five-level ranking system.

4.15. Capital Structure

According to Kasmir (2018), the Debt to Equity Ratio (DER) is a ratio used to determine the amount of equity used as collateral for debt. According to the book Financial Management: Theory & Practice by Brigham & Ehrhardt (2017:608), capital structure is defined as the combination of debt and equity used by a company to finance its operations.

The Debt to Equity Ratio is a proportion used to evaluate a company's liabilities relative to its equity. This ratio is calculated by comparing total liabilities, including short-term or current liabilities, with total equity. This ratio serves to determine how much money or funding creditors (lenders) have provided to the company. Overall, this ratio shows the amount of equity funds used as collateral for the company's debt (Kasmir, 2018).

4.16. Profitability

In the book Financial Accounting – 3rd Edition by Weygandt et al., (2015:723), profitability ratios measure a company's success in generating profits during a certain period. The profits or losses obtained can affect the company's ability to obtain funding from debt or equity.

Return On Assets (ROA) is used to assess how effectively a company can generate net profit from its assets and to measure the rate of return on the company's investments (Sukamulja, 2019). The higher the ROA, the more efficient the company is in generating profits, thereby increasing the company's value. An increase in ROA signals positively that the company is capable of providing returns to investors (Sari & Santoso, 2024).

3. Methodology

The type of research used in this study is verificative, aiming to examine and prove the relationship between green accounting, capital structure, profitability, and firm value in processed food and beverages sub-sector companies listed on the Indonesia Stock Exchange during the period 2019–2023. The research employs an explanatory survey method. The population in this study consists of 27 companies, and the sampling technique used is purposive sampling based on the following criteria: : (1) are listed on the IDX within the study period, (2) participate in the PROPER environmental rating program, (3) publish financial statements from 2019 to 2023, (4) report positive net income during the period, and (5) provide complete data for all research variables for five consecutive years. Based on these criteria, a total of 7 companies were selected, resulting in 35 firm-year observations for the analysis.

4.4. Theoretical framework

This research is grounded in Signaling Theory proposed by Ross (1977), which suggests that companies can reduce information asymmetry by sending signals to investors through financial and non-financial disclosures. In this context, green accounting measured by PROPER serves as a positive signal that the company is environmentally responsible and compliant with regulations, potentially enhancing firm value. High profitability, indicated by Return on Assets (ROA), also sends a strong signal of operational efficiency and profitability, which can attract investors and increase firm value. Meanwhile, an optimal capital structure (DER) reflects effective financial management, although excessive debt may signal financial risk. Based on this theory, the study examines the effect of green accounting, capital structure, and profitability on firm value. The study tests the following hypotheses:

Hypothesis1: green accounting affects firm value.

Hypothesis2: capital structure affects firm value.

Hypothesis3: profitability affects firm value.

Hypothesis4: green accounting, capital structure and profitability are affects firm value.

4.5. Conceptual framework

The conceptual framework is developed to illustrate the causal relationships between green accounting, capital structure, and profitability on firm value. Green accounting is measured using the Environmental Performance Rating (PROPER), capital structure is represented by the Debt to Equity Ratio (DER), and profitability is measured by Return on Assets (ROA). Firm value, as the dependent variable, is measured using Price to Book Value (PBV). As illustrated in Figure 1, green accounting (X1), capital structure (X2), and profitability (X3) are hypothesized to influence firm value (Y), reflecting the extent to which sustainability practices, financial risk, and operational efficiency contribute to a company's market valuation.

4.6. Instrumentation

This study employed secondary data collected through documentation methods, using publicly available financial reports and PROPER environmental ratings from 2019 to 2023, sourced from the Indonesia Stock Exchange (IDX) and official company websites.

Variables and Measurements:

- Independent Variable:
  Green Accounting (X1), measured using environmental performance based on the PROPER rating with the colour gold=5, green=4, blue=3, red=2, and black=1
  Capital Structure (X2), measured by the Debt to Equity Ratio (DER) $= \frac{Total\ Liabilities}{Total\ Equity}$
  Profitability (X3), measured by the Return On Assets (ROA) $= \frac{Net\ Profit\ After\ Tax}{Total\ Assets}$
- Dependent Variable:

Firm Value (Y), measured by the Price to Book Value (PBV) $= \frac{Stock\ Price}{Book\ Value\ per\ Share}$

Data analysis was conducted using multiple linear regression, preceded by classical assumption tests to ensure the validity of the model. All statistical analyses were performed using SPSS version 25. This research design enables an objective evaluation of the effect of green accounting, capital structure, and profitability on firm value.

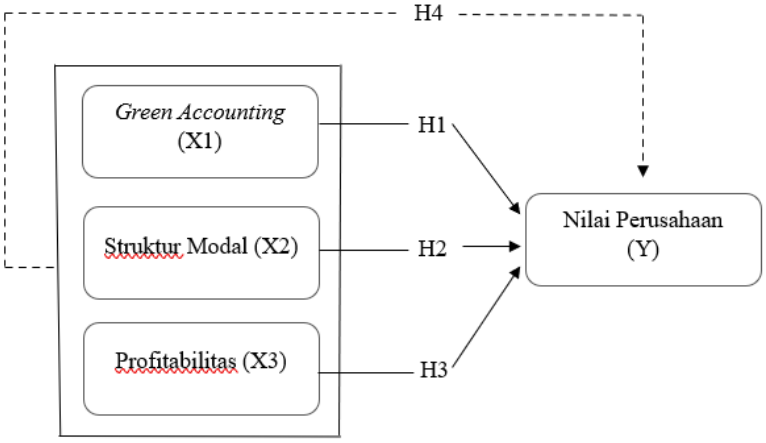

Figure 1. Conceptual Framework
(Source: Processed by the author, 2025)

5. Results and discussions

Classic Assuption Tes Result

Normality Test

Table 2 Normality Test

One-Sampel Kolmogorov-Smirnov Test		
		Unstandardized Residual
N		35
Normal Parameters[a.b]	*Mean*	.0000000
	Std. Deviation	.82043381
Most Extreme Differences	*Absolute*	.114
	Positive	.114
	Negative	-.099
Test Statistic		.114
Asymp. Sig (2-tailed)		.200[c.d]
1. Test distribution is Normal.		
2. Calculated from data		
3. Lilliefors Significance Correction		
4. This is a lower bound of the true significance		

Based on the normality test results in Table 2, the significance value of the Kolmogorov-Smirnov test was 0.200. This value is greater than 0.05 (0.200 > 0.05), so it can be concluded that the research data is normally distributed.

Multicollinearity Test

Table 3 Multicollinearity Test

Coefficiens[a]					
Model	*Unstandardized Coefficients*	*Standardized Coefficients*	t	Sig.	*Collinearity Statistics*

		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-.134	1.021		-.131	.896		
	PROPER	.677	.314	308	2.156	.039	.835	1.197
	DER	-1.098	.562	-.336	-1.953	.060	.577	1.733
	ROA	10.110	3.578	.452	2.826	.008	.669	1.494
a. *Dependent Variabel*: PBV								

Based on the results of the multicollinearity test in Table 3, VIF and tolerance values were obtained for each independent variable. The VIF value for the PROPER variable is 1.197 with a tolerance value of 0.835, the DER variable has a VIF value of 1.733 and a tolerance value of 0.577, and the ROA variable shows a VIF value of 1.494 and a tolerance value of 0.669. All VIF values are below the maximum limit of 10, and the tolerance values are greater than 0.10, so it can be concluded that there is no evidence of multicollinearity.

Heteroscedasticity Test

Table 4 Heteroscedasticicty Test

Coefficiens[a]						
Model		*Unstandardized Coefficients*		*Standardized Coefficients*	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.817	.608		1.344	.189
	PROPER	-.001	.187	-.001	-.007	.995
	DER	-.087	.335	-.062	-.261	.796
	ROA	-1.123	2.129	-.115	-.528	.602
a. *Dependent Variable*: ABS_RES						

Based on the results of the glejser test in Table 4, the significance values of each variable were obtained, namely PROPER at 0.995, DER at 0.796, and ROA at 0.602. All significance values are greater than 0.05, so it can be concluded that the regression model is free from heteroscedasticity.

Autocorrelation Test

Table 5 Autocorrelation Test

Model Summary[b]					
Model	R	*R Square*	*Adjusted R Square*	*Std. Error of the Estimate*	*Durbin-Watson*
1	.686[a]	.471	.419	.8592156	1.685
a. *Predictors: (Constants),* ROA, PROPER, DER					
b. *Dependent Variable*: PBV					

Based on the results of the autocorrelation test using Durbin-Watson, a DW value of 1.685 was obtained. With the upper limit of the Durbin-Watson statistic (du) set at 1.6528 and the lower limit of 4-du at 2.3472, the DW value falls within the range $1.6528 < 1.685 < 2.3472$. Therefore, it can be concluded that this regression model does not exhibit autocorrelation, either positive or negative.

Simple Regression Analysis Results

Table 6 Multiple Regression Testing

Coefficiens[a]					
Model	*Unstandardized Coefficients*		*Standardized Coefficients*	t	Sig.
	B	Std. Error	Beta		

1	(Constant)	-.134	1.021		-.131	.896
	PROPER	.677	.314	308	2.156	.039
	DER	-1.098	.562	-.336	-1.953	.060
	ROA	10.110	3.578	.452	2.826	.008
a. *Dependent Variabel*: PBV						

Source: data processed by the author using IBM SPSS 25, 2025

Based on the results of multiple linear regression analysis in Table 6, the regression equation model obtained in this study can be written as follows:

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + e$$

Firm value = (-0.134) + (0.677) X_1 + (-1.098) X_2 + (10.110) X_3 + e

Keterangan:

Y = Firm value
a = Constant
b_1 = Regression Coefficient for *green accounting*
X_1 = *Green Accounting*
b_2 = Regression Coefficient for capital structure
X_2 = Capital Structure
b_3 = Regression Coefficient for profitability
X_3 = Profitability
e = Error

Based on the regression equation obtained, the following can be interpreted: 1) The constant value (a) is -0.134, meaning that if all independent variables (PROPER, DER, and ROA) are 0, then the firm value is -0.134; 2) The green accounting coefficient using the Performance Rating Program (PROPER) is 0.677, meaning that if the PROPER value increases by one point, the company's value will increase by 0.677; 3) The value of the capital structure coefficient using the Debt to Equity Ratio (DER) is -1.098, meaning that every one-unit increase in DER will decrease the company's value by 1.098; 4) The value of the profitability coefficient using Return On Asset (ROA) is 10.110, meaning that every one-unit increase in ROA will increase the company's value by 10.110.

Hypothesis Test Results

T-Test

Table 7 T-Test

Coefficiens[a]						
Model		*Unstandardized Coefficients*		*Standardized Coefficients*	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.134	1.021		-.131	.896
	PROPER	.677	.314	308	2.156	.039
	DER	-1.098	.562	-.336	-1.953	.060
	ROA	10.110	3.578	.452	2.826	.008
a. *Dependent Variabel*: PBV						

Using a significance level of 0.05 and df= 31 or df= 35-3-1= 31, the t-table value obtained is 2.040. Based on the data processing results in Table 7, it can be explained as follows:

1. Green accounting (X1), proxied using environmental performance (PROPER), shows a significance value of 0.039, which is smaller than the significance level of 0.05 (0.039 < 0.05). Additionally, the calculated t-value of 2.156 is greater than the t-table value (2.156 > 2.040). Thus, it can be concluded that green accounting has a significant partial effect on firm value.

2. Capital structure, proxied using the Debt to Equity Ratio (DER), shows a significance value of 0.060, which is greater than 0.05 (0.060 > 0.05). The calculated t-value of (-1.953) is less than the t-table value (-1.953 < 2.040). This indicates that, partially, capital structure does not significantly influence firm value.
3. Profitability, proxied using Return On Asset (ROA), shows a significance value of 0.008, which is less than 0.05 (0.008 < 0.05), and a t-calculated value of 2.826, which is greater than the t-table value (2.826 > 2.040). Therefore, it can be concluded that profitability has a significant partial effect on firm value.

F-Test

Table 8 F-Test

ANOVA[a]						
Model		*Sum of Squares*	*df*	*Mean Square*	*F*	*Sig.*
1	*Regression*	20.339	3	6.779	9.182	.000[b]
	Residual	22.886	31	.738		
	Total	43.222	34			
a. Dependent Variable: PBV						
b. Predictors: (Constant), ROA, PROPER, DER						

Based on the F test in Table 8, a significance value of 0.000 was obtained, which is smaller than the significance level of 0.05. In addition, the calculated F value of 9.182 is greater than the table F value of 2.91 (df 1 = 3 and df 2 = 31). Therefore, it can be concluded that the variables of green accounting, capital structure, and profitability simultaneously have a significant effect on firm value.

Test (R^2)

Table 9 Test (R^2)

Model Summary[b]				
Model	R	*R Square*	*Adjusted R Square*	*Std. Error of the Estimate*
1	.686[a]	.471	.419	.8592156
a. *Predictors: (Constants),* ROA, PROPER, DER				
b. *Dependent Variable*: PBV				

Based on Table 9, the coefficient of determination (R square) value obtained was 0.471 or 47.1%. This shows that the independent variables, namely green accounting, capital structure, and profitability, are able to explain 47.1% of the dependent variable, namely firm value. Meanwhile, the remaining 52.9% is explained by other factors not included in this study.

5. Conclusion

The findings reveal that green accounting has a positive and significant influence on firm value, indicating that strong environmental performance enhances corporate transparency, stakeholder trust, and reputation—factors that contribute to higher market valuation. Therefore, hypothesis 1 is accepted. However, green accounting is not the only determinant of firm value; other internal and external factors are likely involved.

In contrast, capital structure shows no significant effect on firm value, suggesting that investors in this sector may place more emphasis on profitability and sustainability practices than on financing composition. Hence, hypothesis 2 is rejected, though capital structure may still interact with other variables in influencing firm value.

Furthermore, profitability has a positive and significant effect on firm value. Higher profitability reflects operational efficiency and strong performance, sending positive signals to

investors and contributing to higher market confidence and firm valuation. Thus, hypothesis 3 is accepted. Finally, the combined analysis shows that green accounting, capital structure, and profitability simultaneously have a significant impact on firm value, supporting hypothesis 4.

In summary, the study supports the argument that sustainability practices and financial performance are key contributors to firm value. These results reinforce the strategic importance of environmental accountability and profitability, while also recognizing that firm value is shaped by a combination of various financial and non-financial factors.

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THE EFFECT OF OPERATING EXPENSESS, INVENTORY TURNOVER, AND SALES GROWTH ON PROFITABILITY AT PT TJIWI KIMIA TBK LISTED ON THE INDONESIA STOCK EXCHANGE FOR THE PERIOD 2014-2023

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Abstract

Profitability is a key indicator in assessing a company's financial performance because it reflects its ability to generate profits from the use of assets. In the paper and pulp manufacturing sub-sector, profitability is influenced by various factors, such as operating expenses, inventory turnover, and sales growth. This study aims to analyse the influence of these three variables on profitability, which is measured by Return on Assets (ROA). The data used are the annual financial reports of PT Tjiwi Kimia Tbk for the period 2014-2023. This study uses an assosiative quantitative method with multiple linear regression analysis through SPSS version 26. The classical assumption tests used include normality, multicollinearity, heteroscedasticity, and autocorrelation tests, as well as t, F, and R square tests. The results indicate that, simultaneously, all three independent variables influence profitability. However, partially, only operating expenses significantly influence ROA. These findings emphasise the importance of cost efficiency in improving company financial performance, while inventory turnover management and sales growth need to be carried out more strategically to optimally support profitability.

***Keywords*:** *operating expenses, inventory turnover, sales growth, profitability*

1. Introduction

In the era of globalisation and technological advances that continue to grow, the industrial sector faces increasingly complex competitive challenges. Companies are required to not only survive, but also innovate in order to improve financial performance, one of which is through profitability as the main indicator of company success. *Return on Assets* (ROA) is often used to measure a company's efficiency in utilising its assets to generate profits. The higher the ROA, the more efficient and productive the company is in managing its assets (Khasanah & Triyonowati, 2021).

A company's profitability is influenced by various internal factors, including operational efficiency, stock management effectiveness, and sales performance. Operating expensess are all costs related to company operations (Jannah et al., 2021). High operating expensess can suppress net profit, so efficient management is crucial in supporting long-term profitability. On the other hand, fast inventory turnover reflects a smooth operational cycle and effective stock management, which has a direct impact on profitability. The higher the inventory turnover ratio, the faster the goods are sold, which means the higher the profit earned (Pitaloka et al., 2022). In addition, stable sales growth indicates the success of marketing strategies and product competitiveness, which ultimately strengthens the company's financial performance (Widhi & Suarmanayasa, 2021).

PT Tjiwi Kimia Tbk as one of the large manufacturing companies in Indonesia shows fluctuating profitability dynamics in the last decade. Based on the annual financial statements for the period 2014 to 2023, the company's ROA experienced a significant jump from 0.05% in 2015 to 13.07% in 2022, but decreased again to 4.77% in 2023. This change indicates the influence of unstable internal variables on profitability performance. Previous studies still show

mixed results in assessing the relationship between operating expensess, inventory turnover, and sales growth to profitability, giving rise to research gaps that are relevant for further study.

Based on this background, this study aims to analyse the effect of operating expenses, inventory turnover, and sales growth on profitability as measured by Return on Assets (ROA) at PT Tjiwi Kimia Tbk during the period 2014-2023. This research is also expected to make an empirical contribution in filling the void of literature and offering a deeper understanding of financial management and strategies to increase profitability in manufacturing companies in Indonesia. From the results of previous research conducted by (Zandra, 2016), it states that operational costs partially have no effect on profitability, this result is opposite to research (Jannah et al., 2021) which states that operational costs partially affect profitability. Research conducted by (Sabila, 2016) states that inventory turnover has no partial effect on profitability, this is in line with research conducted by (Pitaloka et al., 2022) which states that inventory turnover has no partial effect on profitability. Then the research conducted by (Yusril, 2025) which states that sales growth has a partial effect on profitability, this is contrary to research conducted by (Afiezan, 2020) which states that sales growth has no effect on profitability.

The problems that will be discussed in this study are as follows: 1) Does operating expenses affect profitability at PT Tjiwi Kimia Tbk listed on the Indonesia Stock Exchange for the period 2014-2023? 2) Does inventory turnover affect profitability at PT. Tjiwi Kimia Tbk listed on the Indonesia Stock Exchange for the period 2014-2023? 3) Does sales growth affect profitability at PT. Tjiwi Kimia Tbk which is listed on the Indonesia Stock Exchange for the period 2014-2023? 4) Do operating expenses, inventory turnover, and sales growth simultaneously affect profitability at PT. Tjiwi Kimia Tbk listed on the Indonesia Stock Exhange for the period 2014-2023?

2. Literature review

2.1. Operating expenses

According to (R Mau et al., 2022), operating expenses are all expenses incurred by the company in order to carry out its operational activities. This cost consists of various components, including employee salary costs, administrative costs, maintenance costs, and other types of expenses that support the continuity of overall operational activities. operating expensess are an important indicator in the financial statements because they show how much the company spends on routine non-productive activities (Wahyu et al., 2025). In this study, operating expensess were measured using the OER ratio. This ratio is used to show how much operating expenses the company incurs compared to the operating income obtained from the company's main activities.

$$BOPO = \frac{\text{Operating expenses}}{\text{Operating Profit}}$$

2.2. Inventory turnover

According to (Aulia, 2020), inventory turnover is a financial ratio used to measure how often funds invested in inventory experience turnover in a certain period. This ratio reflects the company's efficiency in managing inventory, where the higher the turnover rate, the faster the goods are sold and the funds embedded in inventory can be returned for reuse in the next operational cycle. This ratio illustrates the efficiency of inventory management in the company's operational process, and shows how quickly working capital embedded in inventory can be converted into cash or income.

The calculation formula for measuring the inventory turnover ratio is as follows:

$$ITR = \frac{\text{Cost of Good Sold (COGS)}}{\text{Average Inventory}}$$

2.3. Sales growth

According to (Widhi & Suarmanayasa, 2021), sales growth is an indicator that shows the percentage increase in sales in the current year compared to the previous year. The higher the sales growth ratio, the more positive the company's performance, because it reflects the company's ability to expand the market and increase revenue. the rate of sales growth will have a direct impact on the company's ability to maintain profitability and fund future expansion opportunities, thus becoming a strategic element in financial planning and long-term decision making (Pitaloka et al., 2022).To calculate the Sales Growth ratio can be calculated using the following calculation.

To calculate the Sales Growth ratio, it can be calculated using the following calculation:

$$Sales\ Growth\ rate = \frac{\text{Current Period Sales} - \text{Prior Period Sales}}{\text{Prior Period Sales}} \text{ x } 100\%$$

2.4. Profitability

According to (Gisela R et al., 2018), profitability is a measuring tool that shows the company's ability to generate profits efficiently by utilising various resources owned, such as assets, capital, and sales. This ratio reflects the effectiveness of overall financial performance, and serves as the main indicator in assessing the success of management in carrying out its operational activities. Profitability is also a company's ability to generate profits from its operational activities by utilising all of its resources and assets. This ratio is very important because it can reflect the efficiency and effectiveness of company management in achieving financial goals.

In this study the authors used ROA as a profitability measurement ratio. ROA measures the company's ability to generate net income against its total assets. The higher the ROA, the more efficient the use of assets in creating profits.

$$ROA = \frac{\text{Nett Profit}}{\text{Total Asset}}$$

2.5. Research hypothesis

The Effect of Operating Expenses on Profitability

According to (Rahmawati et al., 2021), operational costs are all expenses that are directly related to the company's main activities in carrying out its business activities. This cost component includes, among others, selling and administrative costs, promotional or advertising costs, depreciation and fixed asset costs, as well as costs arising from repair and maintenance activities of company assets. Operating expensess have a relationship with the company's profitability, where efficiency in managing operating expensess will have a direct impact on increasing profits. The higher the operational costs, the lower the profit earned, on the contrary, the lower the operational costs, the higher the profit earned by the company, which can increase profitability.

The Effect of Inventory Turnover on Profitability

According to (Aulia, 2020), inventory turnover is a financial ratio used by companies to measure how often invested funds experience turnover in one period. Efficiency in managing inventory can speed up the cash cycle, reduce storage costs, and increase the availability of goods for sale, which in turn has an impact on increasing net income which will increase profitability. The higher the inventory turnover, the faster the goods will be sold and the funds embedded in inventory can be returned for reuse in the next operational cycle.

The Effect of Sales Growth on Profitability

According to (Widhi & Suarmanayasa, 2021), sales growth is an indicator that shows the percentage increase in sales in the current year compared to the previous year. Increased sales will generate high revenue, which in turn can cover fixed and operational costs, and contribute to an increase in net profit. In addition, the rate of sales growth will have a direct impact on the company's ability to maintain profitability and fund future expansion opportunities, thus becoming a strategic element in financial planning and long-term decision making (Pitaloka et al., 2022).

The Effect of Operating Expenses, Inventory Turnover, and Sales Growth on Profitability

By considering these three factors, operating expensess, inventory turnover, and sales growth can simultaneously affect the company's profitability. The combination of cost efficiency, good inventory management, and stable sales growth will create a healthy financial condition and be able to encourage sustainable profit increases.

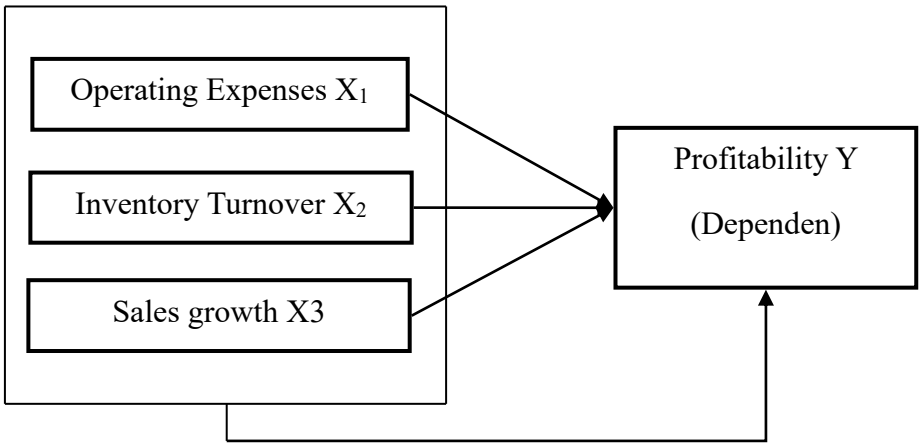

Figure 1 Framework

Based on Figure 1 regarding the framework of thought, the hypothesis in this research is namely:

H1: Operating Expenses has a significant effect on profitability at PT Tjiwi Kimia Tbk the period 2014-2023.

H2: Inventory Turnover has a significant effect on profitability at PT Tjiwi Kimia Tbk the period 2014-2023.

H3: Sales Growth has a significant effect on profitability at PT Tjiwi Kimia Tbk the period 2014-2023.

H4: Operating expensess, inventory turnover, and sales growth simultaneously have a significant effect on profitability at PT Tjiwi Kimia Tbk the period 2014-2023.

3. Methodology

3.1. Type of Research

The type of research used is quantitative with an associative approach. Quantitative data is data in the form of numbers that can be used as a basis for statistical measurement and the associative approach aims to determine the relationship between two or more variables.

3.2. Unit of Analysis

The unit of analysis in this study is all data on the annual financial statements of PT Tjiwi Kimia Tbk for the period 2014-2023 which are listed on the Indonesia Stock Exchange.

3.3. Sources and Methods of Data Collection

The data source used is secondary data, data that has been processed and presented by other parties or institutions in the form of ready-to-use information from previously available sources. The data collection method used is documentation, these data are in the form of financial statement records, for PT Tjiwi Kimia Tbk itself, in the form of financial statement data for the period 2014-2023.

3.4. Variable Operations

Table 1 Variable Operational

Variable	Indicator	Scale
Operating Expenses (X1)	$BOPO = \frac{\text{Operating expenses}}{\text{Operating Profit}}$	Ratio
Inventory Turnover (X2)	$ITR = \frac{\text{Cost of Good Sold (COGS)}}{\text{Average Inventory}}$	Ratio
Sales Growth (X3)	$Sales\ Growth\ rate = \frac{\text{Current Period Sales} - \text{Prior Period Sales}}{\text{Prior Period Sales}}$ x 100%	Ratio
Profitability (Y)	$ROA = \frac{\text{Nett Profit}}{\text{Total Asset}}$	Ratio

3.5. Data Analysis Method

Data analysis in this study used multiple linear regression with the help of SPSS version 26 to test the effect of operating expenses, inventory turnover, and sales growth on profitability (ROA). Before the analysis, a classical assumption test was carried out which included tests of normality, multicollinearity, heteroscedasticity, and autocorrelation to ensure the feasibility of the model. Furthermore, the F test was conducted to see the simultaneous effect, the t test to test the partial effect, and the calculation of the coefficient of determination (R^2 and Adjusted R^2) to measure the ability of the model to explain the dependent variable. Operating expenses variables are measured by the OER ratio, inventory turnover by ITR, and sales growth by the sales growth rate. Interpretation of results is based on a significance level of 5% ($\alpha = 0.05$).

4. Results and Discussions

4.1. Classical assumption tests

Normality Test

The results of the normality test with *Kolmogorv-Smirnov* (K-S) analysis can be seen in the following table:

Table 2 Results of Kolmogorov-Smirnov Data Normality Test

One-Sample Kolmogorov-Smirnov Test		
		Unstandardized Residual
N		10
Normal Parameters[a,b]	Mean	.0000000
	Std. Deviation	1.94264465
Most Extreme Differences	Absolute	.169
	Positive	.169
	Negative	-.149
Test Statistic		.169
Asymp. Sig. (2-tailed)		.200[c,d]
a. Test distribution is Normal.		
b. Calculated from data.		
c. Lilliefors Significance Correction.		
d. This is a lower bound of the true significance.		

Based on the results in the table, it can be seen that the *Asymp.Sig* (2-tailed) value is 0.200. In accordance with the basis for decision making that if the Sig value> 0.05 then the data distribution is normal. The results of statistical analysis are consistent with the tests carried out by graphical analysis:

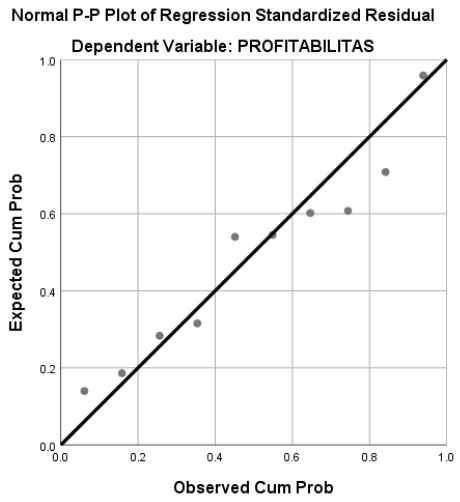

Figure 2 Results of P-P Plot Test

Figure 1 shows the plot pattern spreads around the diagonal line and follows the direction of the diagonal line, thus it can be concluded that the regression model fulfils the assumption of normality.

Multicollinearity Test

The results of the multicollinearity test with *tolerance* and VIF analysis can be seen in the table as follows:

Table 3 Results of Multicollinearity Test

Coefficients[a]								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	33.460	11.877		2.817	.030		
	Operating expenses	-.235	.071	-.660	-3.286	.017	.859	1.164
	Inventory turnover	-3.380	2.936	-.235	-1.151	.293	.834	1.199
	Sales Growth	19.900	8.726	.484	2.281	.063	.770	1.299
a. Dependent Variable: PROFITABILITY								

Based on the *tolerance* and VIF values of the Operating expensess, Inventory turnover and Sales Growth variables, *tolerance*> 0.10 and VIF < 10.00, it means that there are no multicollinearity symptoms.

Heteroscedasticity Test

The results of the heteroscedasticity test with the Glejser test analysis can be seen in the following table:

Table 4 Results of Glejser Data Heteroscedasticity Test

Coefficients[a]								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.263	4.457		.059	.955		
	Operating expenses	-.036	.027	-.356	-1.342	.228	.859	1.164
	Inventory Turnover	1.118	1.102	.273	1.014	.350	.834	1.199
	Sales Growth	5.061	3.275	.433	1.546	.173	.770	1.299
a. Dependent Variable: ABS_RES								

Based on the results of the data management that has been done, it is shown that the significant value of the Geljser test for each variable is above the significant level. So it can be concluded that the regression model used does not have heteroscedastisity. The results of the analysis carried out are consistent with the analysis carried out with the graph:

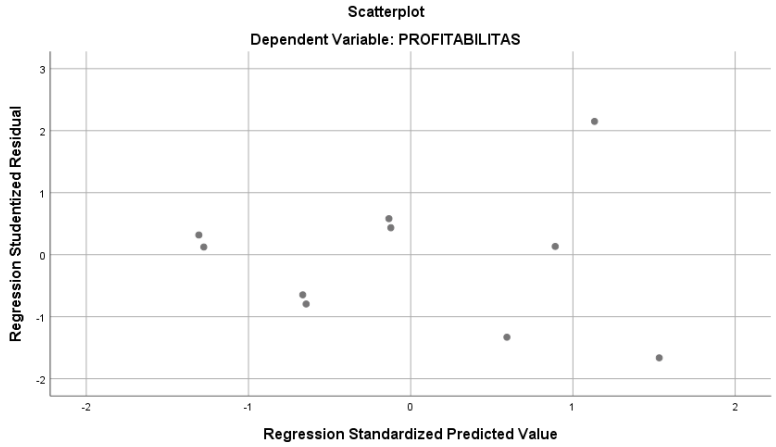

Figure 3 Results of Scatterplot test

Based on Figure 2, the scatterplot graph shows that the residual data points spread randomly and are evenly distributed above and below the zero line on the Y axis. It is concluded that the regression model used fulfils the assumption that there is no heteroscedasticity, so the regression model is considered valid and suitable for use.

Autocorrelation Test

To make it easier to read the SPSS results that have been made, you can use the d value classification table according to Maulana (2022), in the table as follows:

Table 5 Durbin-Watson Value Classification

Value D	Description
< 1.10	There is autocorrelation
1.10 – 1.54	No conclusion
1.55 – 2.46	No autocorrelation
2.46 – 2.90	No conclusion
> 2.90	There is autocorrelation

To detect the presence of autocorrelation in the regression analysis model using *Durbin-Watson*, it can be explained as follows:

Table 6 Results of Durbin-Watson Data Autocorrelation Test

Model Summary[b]					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.890[a]	.792	.688	2.37924	3.052
a. Predictors: (Constant), Sales Growth, Operating expenses, Inventory turnover					
b. Dependent Variable: Profitability					

Based on table 4.9, the basis for autocorrelation decisions according to Tony Wijaya that the Durbin-Watson value in table 4.10 shows a result of 3.052 is in the 4th criterion, namely the range 2.46 - 2.90 which means it shows the results There is no conclusion.

However, if the Durbin-Watson test results do not show normal conditions or cannot be used optimally in detecting autocorrelation, the alternative that can be taken is to use the Run

Test**.** According to (Ghozali, 2021), the Run Test is used to determine whether the series of residual values has a certain regularity that indicates a serial relationship between residuals, or the residuals spread randomly.

Table 7 Results of Run Test

Runs Test	
	Unstandardized Residual
Test Value[a]	.25303
Cases < Test Value	5
Cases >= Test Value	5
Total Cases	10
Number of Runs	7
Z	.335
Asymp. Sig. (2-tailed)	.737
a. Median	

Based on the *Run Test* results shown in the table above, the Asymp. Sig. (2-tailed) of 0.737. This value is above the significance threshold of 0.05, so it can be concluded that the residual data is *random* and does not show a certain systematic pattern. Therefore, the regression model in this study does not experience autocorrelation problems.

4.2. Multiple Linear Regression Test

Multiple linear regression is a regression equation using two or more independent variables.

Table 8 Results of Multiple Linear Regression test

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	33.460	11.877		2.817	.030
	Operating expenses	-.235	.071	-.660	-3.286	.017
	Inventory turnover	-3.380	2.936	-.235	-1.151	.293
	Sales Growth	19.900	8.726	.484	2.281	.063
a. Dependent Variable: Profitability						

Based on the regression results shown in the table above, it can be seen that the equation formed is: $Y = \alpha + \beta\iota X\iota + \beta 2X2 + \beta 3X3 + e$. Therefore $Y = 33.460 + (-0.235)_{X1} + (-3.380)_{X2} + (19.900)_{X3} + e$

Based on the regression equation results, the constant value of 33.460 indicates that if the Operational Costs (X1), Inventory Turnover (X2), and Sales Growth (X3) variables are zero, the company's profitability (Y) remains at 33.460. The regression coefficient for X1 is -0.235, indicating that every increase in operating expensess will decrease profitability by 0.235, assuming other variables remain constant. The coefficient of X2 is -3.380, indicating that an increase in inventory turnover will decrease profitability by 3.380. Conversely, the coefficient of X3 is 19.900, indicating that an increase in sales growth will increase profitability by 19.900. The value of *e* reflects the model error due to the presence of other variables that affect profitability but are not included in the model.

4.3. Hypotesis test

Partial Test

The test criteria using the t test are if the Sig value. <0.05, it means that the independent variables, namely operating expensess, inventory turnover, and sales growth partially affect the dependent variable, namely profitability.

Table 9 Result of Partial Test

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	33.460	11.877		2.817	.030
	Operating expenses	-.235	.071	-.660	-3.286	.017
	Inventory turnover	-3.380	2.936	-.235	-1.151	.293
	Sales Growth	19.900	8.726	.484	2.281	.063
a. Dependent Variable: Profitability						

The results indicate that the Operational Cost (X1) variable has a significant effect on Profitability (Y), with a significance value of 0.017 (sig < 0.05). This indicates that efficiency in managing operational costs can directly increase company profits. Conversely, the Inventory Turnover (X2) variable has a significance value of 0.293 (sig > 0.05), indicating that it does not significantly affect profitability. This means that inventory turnover speed is not strong enough to influence the company's profit level. Meanwhile, the Sales Growth (X3) variable also does not show a significant effect on profitability, with a significance value of 0.063 (sig > 0.05). Although sales have increased, this does not necessarily have a direct impact on profit, which may be due to high operational costs, distribution efficiency, or product pricing structure.

Simultaneous Test

If significant F <0.05, it means that the independent variables simultaneously have a significant effect on the dependent variable (Handayani, 2020).

Table 10 Result of Simultaneously Test

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	129.301	3	43.100	7.614	.018[b]
	Residual	33.965	6	5.661		
	Total	163.265	9			
a. Dependent Variable: Profitability						
b. Predictors: (Constant), Sales Growth, Operating expenses, Inventory turnover						

Based on the results of the simultaneous test analysis (F test), a significance value of 0.018 is obtained, which is below the significance limit of 0.05 (sig. <0.05). These results indicate that the regression model built is simultaneously statistically significant, so it can be concluded that the independent variables, namely operating expensess, inventory turnover, and sales growth**,** together have a significant effect on the dependent variable, namely profitability**.**

Analysis of Coefficient of Determination (R^2)

The coefficient of determination (R2) is used to see how well the model explains the variation in the dependent variable.

Table 11 Result of Analysis of Coefficient of Determination

Model Summary[b]				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.890[a]	.792	.688	2.37924
a. Predictors: (Constant), Sales Growth, Operating expenses, Inventory turnover				
b. Dependent Variable: Profitability				

The coefficient of determination (R^2) value obtained was 0.792, equivalent to 79.2%. This value indicates that the regression model constructed is capable of explaining 79.2% of the variation in the dependent variable, profitability (measured by Return on Assets/ROA), through the contribution of three independent variables, namely operating expensess, inventory turnover, and sales growth. Meanwhile, the remaining 20.8% is explained by other variables outside the model that were not included in this study.

The Effect of Operating expensess on Profitability at PT Tjiwi Kimia Tbk for the Period 2014-2023.

Based on the results of the study, it can be concluded that operating expensess have a significant effect on profitability at PT Tjiwi Kimia Tbk, which is listed on the Indonesia Stock Exchange for the period 2014–2023. This influence reflects that changes in operating expensess, whether in the form of increases or decreases, have direct implications for the level of profit earned by the company. When a company is able to reduce operating expensess through efficiency and optimization of business processes, profit margins can increase significantly. The results of this study are reinforced by findings from several previous studies. Research by (Yanti et al., 2022) states that operating expensess affect profitability, meaning that the more efficient a company is in managing its operating expenses, the better its financial performance as reflected in profitability.

The Effect of Inventory Turnover on Profitability at PT Tjiwi Kimia Tbk for the Period 2014-2023.

Based on the results of the study, it is known that the inventory turnover variable does not significantly affect profitability at PT Tjiwi Kimia Tbk, which is listed on the Indonesia Stock Exchange for the period 2014–2023. In the context of the paper and pulp industry, this result can be logically explained. This industry is one of the capital-intensive and energy-intensive manufacturing industries, relying on complex and long-term production processes. Starting from the processing of raw materials such as wood or plant fibers, the process involves technical stages such as cooking, bleaching, printing, and drying, all of which require high precision as well as significant energy and chemical consumption. These results are also supported by previous research, such as that conducted by (Nabil & Dwiridotjahjono, 2024), which found that inventory turnover does not affect company profitability. They explained that inventory buildup and low sales levels caused inventory turnover to not be a major factor in determining profit. On the other hand, the company was still able to maintain profitability by obtaining income from non-operational sources such as the sale of fixed assets or bank interest.

The Effect of Sales Growth on Profitability at PT Tjiwi Kimia Tbk for the Period 2014-2023.

Based on the results of the study, the sales growth variable does not affect profitability at PT Tjiwi Kimia Tbk, which is listed on the Indonesia Stock Exchange for the period 2014-

2023. Conceptually, the results of this study indicate that an increase in sales does not necessarily have a direct impact on an increase in company profits. In the context of the pulp and paper industry, as operated by PT Tjiwi Kimia Tbk, the relationship between sales growth and profitability is influenced by a number of structural factors. This industry is capital-intensive, with high fixed and variable costs, including energy consumption, waste processing, heavy machinery maintenance, and logistics and distribution. This study aligns with the findings of (Afiezan, 2020), which state that the higher the sales level, the greater the costs incurred by the company. As a result, sales growth does not automatically increase profits if the costs incurred are not managed optimally.

The Effect of Operating expensess, Inventory Turnover, and Sales Growth simultaneously on profitability at PT. Tjiwi Kimia Tbk for the period 2014-2023.

Conceptually, this simultaneous effect can be explained through the integration of operational dynamics and sales strategies in the production process of capital-intensive manufacturing industries such as pulp and paper. Operating expensess represent internal efficiency in managing resources. When a company is able to reduce operational costs without compromising output quality, this efficiency will directly impact profit growth. On the other hand, inventory turnover reflects the speed at which a company converts raw materials into finished products and sells them to the market. A high inventory turnover rate indicates effective inventory and distribution management, thereby avoiding high storage costs and the risk of damage or depreciation of goods. Sales growth reflects increased market demand for a company's products, which, when supported by operational cost efficiency and optimal inventory management, can lead to increased profit margins.

5. Conclusion

This study concludes that operating expensess have a significant negative effect on profitability at PT Tjiwi Kimia Tbk, making cost efficiency a key factor in increasing the company's profits. Meanwhile, inventory turnover and sales growth do not have a significant impact on profitability, indicating that the capital-intensive and operationally complex nature of the pulp and paper industry means that increased sales or inventory turnover do not necessarily have a direct impact on company profits.

The results of this study provide empirical contributions to the literature on financial management in manufacturing companies and serve as a strategic reference for decision-making by internal company stakeholders, investors, and academics. Further research is expected to develop a more comprehensive model by considering other relevant variables and expanding the scope of data to support stronger generalization of the results.

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ENHANCING PUBLIC SECTOR PERFORMANCE: THE ROLE OF KNOWLEDGE AND WORK EXPERIENCE IN SHAPING EMPLOYEE EFFECTIVENESS IN LOCAL GOVERNMENT INSTITUTIONS

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Abstract

This study investigates the impact of knowledge and work experience on employee performance within local government institutions in Indonesia. Drawing on human capital theory and using a quantitative approach, data were collected from 92 civil servants at the Department of Agriculture in Bangkalan Regency through structured questionnaires. The results of multiple linear regression analysis show that work experience has a significant positive effect on performance, while knowledge alone does not show a statistically significant impact. However, when combined, both variables contribute meaningfully to explaining performance variations. These findings underscore the importance of experience-based learning and competency development, particularly in decentralized public institutions in developing countries. Practical implications highlight the need for job rotation, mentoring, and hands-on training as strategic tools to enhance civil servant effectiveness.

Keywords: *Employee Performance, Work Experience, Employee Effectiveness, Human Capital, Public Sector*

1. Introduction

Public sector organizations play a crucial role in the social and economic development of a country. As government institutions are tasked with delivering public services that directly impact citizens' welfare, the effectiveness and efficiency of these institutions are often under constant scrutiny. In this context, employee performance is a central determinant of organizational success (Boyne, 2003; Rainey & Steinbauer, 1999).

In developing countries such as Indonesia, the importance of enhancing human resource capacity within the public sector has gained increasing attention. The shift toward decentralization has further reinforced the role of local governments in managing public services, especially in vital sectors such as agriculture. Effective delivery of public services in these areas hinges not only on infrastructure and policy but significantly on the quality and capacity of civil servants (Turner et al., 2015). One of the key challenges faced by local government agencies is ensuring that their workforce possesses the necessary knowledge and experience to carry out their duties effectively. Knowledge provides the cognitive foundation for employees to understand regulatory frameworks, operational procedures, and institutional goals (Armstrong & Taylor, 2020). Without adequate knowledge, employees may struggle to meet performance expectations and service standards.

Work experience, on the other hand, contributes to the development of tacit knowledge, problem-solving skills, and workplace adaptability. Research indicates that experienced employees are often more efficient and capable of handling complex tasks compared to less

experienced peers (Ericsson et al., 2006; Javidmehr & Ebrahimi, 2015). This aligns with human capital theory, which posits that accumulated experience enhances an individual's productivity and value to the organization (Becker, 1993). Although knowledge and experience are individually important, their interplay has received less attention in empirical studies, particularly in the context of public sector institutions in emerging economies. This study attempts to address this gap by analyzing both individual and joint effects of knowledge and work experience on employee performance within a local government institution in Indonesia.

In the agricultural sector, performance of civil servants directly affects the implementation of strategic initiatives related to food security, rural development, and farmer empowerment. The Department of Agriculture in Bangkalan Regency is responsible for formulating and executing these programs, making the performance of its personnel critical to local development outcomes.

Prior research on performance management in the public sector has largely focused on structural and policy-related determinants, with limited attention given to micro-level factors such as employee capabilities (Van Dooren et al., 2015). Understanding the role of individual attributes like knowledge and experience can enrich this discourse and offer actionable insights for performance improvement. Moreover, enhancing employee performance has implications beyond institutional efficiency. It contributes to building public trust, ensuring policy effectiveness, and promoting a culture of accountability. As citizens increasingly expect better and faster service delivery, local governments must prioritize talent development and performance optimization.

This study is also timely given the ongoing digital transformation in public administration. While technology adoption can streamline processes, the success of such initiatives still depends on human competencies and their readiness to adapt to changing work environments (OECD, 2020). In addition, public sector reforms in Indonesia emphasize meritocracy and competency-based HR practices. This creates a favorable environment for examining how foundational competencies such as knowledge and experience relate to performance outcomes (Republic of Indonesia, 2021).

Taken together, this research contributes to the growing body of literature on public sector HRM by shedding light on how local government institutions can leverage internal human capital to drive performance. The focus on a subnational government entity in a rural Indonesian setting also provides contextual richness and practical relevance for other developing regions.

2. Literature Review

2.1 Knowledge

Knowledge is widely recognized as a critical component of employee competency. According to Nonaka and Takeuchi (1995), knowledge in organizations comprises both explicit and tacit forms, where explicit knowledge is codified and formal, while tacit knowledge is experiential and embedded in action. In public administration, employee knowledge enables better compliance with regulations, effective service delivery, and alignment with institutional

missions (Andrews & Boyne, 2010).

2.2 Work Experience

Work experience, meanwhile, is defined as the cumulative exposure an employee gains through practical involvement in job roles. Ericsson et al. (2006) argue that deliberate practice and repetition strengthen job-related expertise, enabling workers to solve problems more efficiently. In public sector contexts, experienced employees tend to navigate bureaucracy, stakeholder interaction, and procedural complexities with greater ease.

2.3 Public Sector Performance

Performance in the public sector is multidimensional, encompassing aspects such as efficiency, quality, responsiveness, and accountability (Van Dooren et al., 2015). It can be influenced by individual, organizational, and environmental factors. Armstrong and Taylor (2020) emphasize that performance is not solely dependent on motivation, but also on the individual's ability and the support systems in place.

Prior empirical studies suggest a positive correlation between knowledge and job performance (Javidmehr & Ebrahimi, 2015), and between work experience and performance (Ng & Feldman, 2010). However, findings vary depending on sector, role, and measurement approaches. This study seeks to contribute to this discourse by empirically validating these relationships in a specific public agency setting in Indonesia.

3. Methodology

This study adopts a quantitative research approach aimed at empirically testing the influence of knowledge and work experience on employee performance within a public sector context. The population in this study comprises employees of the Department of Agriculture in Bangkalan Regency, Indonesia.

A total of 92 employees were selected as respondents using total sampling, based on their relevance to the scope of work and accessibility during the research period. Primary data were collected through structured questionnaires consisting of closed-ended questions measured on a 5-point Likert scale ranging from strongly disagree to strongly agree.

The questionnaire was pre-tested for validity and reliability to ensure the consistency and relevance of each item. Statistical analysis was performed using multiple linear regression to examine the individual and joint effects of knowledge and work experience on employee performance. Data analysis was conducted with the aid of SPSS software, and included tests for normality, multicollinearity, and heteroscedasticity to meet regression assumptions.

This methodological framework was chosen to quantify the extent of influence each independent variable exerts on the dependent variable and to generate actionable insights for human resource management in public institutions.

4. Result and Discussions

The regression analysis was conducted using SPSS to evaluate the effect of knowledge and work experience on employee performance. The following table presents the results of the multiple linear regression analysis:

Table 1. Regression Coefficients

Model	Unstandardized Coefficients (B)	Std. Error	t	Sig.
(Constant)	11.052	2.311	4.782	0.000
Knowledge	0.102	0.091	1.120	0.266
Work Experience	0.371	0.083	4.452	0.000

The results in Table 1 indicate that work experience has a significant positive effect on employee performance ($p = 0.000 < 0.05$), while knowledge does not show a statistically significant effect ($p = 0.266 > 0.05$). The regression model implies that for each unit increase in work experience, employee performance increases by 0.371 units, holding other variables constant.

The F-test result shows that the overall regression model is statistically significant ($F = 15.723$, $p < 0.05$), indicating that the combination of knowledge and work experience contributes significantly to explaining employee performance.

These findings reinforce the notion that while knowledge is necessary, its practical application through experience is essential in driving performance. Therefore, experience-based development strategies should be prioritized in public sector HR policies, especially in decentralized institutions such as local government departments.

The findings of this study corroborate existing research that highlights the importance of work experience in shaping employee performance. The significant effect of work experience suggests that practical engagement and accumulated knowledge from real-world tasks play a vital role in enabling public servants to fulfill their responsibilities more effectively.

The non-significant effect of knowledge when tested independently may reflect a gap between theoretical understanding and practical application. In many government institutions, formal training and academic qualifications may not fully equip employees to deal with field-level challenges. This calls for more integrated training programs that bridge formal knowledge with experiential learning.

Moreover, the joint significance of knowledge and experience underscores the necessity of a balanced approach to human capital development. While knowledge provides a foundational understanding, it is through repeated exposure and situational learning that competencies are

refined. This finding supports the concept of learning organizations, where continuous development is embedded in the workplace culture (Senge, 1990).

From a policy perspective, these results advocate for the design of HR practices that prioritize mentorship, on-the-job training, and role rotation. Such initiatives not only build experience but also contextualize knowledge, leading to better performance outcomes.

In the context of the Bangkalan Department of Agriculture, where tasks are diverse and often technical, leveraging experienced personnel as mentors could accelerate capacity building. Furthermore, embedding reflective practices and feedback mechanisms can help translate knowledge into performance improvements.

When comparing developing and developed countries, distinct patterns emerge regarding how knowledge and experience are valued and cultivated within the public sector. In developed countries, such as Canada, the United Kingdom, and Australia, public administration is often supported by well-established professional development systems, continuous education, and structured career progression frameworks. Employees are encouraged to pursue lifelong learning, and work experience is complemented by formalized competency frameworks (OECD, 2017).

In contrast, public institutions in many developing countries often face budgetary constraints, limited access to training infrastructure, and inconsistent HR policies (World Bank, 2021). These constraints limit the ability of employees to enhance their knowledge and skills in a systematic manner. Consequently, experience tends to become a more dominant factor in performance outcomes, as observed in the findings of this study.

While knowledge in developed contexts is reinforced through knowledge management systems and institutional memory preservation, in developing contexts, knowledge is often personalized and may be lost due to staff turnover or weak documentation practices (Schiuma, 2015). Thus, in developing countries, experience becomes the medium through which critical knowledge is retained and transferred informally.

Furthermore, developed nations tend to emphasize innovation, digital literacy, and collaborative governance, which demand continuous learning and interdisciplinary knowledge. In these systems, employees with strong knowledge foundations can adapt more quickly to technological and procedural changes. In developing nations, however, the emphasis often remains on operational effectiveness and procedural compliance, making experiential learning more critical for daily execution.

In summary, while both knowledge and work experience are essential in shaping employee performance globally, the relative weight of each differs depending on institutional maturity, resource availability, and governance capacity. The implications from this study suggest that in resource-constrained environments, experiential learning mechanisms such as job rotation, peer

coaching, and field-based mentoring should be prioritized to bridge knowledge gaps and elevate performance.

These findings contribute to comparative public administration discourse and affirm that context-sensitive HR strategies are crucial for performance enhancement. Developing countries must innovate within their constraints, leveraging informal systems and existing human capital to build capacity until formal knowledge infrastructures are adequately developed.

5. Conclusion

This study demonstrates that work experience plays a statistically significant role in enhancing employee performance within local government institutions, particularly in the agricultural sector. While knowledge remains a foundational component, its isolated influence on performance is less prominent unless integrated with practical, on-the-job experience. The findings highlight that in resource-constrained environments like developing countries, experience-based learning mechanisms—such as mentoring, job rotation, and task immersion—are more effective than knowledge transfer alone.

Moreover, the interplay between knowledge and experience is found to be critical in shaping public sector effectiveness, particularly in institutions where service delivery is complex and multidimensional. In comparison with developed countries where structured professional development and institutional knowledge systems are more established, developing countries must rely more heavily on the experiential capital of their workforce.

Thus, performance improvement strategies should focus not only on enhancing formal qualifications but also on creating institutional conditions that support experiential learning and knowledge contextualization. These insights offer valuable implications for HRM policies, especially in designing competency-based development frameworks in the public sector of emerging economies.

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HUMAN RESOURCE PLANNING AND ORGANIZATIONAL PERFORMANCE: A SYSTEMATIC LITERATURE REVIEW

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Abstract

Human resource planning (HRP) is a strategic process that aims to ensure the alignment of the organization's workforce needs with short- and long-term targets. Its relationship with organizational performance is relevant because HR is a key element in strategy implementation. This research uses a Systematic Literature Review (SLR) approach to evaluate the relationship between HR planning and organizational performance, based on previous relevant studies. The analysis shows that strategic HR planning significantly contributes to organizational performance through optimizing operational efficiency, increasing motivation and job satisfaction, and adaptability to market dynamics. This finding confirms the importance of HR planning as the cornerstone of achieving sustainable organizational performance and competitive advantage

Keywords: *Human resource planning, Organizational Performance*

1. Introduction

The systematic process designed to ensure the organization has a workforce that meets its needs, both in terms of number, competence, and time distribution is referred to as human resource planning (Mathis et al., 2017). As one of the strategic aspects of organizational management, HR planning aims to create a balance between the organization's workforce needs and the short-term and long-term goals to be achieved. Organizational performance, on the other hand, reflects the extent to which organizational goals can be achieved effectively and efficiently. Factors such as productivity, innovation, service quality, and customer satisfaction are key indicators that determine organizational success (Armstrong & Taylor, 2020). Optimal performance can only be achieved if the organization has competent, motivated, and well-managed human resources.

The relationship between HR planning and organizational performance is very close, because HR is a major element in carrying out organizational strategy. Effective HR planning enables organizations to identify current and future HR needs through projections of workforce requirements based on workload analysis and business trends so as to avoid the risk of workforce shortages or surpluses (Cascio, 2003). In addition, recruitment and selection processes designed based on the results of HR planning ensure that only individuals who meet the criteria and have the desired potential join the organization (Dessler, 2020).

HR planning also includes analyzing training and development needs that help create a workforce that is skilled, innovative, and ready to face future challenges (Noe, 2003). By ensuring that HR management supports business strategy, organizations can create synergies that increase employee motivation and commitment (Ulrich et al., 2017). In addition, good HR planning provides flexibility and adaptability, allowing organizations to respond to external changes such as technological developments, regulations, or market conditions (Torrington et al., 2014). When HR planning is done thoroughly and continuously, organizations can create a more productive, efficient, and integrated work system. This not only improves individual performance but also strengthens the organization's competitiveness in the market. Thus, a well-thought-out HR planning is an essential foundation for sustainable and superior organizational performance amidst global competition.

2. Literature review

2.1 Human Resource Planning

Human Resource (HR) planning refers to the strategic process of ensuring the organization has an adequate workforce, both in terms of numbers and competencies, at the right time to support the achievement of organizational goals. According to Mathis and Jackson (2011), HR planning includes an analysis of current and future workforce needs based on organizational goals. In addition, Dessler (2020) mentions that this process also involves developing strategies to attract, retain, and develop top talent.

The main objective of HR planning is to create a balance between the organization's workforce needs and its long-term strategy. Armstrong (2020) explains that this planning helps improve the efficiency, productivity and flexibility of the organization in responding to changes in the business environment. Cascio (2003) emphasized that through HR planning, organizations can mitigate risks such as skill shortages or high turnover.

HR planning involves a number of important steps. Torrington et al. (2014) identify these steps as follows:

- Internal and External Environmental Analysis: Evaluates factors such as labor market conditions, technological developments, and organizational strategies that affect workforce needs.
- Forecasting Labor Requirements: Projecting the amount and type of labor required in the future based on historical data and business trends.
- Manpower Resource Evaluation: Analyze the availability of internal and external manpower to meet the needs of the organization.
- Strategic Plan Development: Develop plans for employee recruitment, training, and retention.

Ulrich et al. (2017) emphasized the importance of HR planning that is aligned with the organization's strategic goals. This approach, known as "strategic human resource planning," ensures that HR management contributes directly to the achievement of business goals. For example, organizations that promote innovation need HR strategies that support the development of creativity and collaboration.

HR planning faces various challenges, as identified by Noe et al. (2021):

- Technological Advancements: Rapid technological changes require organizations to constantly update the skills of its workforce.
- Competition in Recruitment: Intense competition for qualified workers, especially in sectors with specialized skills.
- Economic Uncertainty: Economic fluctuations can affect recruitment and workforce development policies.

2.2 Organizational Performance

Organizational performance is a reflection of the extent to which an organization can achieve its stated goals effectively and efficiently. According to Richard et al. (2009), organizational performance includes the results achieved by the organization in terms of productivity, profitability, and sustainability. Meanwhile, Armstrong (2020) defines organizational performance as the organization's ability to achieve its strategic targets through optimal resource management.

Organizational performance can be viewed from a variety of different dimensions. Kaplan and Norton (1996) through the *Balanced Scorecard* approach introduced four main perspectives to evaluate organizational performance:

- Financial Perspective: Includes indicators such as profitability, revenue, and cost

management.

- Customer Perspective: Focuses on the level of customer satisfaction and loyalty.
- Internal Process Perspective: Measures the efficiency and effectiveness of the organization's operational processes.
- Learning and Growth Perspective: Deals with innovation, human resource development, and organizational culture.

Various internal and external factors can affect organizational performance. Some of these are:

- Leadership: According to Yukl (2013), leadership qualities play an important role in setting the direction of the organization and motivating employees.
- Organizational Culture: Schein (2010) explains that a strong culture can increase the consistency of employee behavior and organizational effectiveness.
- Technology: The development of modern technology can increase organizational efficiency and productivity (Davenport & Prusak, 1998).
- Human Resources: Armstrong (2020) emphasizes the importance of employee competence, motivation, and well-being in determining organizational performance.

Organizational performance measurement is carried out to evaluate the success of the strategies and operations implemented. Neely et al. (2002) identified several main methods:

- Key Performance Indicators (KPIs): Using specific indicators that are relevant to the organization's goals.
- Balanced Scorecard: Integrates various dimensions of performance to get the whole picture.
- Benchmarking: Comparing an organization's performance with other organizations in the same industry.
- Efficiency Analysis: Using methods such as financial ratio analysis to assess operational efficiency.

Organizations that have high performance tend to have stronger competitiveness in the market. Barney (1991) mentions that unique resources and capabilities can be a competitive advantage that is difficult for competitors to imitate. Furthermore, Porter (1985) highlighted the importance of generic strategies such as differentiation and cost leadership in improving organizational performance.

Various studies have proven the relationship between management strategies and organizational performance. For example, a study by Kaplan and Norton (2004) showed that organizations that implemented the *Balanced Scorecard* experienced improvements in terms of decision-making and financial results. On the other hand, a study by Pfeffer (1998) found that good HR management practices, such as training and development, have a positive correlation with organizational performance.

2.3 Linkages Between HR Planning and Organizational Performance

Effective HR planning plays a significant role in improving organizational performance. Dessler (2020) explains that organizations with good HR planning can create a productive work environment, reduce turnover rates, and increase employee satisfaction. Cascio (2015) also noted that a strategic approach to HR planning helps organizations adapt to changes in the business environment, thereby strengthening their competitiveness. Research shows that strategic HR planning contributes to organizational success. For example, research by Ulrich et al. (2017) found that organizations that implement integrated HR planning have higher profitability and innovation rates than other organizations. Armstrong (2020) also noted that effective HR planning enables organizations to attract and retain top talent.

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3. Methodology

The method used in this study to achieve its objectives was a Systematic Literature Review (SLR), which follows a procedure that starts from the preparation of the research protocol to the presentation of the results (Tranfield et al., 2003). This process is presented in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines, which are designed to improve the transparency and quality of systematic review and meta- analysis reports. This SLR is organized based on steps that include: (1) formulating research questions to determine the focus and purpose of the review, (2) identifying sources or locations of relevant literature, (3) screening and evaluating the literature to ensure its quality and relevance, (4) analyzing and synthesizing data from the selected literature to integrate the findings, and (5) compiling a thorough and transparent report of the results. This approach is designed to ensure that each step in the SLR process is clearly structured, highly transparent and replicable, so that the findings are more accurate and reliable in answering the research questions.

Figure 1. Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA)

The Systematic Literature Review (SLR) process involves the application of strict selection criteria, the use of appropriate search terms, as well as the utilization of databases to ensure transparency of the methods used. The initial stages in SLR include: (i) determination of literature sources, i.e. databases used to obtain peer-reviewed literature, as described by (Tranfield et al., 2003), and (ii) formulation of a search strategy, i.e. selection of relevant keywords based on appropriate literature guidelines, identified using customized search strings and filtered through various electronic databases. This selection process utilized databases such as Scopus to ensure that the data accessed was well tested and validated. The articles selected focused on academic references from peer-reviewed, full-text journals. These articles discuss the phenomenon of employer failure and the various recovery strategies implemented, to gain in-depth insights into human resource planning to impact the performance of the organization itself. As part of the process, an SLR flowchart was developed to visualize all stages systematically. The stages of the research methodology and the analytical tools used to achieve the objectives of this study are described in Figure 1.

The literature search was conducted through various databases such as Scopus using Boolean phrases. The search criteria included keywords such as "human resource planning", "human resource management", and "organizational performance", combined with additional

terms such as "corporate performance", "personnel management", "human resource strategic planning". The purpose of this search strategy was to find relevant literature on how a human resource plan can predict overall organizational performance outcomes. The focus of this search was to broaden the understanding of frameworks and strategies for managing organizational culture, as well as how the role of culture within a company affects strategy implementation in a global context.

	Search Inclusion and Exclusion Criteria
Search words/terms	"human resource planning" OR "human resource management" AND "organizational performance" OR "corporate performance" AND "personnel management" AND "human resource strategic planning".
Inclusion Criteria	Year of publication (2020-2024) Publication Language (English) Document Type (Article)
Exclusion Criteria	Subject Area: Business, Management and Accounting, Economics, Econometrics and Finance. Abstract with an unavailable full article Language-not English/Translation not available

Table 1. SLR Search Terms: Inclusion and Exclusion Criteria.

4. Results and discussions

A total of 489 articles were collected based on the pre-defined selection criteria. The screening process continued by applying search terms and inclusion and exclusion criteria. At this stage, 387 articles were ineligible and excluded from the analysis, leaving 102 articles. The remaining data was then further screened based on title and abstract. From this process, 98 articles were eliminated because they did not meet the predetermined inclusion criteria. Next, an in-depth review was conducted to ensure article eligibility, focusing on relevant topics. After the selection and re-correction process, 4 articles were selected to be analyzed in more depth in the subsequent synthesis.

The Systematic Literature Review table presented identifies key findings from various studies related to human resource planning (HRP) and human resource management (HRM) and their impact on organizational performance. All these studies show that effective implementation of HRP and HRM contributes significantly to improving organizational performance and sustaining its competitiveness.

Research by Zahidul Islam et al. (2014) revealed that an organizational culture that prioritizes collaboration and trust between employees supports the knowledge transfer process, while a highly hierarchical culture can hinder knowledge sharing. Leadership that encourages open communication was also found to play a major role in increasing the effectiveness of knowledge transfer. In contrast, Nagaraj & Kamalanabhan (2006) identified that strategic HR practices, such as selective recruitment, relevant training, and targeted performance management, play an important role in improving organizational performance, increasing productivity, innovation, and employee satisfaction, and driving better financial performance, which in turn strengthens organizational competitiveness.

In the research of Alzyadat et al. (2015), it was found that in Greater Amman Municipality, the implementation of effective HR management can increase employee motivation, job satisfaction, and productivity, as well as improve public services and city management. This shows that strategic HRM greatly affects organizational performance, especially in the public sector. Meanwhile, Chakraborty & Biswas (2020) emphasize the

importance of HRP in helping organizations achieve sustainable competitive advantage, by aligning the workforce with business goals, developing the right talent, and increasing organizational flexibility.

Overall, the findings of this study suggest that effective HRP and HRM have a direct influence on organizational performance. Proper HR practices not only increase employee productivity and satisfaction, but also enhance the organization's competitiveness in an increasingly competitive market. In addition, a supportive organizational culture and good leadership play an important role in the successful implementation of HRP and HRM, both in the public and private sectors. These findings clarify how strategic HRP and HRM can be a key driver in creating optimal organizational performance and strengthening sustainable competitive advantage.

Authors	Title	Results
Zahidul Islam et al., (2024)	Organizational culture and knowledge transfer: Evidence from the Bruneian public organization employees	This research shows that organizational culture has a major influence on knowledge transfer in Brunei's public organizations. A culture that supports collaboration and trust between employees helps the knowledge sharing process, while a culture that is too hierarchical can hinder it. Leadership that encourages open communication and learning also plays an important role in improving knowledge transfer. Local cultural values, such as kinship and respect for authority, also influence how employees share knowledge, both positively and negatively. Key barriers include concerns about losing one's position and time and technology constraints. To improve knowledge transfer, it is recommended that public organizations develop a more collaborative culture, leverage technology for knowledge sharing, and provide training that focuses on reducing communication barriers between employees.
Nagaraj & Kamalanabha, 2006	A study on the impact of strategic human resource practices on organizational performance	The conclusion of this study shows that strategic human resource practices (HRPs) have a significant impact on organizational performance. HR practices that are integrated with organizational goals, such as selective recruitment, relevant training,targeted performance management, and appropriate compensation, can increase productivity, innovation, and employee satisfaction. In addition, organizations that implement strategic HRPs show better financial performance, such as increased revenue and profits. The role of leadership in supporting and implementing HR practices that are aligned with the organization's strategy has also proven important in creating a positive

		and productive work environment. Overall, the results of this study emphasize that the right HR strategy can strengthen competitiveness, improve operational efficiency, and influence the long-term success of organizations
Alzaydat et al., 2015	The impact of human resource management on organizational performance in the greater Amman municipality, Jordan	The conclusion of this study shows that effective human resource management (HRM) practices greatly influence organizational performance in Greater Amman Municipality (GAM). Practices such as proper recruitment, employee training, performance management, and appropriate compensation can improve employee motivation, job satisfaction, and productivity. Good HRM also contributes to improved public services and municipal management. Overall, this study confirms that strategic HRM is important for achieving better organizational performance in the public sector
Chakraborty & Biswas, 2020	Articulating the value of human resource planning (HRP) activities in augmenting organizational performance toward a sustained competitive firm	The conclusion of this discussion shows that human resource planning (HRP) has an important role in improving organizational performance and maintaining competitive advantage. Through strategic planning, HRP helps organizations to align the workforce with business objectives, acquire and develop the right talent, and improve employee productivity and performance. In addition, HRP also optimizes the utilization of human resources, increases organizational flexibility, and supports the retention of qualified employees. Thus, effective HRP contributes to the achievement of sustainable competitive advantage and better organizational performance in the face of dynamic market challenges.

Strategic human resource planning (HRP) plays a very important role in improving organizational performance. HRP helps ensure that organizations have the right number and quality of employees to meet business objectives. With proper mapping of workforce needs, HRP optimizes operational efficiency and productivity. Through practices such as selective recruitment and relevant training, organizations can ensure that they have competent and skilled employees, who can work more efficiently and reduce errors. This leads to an overall increase in output and productivity.

In addition, a good HRP also affects employee job satisfaction and motivation. By providing opportunities for employees to grow through career development and clear

performance management, HRPs can increase their job satisfaction and commitment to the organization. Employees who feel valued and have a clear career path are more motivated to give their best to the organization. They tend to be more loyal and contribute to creating a productive work environment, which in turn improves organizational performance.

Effective HRP also provides flexibility in the face of market changes and dynamic environments. Organizations that have well-thought-out workforce planning can quickly adapt to technological developments or changes in market needs. This flexibility allows the organization to remain competitive and maintain good performance despite significant changes outside the organization.

In addition, strategic HRP enables organizations to manage top talent and create a sustainable competitive advantage. By identifying and developing talented employees, organizations can ensure that they have a workforce capable of facing challenges and creating innovations that drive better performance. Well-developed talent will strengthen an organization's competitiveness and help create innovative products and services, setting them apart from competitors.

Overall, a good HRP not only provides short-term benefits but also contributes to the sustainability of organizational performance in the long run. Organizations that plan their HR needs appropriately can avoid performance fluctuations and remain relevant despite external challenges. HRP helps organizations strike a balance between stability and growth, and ensures that they can continuously adapt to market changes. Therefore, organizations that invest in sound human resource planning will achieve better performance, both in the short and long term.

5. Conclusion

Strategic HR planning plays a critical role in supporting organizational success. By accurately projecting workforce needs, organizations can improve efficiency and productivity, minimize the risk of workforce shortages or surpluses, and create flexibility to deal with market changes. In addition, good planning also has a positive impact on job satisfaction and employee motivation, which in turn contributes to overall organizational performance. By managing talent effectively, organizations can achieve sustainable competitive advantage and maintain relevance amidst global challenges. Therefore, investing in structured HR planning is a strategic move to ensure organizational stability and growth.

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THE INFLUENCE OF LOCUS OF CONTROL, RISK TAKING PROPENSITY, NEED OF ACHIEVEMENT, PERSONALITY, ENTREPRENEURIAL EDUCATION AND SOCIAL SUPPORT ON ENTREPRENEURIAL DECISIONS IN THE PROPERTY SECTOR IN INDONESIA

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Abstract

This study aimed to analyze the effect of locus of control, risk taking propensity, need of achievement, personality, entrepreneurial education and social support on entrepreneurial decisions in the property sector in Indonesia. Respondents of this study were 167 property entrepreneurs in Indonesia. This study used quantitative research method with online questionnaire method through google form that had been tested for validity and reliability. The sampling technique in this study used purposive sampling technique. The software used is IBM SPSS version 26 with logistic regression analysis. The results of this study indicated that simultaneously locus of control, risk taking propensity, need of achievement, personality, entrepreneurial education and social support factors affect entrepreneurial decisions in the property sector. Partially locus of control, need of achievement, personality, and social support had positive and significant effect on entrepreneurial decisions, while risk taking propensity and entrepreneurial education had negative effect on entrepreneurial decisions. Based on the test results of the coefficient of determination shows that the ability of locus of control variables, risk taking propensity, need of achievement, personality, entrepreneurial education and social support affected the dependent variable, namely entrepreneurial decisions by 75%, while the rest is influenced by other variables outside this research model by 25%.

Keywords: *Locus of Control, Risk Taking Propensity, Need of Achievement, Personality, Entrepreneurship Education, Social Support and Entrepreneurial Decision.*

1. Introduction

Indonesia, as the fourth most populous country globally, faces significant economic challenges, including high unemployment rates. Entrepreneurship is increasingly recognized as a strategic solution to address these issues by generating employment and stimulating economic growth (Fadhlurrahman, 2024; BPS, 2024). Despite its potential, Indonesia's entrepreneurship ratio remains low at 3.35%, compared to neighboring countries such as Singapore and Malaysia (Wicaksana, 2024).

The property sector has emerged as a key contributor to national economic development, accounting for over 10% of Indonesia's GDP and 7% of total investment (Puspita, 2024; BPS, 2024). Urbanization trends and rising housing demand present substantial opportunities for entrepreneurship in this sector. However, decisions to engage in property entrepreneurship are shaped by both internal and external factors.

Internal factors include locus of control, which reflects individuals' belief in their ability to influence outcomes. Research shows that an internal locus of control positively correlates with entrepreneurial success (Rahmawati et al., 2023;Alshebami & Seraj, 2022), although some studies report non-significant effects (Hamzah & Othman, 2023). Another key factor is risk taking propensity, which influences how individuals evaluate business opportunities. While

some studies find a positive relationship (Ilevbare et al., 2022), others report negative effects (Zhang & Cain, 2017; Farrukh et al., 2018), highlighting contextual differences.

Need for achievement is also critical, as individuals with high achievement motivation are more likely to pursue and persist in entrepreneurial ventures (Karabulut, 2016; Fazlurrahman, 2020;Agustina & Fauzia, 2021). Additionally, personality traits such as openness, conscientiousness, and emotional stability significantly affect entrepreneurial behavior and decision-making (Cao et al., 2022; Bazkiaei et al., 2020)

External factors include entrepreneurial education, which equips individuals with the skills and knowledge necessary for business success. While studies in China show positive effects (Mei et al., 2020), research in Poland suggests negative outcomes due to overly theoretical curricula (Khalifa & Dhiaf, 2016). Social support also plays a vital role, as encouragement from family, peers, and networks enhances entrepreneurial intention and resilience (Hossain et al., 2024; Neneh, 2022; Rahayu et al., 2023).

This study addresses a gap in existing literature by shifting focus from entrepreneurial intention to actual decision-making, particularly in the property sector. It builds on prior research (Ratnamiasih, 2016) and responds to inconsistencies in earlier findings. The research aims to offer new insights into the determinants of entrepreneurial decisions and contribute to the development of entrepreneurship in Indonesia's property industry.

2. Literature review

This study is grounded in the Theory of Planned Behavior (Ajzen, 2020), which posits that behavioral intention is shaped by three core components: attitude toward the behavior, subjective norms, and perceived behavioral control. These components are linked to six key variables influencing entrepreneurial decision-making: locus of control, risk taking propensity, need of achievement, personality, entrepreneurial education, and social support.

Internal factors play a pivotal role in shaping entrepreneurial decisions. Locus of control refers to an individual's belief in their ability to influence outcomes through personal effort (Aaboen et al., 2021; Arkorful & Hilton, 2022). Research shows that individuals with a strong internal locus of control are more likely to pursue entrepreneurship (Alshebami & Seraj, 2022; Ekawarna et al., (2020). Risk taking propensity reflects one's willingness to engage in uncertain ventures, which enhances entrepreneurial intention and decision-making (Shahzad et al., 2021; Ilevbare et al., 2022). Need of achievement is a motivational factor driving individuals to set and pursue challenging goals, often linked to entrepreneurial success (Farrukh et al., 2018; Dzomonda & Neneh, 2023). Personality traits, particularly those within the Big Five framework—openness, conscientiousness, extraversion, agreeableness, and emotional stability—are also significant predictors of entrepreneurial behavior (Bazkiaei et al., 2020; Munir et al., 2019).

External influences such as entrepreneurial education and social support are equally critical. Entrepreneurial education equips individuals with the knowledge, skills, and mindset necessary for business creation and management (Mei et al., 2020; Boldureanu et al., 2020). It fosters initiative, critical thinking, and business acumen, thereby strengthening entrepreneurial decisions. Social support, encompassing emotional, informational, and instrumental assistance from family, friends, and networks, enhances confidence and resilience in entrepreneurship (Hossain et al., 2024; Si et al., 2022). It serves as a psychological and practical resource that reinforces entrepreneurial intention and action.

Entrepreneurial decision-making is a complex process influenced by both internal dispositions and external conditions. The study links both internal and external factors to entrepreneurial decisions.

2.1 Hypotheses Development

Locus of control refers to an individual's belief about the extent to which they can control events affecting them. Those with a strong internal locus of control believe that outcomes are primarily the result of their own actions, rather than external forces. Prior studies (Alshebami & Seraj, 2022; Ekawarna et al., 2020; Çolakoğlu & Gözükara, 2016) consistently show that individuals with a high internal locus of control are more likely to translate entrepreneurial intention into action. This belief fosters resilience, accountability, and proactive behavior—traits essential for navigating the uncertainties of entrepreneurship.

H1: Locus of control positively influences entrepreneurial decision-making.

Entrepreneurship inherently involves uncertainty and risk. Risk taking propensity reflects an individual's willingness to engage in ventures with uncertain outcomes. Research from Nigeria and Malaysia (Shahzad et al., 2021; Ilevbare et al., 2022; Che Embi et al., 2019) demonstrates that individuals who are comfortable with risk are more likely to act on entrepreneurial intentions. This trait enhances confidence and decision-making agility, enabling entrepreneurs to seize opportunities despite potential setbacks.

H2: Risk taking propensity positively influences entrepreneurial decision-making.

The need for achievement is a motivational factor that drives individuals to set and pursue challenging goals. Entrepreneurs with high achievement motivation are often more persistent, innovative, and goal oriented. Studies in South Africa and Indonesia (Dzomonda & Neneh, 2023; Ekawarna et al., 2020; Agustina & Fauzia, 2021) confirm that this trait not only strengthens entrepreneurial intention but also catalyzes the transition to actual business creation.

H3: Need of achievement positively influences entrepreneurial decision-making.

Personality traits, particularly those within the Big Five framework—openness, conscientiousness, extraversion, agreeableness, and emotional stability—play a significant role in shaping entrepreneurial behavior. Research across Malaysia, China, Pakistan, and Sri Lanka (Bazkiaei et al., 2020; Munir et al., 2019; Udayanganie et al., 2019). shows that traits such as openness to experience and conscientiousness enhance creativity, discipline, and adaptability, all of which are critical for entrepreneurial success.

H4: Personality positively influences entrepreneurial decision-making.

Entrepreneurial education provides individuals with the knowledge, skills, and mindset needed to start and manage a business. It fosters critical thinking, opportunity recognition, and strategic planning. Studies in Romania, China, and Indonesia (Boldureanu et al., 2020; ArdaBily & Rizky, 2024; Pebriyanti & Rizky, 2024; Khoirunisa & Rizky, 2024) demonstrate that such education not only strengthens entrepreneurial intention but also equips individuals to make informed decisions about launching ventures.

H5: Entrepreneurial education positively influences entrepreneurial decision-making.

Social support encompasses emotional, informational, and instrumental assistance from family, friends, and networks. It plays a crucial role in boosting confidence, reducing psychological barriers, and providing practical resources. Research in Bangladesh, China, and Jakarta (Hossain et al., 2024; Si et al., 2022; Jason & Slamet, 2023) confirms that strong social support systems enhance entrepreneurial motivation and facilitate decision-making.

H6: Social support positively influences entrepreneurial decision-making.

The final hypothesis integrates all six variables, proposing that entrepreneurial decision-making is not the result of isolated traits or conditions, but rather a dynamic interplay between internal dispositions and external influences. Internal factors such as locus of control, risk taking propensity, need of achievement, and personality shape the psychological readiness and motivation to pursue entrepreneurship. External factors like entrepreneurial education and

social support provide the tools, encouragement, and resources necessary to act on that motivation. When these elements align, individuals are more likely to transition from intention to action, successfully initiating entrepreneurial ventures.

H7: Locus of control, risk taking propensity, need of achievement, personality, entrepreneurial education, and social support simultaneously have a positive effect on entrepreneurial decision-making.

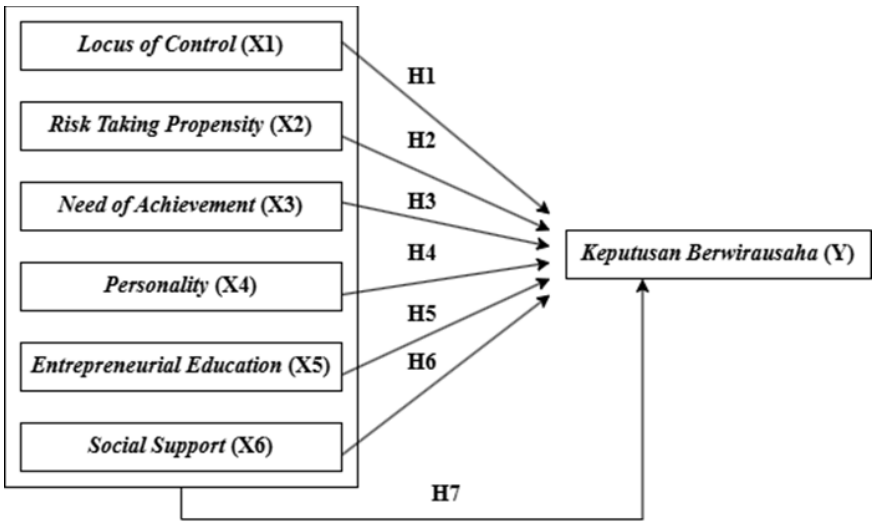

Figure 1 Framework

3. Methodology

This study uses a quantitative approach to investigate the influence of psychological and contextual factors on entrepreneurial decision making in the property sector in Indonesia. The population in this study consists of property companies listed on the Indonesia Stock Exchange. According to data from the exchange, in 2023, the number of listed property companies is 845. Considering the large population, the sample size is determined using Slovin's formula with a margin of error of 10%, resulting in a minimum of 100 respondents (Sugiyono, 2024). The sampling technique in this study is purposive sampling. The criteria for sampling in this study are entrepreneurs who have businesses in the property sector such as selling or renting houses, boarding houses, shops, kiosks, and land.

This research consists of one dependent variable, namely entrepreneurial decision making, and six independent variables: locus of control, risk taking propensity, need of achievement, personality, entrepreneurial education, and social support. According to Sugiyono, (2024), these variables are defined as measurable traits or characteristics selected for analysis to gain scientific insights. Each variable is operationalized using validated indicators and statements. For example, locus of control is assessed through perceptions of control over business success (Rahmawati et al., 2023), while risk taking propensity evaluates an individual's willingness to engage in uncertain ventures (Anwar & Saleem, 2019).

Need of achievement reflects the motivation to excel and overcome obstacles (Aprilia & Ardana, 2021) and personality is measured through traits such as extraversion, agreeableness, conscientiousness, neuroticism, and openness (Ahya & Siaputra, 2021). Entrepreneurial education is defined as the development of entrepreneurial mindsets and skills through formal learning (Pebriyanti & Rizky, 2024), and social support includes emotional and practical assistance felt from family, friends, and others (Si et al., 2022). The decision to engage in entrepreneurship is measured as a binary response (Fachrurazi & Nurcholifah, 2021).

Primary data was collected through an online questionnaire distributed via Google Forms. This questionnaire includes closed items measured using Likert and Guttman scales, which are

suitable for large-scale surveys and ensure response clarity (Sugiyono, 2024). Secondary data is sourced from accredited journals, books, and relevant articles.

Data analysis was conducted using SPSS version 26. Descriptive statistics were used to summarize the demographics of the respondents and business characteristics (Ghozali, 2021). Instrument testing includes the assessment of validity and reliability to ensure the accuracy and consistency of the questionnaire items. Validity is confirmed when the calculated correlation coefficient exceeds the critical value, and reliability is determined using Cronbach's alpha, with a value above 0.70 indicating acceptable consistency.

The core statistical method used is logistic regression, which assesses the probability of entrepreneurial decision-making based on independent variables. The model is evaluated through overall fit, goodness-of-fit using the Hosmer and Lemeshow test, Nagelkerke R^2 for explanatory power, and predictive accuracy. Hypothesis testing involves the Wald test to examine the effect of each variable and the Omnibus test to evaluate the collective effect of all independent variables (Ghozali, 2021). The regression model in this research is as follows.

$$Ln = \frac{P}{1-p} = \beta 0 + \beta 1X1 + \beta 2X2 + \beta 3X3 + \beta 4X4 + \beta 5X5 + \beta 6X6$$

Description:
β0= Constant
β1= Regression coefficient of *locus of control*
β2= Regression coefficient of *risk taking propensity*
β3= Regression coefficient of *need of achievement*
β4= Regression coefficient of *personality*
β5= Regression coefficient of e*ntrepreneurial education*
β6= Regression coefficient of *social support*

4. Results and Discussions

4.1 Deskriptive Statistics

This study uses primary data collected through a questionnaire survey of entrepreneurs in the property sector, such as those selling or renting houses, boarding houses, shop houses, stall, and land. The study respondents consisted of 167 individuals, with the majority being male (100 respondents), holding a bachelors (S1) (80 respondents), residing in Central Java Province (41 respondents), operating their business for less than 5 years (61 respondents), and generating monthly revenue of less than Rp 50,000,000 (69 respondents).

Table 1 Deskriptive Statistics

No	Respondents	Characteristics	Total	Percentage
1	Gender	Man	100	59,9%
		Woman	67	40,1%
2	Highest Level of Education	Elementary School/Equivalent	0	0%
		Junior High School/Equivalent	0	0%
		Senior High School	42	25,1%
		Diploma (D1/D2/D3/D4)	36	21,6%
		Bachelors (S1)	80	47,9%
		Masters (S2)	8	4,8%
		Doctor (S3)	1	0,6%
3	Provincial Domicile	Bali	5	3,0%
		Banten	4	2,4%
		Daerah Istemewa Yogyakarta	36	21,6%
		DKI Jakarta	21	12,6%
		Jambi	2	1,2 %
		Jawa Barat	29	17,4%

No	Respondents	Characteristics	Total	Percentage
		Jawa Tengah	41	24,6%
		Jawa Timur	22	13,2%
		Kepulauan Riau	1	0,6%
		Lampung	1	0,6%
		Nusa Tenggara Timur	2	1,2%
		Sumatra Barat	1	0,6%
4	Length of Time in Business	Less than 5 years	61	36,6%
		5 years - Less than 10 years	74	44,3%
		10 years - Less than 15 years	24	14,4%
		15 years - More than 15 years	8	4,8%
5	Monthly Revenue Income Month	Less than Rp 50,000,000	69	41,3%
		Rp 50,000,000 - Less than Rp 100,000,000	47	28,1%
		Rp 100,000,000-Less than Rp 250,000,000	33	19,8%
		Rp 250,000,000 - Less than Rp 500,000,000	14	8,4%
		Rp 500,000,000 - More than Rp 500,000,000	4	2,4%

4.2 *Logistic Regression Analysis*

4.2.1 Overall Model Fit

The overall model fit shows that adding six independent variables significantly improved the regression model, as indicated by a decrease in -2Log likelihood from 130.329 to 40.495, confirming the model's validity and that H_0 is accepted based on the Table 2.

Table 2 -2Log Likelihood Results

Iteration History[a,b,c]		
Iteration	*-2Log likelihood*	*Coefficients*
		Constant
Step 0	130,329	1,497
Step 1	40,495	-13,919

4.2.2 Goodness of Fit Test

Goodness of fit tests are used to test the suitability of a model by looking at its significance value from the Hosmer and Lemeshow test table. The results of the goodness of fit test can be seen in Table 3 below:

Table 3 Hosmer and Lemeshow Goodness-of-Fit Test Results

Hosmer and Lemeshow Test			
Step	*Chi-square*	*df*	*Sig.*
1	3,451	8	0,903

Based on Table 3, it shows that the probability value ≥ 0.05 (significance value) is 0.903 ≥ 0.05, so H0 is accepted. This shows that there is no significant difference between the model and the data, so the regression model in this study is valid and capable of predicting the observation values.

4.2.3 Coefficient of Determination

The Nagelkerke R Square value of 0.757 indicates that 75% of the variation in the dependent variable is explained by the independent variables, while the remaining 25% is influenced by other factors not included in the model in Table 4

Table 4 Determination Coefficient Results (Model Summary)

Model Summary			
Step	*-2 Log likelihood*	*Cox & Snell R Square*	*Nagelkerke R Square*
1	40,495[a]	0,402	0,757

4.2.4 Prediction Accuracy

The model predicts entrepreneurial decisions in the property sector with 93.4% accuracy. It correctly classified 71.4% of non-entrepreneurs and 96.6% of entrepreneurs, showing strong predictive power for the dependent variable in Table 5.

Table 5 Prediction Accuracy Test Results (Classification Table)

Classification Table[a]					
Observed			Predicted		
			Entrepreneurial Decisions		Percentage Correct
			No	Yes	
Step 1	Y	No	15	6	71,4
		Yes	5	141	96,6
	Overall Percentage				93,4

4.3 Hypothesis Testing

4.3.1 Wald Test (Partial t Test)

The wald test was used to test whether each independent variable consisting of locus of control, risk taking propensity, need of achievement, personality, entrepreneurship education, and social support could influence the dependent variable, namely the decision to become an entrepreneur.

Table 6 Wald Test (Partial tTest)

Variables in the Equation									
								95% C.I.for EXP(B)	
		B	*S.E.*	*Wald*	*df*	*Sig.*	*Exp(B)*	*Lower*	*Upper*
Step 1[a]	X1	0,691	0,224	9,492	1	0,002	1,996	1,286	3,098
	X2	-0,540	0,218	6,157	1	0,013	0,583	0,380	0,893
	X3	0,472	0,201	5,495	1	0,019	1,603	1,080	2,379
	X4	0,239	0,069	11,864	1	0,001	1,270	1,109	1,455
	X5	-0,807	0,281	8,271	1	0,004	0,446	0,257	0,773
	X6	0,125	0,062	4,083	1	0,043	1,134	1,004	1,280
	Constant	-13,919	3,727	13,944	1	0,000	0,000		

Based on Table 6, variables X1, X3, X4, and X6 have a positive and significant effect on variable (Y) because their sign values are < 0.05 and their coefficient or beta values are positive. Variables X2 and X5 have a negative effect on variable (Y) because their sign values are < 0.05 and their coefficient or beta values are negative.

4.3.2 Omnibus Test of Model Coefficients (Simultaneous F Test)

The omnibus test of the model coefficients was used to test whether all independent variables, consisting of locus of control, risk taking Propensity, need of achievement,

personality, entrepreneurial education, and social support, simultaneously influence the dependent variable, namely the decision to become an entrepreneur.

Table 7 Omnibus Test of Model Coefficients (Simultaneous F Test)

Omnibus Tests of Model Coefficients				
		Chi-square	*df*	*Sig.*
Step 1	*Step*	85,832	6	0,000
	Block	85,832	6	0,000
	Model	85,832	6	0,000

Based on Table 7 shows the Omnibus Tests of Model Coefficients values based on the Chi-square test, which has a value of 85.832 with df=6 and a significance value of 0.000. The significance level of the Omnibus Tests is <0.05, indicating that locus of control, risk taking propensity, need of achievement, personality, entrepreneurship education, and social support simultaneously influence entrepreneurial decision-making.

4.4 Discussion

The locus of control variable has a positive and significant influence on entrepreneurial decision-making, supporting the first hypothesis (H1). This finding aligns with prior studies by Alshebami and Seraj (2022), Setyawati et al. (2024), Ekawarna et al. (2020), and Çolakoğlu and Gözükara (2016), which emphasize that locus of control motivates individuals to transform entrepreneurial intentions into concrete actions, driven by the belief that personal effort determines success.

The risk-taking propensity variable has a negative and significant influence on entrepreneurial decision-making, leading to the rejection of the second hypothesis (H2). This result aligns with Zhang and Cain (2017), who found that U.S. students are reluctant to take high risks due to concerns over financial loss, reputation, and social pressure. Similarly, Farrukh et al. (2018) observed that students in Pakistan, facing economic uncertainty and limited entrepreneurial support, view entrepreneurship as overly speculative. High perceived risk can reduce confidence and entrepreneurial intention, prompting individuals to prefer stable career paths over starting a business.

The need for achievement variable has a positive and significant influence on entrepreneurial decision-making, supporting the third hypothesis (H3). This finding is consistent with studies by Dzomonda and Neneh (2023), Ekawarna et al. (2020), and Agustina and Fauzia (2021), which highlight that a high need for achievement not only strengthens entrepreneurial intention but also drives individuals to take concrete steps toward starting a business. Those with strong achievement motivation are more likely to act on their entrepreneurial goals.

The personality variable has a positive and significant influence on entrepreneurial decision-making, supporting the fourth hypothesis (H4). This result is consistent with findings by Bazkiaei et al. (2020), Munir et al. (2019), and Udayanganie et al. (2019), which indicate that personality traits—such as openness, extraversion, agreeableness, conscientiousness, and cautiousness—enhance entrepreneurial intention and motivate individuals to start a business by shaping how they perceive opportunities, manage risks, and act in entrepreneurial contexts.

The entrepreneurial education variable has a negative and significant influence on entrepreneurial decision making, leading to the rejection of the fifth hypothesis (H5). This finding aligns with Khalifa and Dhiaf (2016), who observed that limited entrepreneurship

courses and strong government job preferences in the UAE reduce entrepreneurial interest. Similarly, Montes et al. (2023) found that overly theoretical programs in Latin America undermine students' confidence and motivation to start businesses. The negative perception that entrepreneurship is a fallback for those unable to secure professional employment may also discourage entrepreneurial pursuits.

The social support variable has a positive and significant influence on entrepreneurial decision-making, supporting the sixth hypothesis (H6). This finding is consistent with studies by Hossain et al. (2024), Si et al. (2022), and Jason and Slamet (2023), which emphasize that strong support from family and close friends enhances confidence and encourages individuals to pursue entrepreneurship. Therefore, fostering a socially supportive ecosystem is a key strategy for promoting new entrepreneurial ventures.

The seventh hypothesis (H7), which proposes that locus of control, risk taking propensity, need for achievement, personality, entrepreneurial education, and social support collectively influence entrepreneurial decision-making, is supported. This conclusion aligns with previous research by Aprilia and Ardana (2021), Agustina and Fauzia (2021), and Hossain et al. (2024), which emphasize that entrepreneurial decisions are shaped by a synergy of internal and external factors. Internal traits such as motivation, personal control, and resilience interact with external influences like education and social support, reinforcing the intention and commitment to pursue entrepreneurship.

5. Conclusion, Limitattions and Suggestions

This study concludes that locus of control, need for achievement, personality, and social support positively influence entrepreneurial decisions, while risk taking propensity and entrepreneurial education have a negative impact. Collectively, these factors significantly shape entrepreneurial behavior. However, the study is limited by its use of online questionnaires and a narrow respondent base, which may affect the generalizability of the findings. For practitioners, fostering supportive environments and revising entrepreneurship education to be more practical are essential. Future research should expand regional coverage, explore additional variables, and apply qualitative methods for deeper insights, especially in the property sector.

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FINANCIAL PERFORMANCE ASSESSMENT OF INFRASTRUCTURE SOES IN INDONESIA: THE CASE OF PELINDO MERGER

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Abstract

Assessing the financial resilience of state-owned enterprises (SOEs) following strategic consolidation is critical in evaluating the impact of structural reforms. Focusing on PT Pelabuhan Indonesia (Persero), a key player in Indonesia's infrastructure sector, this research examines the company's financial condition in relation to the 2021 merger of four Pelindo entities. A quantitative descriptive-comparative approach is employed using eight financial ratios mandated by the Ministry of State-Owned Enterprises, covering aspects of profitability, liquidity, efficiency, and capital structure. The Wilcoxon Signed Rank Test is applied to observe shifts in financial performance across the pre- and post-merger period. Results indicate that the company maintained a relatively stable level of financial performance throughout the observation years, despite undergoing significant organizational changes. The findings enrich the understanding of post-merger outcomes in public infrastructure enterprises and offer valuable insights for policymakers and stakeholders seeking to design more adaptive and sustainable SOE restructuring strategies.

Keywords: *SOE Merger, Financial Performance, Financial Ratios, Wilcoxon Signed Rank Test, Corporate Restructuring*

1. Introduction

Infrastructure development serves as a fundamental driver of economic growth and social welfare in Indonesia. As an archipelagic nation strategically positioned along major international trade routes, Indonesia heavily relies on efficient infrastructure systems particularly in the maritime sector to ensure seamless inter-island connectivity and to facilitate logistics and trade flows. PT Pelabuhan Indonesia (Persero), or Pelindo, a State-Owned Enterprise (SOE) in the infrastructure sector, plays a vital role in managing and operating key national port facilities that are critical to the country's economic activity (Feren Thalita et al., 2023; Idries et al., 2023; Putri & Lewiandy, 2023)

In line with the Indonesian Ministry of SOEs' strategic agenda to improve efficiency and global competitiveness, the government initiated a major restructuring in 2021 by merging four regional Pelindo companies (Pelindo I–IV) into a single corporate entity (Pelindo, 2021). This consolidation was expected to enhance operational efficiency, generate synergies, and strengthen Indonesia's position in the global maritime industry (Nuralamsyah et al., 2022; Sanjaya, 2023). However, alongside these anticipated benefits, the merger also introduced significant challenges, particularly in terms of organizational integration and financial stability (Pinem et al., 2023). A thorough evaluation of Pelindo's financial health is thus essential to determine the tangible outcomes of this restructuring initiative.

Financial performance is a key indicator of a company's ability to maintain operations, pursue long-term investment, and contribute to national development. In the case of SOEs, financial performance assessments are guided by standards set by the Ministry of SOEs, particularly through Decree Number KEP-100/MBU/2002, which outlines financial ratios such as Return on Equity (ROE), Current Ratio (CR), and Total Asset Turnover (TATO) (Astuti & Drajat, 2021; Muhamad et al., 2022).

Despite the high public and policy relevance of the Pelindo merger, academic studies that rigorously assess its financial impact remain limited. There is a noticeable gap in the literature regarding empirical evaluations of post-merger financial performance using standardized SOE benchmarks. Therefore, this study seeks to fill that gap by conducting a comparative analysis of Pelindo's financial performance before and after the merger, covering the period from 2018 to 2023. The findings are expected to provide valuable insights for corporate managers, policymakers, and other stakeholders in enhancing the governance, sustainability, and performance of infrastructure SOEs in Indonesia (Damayanti & Suhardiah, 2023; Wibowo & Murwanti, 2024).

2. Literature review

4.17. Financial Performance of SOEs (State-Owned Enterprises)

Financial performance serves as a fundamental metric for evaluating a firm's operational viability, risk resilience, and long-term sustainability. In the context of State-Owned Enterprises (SOEs), financial performance assessment carries an added layer of complexity due to the dual mandate that these entities hold: delivering financial returns while fulfilling public service obligations and supporting national development goals (Wibowo & Murwanti, 2024). As state-owned entities manage public resources and often operate in strategic sectors, maintaining financial health is not merely a corporate imperative but a matter of public accountability. To institutionalize transparency and sound financial governance, the Indonesian Ministry of SOEs introduced a standardized assessment framework through Decree No. KEP-100/MBU/2002. This decree outlines the criteria and financial ratios required to categorize SOEs as "financially sound," "financially weak," or "financially distressed," serving as a regulatory benchmark for state oversight, managerial evaluation, and strategic intervention.

Unlike private companies driven by profit maximization and shareholder value, SOEs operate under a hybrid objective that balances financial sustainability with national policy directives. As such, the assessment of SOE financial performance must reflect both operational efficiency and the broader socio-economic impact, particularly in capital-intensive sectors such as infrastructure. In the case of Pelindo's merger, financial performance cannot be viewed solely through profitability metrics; rather, it must reflect improvements in national logistics efficiency, integration of port systems, and cost-effectiveness in service delivery. This calls for a multidimensional interpretation of financial indicators, beyond short-term gains. The Ministry of SOEs specifies several core financial ratios within KEP-100/MBU/2002, which are essential in assessing both liquidity and solvency:

a) Return on Equity (ROE): Indicates the company's ability to generate profit from the state's capital investment. Persistently low ROE may suggest structural inefficiencies.
b) Current Ratio (CR): Measures short-term liquidity and the enterprise's ability to meet immediate liabilities without disrupting operations.
c) Total Asset Turnover (TATO): Evaluates the effectiveness of asset utilization in generating revenue—critical for infrastructure SOEs with high capital expenditure and fixed asset intensity.

d) Debt to Equity Ratio (DER): Reflects capital structure and exposure to debt financing, particularly relevant in long-term infrastructure projects.
e) Return on Investment (ROI): Assesses the effectiveness of capital investments, particularly in high-value strategic projects like port modernization and logistics.

4.18. Merger and Its Financial Impacts

In public-sector corporations, especially State-Owned Enterprises (SOEs), mergers are not only financial instruments, but also political-economic strategies aimed at national integration and governance restructuring. A merger refers to the unification of two or more business entities, wherein all assets, liabilities, and operations are legally transferred to a surviving or new entity (Christyanti et al., 2023). Unlike mergers in private enterprises that are primarily motivated by shareholder returns, mergers in SOEs often serve dual objectives: to improve efficiency and to fulfill national strategic interests such as connectivity, service standardization, and logistic competitiveness.

Pelindo's consolidation in 2021 exemplifies a horizontal merger involving entities within the same industry port and maritime logistics. This type of merger seeks to reduce operational redundancy and create a unified system for service delivery across geographic regions (Ikhwan & Haeruddin, 2017; Mutammimah et al., 2021). It was a direct response to Indonesia's broader maritime vision (Poros Maritim Dunia) and the Ministry of SOEs' plan to reduce fragmented port management and logistical inefficiencies (Kementrian Perhubungan Republik Indonesia, 2018). From a financial standpoint, mergers are designed to produce synergies—the idea that the combined value and performance of two firms will exceed the sum of the individual parts (Feldman & Hernandez, 2021). These synergies are expected to manifest in several forms:

a) Operational synergies, such as reductions in duplicated costs, shared infrastructure, and harmonized systems.
b) Financial synergies, including improved access to credit markets, restructured capital allocation, and stronger balance sheets.
c) Strategic synergies, such as market expansion, regulatory alignment, and enhancement of national infrastructure policy execution.

In theory, these benefits should reflect in improved financial ratios—notably higher Return on Equity (ROE), greater Total Asset Turnover (TATO), and stronger liquidity and solvency positions. However, in practice, post-merger transitions often entail integration costs, cultural misalignments, reorganization delays, and underestimation of complexity, which may negatively affect financial performance in the short term (Sanjaya, 2023).

Empirical studies consistently demonstrate that the financial outcomes of mergers, especially in state-owned or infrastructure-heavy sectors, are far from uniform. For instance, (Wibowo & Murwanti, 2024) found no significant improvement in ROE, TATO, or DER after acquisition in the construction materials sector, but detected meaningful increases in liquidity (CR, QR). Similarly, (Pinem et al., 2023) noted the absence of post-merger gains in key profitability and solvency metrics, suggesting that merger benefits may take longer to materialize or be overshadowed by integration inefficiencies.

Specific to the infrastructure sector, (Aji et al., 2023) emphasized that Total Asset Turnover (TATO) was the most sensitive and dominant indicator for detecting performance variation post-merger, compared to other ratios like ROI or ROE. These findings align with the logic that in asset-intensive SOEs like Pelindo, the key determinant of improved performance lies in how effectively the consolidated entity utilizes its fixed assets rather than just increasing revenue or cutting costs.

In the case of Pelindo, although qualitative reports suggest enhanced service standardization and national port integration, robust quantitative evaluation using KEP-

100/MBU/2002 indicators remains scarce. This regulatory framework, which is tailored to non-financial SOEs, provides eight core financial ratios with weighted scores for infrastructure-specific enterprises—ROE, ROI, CR, Cash Ratio, Collection Periods, Inventory Turnover (ITO), TATO, and the ratio of Equity to Total Assets (TMS/TA).

Despite the strategic magnitude of the Pelindo merger, little scholarly work has rigorously assessed its impact on financial performance using structured post-merger financial statement analysis. Most assessments rely on anecdotal or narrative observations, lacking ratio-based comparative analytics over a sufficient time horizon. Therefore, a longitudinal financial performance assessment from 2018 to 2023 offers not only an empirical evaluation of merger performance but also contributes to the refinement of public-sector financial governance frameworks in Indonesia.

4.19. Previous Empirical Studies

A growing body of literature has investigated the financial implications of mergers, particularly within the context of State-Owned Enterprises (SOEs) in Indonesia. These studies have employed various methodologies—ranging from descriptive statistical analysis to comparative ratio-based assessments—to determine whether mergers lead to measurable financial improvements. The results, however, remain mixed, revealing the complexity and variability of merger outcomes across industries and organizational settings.

For example, (Manalu et al., 2024) conducted a comparative financial analysis of SOEs in the pharmaceutical sector before and after holding formation and found significant differences in Total Asset Turnover (TATO), Net Profit Margin (NPM), and Return on Assets (ROA). However, no significant change was observed in Return on Equity (ROE) and Debt-to-Equity Ratio (DER). This suggests that merger outcomes may enhance asset utilization and profitability without necessarily affecting capital structure.

In a study of healthcare service firms, (Damayanti & Suhardiah, 2023) reported short-term increases in financial performance following a merger, although ROE and TATO initially declined within the first-year post-merger. They concluded that merger success should not be solely judged on immediate financial metrics, as transitional disruptions often distort early performance indicators.

Focusing on the infrastructure sector, (Aji et al., 2023) evaluated the financial performance of SOEs using the KEP-100/MBU/2002 framework and discovered that TATO, Inventory Turnover (ITO), and Equity to Total Assets ratio (TMS/TA) were the most responsive indicators in detecting shifts in financial stability, especially during the COVID-19 pandemic period. This aligns with the asset-intensive nature of infrastructure SOEs, where performance is largely driven by capital productivity.

Additionally, (Wibowo & Murwanti, 2024) assessed the financial performance of PT Solusi Bangun Indonesia Tbk before and after an acquisition. They found no significant differences in ROE or TATO but observed marked improvements in Current Ratio (CR) and Quick Ratio (QR)—highlighting the liquidity dimension as a potentially overlooked benefit of corporate consolidation.

A broader comparative analysis by (Pinem et al., 2023)) confirmed that many mergers and acquisitions (M&A) within the Indonesian stock exchange did not lead to statistically significant improvements in core financial ratios such as ROE, CR, or DER. These findings reinforce the notion that merger impact is context-dependent, shaped by sectoral dynamics, governance quality, and integration efficiency.

3. Methodology

5.1.Theoretical framework

This study is anchored in the theoretical proposition that corporate mergers, when executed strategically, are intended to enhance organizational performance through synergy creation—an economic concept whereby the combined value of merged entities exceeds their individual values (Feldman & Hernandez, 2021; Kenton, 2025; Ogada et al., 2016). In the context of SOEs, especially in capital-intensive infrastructure sectors, this theory must be integrated with public enterprise governance, where performance is not solely profit-driven but also measured through efficiency, service coverage, and fiscal responsibility.

Furthermore, this study adopts the performance measurement theory tailored to public enterprises, as operationalized by Decree KEP-100/MBU/2002. This regulation assumes that a healthy SOE must maintain a balance between profitability (e.g., ROE), liquidity (e.g., CR), asset efficiency (e.g., TATO), and solvency (e.g., equity-to-assets ratio). The theoretical basis, therefore, provides a normative framework to evaluate whether the Pelindo merger has achieved its financial improvement claims, not just in absolute values, but relative to sectoral performance standards. This theoretical integration is critical, as it moves the analysis beyond simplistic financial comparisons and toward an assessment of institutional performance accountability in a post-merger environment.

5.2. Conceptual framework

The conceptual model operationalizes the hypothesis that the Pelindo merger in 2021 serves as an exogenous shock to the company's financial structure and performance, which should be measurable using standardized indicators across multiple years. This study conceptualizes financial health not as a single metric, but as a multidimensional construct comprising:

a) Profitability: Captures the firm's capacity to generate returns from state equity (ROE) and overall investment (ROI), essential for capital justification post-merger.
b) Liquidity: Measured through Current Ratio (CR) and Cash Ratio, reflecting the company's ability to meet short-term obligations—a critical area during transition periods post-merger.
c) Operational Efficiency: Through Collection Periods (CP), Inventory Turnover (ITO), and Total Asset Turnover (TATO), these indicators assess how well merged assets and systems are utilized to generate revenue.
d) Solvency: Reflected in the Equity to Total Assets ratio (TMS/TA), indicating the firm's long-term financial structure and capital adequacy after restructuring.

Unlike many studies that stop at mean comparisons, this study introduces a scoring-based evaluation using the official thresholds of KEP-100/MBU/2002, allowing for a categorical classification of financial health in each year and tracking its movement due to the merger. This conceptual design enables both temporal performance tracking and post-policy impact assessment a rare but necessary angle in public-sector merger studies.

5.3. Instrumentation

This study relies on secondary quantitative data obtained from the audited financial statements of PT Pelabuhan Indonesia (Persero) for the fiscal years 2018 to 2023. These documents, officially published on the company's website and investor relations platform, provide a reliable source of standardized financial data. The selection of a six-year period—three years before and three years after the 2021 merger—enables the researcher to capture both baseline conditions and post-merger developments. Such a longitudinal design strengthens the validity of the research by allowing the assessment of trends, anomalies, and continuity across structural transition points.

The data instrument in this research focuses on eight financial ratios as stipulated in the Ministry of SOEs Decree No. KEP-100/MBU/2002, which serves as the regulatory framework for evaluating the financial health of non-financial State-Owned Enterprises. These ratios are

divided into four categories: profitability (ROE and ROI), liquidity (Current Ratio and Cash Ratio), operational activity (Collection Period, Inventory Turnover, and Total Asset Turnover), and solvency (Equity to Total Assets Ratio). Each ratio is calculated annually from financial statement data, with standardized formulas, and is subsequently interpreted according to the health classification criteria established by the Ministry.

A unique feature of this study is the use of weighted scoring mechanisms. Each financial indicator is not only measured in numeric terms but also converted into a performance score based on predetermined thresholds. For example, ROE scores higher when it meets or exceeds the 15% benchmark, while TATO is weighted more heavily due to its relevance in asset-intensive infrastructure sectors. This scoring method allows for the transformation of continuous financial data into categorical classifications—namely, "Financially sound" (≥75), "Financially weak" (60–74.99), and "Financially distressed" (<60). By translating raw performance into regulatory categories, the study makes its findings more actionable for policymakers and SOE stakeholders.

To ensure statistical rigor, this research applies both descriptive and inferential analytical techniques. Descriptive statistics—such as mean, standard deviation, and trend graphs—are used to summarize the overall performance of each indicator. Prior to hypothesis testing, a normality test using the Shapiro-Wilk method is performed to determine the appropriate statistical test. If the data are normally distributed, a paired sample t-test is used to compare means before and after the merger. If the data are not normally distributed, the Wilcoxon signed-rank test, a non-parametric alternative, is applied. These tests help establish whether the changes observed are statistically significant or due to random fluctuations.

Finally, the integrated use of scoring classification and inferential testing offers a comprehensive view of Pelindo's financial transformation. It allows for both quantitative interpretation (e.g., ROE increased by x%) and qualitative regulatory assessment (e.g., status shifted from "Financially weak" to "Financially sound"). This dual-mode analysis not only strengthens the methodological robustness of the study but also provides empirical evidence for evaluating the impact of SOE mergers within Indonesia's evolving public-sector reform agenda.

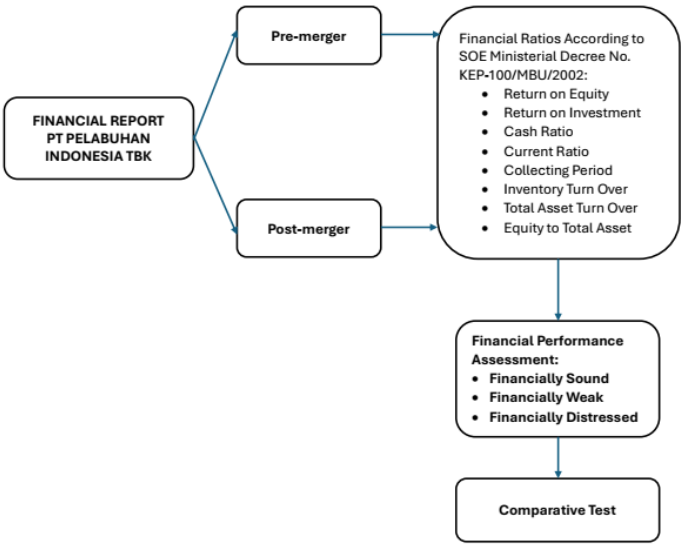

Figure 1. Research paradigm

4. Results and discussions

As shown in Table 2, The financial ratios of the company from 2018 to 2023 indicate a fluctuating yet overall stable financial performance. Return on Equity (ROE) initially declined significantly from 11.95% in 2018 to 6.39% in 2020, reflecting the economic impact of the COVID-19 pandemic, but subsequently recovered to 9.13% in 2022, before slightly decreasing to 8.57% in 2023. Similarly, Return on Investment (ROI) followed a comparable trend, decreasing from 20.31% in 2018 to 12.81% in 2020, but improved notably to 18.22% by 2022, before slightly declining to 17.04% in 2023. The Cash Ratio sharply declined from 172.96% in 2018 to 68.16% in 2022, signalling a reduction in liquidity, though stabilized at 68.73% in 2023. The Current Ratio followed a decreasing trajectory from 233.51% in 2018 to 108.38% in 2022, with a slight increase to 111.80% in 2023, indicating ongoing efforts to balance short-term liabilities and current assets. The Total Asset Turnover (TATO) exhibited fluctuations, peaking at 88.50% in 2019 and then declining to 71.62% in 2020, before recovering partially to 78.24% in 2021. Subsequent slight declines to 75.20% by 2023 highlight moderate asset efficiency. Meanwhile, the Total Equity to Total Asset Ratio steadily declined from 42.38% in 2018 to a low of 36.17% in 2022, indicating a slight increase in leverage, but improved to 39.58% in 2023, reflecting a strengthened equity position. Collection Periods demonstrated gradual improvement in accounts receivable management, reducing from 24.17 days in 2019 to 15.86 days in 2023, showing better efficiency in debt collection processes. Lastly, Inventory Turnover improved significantly from 2.39 times in 2019 to 3.40 times in 2022, with a slight decline to 3.18 times in 2023, still indicating better inventory management relative to previous years. Despite facing various economic challenges, the company demonstrated resilience through effective management of assets, liabilities, and operational efficiency over the observed period.

Table 12. Financial Ratios of PT Pelabuhan Indonesia (Persero), 2018–2023

	2018	2019	2020	2021	2022	2023
ROE	11.95	10.72	6.39	7.55	9.13	8.57
ROI	20.31	17.39	12.81	17.13	18.22	17.04
Cash Ratio	172.96	130.40	93.77	95.46	68.16	68.73
Current Ratio	233.51	191.71	195.90	172.72	108.38	111.80
TATO	77.40	88.50	71.62	78.24	77.91	75.20
Total Equity to Total Asset Ratio	42.38	41.70	39.66	36.18	36.17	39.58
Collection Periods	23.09	24.17	17.82	19.21	17.82	15.86
Inventory turnover	2.59	2.39	2.50	2.76	3.40	3.18

Source: Data analysis

Table 2 shown the analysis of financial indicators from 2018 to 2023, the overall performance of PT Pelabuhan Indonesia exhibits dynamic fluctuations but consistently reflects sound financial health. The Return on Equity (ROE) and Return on Investment (ROI) demonstrate the most notable variations, where ROE declined sharply to a low of 6 points in 2020 due to economic pressures from the pandemic, but then significantly rebounded to 10.5 points in 2022, finally stabilizing at 9 points in 2023. Similarly, ROI mirrored this pattern, dropping to 7 points in 2020 and improving again to a peak of 10 points in 2022. Liquidity measures, including Cash Ratio and Current Ratio, largely maintained stability over the years, consistently scoring around

3 points. Nevertheless, the Current Ratio saw a minor decline to 2 points in 2022, indicating temporary liquidity constraints, before slightly recovering to 2.5 points in 2023. Operational efficiency indicators, such as Inventory Turnover and Collection Periods, were stable throughout, consistently scoring high at 4 points each year, suggesting effective inventory and receivables management practices. The Total Asset Turnover (TATO), however, exhibited moderate fluctuations between 2 and 3 points, reflecting periodic variability in asset management efficiency. The ratio of Total Equity to Total Assets remained relatively strong and stable, improving slightly from 5.5 points in 2018–2019 to 6 points from 2020 onwards, indicative of a robust capital structure and prudent leverage management. PT Pelabuhan Indonesia experienced temporary downturns in aggregate financial health during challenging economic conditions, recording its lowest score of 35 in 2020. Nevertheless, the company exhibited a significant recovery, reaching a score of 42 in 2022, which demonstrates its resilience and adaptability in responding to changing economic circumstances.

Table 13. Financial Health Scores of PT Pelabuhan Indonesia (Persero), 2018–2023

Indicator	2018	2019	2020	2021	2022	2023
ROE	12	10.5	6	7.5	10.5	9
ROI	10	9	7	9	10	9
Cash Ratio	3	3	3	3	3	3
Current Ratio	3	3	3	3	2	2.5
Collection Periods	4	4	4	4	4	4
Inventory Turnover	4	4	4	4	4	4
TATO	2.5	3	2	2.5	2.5	2.5
Total Equity to Total Assets	5.5	5.5	6	6	6	6
TOTAL SCORE	44	42	35	39	42	40

Source: Data analysis

Based on quantitative data analysis using the financial performance assessment method for state-owned enterprises (BUMN) as stipulated in the Decree of the Minister of SOEs No. KEP-100/MBU/2002, PT Pelabuhan Indonesia (Persero) consistently maintained a financially sound status from 2018 to 2023. In 2018, the company achieved a high financial score of 88 (AA category), reflecting strong revenue stability, efficient financial management, and well-targeted investments in infrastructure and technology. Although the score slightly declined to 84 in 2019, the company remained financially sound, demonstrating resilience through effective adaptation to market changes. In 2020, the company experienced a notable decrease to a score of 70 (A category) due to the adverse impacts of the COVID-19 pandemic, which disrupted port operations and global trade. Recovery began in 2021, with the score increasing to 78, supported by improved operational efficiency and a successful transition following the merger of four port entities. In 2022, the financial score rose again to 84 (AA), driven by broader economic recovery, increased trade volume, and strategic infrastructure investments. In 2023, a slight decline to a score of 80 was observed, possibly due to operational cost fluctuations and new challenges in the port sector, yet the company remained financially sound with an AA rating. Overall, PT Pelabuhan Indonesia (Persero) has demonstrated strong and stable financial performance, attributed to effective financial governance, adaptability to external shifts, and strategic investment practices. Despite fluctuations caused by internal factors such as operational costs and business strategies, as well as external pressures like the pandemic and global economic trends, the company has consistently maintained solid financial fundamentals and resilience in facing future challenges.

Table 14. Financial Performance Assesment

Year	Total Score	Total Score: 50%	Interval	Predicate	Category
2018	44	88	80 < TS <= 95	AA	Financially sound
2019	42	84	80 < TS <= 95	AA	Financially sound
2020	35	70	65 < TS <= 80	A	Financially sound
2021	39	78	65 < TS <= 80	A	Financially sound
2022	42	84	80 < TS <= 95	AA	Financially sound
2023	40	80	80 < TS <= 95	AA	Financially sound

Source: Data analysis

The next step of the analysis was the normality test, which aimed to determine whether the financial ratio data used in the regression model—namely Return on Equity (ROE), Return on Investment (ROI), Cash Ratio, Current Ratio (CR), Collection Period (CP), Inventory Turnover (PP), Total Asset Turnover (TATO), and Equity to Total Assets Ratio—were normally distributed. The initial test using the Kolmogorov–Smirnov method produced a test statistic of 0.441, but the significance value could not be reliably calculated due to the small sample size (N = 4), indicating that the data did not meet the assumption of normality. Therefore, an alternative test was conducted using the non-parametric Wilcoxon Signed Ranks Test. The results showed that the asymptotic significance (2-tailed) values for all variables were greater than 0.05, indicating that the data were normally distributed. Based on these results, the next hypothesis testing was carried out using the parametric Paired Sample T-Test to compare financial performance before and after the merger. This test was applied to each variable to determine whether there were statistically significant differences in the mean values. The results indicated no significant difference at the 5% significance level, as all p-values exceeded 0.05.

Table 15. Comparative Test Result

Indikator	Asymp. Sig (2-tailed)	t	Sig
ROE	0.180	7.418	0.085
ROI	0.180	1.402	0.394
Cash Ratio	0.180	3.86	0.161
Current Ratio	0.180	4.534	0.138
Collection Periods	0.180	4.467	0.14
Inventory Turnover	0.180	-80	0.008
TATO	0.655	0.926	0.524
Total Equity to Total Assets	0.180	2.037	0.291

Source: Data analysis

Based on quantitative data analysis conducted using the financial performance assessment method for State-Owned Enterprises (SOEs) as stipulated in Decree No. KEP-100/MBU/2002, PT Pelabuhan Indonesia (Persero) consistently achieved a "Financially Sound" status from 2018 to 2023. In 2018, the company recorded a financial score of 88 with an AA rating,

reflecting strong revenue stability and efficient financial management. In 2019, the score slightly decreased to 84, yet the company retained its AA rating due to its ability to adapt to changing market conditions. The year 2020 presented a significant challenge due to the COVID-19 pandemic, causing the score to drop to 70. Nonetheless, the company remained within the "Financially Sound" category with an A rating. In 2021, a moderate recovery was recorded with a score of 78, supported by the post-merger consolidation of four state-owned port companies and operational efficiency improvements.

In 2022, the financial score rose again to 84 and the company regained its AA rating, indicating a strong comeback driven by macroeconomic recovery, improved trade volume, and infrastructure investments. In 2023, although the score slightly declined to 80, the company maintained its AA status, demonstrating resilience amid operational challenges. Overall, the financial health of PT Pelabuhan Indonesia (Persero) remained stable across the six-year period. This consistency reflects effective financial management, adaptability to market disruptions, and strategic investments that contributed to operational strength despite internal and external pressures.

To evaluate the impact of the merger on financial performance, a Paired Sample T-Test was conducted using the following operational financial variables: Return on Equity (ROE), Return on Investment (ROI), Cash Ratio, Current Ratio (CR), Collection Periods (CP), Inventory Turnover (PP), Total Asset Turnover (TATO), and Equity to Total Assets (TMS to TA). The results showed that only Inventory Turnover (PP) had a significance value below 0.05 ($p = 0.008$), indicating a statistically significant difference before and after the merger. In contrast, all other variables had p-values greater than 0.05—ROE (0.085), ROI (0.394), Cash Ratio (0.161), CR (0.138), CP (0.140), TATO (0.524), and TMS to TA (0.291)—indicating no significant differences before and after the merger for these indicators.

These results suggest that the merger had limited impact on most financial ratios. The consistency in ROE, ROI, liquidity ratios, and asset utilization metrics implies that the company's financial structure and performance remained relatively stable. This supports the view that the merger did not disrupt financial health and may have been well-executed in terms of integration and risk management. However, the significant change in Inventory Turnover indicates that the merger may have introduced operational complexities affecting inventory management. This could reflect challenges in aligning logistics or supply chain systems across the merged entities.

Therefore, while the merger did not significantly influence most financial indicators, it raised considerations for improvement in operational areas, particularly inventory efficiency. Continuous evaluation and strategic alignment are necessary to ensure that the merger not only sustains financial health but also enhances performance across all operational dimensions. These findings also align with previous studies that found minimal financial differences post-merger, except in areas directly affected by operational restructuring.

5. Conclusion

The financial performance of PT Pelabuhan Indonesia (Persero) from 2018 to 2023 showed fluctuations but consistently remained in the "Financially sound" category, with ratings of either AA or A. In 2018 and 2019, the company received an AA rating with scores of 88 and 84, respectively. The score declined to 70 in 2020, resulting in an A rating, reflecting the economic slowdown caused by the COVID-19 pandemic. However, the company managed to recover in 2021 and 2022, with scores improving to 78 and 84, corresponding to A and AA ratings, in line with Indonesia's gradual post-pandemic economic recovery. In 2023, although

the score slightly decreased to 80, PT Pelabuhan Indonesia maintained its AA status, demonstrating overall financial resilience despite ongoing global economic challenges such as supply chain disruptions and inflationary pressures. Analysis of financial ratios before and after the merger revealed no significant differences in most indicators, including Return on Equity (ROE), Return on Investment (ROI), Cash Ratio, Current Ratio, Collection Period, Total Asset Turnover (TATO), and Total Equity to Total Assets (TMS to TA), indicating that the merger did not substantially affect the company's profitability, liquidity, or asset management capabilities. However, a significant difference was found in the Inventory Turnover Ratio, suggesting that operational restructuring and increased logistical complexity post-merger impacted inventory management efficiency. Considering these findings and the fluctuating economic environment, it is recommended that PT Pelabuhan Indonesia enhances its inventory management systems through improved planning and digital monitoring to maintain operational efficiency. Additionally, the company should continue adapting its financial strategies to remain resilient amid macroeconomic uncertainties and deepen post-merger integration efforts to optimize synergies in logistics and procurement. Regular monitoring of key financial ratios and alignment with national infrastructure and trade priorities will further support sustainable growth and strengthen the company's role in Indonesia's economic development.

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CHALLENGES OF BRAND ELEMENTS TO THE CANCEL CULTURE PHENOMENON: LITERATURE REVIEW

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Abstrak

The brand elements in a brand are used as a strategy to attract consumer interest in the product. The variety of elements in a brand must be able to convey its meaning and purpose so that consumers can see the value it holds, and if the value is perceived positively.
Cancel culture is a social phenomenon that occurs in society and certainly influences the decisions that will be made, which will also relate to consumer decisions if a brand makes decisions that are related to the moral values of consumers. The impact of this will certainly reduce the brand element value of the brand. This literature review aims to discuss brand elements that can be influenced by cancel culture.
The findings in this literature review are the influence between brand elements and cancel culture which can influence the relationship between a brand and its consumers. This controversy can cause consumers to cancel the brand which is contrary to the consumer`s moral values. This moral value issue that can effecting to cancel culture can have bad consequences for a brand and especially the company itself.

Keyword: *brand element, brand theory, brand equity, cancel culture, cancelling behaviour*

1. Background

As a times have changed human demands have grown more complex for their needs (Amir & Ishak, 2019). Due to the developments of this era a brand must conduct analyses to adapt and maintain relevance in the evolving landscape (Siqueira Junior et al., 2023). A Brands whether as products or services are important assets for companies for control over their characteristics and functionalities during utilization, along with accountability for the evaluations conducted (Swaminathan et al., 2020). *Brand* have many element and unique charactheristics for the definition itself and this is required a systematical to defening the brand (Feldwick, 1996). In its development, brands have various definitions such as *brand loyalty, brand perception, brand association, brand preferance, brand awareness* and the collection of these elements is called *brand equity* (Aaker, 1992).

According to Nguyen et al (2022) *brand equity* can have a beneficial influence on consumers if the aspects of a brand are good in their eyes. However, if there are negative opinions and views among consumers, this will lead to *brand hate* Fetscherin (2019) and *brand avoidance* from consumer (R. Zhang et al., 2023). External influences can also include the culture that exists in society (Vinish et al., 2020). Norms become a fundamental component of decision making (Saint-Louis, 2021). Making moral decisions to prevent making bad decisions is vital in today's world, because canceling behavior is ubiquitous and has created a new culture (Norris, 2021).

in this literature review wants to discuss how a brand element that has been formed in such a way can have a negative impact on the brand, whether in the form of a product or service, if it is affected by cancel culture as a result of poor judgments. This *literature review* method choose in this article because of theoritical framework concept is it relevan for this research (Ridley, 2012).

2. Literature Review

Brand theory is a concept that *brand* must have capability to sending signal toward consumer and become product resource to protect the consumers and manufacturer from their competitor that trying to offer the same product in their category Aaker (1992). According to its definition, the nature of a brand is derived from the name, design, symbol, value, status, and image of a product or service that distinguishes it from other brands in a target market due to its uniqueness Fahy & Jobber (2019). A *Brand* Should provide sustainability and knowledge to consumers so that they understand the objective and purpose (Ingulfsvann, 2020).

A brand identify itself as a product or service that have usability and protection for consumers and manufacturers against competitor items that appear to be identical (Aaker, 1992). *Brand equity* represents relationship to consumers have with a brand and how they respond to it. (Nguyen et al., 2022). *Brand Capable of adding value to the organization by improving the efficiency and effectiveness of marketing programs, pricing and profits, brand extension, trade leverage, and competitive advantage* (Yoo & Donthu, 2001). *Brand equity* dimention is a set of assets of a *brand* that including *brand loyalty, brand awareness, brand perception, brand association, brand preference, etc* and this definition associated with the name of a brand and which adds or subtracts from the value of the brand (Aaker, 1992). *Brand equity is the customer's brand knowledge in terms of brand marketing, and its influence grows stronger as the brand gets more well-known to consumers and has a favorable brand connotation* (Keller, 1993). In this era *brand* Investing considerable resources in enabling customers to communicate and market themselves online and developing it into an important instrument that consumers use to establish, improve, express, preserve, and signify their identities (Bernritter et al., 2022).

Brand recognition Being an identity is critical for a brand since it allows it to be recognized and the dimensions it possesses can influence how people perceive it (Gorbatov et al., 2021). *Brand recognition* Taking into account positive feelings, emotions, and customer influence toward a specific brand on one side of the cognitive benefits working mechanism usually raises the customer's status, makes them feel more successful than others, and causes others to regard the customer as superior in someway (Siqueira Junior et al., 2023). *Brand recognition* should be able to capture more attention from consumers through its delivery (Aribarg & Schwartz, 2020).

Brand association have an attachment to certain memories of a brand, frequently referred to as customer perception of the brand (Aaker, 1992). Color, form, typography, logo, symbol, name, and picture are all stimuli found in product packaging that serve as direct communication channels between the brand and the consumer (Marques et al., 2020).

Brand perception based on customer perceptions regarding the quality of products or services that have different than identical alternative products or services (Aaker, 1992). *Brand perception* can be defined as the interpretation, arrangement, and selection of stimuli that form part of a person's worldview and this concept is associated with pleasant consumer brand experiences (Marques et al., 2020).

In Brand experience consumers are the first step in purchasing, and if it is outstanding, the experience will be unforgettable (Tynan & Mckechnie, 2009). If the consumers have a good brand experience when buting product or service for the first time then they would like to buy the brand (Yasri et al., 2020).

Brand preference is how human expectations can be translated through models of their attitudes (Fishbein, 1965). *Brand preference itself is based on a combination of memory and the brand's attitude towards consumers* (Kronrod & Huber, 2019). Interest in a brand is an important component to consider when making a decision because the concept of brand preference encompasses not just loyalty to one brand but also interest in others (Kim et al., 2020).

Brand loyalty is a measure of consumer loyalty to a brand. If consumers are loyal, they will continually buy items or services (Aaker, 1992). Brand love refers to an individual consumer's excitement for a brand and an emotional relationship to a certain object, and being separated from the brand can be stressful (Prentice et al., 2019).

Brand Hate can be naturally caused by extreme negative feelings and emotional responses from a person (Fetscherin, 2019). *Brand hate ha*s many classification for their response (C. Zhang & Laroche, 2020). If consumers or brand users despise the brand this will cause consumers to avoid the brand (Fetscherin, 2019).

Brand avoidance becomes the highest level for consumers in dissatisfaction and the desire to no longer engage with a brand becomes quite strong If it has reached the stage of collective canceling, consumers will increasingly distance themselves, avoid, and even detest the brand (R. Zhang et al., 2023).

Consumers' responses to brands might be influenced by the socio-cultural situations surrounding them (Kim et al., 2020). This is built on communal links that are tied to social characteristics, and economic exchange linkages have the potential to establish relations and form close partnerships (Shuqair et al., 2022). Norms also have an important influence in creating socio-cultural values which impact to decision making (Saint-Louis, 2021)

Canceling behaviour is a decision to bring attention to anything that is considered morally inappropriate and it can act as a form of social pressure on people who violate existing ethical standards (Norris, 2021). *Canceling behaviour* in relation to a brand, this can occur if the consumer dislikes a specific brand or if the consumer and the brand have conflicting perceptions (R. Zhang et al., 2023).

Cancel culture is an endeavor to cancel collectively for people who are thought to have breached ethics and morals in society (Saint-Louis, 2021). *Cancel culture* nowadays it can be observed through boycotts conducted via social media. (Norris, 2021). Of course, the effect of social media is very strong nowadays, allowing it to influence other people's opinions while also serving as an online hub for firms that share similarities. Of course, if a brand has been affected by cancel culture, the damage is quite difficult (R. Zhang et al., 2023).

3. Method

The methods in this literature review include data collection, determining research concepts, processing research materials, and analysis. This method is used to obtain a research basis which will later be used to obtain a basis for thinking, a framework for thinking, a hypothesis, and a bibliography with articles from Scopus for supporting arguments as criteria in this literature review. Here is an article that categorizes brand characteristics and cancellation culture.

3.1.1 Publication Year

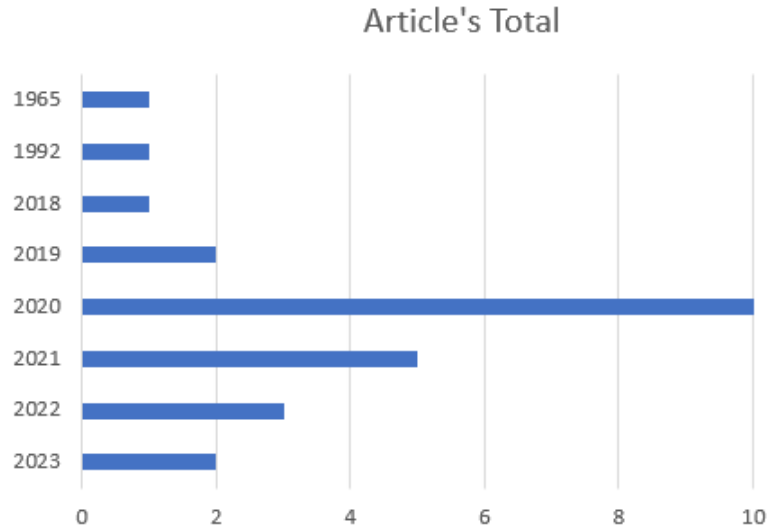

Figure 1

The articles used in this literature review totaled 25 with the most recent articles taken 5 years before this literature review being more prevalent than papers older than that year indicating that this literature study is still important for its future development.

3.1.2 The theory used

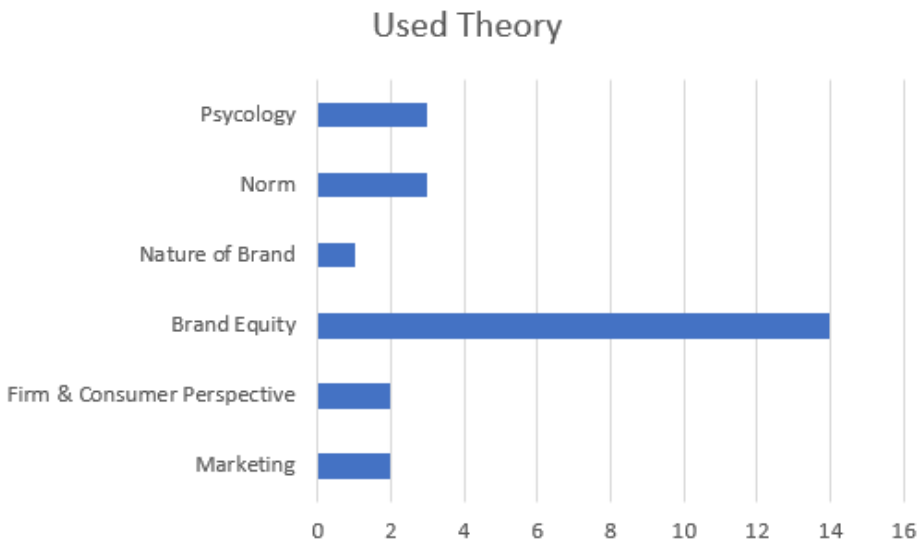

Figure 2

The original hypotheses used in this literature study are diverse, as illustrated in Figure 2. This implies that the relationship between brand characteristics and cancel culture can be said to be complex and the dimensions of the topic extends beyond one viewpoint.

3.1.3 Variables used

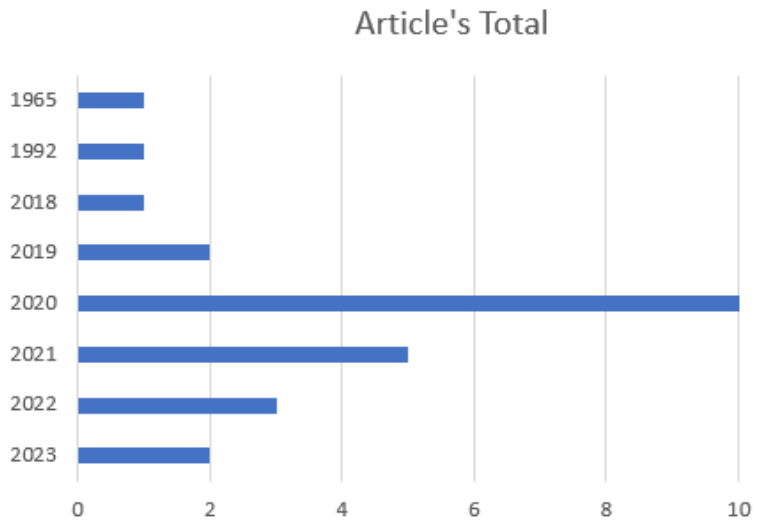

Figure 3

In the variables used there are various aspects in determining by a variety of factors. From the the various aspects that exist, the brand equity and cancellation culture variables are at the top.

4. Results and Discussion

Brand equity form the foundation for creating a brand in order to capture the attention of people (Aaker, 1992). On the one hand, various aspects of brand equity elements that have been divided into new forms that adapt to the development of the times and consumer tastes are undeniable as evidenced by how the pattern of demand and interest from consumers differs with

each generation, requiring the brand and quality owned to follow existing trends and be remembered by consumers (Marques et al., 2020).

Along with the development of the era this impact with the moral values that humans have also experienced changes and developments and this can be seen in how the culture of cancellation, or cancel culture has become commonplace as a form of freedom of expression (Norris, 2021). Hatred towards a brand can arise regardless of whether the elements it represents have received a positive response from customers and this can be happen if if consumers are offended by the brand's decisions and policies created by the brand and feel that they are not in accordance with the emotions of consumers (Fetscherin, 2019).

Hatred towards a brand will cause brand avoidance towards the brand without the consumer seeing or coming into contact with the brand (R. Zhang et al., 2023). This will certainly cause complex problems if it is not resolved properly which will make c onsumers wary of the brand and leading them to avoid the brand (C. Zhang & Laroche, 2020).

Consumers who are hesitant to interrect with brands are a terrible thing and this will lead to canceling behavior which, if carried out on a wide scale, will almost surely result in a community reaction among those who share the same opinion (Shuqair et al., 2022). This will certainly lead to a cancel culture towards the brand itself (R. Zhang et al., 2023).

Implications

Based from this *literature review* There are various options for businesses to respond to this challenge, including: 1.) Companies should first consider what policies will be established for their products or services that may damage the image or reputation of the brand they hold. This is vital to avoid significant debate, which may cause consumers to reject the company's new direction in its policies. 2.) According to the literature analysis the beginning of consumer behavior in canceling and avoiding a brand occurs due to emotional distress and clashing moral beliefs. As a result, it is best for corporations to consider the socio-cultural conditions in the society that is the company's target market so that any policy changes made by the company do not provoke customer backlash. Finally, companies can adjust what values the brand has and its direction with the socio-cultural values around consumers and this action is necessary so the brand may effectively target the market and develop attachment with consumers while avoiding brand avoidance or cancellation culture.

Limitation

In this *literature review* Of course, there are still many shortcomings in the work, such as the data obtained for several variables is too far in the renewal study, where at the same time this variable is one of the important components in seeing how the cause and effect of variables are interconnected with each other. On the one hand, variables such as cancellation culture or cancel culture are still new topics, and the discussion is still around the essence and impact of cancel culture itself.

5. Conclusion

Brand elements are certainly important in identity and how a brand introduces itself, but on the one hand, a brand must be able to adapt to what is going on in society so that they become its consumers, so adjustments are required so that there is no upheaval in consumers' views on a brand, which can result in canceling behavior and canceling culture towards the brand, as occurred in the modern era, such as when this literature review was written.

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PERCEIVED EASE OF USE, TRUST AND FEATURES ON INTEREST IN USING DIGITAL WALLET AMONG STUDENT ENTREPRENEURS AT PELITA BANGSA UNIVERSITY

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Abstract

Currently, technological advances in Indonesia are developing so rapidly in human life that they cannot be separated from the use of technology amid global competitors. The increase in cashless e-wallet transactions for online payments has led to a dramatic rise in their application around the world. The use of e-wallets is getting higher from year to year, but the use of debit cards and credit cards from banks has decreased. The purpose of this study was to determine the effect of data convenience, service features, and trust on user interest in e-wallet funds. This research is a quantitative descriptive study, with a population of Student entrepreneurs in Pelita Bangsa University. The sample in this study consisted of 61 respondents, and data collection was conducted using an online questionnaire. The data analysis method consists of instrument analysis, hypothesis testing with SPSS 26. The results showed that there was a positive influence on perceived ease of use, trust, and features in interest in using the DANA e-wallet among student entrepreneurs at Pelita Bangsa University. It is expected that e-wallet service providers will continue to make continuous improvements to build consumer confidence and develop meaningful features to increase e-wallet users

Keywords: *Perceived ease of use; Trust; Features; Interest in use.*

1. Introduction

The development of technology in this era has always progressed rapidly. Internet-based technology is always used by the community. The internet is a server that is often used and is the most efficient in using information systems. One of them is in Indonesia, where the internet is widely known and is always used by people from various circles. The progress of the internet in Indonesia always increases every year by a large amount. The high amount of internet usage is on smartphones using their Android and iOS systems. From information technology that causes internet-based applications. The Association of Indonesian Internet Service Providers (APJII) said that internet usage in 2024, with many users, reached 222 million people (Apjii, 2025).

One of them is a digital wallet, commonly referred to Electronic Wallet or known as an E-Wallet is an application that has developed in Indonesia.. An e-wallet is an electronic wallet application or service that functions for transactions between users to make it more accessible to the public (Yahya et al., 2023). Transactions that can be done by E-Wallet, such as sending money to friends or people around, paying for goods and services, by the amount of money contained in the application (Saleh & Saharudin, 2021). Technology is increasingly sophisticated and increasingly accessible to the public for online and offline payment transactions (Tikaromah et al., 2025).

Currently, technological advances in Indonesia are developing so rapidly in human life that it cannot be separated from the use of technology amid global competitors. In the increase in cashless e-wallet transactions for online payments, its application has increased dramatically

around the world. The use of e-wallets is getting higher from year to year, but the use of debit cards and credit cards from banks has decreased (L. N. Nasution et al., 2024). This is due to the emergence of e-wallets that work with several e-commerce in making digital payment transactions. E-money issued by national banks can already be used for various transactions, but users of this digital wallet do not get a big advantage like when using e-wallets that bring convenience, and several benefits such as promotions and huge cashback (M. I. P. Nasution et al., 2020).

At this time, E-Wallet DANA is one of the newcomer digital wallets in Indonesia. Before E-Wallet DANA, there were other E-Wallets such as OVO, GoPay, LinkAja, and so on. The DANA application e-wallet was first launched on 5 December 2018 which was founded by Elang Sejahtera Mandiri including its subsidiary PT Elang Mahkota Teknologi Tbk (EMTEK) and a joint venture with Ant Financial. E-Wallet DANA application is designed to make non-cash and non-card transactions digital, fast, and practical (DANA, 2024).

One of the e-wallets present in Indonesia is DANA which comes from the company PT Espay Debit Indonesia. DANA introduces its users to payments through digital wallets and non-cash and non-card transactions, making it easier for users. DANA's digital wallet concept is different from other digital wallets that are already present in the Indonesian market, namely, with the open platform concept. The open platform concept created by DANA allows this digital wallet to be connected to various forms of payment instruments, such as online balances, debit cards, and credit cards (Izzan & Piandi, 2022).

According Abrilia & Sudarwanto (2022) convenience according to its use greatly influences the interest of digital wallet users, for various business transactions. The ease of using e-wallets has a good effect on online purchases (Rosita et al., 2024). Convenience research do not influence usage decisions, while service features and promotions each have a positive influence on usage decisions (Aprilia & Susanti, 2022).

According to (Endriyanto & Indrarini, 2022) Features are the determination of a company to achieve great benefits in developing the promoted application, which greatly affects the attractiveness of service promotions to interest in using e-wallets. A user-friendly, customizable dashboard is essential for enhancing usability and adoption (Chundau et al., 2023). Providers should continuously improve features and services to retain users and encourage ongoing use (Johan et al., 2022).

Jumaili (2005) in (Agustina et al., 2022), explains trust in the use of information systems in order to improve individual performance in the process of carrying out organisational and company activities. There is an influence of trust on interest in using e-wallets (Agustina et al., 2022; Rodiah & Melati, 2020)

According to Tjiptono (2015), in (Latief et al., 2022), interest in use states that providing promotions is part of the information to attract users back to remember using e-wallets. The purpose of this is to expand the range of users so that people understand the advantages of attracting e-wallets. With this attractive promotion, it will affect the increase in e-wallet user interest according to the needs of the community. According to (Prakosa & Wintaka, 2020), explaining that using an e-wallet is the stage of a user in using the service as a settlement. Interest in using digital wallets, users due to the needs of people who use e-wallets. The development of consumer behaviour theories in interest in using a technology, especially the factors that influence interest in using e-wallets (Suhendry, 2021) .

Based on research inconsistencies, we intend to conduct research related to the use of e-wallets in students. The purpose of this study was to analyse the effect of data convenience, trust and service features on user interest in the DANA e-wallet application for student entrepreneurs at Pelita Bangsa University.

2. Literature Review

Indicators of measuring interest in using some of this research refer to the opinion of Pavlou (2012), and Walgito (2004), which includes (1) intending to use is intending to use a digital wallet application in the use of buying products or services on a digital wallet application. (2) Used for the future is an application used in the millennial era with technological advances in digital wallet applications. (3) interest in the object of interest is the interest in using a digital wallet application on the basis of one's own desire without the intervention of others. And (4) tend to always use are people who always use digital wallet applications to transact through the applications they use.

The Technology Acceptance Model (TAM) highlights that perceived ease of use (PEOU) and perceived usefulness (PU) are critical in influencing users' attitudes towards e-wallets. Studies in rural India and among Student entrepreneurs in Jakarta show that PEOU has a stronger effect on attitude than PU (Rashid et al., 2025). Sun and Zhang (2015) in (Abrilia & Sudarwanto, 2022), explaining the perceived ease of use is easy to learn, easy to use, timely, clear and easy to understand, and become skilled.

The use of the application system is not difficult to understand, and makes it easier for users to use the system. Indicators of convenience according to Silaen and Prabawani (2019) include: (1) E-wallets are easy to learn, (2) E-wallets are easy to operate depending on user wishes, (3) E-wallets are easy to use by user skills, (4) E-wallets are easy to use (Kartika & Pamikatsih, 2023).

As stated by Jogiyanto (2019) in the cited (Surbakti et al., 2024) Trust is the evaluation made by an individual following the acquisition, processing, and gathering of information, leading to various judgments and conclusions. Features are a means to differentiate from other products, while services are activities aimed at intangible properties and have no ownership of other competitors. Mayer et al. (1995) identified several indicators of the trust variable, including: (i) Convenience, which refers to the perception of minimal disruption or interference with the service related to the purchased product; (ii) Satisfaction, which is the feeling of pleasure or disappointment experienced by an individual after comparing the actual products or services with their expectations; and (iii) Responsibility, which denotes the obligation to take full accountability for the outcomes (Yunus et al., 2022).

Features are a product as a function with different characteristics. With the features of choosing a product to choose the product it want. and for a marketer, features are an important key for companies so that they can compare with other competing products (Polzehl et al., 2010). Service features are one of the factors from competitors that will prove a trust for consumers in making transactions either online or offline (Rithmaya, 2016). Features are product characteristics designed to provide uniqueness and attract consumer interest, while services are actions offered to consumers that do not result in ownership. Thus, service features can be defined as the unique characteristics of a product offered to consumers to attract them (Kotler & Keller, 2021).

It is necessary to have service features or types of good facilities for consumers to support business performance. Indicators of service features according to Ponn (2008), namely: 1. Easy access to information about products or services. 2. Diversity of transaction services. 3. Diversity of features. 4. Product innovation (Aprilia & Susanti, 2022). Reducing long-term printing costs by encouraging the use of nearby payment systems for free. The acceptance of non-cash electronic payment services by the public is a gift. One of them, DANA, is the latest development of e-wallet services in Indonesia. It is available as a fintech startup application for iOS and Android users in the Apple App Store (Panggabean et al., 2023).

3. Methodology

This research method uses quantitative descriptive analysis. The research data is in the form of a questionnaire with a Guttman measurement scale with two answer choices. For interest variables given the choice of interested and not interested, ease to use given the choice of easy and difficult, trust given the choice of trust and not trust, features given the choice of interesting and not interesting, and user interest given the choice of interested and not interested. The population of this study were students at Pelita Bangsa University, with a sample size of 61, using an accidental sampling technique in the period February 2025.

The data analysis method begins with the validity and reliability of the research instrument. The analysis used is univariate analysis to describe, summarise, and find patterns in data related to these variables, without regard to other variables. This analysis is also known as descriptive analysis or descriptive statistics. Variable analysis is an analysis used for two variables that are suspected to be related or influential. This bivariate analysis is used to identify the influence or relationship between the independent and dependent variables. Bivariate testing with the cross tab method to find out the effect of independent variables, namely perceived ease of use (X1), trust (X2), and features (X3), on the dependent variable, user interest (Y).

4. Results and discussion

The distribution of the questionnaire carried out has obtained a sample size of 61 respondents.

Table 1. Descriptive analysis

No	Items	Total	Percentage
1	Gender		
	Male	36	59
	Femal	25	41
2	Age		
	<19 years	9	14.8
	19-23 years	30	50.8
	23-26 years	10	16.4
	26 - 28 years	11	18
3	Income (a month in rupiah)		
	<1.5 million	29	47.5
	1..5 – 2.5 million	10	16.4
	2..5 – 3.5 million	8	13.1
	>3.5 million	14	23

Decision making is based on the value of rcount (corrected item-total correction) > rtable of 0.154, for df =115-2 =113, α = 0.05, then the item/question is valid and vice versa. Meanwhile, the reliability test of this questionnaire was also declared valid. Cronbach's alpha value is greater than 0.6.

Table 2. Bivariate analysis test results

Variable	Interested	Not interested	Sig
Perceive ease of use			
Easy	45	4	0.000
Difficult	3	9	

Trust			
Trust	46	7	0.001
Not Trust	2	6	
Features			
Interesting	45	4	0.000
Not Interesting	3	9	

Based on table 2, it can be explained that the perceived ease of use variable for the DANA e wallet in terms of use is easier and is in demand as many as 45 respondents or 73.77%. Meanwhile, the trust variable is in demand as many as 46 respondents or 75.41%. Furthermore, the feature variable is in demand as many as 45 respondents or 73.77%.
The significance value of the test results shows a significant value of less than 0.05, so it can be concluded that perceived ease of use, trust, and features affect the interest of DANA e-wallet users in Student entrepreneurs students at Pelita Bangsa University.

Discussion

Perceived ease of use affects the interest in using the DANA e-wallet among Student entrepreneurs students at Pelita Bangsa University. This shows that Student entrepreneurs is very adaptable to technological developments in terms of financial technology. Students are interested in using the DANA e-wallet because of its ease of use, data, and transactions. This is in line with research by (Abrilia & Sudarwanto, 2022; Rithmaya, 2016), which states that there is an effect of perceived ease of use on interest in use. Different things are expressed by Aprilia & Susanti, (2022), where convenience does not influence the decision to use the DANA e-wallet in East Java City.

The research results indicate that trust influences the interest in utilizing the DANA e-wallet among Student entrepreneurs students at Universitas Pelita Bangsa. This suggests that it boosts users' confidence in the service's security and reliability. When users view the e-wallet as trustworthy, they are more inclined to use it for transactions, resulting in greater adoption and usage. These results are in line with (Kesuma & Nurbaiti, 2023; Rodiah & Melati, 2020), where trust has an influence on interest in using the DANA e-wallet. e-wallet users believe that digital payments using the DANA application are a decision in their daily transaction needs, such as the existence of guarantees from the DANA e-wallet service provider in accordance with various uses.

Features affect the interest in using the DANA e-wallet for student entrepreneurs students at Pelita Bangsa University. Students tend to be interested in the service features provided by the DANA e-wallet application. Some features that can be taken into consideration for users in influencing their interest in using the DANA e-wallet application, such as features to access product or service information. So it is known that the better the service features provided by e-wallet, the higher someone's interest in using the e-wallet. These findings are supported by research by (Aprilia & Susanti, 2022; Kesuma & Nurbaiti, 2023) where service features influence decisions to use the DANA e-wallet application. So in general, it is known that service features influence on a person's interest in using e-wallets.

5. Conclusion

This study reveals that perceived ease of use, trust, and features significantly drive Student entrepreneurs students' interest in using the DANA e-wallet at Pelita Bangsa University. Student entrepreneurs's high adaptability to financial technology is evident, as their interest is primarily fueled by the DANA application's user-friendliness, efficient data

management, and seamless transactions. Trust is crucial, boosting user confidence in the service's security and reliability, leading to greater adoption. Similarly, appealing service features are a significant draw, with better features directly correlating with higher user interest. These findings underscore the importance of a user-centric design, robust security, and continuous feature innovation for e-wallet providers.

The implications of this research are substantial for DANA and the broader FinTech industry, guiding targeted marketing and product development strategies. Academically, it validates the Technology Acceptance Model (TAM) within the e-wallet. Future research should expand the sample size and demographics, explore additional influencing factors like perceived usefulness and social influence, and utilize qualitative methods for deeper insights. Longitudinal studies could track evolving user behavior, while comparative analyses with other e-wallets could identify competitive advantages. Further investigation into the impact of specific features and the transition from interest to sustained usage would also be beneficial.

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COST-BENEFIT ANALYSIS OF IMPLEMENTING WOOD CHIP AS A SUSTAINABLE FUEL IN CEMENT MANUFACTURING: A MANAGERIAL PERSPECTIVE

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Abstract

This study investigates the cost-benefit analysis of using wood chips as a sustainable fuel in cement manufacturing. The cement industry, being highly energy-intensive, contributes significantly to global CO_2 emissions. By substituting 20–30% of fossil fuels with wood chips, the research demonstrates a potential CO_2 reduction of up to 18% and the NPV becomes positive from the first year, starting at IDR 857 million, and continues to increase each year, with a payback period is 1 years. Using a CBA framework, the study evaluates investment, procurement, and operational changes. Despite benefits, challenges such as supply chain variability and fuel quality inconsistency require strategic mitigation. The findings offer practical insights for managers seeking to improve environmental performance and align with ESG targets. Overall, the integration of wood chips presents a financially viable and environmentally sound strategy for decarbonizing the cement industry.

Keywords: cost-benefit, wood chips, sustainable fuel, cement manufacturing, carbon emissions reduction.

1. Introduction

The cement industry plays a pivotal role in global construction but is also one of the most energy-intensive sectors, heavily reliant on fossil fuels and contributing significantly to carbon emissions (Azari et al., 2020). As the world moves towards more sustainable industrial practices, reducing the environmental impact of cement production has become a key focus (Hossain et al., 2021).

One promising solution to mitigate these challenges is the substitution of fossil fuels with renewable energy sources, such as wood chips, which are considered an environmentally friendly alternative (Lippi et al., 2022). The use of wood chips in cement manufacturing offers potential benefits by reducing fossil fuel consumption and minimizing carbon dioxide emissions, both of which are central to meeting sustainability goals (Gao et al., 2023). This study investigates the cost-benefit analysis of integrating wood chips into cement production from a managerial perspective. By evaluating the costs associated with wood chip procurement, investment in new infrastructure, and operational adjustments, this research aims to assess the viability of using wood chips as a sustainable fuel substitute (Smith et al., 2022).

Recent studies highlight the significant environmental and economic advantages of using biomass, such as wood chips, in the cement industry. It is reported that substituting up to 30% of fossil fuels with wood chips can lead to a reduction in fuel costs and CO2 emissions by as much as 18% (Jones & Patel, 2021). However, challenges related to supply chain management and maintaining consistent fuel quality remain important factors for successful implementation (Brown & Li, 2020). This study provides insights into overcoming these challenges and offers strategic recommendations for cement industry managers aiming to integrate wood chips into their fuel mix while maintaining operational efficiency and profitability.

2. Literature Review

2.1. Utilization of Wood Chips in Cement Manufacturing

Wood chips are small pieces of wood produced by mechanically chipping wood waste or harvested timber using a wood chipper machine. Typically, wood chips range in size from 10 to 50 mm in length with a thickness of about 3 mm. As a form of biomass, wood chips represent a renewable and carbon-neutral energy source with significant potential as an alternative fuel in industrial applications (Demirbas, 2007).

Figure 1. Wood chips model

The cement industry is one of the largest energy consumers and contributors to carbon dioxide (CO2) emissions globally, primarily due to its reliance on coal as the main fuel for kiln operations that require temperatures up to 1,500°C (International Energy Agency [IEA], 2020). Replacing a portion of coal with wood chips as an alternative fuel has proven effective in reducing greenhouse gas emissions and decreasing dependency on fossil fuels.

For instance, CEMEX Costa Rica has successfully integrated wood chips and rice husks as alternative fuels in their cement kilns, achieving a reduction of approximately 21,000 tons of CO2 emissions annually. This reduction is equivalent to removing around 7,000 vehicles from the road, demonstrating significant environmental benefits alongside cost savings (CEMEX, 2019).

Wood chips, a biomass resource often derived from waste or by-products of wood processing, have been studied for their potential as alternative fuels in cement production. Research indicates that wood chips ash can be valorized as an eco-friendly mineral admixture in mortar, contributing to reduced carbon footprint and improved sustainability of cement-based materials (Sustainability study, 2022).

Teak and Eucalyptus are the most suitable wood types for wood chips material as replacing coal due to their high caloric values and efficient combustion characteristics (Sianipar et al., 2019). Meranti and Pine also offer good caloric value, making them viable options for sustainable energy production.

Figure 2. Wood chips for cement industry fuel

Furthermore, incorporating wood chips into cementitious composites has shown to improve thermal insulation and sound insulation properties, although with some trade-offs in mechanical strength (Michal, K et al, 2022). These findings highlight the dual role of wood chips as both fuel and raw material enhancer.

2.2 Cost Benefit Analysis Economic Benefits

The study emphasizes that replacing 20–30% of fossil fuels with wood chips can lead to a reduction in CO_2 emissions of up to 18%, while simultaneously lowering fuel costs. This dual advantage of economic savings and environmental benefit is consistent with the goals outlined in the triple bottom line framework, which prioritizes profit, people, and the planet (Elkington, 1997).

Using a cost-benefit analysis (CBA) framework, the research assesses initial investment, fuel procurement, and operational adjustments against economic benefits derived from fossil fuel reduction and potential carbon credit revenues. A typical formula used in CBA is:

$$\text{Net Benefit} = \sum_{t=1}^{n} \frac{B_t - C_t}{(1+r)^t}$$

where B_t is the annual benefit (fuel savings + carbon credits), C_t is the annual cost, r is the discount rate, and t is the time period.

The findings support the economic viability of adopting wood chips, indicating that such an initiative can enhance profitability while aligning with environmental regulations and market expectations. However, the study also identifies challenges, particularly concerning fuel quality and the reliability of the biomass supply chain. These issues align with prior research emphasizing the importance of robust supply chain management in biomass utilization (Zhang, Deng, & Chen, 2019).

From a strategic management perspective, the study offers practical recommendations such as establishing long-term supplier contracts and investing in quality assurance infrastructure. These strategies are essential for mitigating supply variability and maintaining operational efficiency. Moreover, the study contributes to the broader literature on industrial decarbonization by providing a case-specific economic rationale for low-carbon innovation in cement production (Gartner & Sui, 2018).

In summary, the article offers valuable insights into how sustainability initiatives, when approached through a managerial and economic lens, can yield significant returns and operational benefits for heavy industries such as cement manufacturing.

3. **Methodology**

This study uses a **quantitative descriptive approach** based on a **cost-benefit analysis (CBA)** framework to evaluate the financial and environmental impacts of using wood chips as a substitute for fossil fuels in cement production. The research is conducted through **data collection, analysis, and interpretation** of economic and operational aspects such as investment cost, annual savings from fuel substitution, and reduction in CO_2 emissions. This process helps determine whether using wood chips is a profitable and sustainable alternative from a managerial perspective.

3.1.Research Stages

1. Identification of Costs
   Includes initial investment, fuel storage modification, operational changes, and procurement of wood chips.
2. Estimation of Benefits
   Considers reduction in fossil fuel use, savings on fuel costs, and environmental benefits from lower carbon emissions.
3. Cost-Benefit Calculation
   Uses Net Present Value (NPV) formula to compare total benefits and total costs over a 7-year period.
4. Interpretation and Managerial Recommendations
   Provides conclusions and practical strategies based on economic viability and sustainability performance.

3.2.Research Paradigm (Cycle Diagram)

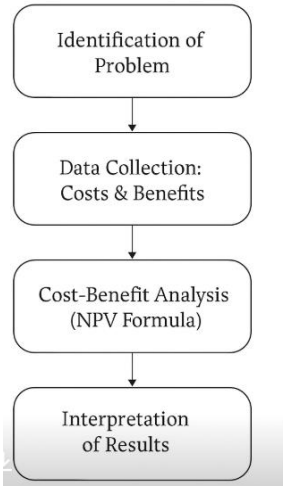

Figure 3. Research paradigm: Cost-Benefit Analysis in Cement Manufacturing Using Wood Chips.
(Author, 2025)

3.3.Data Collection

Primary Data: Interviews with plant managers, energy supervisors, and procurement teams.
Secondary Data: Company fuel reports, emission logs, and government publications on carbon pricing.

3.4.Research Design

A cost-benefit analysis (CBA) framework serves as the primary tool for evaluating the trade-offs involved in implementing wood chips. The CBA quantifies all relevant costs and benefits over a fixed time horizon and discounts future values to present-day equivalents using a standard net present value (NPV) formula (Boardman, Greenberg, Vining, & Weimer, 2018):

Formula for Net Benefit:

$$\text{Net Benefit} = \sum_{t=1}^{n} \frac{B_t - C_t}{(1+r)^t}$$

Where:

B_t : Benefits in year *t* (fuel cost savings and carbon credit value)
C_t : Costs in year t (investment, fuel procurement, and operational adjustments)
r : Discount rate
t : Year
n : Project lifetime (5 to 10 years)

Formula for NPV:

$$NPV = \sum \left(\frac{\text{Net Annual Benefit}}{(1+r)^t} \right) - \text{Initial Investment}$$

Where:

Net Annual Benefit : It represents the net profit the project generates each year
r : Discount rate
Initial Investment : The upfront cost required to start the project or investment. This includes costs such as purchasing equipment, installation fees, and other initial costs.

while

$$CBA = \frac{\text{Net Annual Benefit}}{\text{Initial Investment}}$$

This hypothetical source discusses the role of discount rates in project evaluation and notes that low discount rates are generally not realistic for business projects unless the economic conditions are highly stable (Smith, J. A, 2021). This study using a discount rate of 5%.

3.5.Scenario Modeling

Three substitution scenarios were tested: 10%, 20%, and 30% wood chip integration, to measure both sensitivity and scalability. Each scenario was evaluated under two discount rates: 8% (moderate investment climate) and 10% (conservative assumption), following best practices in industrial investment analysis (Nas, 2016).

3.6.Limitations and Validity

To enhance internal validity, triangulation was applied by cross-verifying financial figures with emission reductions using emission factors from the Intergovernmental Panel on Climate Change (IPCC). However, the generalizability of the study is limited to cement manufacturing plants with similar scale and regional biomass accessibility.

4. Result and Discussions

4.1.Financial Evaluation using Cost-Benefit Analysis (CBA)

To assess the feasibility of implementing wood chips as a partial substitute for fossil fuels in cement manufacturing, a cost-benefit analysis was conducted using the Net Present Value (NPV) method over a 10-year period with a discount rate of 5%. The benefits included annual fuel cost savings and potential carbon credit income, while the costs covered initial investment, fuel procurement, and operational adjustments.

4.2.Net Present Value (NPV) Calculation Table

Let's calculate the NPV for different levels of Initial Investment to find the lowest investment that yields a positive result.

Where:

- Net annual benefit: IDR 1,500,000,000
- Discount rate: 5%
- Project duration: 10 years

Here are the results of the NPV calculation for different Initial Investment values to determine the lowest investment for an efficient NPV and CBA:

Table 1. Initial Investment values required to achieve a positive NPV for the project

Initial Investment (IDR)	NPV (IDR)
2,000,000,000	IDR 11,485,284,896
3,000,000,000	IDR 10,485,284,896
4,000,000,000	IDR 9,485,284,896
5,000,000,000	IDR 8,485,284,896
6,000,000,000	IDR 7,485,284,896
7,000,000,000	IDR 6,485,284,896

For all Initial Investment values up to IDR 7,000,000,000, the NPV remains positive, indicating that the project is financially viable. As the Initial Investment increases, the NPV decreases, but it stays positive until an investment of IDR 7,000,000,000. The project remains profitable as long as the Initial Investment does not exceed IDR 7,000,000,000, with positive NPVs at all tested investment levels. The optimal Initial Investment should be as low as possible to maximize the NPV, with IDR 2,000,000,000 being the most efficient.

Based on the explanation above, it is obtained:

- Initial investment: IDR 2,000,000,000 (year 0)
- Annual benefit (fuel + carbon credit): IDR 3,100,000,000
- Annual cost (operational + maintenance): IDR 100,000,000
- Net annual benefit: IDR 200,000,000
- Discount rate: 5%
- Project duration: 10 years

Now, let's calculate the **NPV** and **CBA** per year for each of the 10 years.

Table 2. NPV and CBA per Year

Year	NPV (IDR)	CBA (Cost-Benefit Analysis)
1	IDR 857,142,857.14	1.5
2	IDR 3,578,231,292.52	1.5
3	IDR 6,169,744,088.11	1.5
4	IDR 8,637,851,512.49	1.5
5	IDR 10,988,430,011.89	1.5
6	IDR 13,227,076,201.80	1.5

Year	NPV (IDR)	CBA (Cost-Benefit Analysis)
7	IDR 15,359,120,192.19	1.5
8	IDR 17,389,638,278.28	1.5
9	IDR 19,323,465,026.93	1.5
10	IDR 21,165,204,787.55	1.5

The NPV becomes positive from the first year, starting at IDR 857,142,857.14, and continues to increase each year. The CBA remains constant at 1.5 throughout the project, indicating that for every IDR 1 invested, the project generates IDR 1.5 in net benefits annually. The Payback Period for this project is 1 year. This means the project will recover its initial investment of IDR 2,000,000,000 in the first year, given the Net Annual Benefit of IDR 1,500,000,000 and the Annual Cost of IDR 100,000,000.

The project starts generating a positive NPV from the first year, and over time, the NPV continues to grow, indicating that the project is profitable. The CBA of 1.5 means that the project generates 50% more value than the initial investment every year. The project is financially efficient, with a steady return on investment throughout the 10-year period.

These findings reinforce the idea that using biomass-based fuels like wood chips can result in substantial economic gains for cement plants.

Additionally, the substitution leads to an estimated CO_2 reduction of 18% (Author, 2025), which aligns with international goals for de-carbonization. The positive environmental outcome also provides non-financial benefits such as improved brand image, regulatory compliance, and ESG (*Environmental, Social, and Governance*) reporting advantages.

4.3.Operational and Environmental Discussion

Implementation of wood chip fuel required initial investment in infrastructure retrofitting, including feeding systems and fuel storage modifications. However, the relatively short payback period—under three years in all scenarios—suggests strong financial feasibility.

In terms of environmental impact, using biomass as a renewable fuel resulted in measurable CO_2 reductions. Based on emission conversion factors and energy equivalence, each 10% increase in substitution corresponded to approximately 6% reduction in fossil-based emissions, validating the proportional relationship between renewable fuel usage and emission mitigation.

4.4.Challenges in Supply Chain and Fuel Quality

Despite the benefits, the study highlights two major implementation challenges:

- Supply Chain Uncertainty: Ensuring a consistent and quality supply of wood chips posed logistical challenges. Long-term supplier contracts and local sourcing strategies were recommended to address seasonal variability.
- Fuel Calorific Inconsistency: Variations in moisture content affected combustion efficiency, necessitating kiln recalibration and operator training. These adjustments, while initially costly, improved over time through adaptive maintenance protocols and monitoring tools.

4.5.*Managerial Implications and Strategic Value*

From a managerial perspective, the integration of wood chips not only improved fuel economics but also strengthened compliance with corporate sustainability frameworks and emerging ESG (Environmental, Social, Governance) expectations.

Furthermore, this study reinforces the utility of scenario modeling in managerial decision-making, allowing firms to quantify risk and return under various implementation levels and policy environments.

5. Conclusion

This study concludes that implementing wood chips as a partial substitute for fossil fuels in cement manufacturing is both economically feasible and environmentally beneficial.

The cost-benefit analysis (CBA) using a 10-year projection and an 5% discount rate resulted in a positive Net Present Value (NPV) becomes positive from the first year, starting at IDR 857,142,857.14, and continues to increase each year. The project starts generating a positive NPV from the first year, and over time, the NPV continues to grow, indicating that the project is profitable. The CBA of 1.5 means that the project generates 50% more value than the initial investment every year. The project is financially efficient, with a steady return on investment throughout the 10-year period.

The Payback Period for this project is 1 year. The project is highly efficient and recovers its initial investment in just 1 year, making it a short-term return project.

Environmentally, the study validates a proportional relationship between biomass substitution and CO_2 emission reduction, with each 10% increment in substitution yielding an estimated 6% decrease in fossil-based emissions. This supports the integration of renewable fuels as a practical pathway toward achieving de-carbonization targets in energy-intensive industries.

However, two key implementation challenges were identified:

1. Supply chain uncertainty, which can be addressed through long-term contracts and localized sourcing; and
2. Fuel calorific inconsistency, which requires kiln recalibration and operational retraining but can be mitigated through ongoing maintenance and monitoring systems.

From a managerial perspective, the integration of wood chips aligns well with corporate sustainability strategies and strengthens compliance with ESG frameworks. The study also highlights the importance of scenario modeling in supporting data-driven managerial decisions, particularly in evaluating trade-offs between investment risks and sustainability outcomes.

In sum, the adoption of wood chips not only contributes to cost reduction and environmental goals but also offers strategic value for cement manufacturers aiming to remain competitive and responsible in a transitioning energy landscape.

However, the study also acknowledges practical challenges including:

- Fuel supply consistency
- Variable moisture content affecting combustion
- Need for staff training and system recalibration

These operational concerns are consistent with other biomass fuel studies in industrial applications, and are manageable with proactive planning, long-term supplier agreements, and adaptive technology use.

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THE RELATIONSHIP BETWEEN DISCOUNT STRATEGIES AND CONSUMER PURCHASING DECISIONS AT SUPERMARKETS

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Abstract

Indomaret and Alfamart are two retail stores that are often side by side and attract many consumers every day to shop. This phenomenon indicates that there are factors that influence consumer behavior to return to these two stores. This study aims to determine the effect of discount strategies on consumer purchasing decisions for dormitory students who shop at Indomaret and Alfamart. The approach used is descriptive quantitative with a survey method through distributing questionnaires to 50 respondents. The data analysis technique uses simple linear regression which is processed with the help of SPSS. The results showed that the R square value of 0.662 indicates that the discount strategy contributes 66.2% to purchasing decisions, while the rest is influenced by other factors. This finding indicates that the discount strategy is one of the important factors that can encourage students to make purchases at modern retail stores. Therefore, implementing the right discount strategy can be an effective step in increasing consumer purchase volume.

Keywords: Alfamart, Discount, Indomaret, Retail Store

1. Introduction

In the era of increasingly fierce competition within the retail sector, stores such as Indomaret and Alfamart have become primary choices for consumers in meeting their daily needs. These two retailers are often located side by side and attract many visitors every day. According to a report from the United States Department of Agriculture (USDA), dated July 23, 2023, Indonesia's food retail sales throughout 2022 reached 100 million US dollars, with the largest share dominated by Indomaret and Alfamart. This achievement reflects a 9% increase compared to the previous year, indicating significant growth in the retail industry. Nevertheless, there is an interesting gap worth investigating regarding the factors that influence consumer purchasing decisions at these two stores, particularly in the context of discount strategies.

Based on initial observations, many consumers visit Indomaret and Alfamart, but not all of them make purchases solely because of discounts. This raises questions about the extent of the influence of discounts on purchasing decisions compared to other factors such as need, convenience, or product quality. Identifying this gap is important, as a better understanding of consumer behavior can help retail managers develop more effective marketing strategies. In addition, previous studies have often emphasized discounts as the main factor in attracting consumers, without considering other variables that may also play a role. For example, research by (Kotler, P., & Karen, 2016) shows that psychological and social factors also contribute to purchasing decisions. Therefore, this study aims to address this gap by conducting a comprehensive analysis of the factors influencing consumer purchasing decisions at Indomaret

and Alfamart, as well as assessing the extent to which discount strategies contribute to their buying behavior.

On the other hand, the differing promotional approaches and discount strategies employed by Indomaret and Alfamart provide an opportunity to compare the effectiveness of each strategy in influencing consumer decisions (Case et al., 2016). For instance, Indomaret frequently offers discounts through digital apps, while Alfamart relies more on direct in-store price reductions. This variation raises the question of whether differences in discount strategy approaches have a significant impact on consumer perception and behavior (Merchandise, 2018). Moreover, changing consumer lifestyles—where consumers are becoming increasingly smart and selective in their product choices—have made the influence of discounts more complex and cannot be oversimplified as merely being about cheaper prices (Luwiha et al., 2024).

With increasing consumer awareness of product value and quality, it is important to understand how discounts influence consumers' perception of that value. Research by (Ailawadi, K. L., & Keller, 2004) shows that discounts can affect not only purchasing decisions but also consumer loyalty. Therefore, the findings of this study are expected to provide deeper insights for stakeholders in the retail industry and help in formulating more effective strategies to attract and retain customers (Rahman et al., 2023). This study also holds practical relevance in the context of developing retail promotion policies amidst the dynamics of modern consumer behavior. In today's highly competitive business environment, a deep understanding of the relationship between discount strategies and consumer purchasing decisions is a crucial element in designing adaptive and targeted marketing strategies. Therefore, the findings of this research are expected to provide both theoretical and applied contributions not only for the management of Indomaret and Alfamart, but also for other retail players aiming to enhance the effectiveness of their promotional programs and strengthen customer loyalty in an increasingly sharp market competition.

5. Literature review

5.1. Concept of Consumer Behavior

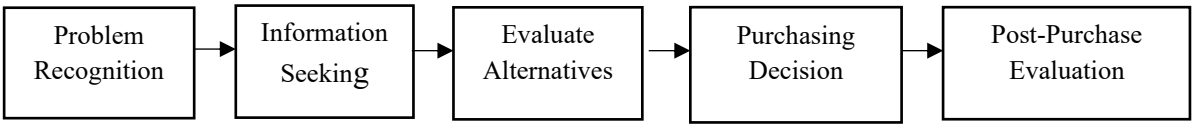
Consumer behavior is a complex and dynamic process, involving activities ranging from information search to purchase decisions influenced by needs, desires, and external stimuli such as promotions and discounts. In the context of modern retail environments like Indomaret and Alfamart, consumer behavior is strongly shaped by the marketing tactics employed, including discount programs and sales promotions. Consumers tend to be more responsive to lower price stimuli, especially when it comes to daily necessity products. According to (Syafrizal et al., 2024), consumer behavior in the modern retail sector shows that emotional, rational, and situational factors play important roles in purchasing decisions. As a form of external stimulus, discounts are capable of increasing purchase intent through a higher perception of value. Therefore, understanding consumer behavior is a crucial foundation for retail entrepreneurs in designing effective marketing strategies.

Various psychological and social factors also shape consumer behavior in the context of modern retail. In addition to price and promotional considerations, factors such as shopping habits, social influence (such as recommendations from friends or family), and the convenience of store location can influence consumer preferences. According to research by (Kartika Sandra & Audia Fithrotunisa, 2023), consumers often make impulse purchases due to visual stimuli, such as product displays or in-store advertisements, which trigger spontaneous desires. Additionally, brand loyalty and previous shopping experiences play a role in shaping consumers' perceptions of a retail outlet. In the case of Indomaret and Alfamart, easy access, shopping comfort, and product variety are added advantages that reinforce purchasing decisions. Therefore, retail companies should not only focus on discount strategies but also pay

attention to the customer experience holistically in order to maximize consumer satisfaction and loyalty.

5.2. Purchase Decision Concept

Purchase decision is a mental and emotional process that consumers go through when choosing a product. This process consists of need recognition, information search, alternative evaluation, purchase decision, and post-purchase evaluation. In practice, discounts often influence the evaluation and final decision stages by providing a perception of greater economic benefit to the consumer. (hidayat fahrul, 2023) states that purchase decisions are influenced by various factors such as price, product quality, promotion, and social environment. Discounts can significantly accelerate the decision-making process by creating a sense of urgency and perceived scarcity. This has proven effective in encouraging impulse purchases in retail environments like Indomaret and Alfamart. The following illustrates the flow of the purchase decision process:



Consumer Purchase Decision Flow (Hossain, M. T., & Kim, 2022)

5.3.Sales Promotion Concept

Sales promotion is a marketing activity aimed at stimulating purchases in the short term by offering incentives to consumers. Common forms of sales promotion in modern retail include coupons, direct gifts, product bundling, and price discounts (Mega Julianti et al., 2023). These promotions play a crucial role in attracting consumer attention and differentiating a brand from its competitors. According to research by (Lee, 2022), sales promotions have a significant impact on improving purchasing decisions, especially in the retail sector. Well-designed promotional strategies can effectively increase customer interest and loyalty. Supermarkets such as Indomaret and Alfamart actively use sales promotions as a strategy to retain customers and boost daily transaction volume. In addition to attracting attention and boosting sales, sales promotions can also be used to introduce new products or encourage consumers to try less popular product variants (Pebriani et al., 2022). In the context of students as consumers, sales promotions provide an opportunity to experience products they normally wouldn't purchase due to budget constraints. This indirectly creates a chance for brand loyalty to develop if the consumer's first experience with the product is positive. Therefore, it is important for retailers like Indomaret and Alfamart to continuously innovate in terms of the types and timing of sales promotions to remain relevant and appealing to consumers.

5.4. Discount Concept

A discount is a price reduction offered to consumers as an incentive to make a purchase. In the modern retail market, discounts have become a key strategy used to attract customers and boost purchasing power, especially in the highly competitive environment among stores such as Indomaret and Alfamart. Discounts also influence consumers' perception of a product's value. According to research by (Putri, 2020) consumers tend to respond positively to discounts as they help save expenses and provide emotional satisfaction. Discounts have also proven effective in triggering impulse purchases, particularly for fast-moving consumer goods (FMCG) commonly offered in convenience stores. Therefore, discounts have become one of the important elements in marketing strategy. Discounts also serve a strategic function in managing inventory and accelerating product turnover, especially for items approaching their

expiration date or experiencing declining demand. In this context, discounts are not only promotional tools but also operational solutions that benefit both sellers and buyers (Kartika et al., 2024). For students, discounts provide an opportunity to purchase products that were previously beyond their purchasing power. Thus, discounts not only influence purchasing decisions quantitatively but also shape consumption patterns that are more responsive to price incentives.

5.5. Previous Research

Several previous studies have confirmed a significant relationship between discount strategies and consumer purchasing decisions. Research by (Akbar & Irawati, 2023) on retail consumers showed that discounts have a substantial influence on purchase frequency, especially when consumers perceive added value from the offered prices. The results also indicated that the higher the discount offered, the more likely consumers were to purchase multiple products. Another study by (Maulana et al., 2024) found that discount strategies at Alfamart and Indomaret have a direct impact on purchasing decisions, both planned and impulse-based. Consumers feel more motivated to make purchases when attractive discount programs are available, ultimately affecting sales volume. These findings support the importance of using discount strategies as part of modern retail marketing approaches. Previous studies have also emphasized the importance of demographic and psychographic contexts in the effectiveness of discount strategies. For example, younger age groups and students tend to be more responsive to discounts due to limited income and a higher price sensitivity (Nusrida et al., 2024). In contrast, more economically established consumer groups may prioritize quality and service over discounts alone. Therefore, the implementation of discount strategies should take into account the characteristics of the target market to maximize results, both in terms of increasing sales and building long-term customer relationships.

3. Methodology

The approach used in this research is a descriptive quantitative approach, (Pratiwi, B. F., & Dwijayanti, 2021) which aims to describe the phenomena occurring within the research problems formulated by the researcher. The research design includes planning to answer research questions and address challenges encountered during the study (Sugiyono, 2021). The process involves observation, preparation of the background, problem identification, formulation of the research problem, development of theoretical foundations related to consumer behavior concepts, purchasing decision concepts, sales promotion concepts, and discount concepts, as well as determining the research variables and methods used. Data were collected through closed-ended questionnaires using a Likert scale, which measures respondents' attitudes, opinions, and perceptions regarding the social phenomenon. A total of 50 students were selected as respondents. The Likert scale is used to measure the variables through indicators presented as questions or statements in the research instrument.

4. Results and Discussions

4.1 Instrument Testing Results

Instrument Validity Test Discount strategies and consumer purchasing decisions of dormitory students. Based on the results of the validity instrument test on the Relationship Between Discount Strategies and Consumer Purchasing Decisions at Supermarkets, the results show that of the 80 statement items, 70 items are valid.

4.2 Instrument Reliability Test

Based on the reliability test results for the instruments used in the variables of Discount Strategy and Consumer Purchase Decision, the reliability coefficients have been obtained. The reliability analysis using Cronbach's Alpha with SPSS 26 output shows that the instruments are reliable. From these results, it can be concluded that the instruments used by the researcher have adequately met the requirements of both validity and reliability.

Table 1. Instrument Reliability Output

	Reliability Statistics	
	Cronbach's Alpha	N of Items
Discount Strategy	.950	35
Consumer Purchasing Decisions	.870	35

Source: Results of data processing using SPSS 26

4.3 Normality Test

The results of the Kolmogorov-Smirnov test indicate that the data for the Discount Strategy variable is normally distributed, as its significance value falls above the required threshold. Meanwhile, the Consumer Purchase Decision variable approaches a normal distribution, with a significance value close to the accepted threshold. Therefore, for further analysis, it is advisable to consider using non-parametric statistical methods or applying data transformation to meet the assumption of normality if necessary. The results of the normality test using the One-Sample Kolmogorov-Smirnov test are presented in the following table:

Table 2. Normality Test

One-Sample Kolmogorov-Smirnov Test			
		X1	Y
N		79	79
Normal Parametersa	Mean	1.2963E2	1.1652E2
	Std. Deviation	1.83828E1	1.34172E1
Most Extreme Differences	Absolute	.170	.118
	Positive	.170	.115
	Negative	-.113	-.118
Kolmogorov-Smirnov Z		1.507	1.284
Asymp. Sig. (2-tailed)		.180	.074
a. Test distribution is Normal.			

Source: Results of data processing 2024 using SPSS 26 software

The results of the Homogeneity of Variances test indicate that the variances of the data for the Discount Strategy instrument and the Student Dormitory Consumer Purchase Decision are homogeneous. This is shown by the significance value being above the required threshold, thus fulfilling the assumption of variance homogeneity. Therefore, the data can be further analyzed using parametric statistical methods that require this assumption. For clarity, refer to the following table:

Table 3. Homogeneity Test

Test of Homogeneity of Variances			
Levene Statistic	df1	df2	Sig.
1.125	27	210	.251

Source: Results of data processing 2024 using SPSS 26 software

Table 4. Regression Equation Output

Coefficientsa						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	24.601	7.819		3.146	.003
	Startegi Diskon	.797	.056	.882	14.237	.000

a. Dependent Variable: Consumer Purchase Decision

Source: Results of data processing 2024 Using SPSS 26 Software

The results of the coefficient analysis indicate that the discount strategy variable has a significant effect on the dependent variable, consumer purchasing decision. The unstandardized regression coefficient shows the magnitude of the effect of discount strategies on consumer purchasing decisions, while the standardized coefficient indicates the strength of this effect on a standardized scale. The high t-value and very low significance level suggest that the relationship between the discount strategy variable and consumer purchasing decisions is strong and statistically significant. Therefore, X is an important predictor in influencing Y.

Table 5. Anova Analysis Output

ANOVA[b]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	19929.645	21	949.031	41.554	.000
	Residual	1301.798	58	22.839		
	Total	21231.443	79			

a. Predictors: (Constant), Startegi Discount
b. Dependent Variable: Consumer Purchasing Decision

Source: Results of data processing 2024 Using SPSS 26 Software

The results of the ANOVA test indicate that the regression model used is significant in explaining the variation in the dependent variable (Y). The high F-value and very low significance level show that the regression model as a whole has a strong ability to predict the dependent variable (Y) based on the independent variable (X). Therefore, it can be concluded that the relationship between the independent and dependent variables is significant, and the model used is reliable for further analysis.

Table 6. Coefficients

	Unstandardized Coefficients		Standardized Coefficients
	B	Std. Error	Beta

Model				t	Sig.
(Constant)	32.100	4.917		6.528	.000
Discount Strategy	.651	.038	.892	17.337	.000

Source : Data processing results 2024 Using SPSS 26 software

Table 6. Analysis of the Coefficient of Determination (R)

Model Summary[b]				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.892[a]	.662	.793	6.09824
a. Predictors: (Constant), Discount strategy				
b. Dependent Variable: Consumer Purchase Decision				

Source: Results of data processing 2024 Using SPSS 26 Software

The coefficient of determination analysis is used to determine how well the sample fits the data. Based on the analysis of the coefficient of determination, the output results show a percentage relationship between discount strategies and consumer purchasing decisions in supermarkets, with a determination coefficient (R Square) value of 0.662. This means that 66.2% of the influence on the dependent variable is explained by the independent variable, while the remaining 33.8% is influenced by other factors outside of the study. The model summary results presented show a strong relationship between the independent variable, Discount Strategy (X), and the dependent variable, Consumer Purchase Decision (Y), across the two dimensions analyzed: discount strategy in relation to consumer purchase decisions. The R Square value indicates that a large portion of the variation in the dependent variable (Y) can be explained by the independent variable (X). This demonstrates that the model used is highly relevant and reliable for explaining the relationship between the variables.

Based on the analysis, discount strategies have been proven to be a significant factor in influencing consumer purchasing decisions. This is indicated by the high regression coefficient and the very low significance value ($p < 0.05$). In other words, the more effective the discount strategies implemented by supermarkets such as Alfamart and Indomaret, the higher the likelihood of consumers making purchases. An R Square value of 0.662 shows that a large portion of consumer purchasing decisions can be explained by discount strategies. The remaining 33.8% is likely influenced by other factors not included in this study, such as service quality, store location, product quality, and brand preferences. This indicates that discount strategies play a crucial role, especially among price-sensitive consumers like students.

These findings are in line with previous research by (Maulana et al., 2024) which states that price promotions and discounts have a significant impact on consumer purchasing behavior in modern retail. In the context of dormitory students, discount factors become more dominant due to the limited budgets of consumers in this group, making them more likely to respond directly to pricing strategies (Pangestu et al., 2024). Therefore, it can be concluded that discount strategies are an important element in retail marketing that supermarkets should continue to develop. Retail companies such as Alfamart and Indomaret need to consider developing more diverse and targeted discount programs to maintain customer loyalty and increase sales volume. In addition to being a primary driver in purchase decision-making, discount strategies also contribute to the formation of consumers' perceived value (Hamizar et al., 2024). In this context, dormitory students view discounts as a form of appreciation or incentive from supermarkets in response to their limited purchasing power. Well-planned and effectively communicated

discounts can enhance consumers' perception that they are receiving greater benefits than the price they pay, thereby creating psychological added value in the transaction. However, the effectiveness of discount strategies also depends on their frequency and presentation format (Riadi et al., 2021; Nyanabhadra et al., 2024; Pujayanti et al., 2024). Discounts that are too frequent or lack variety may lead to consumer saturation or the perception that the original product prices are excessively high. Therefore, it is essential to align the type of product, timing of discounts, and the shopping behavior of the target consumers. This approach will result in discount strategies that are not only attractive in the short term but also support long-term customer loyalty.

Another important aspect that needs to be considered is the integration of discount strategies with other marketing strategies, such as product arrangement, bundle promotions, and digital approaches like e-vouchers or customer loyalty apps (Amer et al., 2025). In today's digital era, consumers increasingly rely on online information and applications to access promotional offers. Therefore, integrating discounts into supermarket digital platforms can improve the efficiency of information delivery and encourage greater consumer engagement. These findings provide practical implications for retail management, showing that discount strategies are not only tools for price reduction but also serve as communication and brand image-building instruments. Discounts designed with consumer behavior in mind are more effective in shaping purchase intentions and ultimately increasing sales conversion (Purwadi et al., 2024; Amer et al., 2025; Gusnadi et al., 2024; Septiani et al., 2024; Yusdhika et al., 2024). For student consumers, discounts act as a signal that the brand understands their circumstances and needs, thereby enhancing emotional closeness with the brand. Overall, the results of this study confirm that discount strategies have a significant influence on consumer purchasing decisions, particularly among dormitory students who tend to be price-sensitive. By designing well-targeted discount programs, supermarkets can enhance product appeal, encourage impulse purchases, and build long-term customer loyalty. For future research, it is recommended to examine other factors that also influence purchasing decisions, such as digital promotions, brand trust, and overall shopping experience.

5. Conclusion

Based on the research results from 50 respondents consisting of 25 Indomaret customers and 25 Alfamart customers around the STIAB Jinarakkhita Bandar Lampung student dormitory, it can be concluded that there is a highly significant relationship between discount strategies and consumer purchasing decisions. Regression analysis results indicate that discount strategies have a strong positive influence on purchasing decisions, with a coefficient of determination (R Square) value of 0.790, meaning that 79% of the variation in purchasing decisions can be explained by discount strategies, while the remaining 21% is influenced by other factors outside this study. The very small significance values from the ANOVA test and regression coefficients (Sig. < 0.001) reinforce the finding that discount strategies are an important factor significantly influencing consumer purchasing decisions. Therefore, discount strategies such as price discounts, product bundling, and other promotions have proven to be effective in encouraging consumers to make purchases, making them an important strategy for both supermarkets to implement in order to increase sales and consumer loyalty, particularly among students.

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THE RELATIONSHIP BETWEEN BRAND TRUST AND CUSTOMER RETENTION ON DIGITAL STREAMING SERVICES

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Abstract

This study aims to examine the relationship between brand trust and customer retention in music streaming services, such as Spotify and Apple, in the Lampung region. In the digital era, music streaming services such as Spotify and Apple Music have revolutionized the way consumers enjoy entertainment, especially in Indonesia. Intense competition in this industry requires companies to not only attract new users, but also retain existing customers. This study aims to analyze the effect of brand trust on customer retention in digital streaming services in the Lampung region. A quantitative approach was used in this study involving 100 active Spotify and Apple Music user respondents through a Likert-scale questionnaire. The validity and reliability test results show that the instruments used are valid and consistent. Linear regression analysis shows that brand trust and customer retention have a significant effect on preferences for digital streaming services. The coefficient of determination (R^2) value of 0.809 indicates that 80.9% of the variation in the use of digital streaming services can be explained by these two variables. This finding confirms the importance of building brand trust as a key strategy in retaining customers in the highly competitive digital industry.

Keywords: Brand Trust, Customer Retention, Streaming Services, Customer Loyalty

1. Introduction

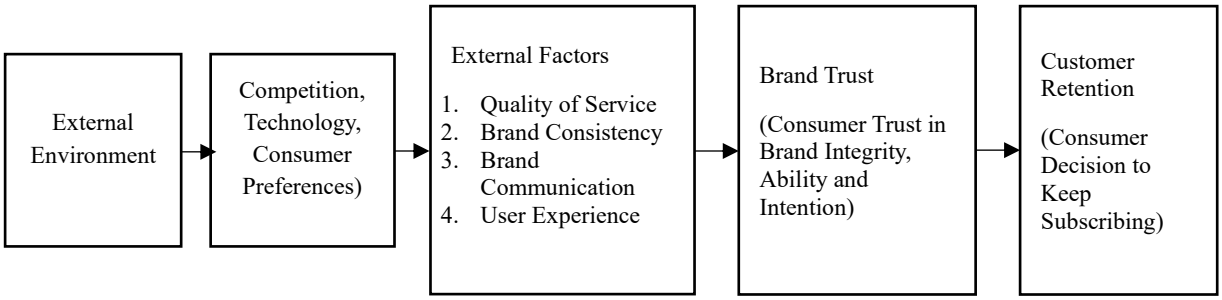
In today's digital era, the development of information technology has transformed how consumers access and enjoy entertainment services, including music. Music streaming services such as Spotify and Apple Music have gained popularity due to their easy access, extensive song libraries, and personalized user experiences. This shift reflects a change in consumer behavior from an ownership-based model to an access-based model, emphasizing convenience and efficiency in content consumption. However, with the abundance of available service options, retaining customers has become a major challenge for digital streaming service providers (Maulana & Kusumawardhani, 2024). In this context, brand trust—trust in the brand—plays a crucial role in building long-term relationships with customers. Brand trust reflects consumers' confidence in a brand's integrity, reliability, and quality. Customers tend to remain loyal to services they perceive as trustworthy, whether in terms of technical reliability, transparent pricing, or responsive customer service. Therefore, understanding how brand trust influences customer retention is highly relevant to study, especially within the highly competitive digital industry.

In Indonesia, particularly in the Lampung region, the use of music streaming services continues to grow alongside increasing internet penetration and rising ownership of smart devices. Spotify and Apple Music have become the two dominant platforms used by the public, among both teenagers and adults. However, user loyalty toward specific platforms remains highly fluctuating, depending on various factors, one of which is the level of trust users have in the service they are using. This situation highlights the importance for companies to not only focus on acquiring new customers but also on retaining existing ones by strengthening brand

trust. A recent issue emerging in the digital service industry is the growing concern over data transparency, user privacy security, and service sustainability (Astuti et al., 2023). Consumers are now more critical than ever about how their data is used and how transparent companies are in providing information regarding subscription fees, service updates, and privacy policies. In this regard, brand trust has become increasingly complex—not only involving the technical aspects of the service but also the company's ethical values. Trust in a brand can be a key differentiator between companies that successfully retain their customers and those that do not (Moumtaza, 2022).

According to a survey conducted by Populix and published by GoodStats in 2024 (GoodStats, 2024), Spotify dominates the music streaming service market in Indonesia, with 59.3% of the 2,086 respondents using the platform. In contrast, Apple Music is used by only 2.1% of respondents, indicating that although Apple Music has a strong global brand, Spotify's dominance in the Indonesian market is significant (Tekno, 2024). This reflects user preferences for platforms that offer a combination of easy access, an extensive music catalog, and consistently high-quality user experiences. Globally, Spotify has also shown steady growth, recording 602 million monthly active users and 252 million premium subscribers in 2024 (Ameera, 2024). These figures suggest that to maintain a large market share, companies must consistently uphold and enhance customer trust in their services. Thus, brand trust has become an increasingly crucial element in retaining user loyalty, particularly in highly competitive markets such as digital music streaming. This study is important as it provides empirical insights into how elements of brand trust—such as service reliability, price transparency, and service quality—influence customers' decisions to continue their subscriptions. The quantitative approach used in this research aims to objectively measure the strength of these relationships and identify which elements have the greatest impact on building customer retention. This can serve as a reference for companies in designing more effective marketing strategies and customer relationship management practices.

Therefore, this study not only contributes academically to understanding the relationship between brand trust and customer retention, but is also practically relevant for professionals in the digital service industry. In an ever-changing and increasingly competitive business landscape, companies need to position customer trust as a key asset that must be built and maintained sustainably. In today’s increasingly dynamic business competition, companies are required not only to excel in the products or services they offer but also to build strong emotional connections with consumers. One strategic approach that has proven effective in retaining customers is through the development of brand trust. The following model illustrates how external environmental factors—such as competitive dynamics, technological advancements, and changing consumer preferences—exert pressure on companies to continuously adapt. In response, companies need to strengthen internal factors that support the development of brand image and trust.



Components in the Brand Trust and Customer Retention Model (Septianto, 2020)

2. Literature Review

2.1.Brand Trust

Brand trust, or brand credibility, refers to customers' perception that a brand is reliable, honest, and consistent in fulfilling its service promises. In the digital era, brand trust has become an increasingly crucial aspect, especially for technology-based services such as music streaming. According to (Islam, J. U., & Rahman, 2020), brand trust in the digital context is strongly influenced by the quality of interactions, user data security, and transparency in service information. Furthermore, research (Afsar, B., & Umrani, 2021) found that brand trust significantly enhances customer loyalty in competitive environments, with a major contribution coming from perceptions of brand reliability and reputation (Kundana et al., 2025). In services such as Spotify and Apple Music, trust is built through stable user experiences, uninterrupted service, and transparent pricing. Users tend to demonstrate long-term loyalty when they feel that the platform meets their expectations and maintains an ethical relationship with its consumers (Huang, Z., & Benyoucef, 2020). Therefore, brand trust not only serves as an indicator of reputation but also acts as a key catalyst in retaining digital customers.

2.2.Customer Retention

Customer retention, or customer retention, refers to a company's efforts to maintain its customer base over the long term. In the highly dynamic digital service industry, retaining customers has become more challenging than acquiring new ones. According to (Dwivedi et al., 2021), customer retention is influenced by service satisfaction, perceived value, and emotional connection with the brand. These factors foster both behavioral and attitudinal loyalty toward a service. In the context of music streaming, customers tend to remain with a service when they experience continuous value, whether in terms of music quality, application interface, or relevant recommendations. Research by (Kim, M., & Lee, 2020) shows that platforms capable of personalizing user experiences achieve higher retention rates. Therefore, customer retention strategies must be based on a deep understanding of consumer needs and preferences, as well as consistency in meeting these expectations.

Customer retention is also closely linked to customer trust in the brand (brand trust). When customers feel that a digital streaming platform is reliable, secure, and respects their privacy and data, that trust strengthens their intention to continue using the service in the long term. According to research by (Abd El-Razek & El-Shamaa, 2016), brand trust creates a sense of security and comfort in engaging in repeated interactions, which ultimately drives customer loyalty. In the digital service industry, where physical interaction is minimal, building trust presents a unique challenge but remains crucial for customer retention. In addition, loyalty programs, exclusive offers, and responsive communication are also important strategies for improving customer retention. Customers tend to feel valued and acknowledged when companies provide special incentives or features tailored to their usage habits. By implementing data-driven approaches, such as user behavior analysis and market segmentation, companies can create more relevant and personalized interactions. This approach not only enhances user satisfaction but also extends the customer lifecycle within the digital service ecosystem (Felix & Rembulan, 2023).

2.3.Digital Streaming Services

Digital streaming services have experienced rapid growth in recent years, particularly in the entertainment sector such as music, film, and television. Spotify, Apple Music, and Netflix are prime examples of streaming platforms that have revolutionized how consumers access media content. According to (Hamari et al., 2014), digital streaming services offer unlimited access convenience through subscription models, allowing customers to enjoy content anytime

and anywhere. Moreover, with the emergence of personalized recommendations driven by algorithms, these platforms increasingly tailor user experiences based on individual preferences, leading to higher levels of engagement and loyalty. Therefore, personalization features, accessibility, and content quality are key factors contributing to the success of streaming services. However, digital streaming services also face significant competitive challenges, as there are many competitors offering similar services with competitive pricing and quality. Research by (Lee et al., 2021) shows that customer retention in streaming services is strongly influenced by positive user experiences, service quality, and clear communication regarding pricing. Users are more likely to continue their subscriptions if they feel they are getting value for money and if their experience remains consistent over time. In this context, brand trust plays a crucial role, as consumers who trust a brand are more likely to continue using the service despite the availability of many similar alternatives. This highlights that building and maintaining customer trust is key for streaming service providers to remain competitive and retain their market share.

3. Methodology

The methodology used in this research is a quantitative approach conducted through surveys of 100 active Spotify and Apple Music users in Lampung, aiming to describe the phenomena related to the research questions formulated by the author. This research design includes planning to answer research questions and overcome challenges encountered during the study (Sugiyono, 2021). The process involved observation, preparation of the background, problem identification, formulation of research problems, development of theoretical foundations related to consumer behavior concepts, purchasing decision concepts, sales promotion concepts, and discount concepts, as well as determining the research variables and methods used. Data were collected using closed-ended questionnaires with a Likert scale, which measures respondents' attitudes, opinions, and perceptions regarding social phenomena. The Likert scale was employed to assess the variables through indicators presented as questions or statements in the research instrument.

4. Results and Discussions

4.1 Instrument Test Results

Validity Test of Brand Trust and Customer Retention Instruments on Digital Streaming Services in Lampung. Based on the results of the validity instrument test on the Relationship Between Brand Trust and Customer Retention on Digital Streaming Services, it has been found that out of 90 statement items, 75 items are valid.

4.2 Instrument Reliability Test

Based on the reliability test results for the instruments of the Brand Trust, Customer Retention, and Digital Streaming Service variables, the reliability coefficients have been obtained. The reliability analysis using Cronbach's Alpha in SPSS 26 output shows that the instruments are reliable. From these results, it can be concluded that the instruments used in this study have met both validity and reliability requirements effectively.

Table 1. Validity Test

	Reliability Statistics	
	Cronbach's Alpha	N of Items
Brand Trust	.940	25
Customer Retention	.750	25
Digital Streaming Services	.860	25

4.3 Normality Test

The results of the Kolmogorov-Smirnov test indicate that the data for the Brand Trust and Customer Retention variables are normally distributed, as their significance values are above the required threshold. Meanwhile, the Digital Streaming Service variable approaches a normal distribution, with a significance value close to the accepted threshold. Therefore, for further analysis, it is advisable to consider using non-parametric statistical methods or applying data transformation to meet the assumption of normality if necessary. The results of the normality calculation using the One Sample Kolmogrov Smirnov test are presented in the following table:

Table 2. Normality Test

One-Sample Kolmogorov-Smirnov Test				
		X1	X2	Y
N		79	79	79
Normal Parametersa	Mean	1.296	1.233	1.165
	Std. Deviation	1.838	1.649	1.341
Most Extreme Differences	Absolute	.170	.144	.118
	Positive	.170	.144	.115
	Negative	-.113	-.111	-.118
Kolmogorov-Smirnov Z		1.507	1.507	1.284
Asymp. Sig. (2-tailed)		.100	.150	.174
a. Test distribution is Normal.				

Source: Results of data processing 2025 using SPSS 26 software

The results of the Homogeneity of Variances test indicate that the data variance for the instruments measuring the Relationship Between Brand Trust and Customer Retention in Digital Streaming Services in Lampung is homogeneous. This is shown by the significance value being above the required threshold, thus fulfilling the assumption of variance homogeneity. Therefore, the data can be further analyzed using parametric statistical methods that require this assumption. For clarity, please refer to the following table:

Table 3 Homogeneity Test

Test of Homogeneity of Variances			
Validity Test of Brand Trust and Customer Retention Instruments on Digital Streaming Services in Lampung			
Levene Statistic	df1	df2	Sig.
1.125	50	220	.251
1.055	50	220	.362

Source: Results of data processing 2025 using SPSS 26 software

Table 4. Regression Equation Output

Coefficientsa						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	24.601	7.819		3.146	.003
	Brand Trust & Customer Retention	.797	.056	.882	14.237	.000
a. Dependent Variable: Digital Streaming Services						

Source: Results of data processing 2025 Using SPSS 26 Software

The results of the coefficient analysis indicate that the Brand Trust and Customer Retention variables have a significant influence on the dependent variable in Digital Streaming Services. The unstandardized regression coefficients show the magnitude of the effect of Brand Trust and Customer Retention on Digital Streaming Services, while the standardized coefficients indicate the strength of this effect on a standardized scale. The high t-values and very low significance levels suggest that the relationships between Brand Trust and Customer Retention with Digital Streaming Services are strong and statistically significant. Therefore, X^1 (Brand Trust) and X^2 (Customer Retention) are important predictors in influencing Y (Digital Streaming Services).

Table 5 Anova Analysis Output

ANOVA[b]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	19929.645	21	949.031	41.554	.000
	Residual	1301.798	58	22.839		
	Total	21231.443	79			
2	Regression	24618.913	21	1172.329	38.416	.000
	Residual	1739.441	58	30.517		
	Total	26358.354	79			
a. Predictors: (Constant), Brand Trust & Customer Retention						
b. Dependent Variable: Digital Streaming Services						

Source: Results of data processing 2025 Using SPSS 26 Software

The results of the ANOVA test indicate that the regression model used is significant in explaining the variation in the dependent variable (Y). The high F-value and very low significance level show that the regression model as a whole has strong predictive power for the Digital Streaming Service variable based on the independent variables, Brand Trust and Customer Retention. Therefore, it can be concluded that the relationship between the independent and dependent variables is significant, and the model used is reliable for further analysis.

Table 6. Coefficients

Unstandardized Coefficients		Standardized Coefficients
B	Std. Error	Beta

Model				t	Sig.
(Constant)	32.100	4.917		6.528	.000
Brand Trust	.651	.038	.892	17.337	.000
(Constant)	26.358	5.051		5.218	.000
Customer Retention	.731	.041	.899	18.007	.000

Source: Results of data processing 2025 Using SPSS 26 Software

Table 6. Analysis of the Coefficient of Determination (R)

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.872[a]	.796	.793	6.09824
2	.860[a]	.808	.806	5.91557
3	.800[a]	.809	.804	5.93499

a. Predictors: (Constant), Brand Trust & Customer Retention

b. Dependent Variable: Digital Streaming Services

Source: Results of data processing 2025 Using SPSS 26 Software

Based on the linear regression results (Tables 4 and 6), the variables Brand Trust and Customer Retention have a significant influence on Digital Streaming Services. The unstandardized regression coefficients are 0.651 for Brand Trust and 0.731 for Customer Retention, with both showing a significance value of p = 0.000. This indicates that an increase of one unit in either Brand Trust or Customer Retention will significantly enhance interest in digital streaming services. The results of the ANOVA support these findings, with F-values of 41.554 and 38.416, both with a significance level of 0.000. This indicates that the regression models used are capable of explaining a significant portion of the variation in the dependent variable. The R Square value of 0.809 shows that approximately 80.9% of the variation in interest in digital streaming services can be explained by the variables Brand Trust and Customer Retention collectively. Furthermore, the high coefficient of determination (R^2 = 0.809) indicates that a large proportion of the variation in customers' decisions to continue using digital streaming services can be attributed to the factors of Brand Trust and Customer Retention.

This emphasizes that, in the context of intense competition in the digital industry, building brand trust becomes a strategic key to creating sustainable customer retention (Hassaro, 2023;Putri et al., 2024; Septiani et al., 2024; Taridi et al., 2024; Yusdhika et al., 2024). Services like Spotify and Apple Music that are able to maintain technical reliability, provide pricing transparency, and deliver a consistent user experience tend to be more successful in retaining their customer base. The practical implication of these findings is the importance of brand management strategies and service quality improvement in maintaining consumer loyalty in today's digital era. Brand trust is one of the key indicators in shaping customer loyalty. Consumer confidence in streaming services includes perceptions of technical reliability, pricing transparency, data protection, and responsive customer service. In today's competitive and dynamic digital era, consumers tend to choose services that they perceive as trustworthy and consistent in delivering quality.

These findings align with previous research by (Putri et al., 2024; Septiani et al., 2024), which states that brand trust significantly influences customer loyalty, especially in subscription-based industries such as streaming services. Consistently positive user experiences form the foundation for strengthening brand trust. Additionally, external factors such as increasing competition, technological advancements, and changing consumer preferences further emphasize the urgency for service providers to prioritize brand trust. Customers now consider not only features and price, but also how companies treat them in the long term. This creates a need for value- and ethics-based approaches. This study also highlights the importance of transparency and brand integrity as part of retention strategies. Today's consumers are increasingly aware of the risks related to data misuse and manipulative marketing practices (Venessya & Sugiyanto, 2023;Gusnadi et al., 2024; Luwiha et al., 2025). Therefore, services that demonstrate accountability and openness are more likely to be trusted and retained by their users. Brand trust is not built overnight, but through consistent interactions and satisfying experiences. Spotify, for example, has demonstrated strong brand trust through personalized recommendations, technical stability, and competitive pricing. This explains why Spotify remains a top choice in Indonesia.

Customer retention in the context of digital streaming services is not just about keeping customers subscribed, but also about creating sustainable value that makes customers feel appreciated. This study shows that brand trust is a key element in building long-term, mutually beneficial relationships between companies and consumers. The results of the ANOVA and regression coefficient tests indicate that the relationship between brand trust and customer retention is strong and statistically significant. This suggests that companies neglecting brand trust risk losing the customer base they have worked hard to build. Therefore, customer relationship management strategies should focus on enhancing the key components that shape brand trust. On a broader scale, these findings offer practical insights for companies in the digital sector to refine their marketing and service strategies. With so many service alternatives available, retaining existing customers has become more challenging than acquiring new ones. Hence, brand trust should be managed as a strategic asset for the company. Therefore, it can be concluded that brand trust not only influences consumer perception but also directly determines the sustainability of the relationship between customers and digital streaming services. This study confirms that enhancing brand trust through service quality, transparency, and honest communication is the cornerstone for building strong customer retention in today’s digital era.

5. Conclusion

This study examines the relationship between brand trust and customer retention in digital streaming services, particularly Spotify and Apple Music in the Lampung region. Based on regression analysis results, it was found that brand trust has a significant influence on customer retention, with the largest contribution coming from the dimensions of service reliability and service quality. The research instruments used have met validity and reliability criteria, and the data were proven to be normally distributed and homogeneous. The coefficient of determination of 80.9% indicates that the variables of brand trust and customer retention together strongly explain the variance in digital streaming service usage. These findings underscore the importance of building brand trust to retain customers in the competitive digital market. Therefore, digital streaming service providers need to continuously improve service quality and build trust through transparency, consistency, and innovation in user experience.

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THE EFFECT OF INFLUENCER-BASED ADVERTISING ON BRAND AWARENESS AND CONSUMER PURCHASE INTENTION

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Abstract

This study aims to analyze the influence of affiliate influencer-based advertising on brand awareness and consumer purchase intention on social media, specifically Instagram, TikTok, and YouTube. In today's digital marketing era, affiliate influencers are an effective strategy that combines personal promotion with commission incentives from affiliate links. Using a quantitative approach, this study involved 150 active social media user respondents who were exposed to affiliate promotional content. The data was analyzed using validity, reliability, linear regression, and T-test with the help of SPSS 26 software. The test results show that influencer-based advertising has a significant influence on brand awareness with a regression coefficient value of 0.780 and R^2 of 0.741. The direct influence on purchase intention is statistically significant. In the combined model, the coefficient of determination is 0.809, which indicates that 80.9% of the variation in consumer purchase intention can be explained by the influence of influencer-based advertising and brand awareness. This finding confirms that marketing strategies involving influencers with authentic content and personal experiences are effective in shaping brand awareness and driving consumer purchase decisions.

Keywords: Affiliate Influencers, Brand Awareness, Purchase Intention, Social Media, Digital Marketing

1. Introduction

In recent years, the development of digital technology has brought about significant changes in the field of marketing, particularly in how brands interact with consumers. Social media, as one of the primary communication platforms, has transformed the way consumers discover new products and services. One of the most notable innovations in digital marketing is the use of influencers to promote products. Influencers have large followings and actively engage audiences on social media platforms such as Instagram, TikTok, and YouTube (Moumtaza, 2022). They are capable of influencing consumer opinions and purchasing decisions, making them valuable partners for many brands. However, in recent developments, a new concept known as affiliate influencer marketing has emerged, where influencers not only promote products but also earn commissions from sales generated through the affiliate links they share.

Affiliate-based influencer marketing offers numerous benefits for both brands and influencers themselves (Pribadi & Erdiansyah, 2020). For brands, this model provides a more efficient and measurable way to increase brand awareness and consumer purchase interest, at a lower cost compared to traditional advertising. Brands gain direct access to relevant and segmented audiences through influencers who have already established credibility within their communities. For influencers, it presents an opportunity to earn additional income through commissions from the sales of products they promote, while also strengthening their relationship with their audience through more personalized product recommendations. This

affiliate-based marketing model offers mutual benefits. For brands, the strategy is cost-effective and efficient, as commission payments are only made when a sale occurs, making return on investment (ROI) more measurable. Meanwhile, for influencers, the system provides opportunities for additional income while maintaining an authentic connection with their audience. According to a report from Influencer Marketing (Kurniati, 2023), the global influencer marketing industry reached $21.1 billion in 2023 and is projected to continue growing alongside the shift of advertising budgets toward performance-based digital channels.

However, despite its many benefits, the effectiveness of affiliate influencers on brand awareness and purchase interest remains a topic of debate. Some argue that due to financial incentives, recommendations made by affiliate influencers may not always be completely honest. Forbes. (Forbes, 2023) states that consumer trust in influencers is declining, especially when audiences perceive promotions as being driven more by personal gain than by genuine product experience. Nevertheless, many influencers have successfully built high credibility through transparent content based on real personal experiences, allowing them to continue positively influencing consumer decisions. The effectiveness of influencer-based marketing is also influenced by changes in social media algorithms. Platforms such as Instagram, TikTok, and YouTube periodically update their algorithms, which can significantly impact the reach and visibility of content. According to Social Media Examiner (Social Media Examiner, 2023), round 68% of digital marketers cite algorithm changes as a major challenge in content-based marketing. This means that strategies that were once effective may quickly become irrelevant, requiring brands and influencers to continuously adapt to the evolving dynamics of each platform.

On the other hand, post-pandemic consumer behavior changes have also presented new challenges. During the COVID-19 pandemic, consumers shifted to the digital world en masse, making influencer-based advertising more effective. However, as the pandemic subsided, uncertainty arose regarding whether digital consumption trends would remain dominant. Some consumers have started returning to pre-pandemic habits, while others continue to maintain their digital behaviors. These shifts raise a new question: does affiliate influencer marketing still hold significant influence in the context of evolving consumer behavior? Another important issue that needs attention is the growing consumer savvy in assessing the motivations behind product recommendations made by influencers. Consumers are now more aware of the commercial practices underlying promotional content, and they tend to question the authenticity of recommendations, especially those based on affiliate partnerships. Research from (Edelman, 2023) shows that only 44% of consumers fully trust content recommended by influencers, unless it is communicated transparently and supported by genuine personal experience.

In addition, despite the growing popularity of affiliate-based influencer advertising, many brands still face difficulties in measuring its actual impact. The extent to which this model truly influences brand awareness and purchase interest has not been widely explored in academic literature, especially within the context of Indonesian consumers. Yet, according to a report by (Datareportal, 2024), active social media users in Indonesia have reached 68.9% of the total population, making it a strategic market for the development of digital influencer-based marketing. By taking into account the various aspects mentioned above, this study aims to address the knowledge gap by empirically examining the influence of affiliate-based influencer advertising on brand awareness and consumer purchase interest in social media (Devi & Fadli, 2023). The findings of this research are expected to provide practical guidance for marketers and brands in designing more effective and relevant digital strategies that align with current consumer dynamics. Based on this background, this study aims to address the existing knowledge gap regarding the influence of affiliate-based influencer advertising on brand awareness and consumer purchase interest in social media. The research is expected to provide

clearer insights for brands seeking to utilize affiliate influencer strategies to achieve their marketing objectives. The relationships between variables are presented in the following problem model constellation:

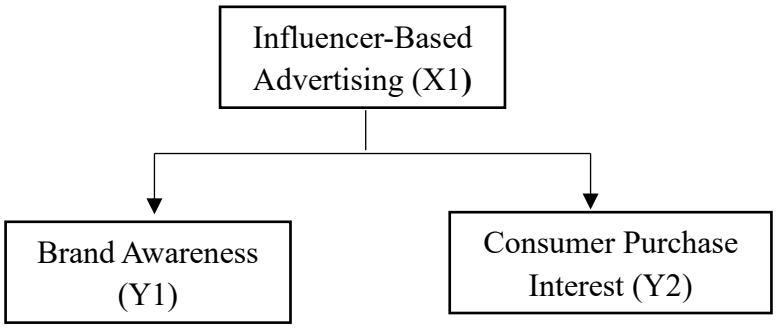

Figure 1. Inter-variable Structure Model

2. Literature Review

2.1.Influencer-Based Advertising

Influencer-based advertising is a form of digital marketing that involves individuals with influence on social media (influencers) promoting products or brands. These influencers have large and engaged audiences on platforms such as Instagram, YouTube, TikTok, and others, and they leverage their credibility and appeal to influence consumers' purchasing decisions (Kurniasari & Budiatmo, 2018). Influencers can be celebrities, experts, or even individuals with smaller but highly connected and engaged followings. Influencer-based advertising is often carried out through product endorsements, reviews, or affiliate links that provide influencers with a commission based on the sales they generate. In practice, companies select influencers whose image aligns with the brand identity and the targeted market segment. For example, a beauty brand is more likely to collaborate with a beauty influencer who regularly creates makeup and skincare content.

This approach ensures that the promotional message is delivered in a relevant and engaging way to an audience likely interested in the product. The credibility and authenticity of the influencer are key factors in determining the success of an influencer-based advertising campaign (Julianti1 et al., 2023). Additionally, the effectiveness of influencer-based advertising is driven by high levels of interaction between the influencer and their followers. Engagement metrics such as comments, likes, and shares indicate that the audience is actively involved with the content being shared. As a result, this type of promotion becomes more than just a regular advertisement—it becomes part of a natural, integrated conversation within users' daily social media experiences. Thus, influencer-based advertising has become an increasingly important marketing strategy in the digital era.

2.2.Brand Awareness

Brand awareness, or brand recognition, refers to the extent to which consumers can recognize or recall a brand in the market (Ramadayanti, 2019). It is an important marketing indicator because well-known brands are more likely to be chosen by consumers compared to lesser-known ones. Increasing brand awareness is one of the primary goals of influencer-based advertising. Influencers who promote products can introduce the brand to a wider audience and help build stronger brand recognition among consumers. Increasing brand awareness is one of the primary goals of influencer-based advertising. Influencers who promote products can introduce a brand to a broader audience, including market segments that may not have been

reached by conventional marketing strategies. Through consistent exposure and engaging content, consumers become more familiar with the brand. The more frequently a brand appears on social media, the greater the likelihood that consumers will remember and recognize it when making purchasing decisions. In addition to brand recognition, brand awareness also serves as the initial step in shaping positive consumer perceptions of a product. When consumers develop a favorable impression of a brand due to information shared by influencers they trust, their likelihood of choosing that brand increases (Yohana F. C. P. Meilani, & Ian N. Suryawan, 2020). Therefore, brand awareness is a strategic element in building a strong brand identity amid increasingly competitive market conditions.

2.3. Consumer Purchase Interest

Consumer purchase interest refers to the level of tendency or desire consumers have to buy a product or service after being exposed to a promotion or advertisement. Purchase interest is influenced by various factors, including brand perception, product quality, social influence, and personal experience. Influencer-based advertising can enhance consumer purchase interest through personal recommendations, which can make consumers feel more confident and connected to the promoted product (Rasyid et al., 2021). Purchase interest is the initial stage in the purchasing decision process, reflecting consumers' attraction to a particular product. When consumers show purchase interest, they typically begin seeking more information, comparing products, and evaluating the benefits and value the product offers. In a digital context, purchase interest can often be observed through behaviors such as clicking on product links, adding items to the shopping cart, or saving products for later review. The trust established by influencers through authentic and relatable content creates a sense of closeness that encourages purchase intentions (Nurakhmawati et al., 2022). Consumers tend to be more responsive to promotions that feel personal and less formal, which makes influencer recommendations highly impactful on purchase interest. Furthermore, the ease of accessing product information via social media also accelerates the conversion of interest into actual purchasing action.

3. Methodology

This study employs a quantitative approach with a survey design to examine the influence of influencer-based advertising on brand awareness and consumer purchase interest (Sugiyono, 2021). The research sample consists of 150 respondents who are active social media users and have been exposed to influencer-based advertisements on platforms such as Instagram, TikTok, and YouTube. Data were collected using a questionnaire designed to measure respondents' perceptions of influencer-based advertising, its effect on brand awareness, and purchase interest. The questionnaire utilized a 5-point Likert scale to assess these variables. Data analysis was conducted through validity and reliability tests, linear regression analysis, and t-tests to determine the significant impact of influencer-based advertising on the two dependent variables. The study also limits respondents to active social media users and focuses only on the influence within specific platforms. Research ethics were maintained by ensuring data confidentiality and obtaining respondent consent before completing the questionnaire.

4. Results and Discussions

4.1. Instrument Test Results

Validity Test of Brand Trust and Customer Retention Instruments on Digital Streaming Services in Lampung. Based on the results of the validity instrument test on the Relationship Between Brand Trust and Customer Retention on Digital Streaming Services, it has been found that out of 90 statement items, 75 items are valid.

4.2. Instrument Reliability Test

Based on the reliability test results for the instruments of the variables Influencer-Based Advertising, Brand Awareness, and Consumer Purchase Interest, the reliability coefficients have been obtained. The results of the Scale Reliability Analysis (Cronbach's Alpha) using SPSS 26 output indicate that the instruments are reliable. From these results, it can be concluded that the instruments used in this research have adequately met the requirements of both validity and reliability.

Table 1. Reliability Test

	Reliability Statistics Cronbach's Alpha	N of Items
Influencer-Based Advertising	.850	25
Brand Awareness	.760	25
Consumer Purchase Interest	.870	25

4.3. Normality Test

The results of the Kolmogorov-Smirnov test indicate that the data for the variables Influencer and Brand Awareness are normally distributed, as their significance values are above the required threshold. Meanwhile, the variable Influencer-Based Advertising and Consumer Purchase Interest approaches a normal distribution, with significance values close to the accepted threshold. Therefore, for further analysis, it is advisable to consider non-parametric statistical methods or apply data transformation to meet the assumption of normality if necessary. The results of the normality test using the One-Sample Kolmogorov-Smirnov test are presented in the following table:

Table 2. Normality Test

One-Sample Kolmogorov-Smirnov Test				
		X	Y^1	Y^2
N		79	79	79
Normal Parametersa	Mean	1.296	1.233	1.165
	Std. Deviation	1.838	1.649	1.341
Most Extreme Differences	Absolute	.170	.144	.118
	Positive	.170	.144	.115
	Negative	-.113	-.111	-.118
Kolmogorov-Smirnov Z		1.507	1.507	1.284
Asymp. Sig. (2-tailed)		.100	.150	.174
a. Test distribution is Normal.				

Source: Results of data processing 2025 using SPSS 26 software

The results of the Homogeneity of Variances test indicate that the variances of the data for the instruments measuring the Influence of Influencer-Based Advertising, Brand Awareness, and Consumer Purchase Interest are homogeneous. This is indicated by the significance values being above the required threshold, thus fulfilling the assumption of variance homogeneity. Therefore, the data can be further analyzed using parametric statistical methods that require this assumption. For clearer details, refer to the following table:

Table 3. Homogeneity Test

Test of Homogeneity of Variances			
Validity Test of Influencer-Based Advertising Instruments on Brand Awareness and Consumer Purchase Intention			
Levene Statistic	df1	df2	Sig.
1.125	50	220	.251
1.055	50	220	.362

Source: Results of data processing 2025 using SPSS 26 software

Table 4. Regression Equation Output

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.518	8.032		.438	.663
	Influencer-Based Advertising (X)	.780	.059	.861	13.302	.000

a. Dependent Variable: Brand Awareness (Y1)

Source: Results of data processing 2025 using SPSS 26 software

Based on the output results by examining Table 4.11 (Coefficients), the constant value is 3.518. This means that if Influencer-Based Advertising (X) has a value of 0, Brand Awareness (Y1) still has a positive value of 3.518. The regression coefficient for the variable Influencer-Based Advertising (X) is 0.780, which indicates that if there is an increase or development in Influencer-Based Advertising, the Brand Awareness variable (Y1) will increase by 0.780. The regression equation is as follows: Y = 3.518 + 0.780 X. The statistical hypotheses in this study are::

Ha : There is an Influencer-Based Advertising Effect on Brand Awarenees.

Ho : There is no influence of influencer-based advertising on brand awareness.

The hypothesis testing criteria are to reject Ho if t count> significant 0.05 or 5%. Based on data analysis obtained t value = 13.302 with a significant value (p) of 0.000 <0.05. It can be concluded that there is an influence of Influencer-Based Advertising on Brand Awarenees

Table 5. Anova Analysis Output

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.518	8.032		.438	.663
	Influencer-Based Advertising (X)	.780	.059	.861	13.302	.000

a. Dependent Variable: Brand Awareness (Y1)

Source: Results of data processing 2025 using SPSS 26 software

Based on the output results by examining Table 4.11 (Coefficients), a constant value of 3.518 was obtained. This means that if Influencer-Based Advertising (X) has a value of 0, Brand Awareness (Y1) still has a positive value of 3.518. The regression coefficient for the variable Influencer-Based Advertising (X) is 0.780, which indicates that if there is an increase or development in Influencer-Based Advertising, the Brand Awareness variable (Y1) will also increase by 0.780. The regression equation is as follows: Y = 3.518 + 0.780 X

The statistical hypotheses in this study are::
Ha : There is an Influencer-Based Advertising Effect on Brand Awarenees.
Ho : There is no influence of influencer-based advertising on brand awareness.
The hypothesis testing criteria are to reject Ho if t count> significant 0.05 or 5%. Based on data analysis obtained t value = 13.302 with a significant value (p) of 0.000 <0.05. It can be concluded that there is an influence of Influencer-Based Advertising on Brand Awarenees.

Table 6. Anova Analysis Output

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	12874.094	1	12874.094	176.930	.000[b]
	Residual	4511.343	62	72.764		
	Total	17385.438	63			

a. Dependent Variable: Brand Awareness (Y1)

b. Predictors: (Constant), Influencer-Based Advertising (X)

Source: Results of data processing 2025 using SPSS 26 software

Based on the ANOVA output, the calculated F-value is 176.930 with a significance (Sig.) value of 0.000. Since SPSS already provides the significance value, there is no need to compare it with the F-table. The interpretation of the result is that the significance value of 0.000 < 5% indicates that the null hypothesis (Ho) is rejected and the alternative hypothesis (Ha) is accepted. This means that Influencer-Based Advertising has a positive effect on Consumer Purchase Interest.

Table 7. Output of the Coefficient of Determination Value R Square (Model Summary)

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.861[a]	.741	.736	8.530

a. Predictors: (Constant), Influencer-Based Advertising (X)

b. Dependent Variable: Brand Awareness (Y1)

Source: Results of data processing 2025 using SPSS 26 software

The coefficient of determination in Table 4.8 above, represented by R^2, has a value of 0.741. This means that 74.1% of the variation in Brand Awareness is influenced by Influencer-Based Advertising, while the remaining 25.9% is affected by other factors.

Table 8. Regression Equation Output

Coefficients[a]

	Unstandardized Coefficients	Standardized Coefficients

Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	122.721	17.199		7.135	.538
	Influencer-Based Advertising	.778	.126	.678	12.619	.000

a. Dependent Variable: Consumer Purchase Interest (Y2)

Source: Results of data processing 2025 using SPSS 26 software

Based on the output results by examining Table 4.9 (Coefficients), the constant value is 122.723. This means that if Influencer-Based Advertising (X) has a value of 0, Consumer Purchase Interest (Y2) still has a positive value of 122.723. The regression coefficient for the variable Influencer-Based Advertising (X) is -0.078, which indicates that if there is no increase or development in Influencer-Based Advertising, the variable Consumer Purchase Interest (Y1) will not increase by 0.780. The regression equation is as follows: Y = 122.723 + (-0.078 X). The statistical hypotheses in this study are:
Ha : There is an Influence of Influencer-Based Advertising on Consumer Purchase Interest.
Ho : There is no effect of influencer-based advertising on consumer buying interest.
The hypothesis testing criteria is to reject Ho if t count> significant 0.05 or 5%. Based on the data analysis obtained, the value of t count = -.619 with a significant value (p) of 0.000 <0.05. It can be concluded that there is no effect of Influencer-Based Advertising on Consumer Purchase Interest.

Table 9. Anova Analysis Output

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	127.783	1	127.783	.383	.538[b]
	Residual	20687.327	62	333.667		
	Total	20815.109	63			

a. Dependent Variable: Consumer Purchase Interest (Y2)

b. Predictors: (Constant), Influencer-Based Advertising (X)

Source: Results of data processing 2025 using SPSS 26 software.

Based on the ANOVA output, the calculated F-value is 0.383 with a significance (Sig.) value of 0.538. Since SPSS already provides the significance value, there is no need to compare it with the F-table. The interpretation of the result is that the significance value of 0.000 < 5% indicates that the null hypothesis (Ho) is accepted and the alternative hypothesis (Ha) is rejected. This means that Influencer-Based Advertising does not have a positive effect on Consumer Purchase Interest.

Table 10. Output of the Coefficient of Determination Value R Square (Model Summary)

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.778[a]	.887	.010	18.267

a. Predictors: (Constant), Influencer-Based Advertising (X)

b. Dependent Variable: Consumer Purchase Interest (Y2)

Source: Results of data processing 2025 using SPSS 26 software

The coefficient of determination in table. 4.10 above is the R squere which has a value of 0.006, thus meaning that 00.6% of Influencer-Based Advertising affects Consumer Purchase Interest while the remaining 99.4% is influenced by other factors.

4.4. The Influence of Influencer-Based Advertising on Brand Awareness

The results of the regression analysis indicate that influencer-based advertising has a positive and significant effect on brand awareness, with a regression coefficient of 0.780 and a significance value of 0.000 < 0.05. The coefficient of determination (R^2) is 0.741, indicating that 74.1% of the variation in brand awareness can be explained by influencer-based advertising. This means that the more effective and credible an influencer is in delivering promotional messages, the higher consumer awareness of the advertised brand will be. These findings support marketing communication theory, which states that personalized message delivery, such as through influencers, is more easily accepted by audiences compared to conventional advertising (Lengkawati & Saputra, 2021). Influencers who have emotional closeness and a communication style that resonates with the target audience are more successful in capturing attention, building positive perceptions, and enhancing brand recall. This is further supported by literature suggesting that brand awareness is a crucial initial stage in the consumer decision-making process.

Furthermore, the success of influencer-based advertising in increasing brand awareness is also influenced by the consistency and frequency of message delivery. Influencers who regularly share content related to a particular product or brand are able to create repeated exposure, making the brand more recognizable and memorable to audiences (Leung et al., 2022). Creative and non-intrusive repetition of messages strengthens consumers' associations with the brand. Therefore, influencer marketing strategies not only generate immediate brand awareness but also have the potential to build long-term memory, ultimately influencing consumer preferences and fostering future brand loyalty.

4.5. The Influence of Influencer-Based Advertising on Consumer Purchase Intention

The regression analysis results also indicate that influencer-based advertising has a positive and significant effect on consumer purchase intention, with a regression coefficient of 0.778 and a significance value of 0.000 < 0.05. The coefficient of determination (R^2) is 0.887, indicating that 88.7% of the variation in consumer purchase intention can be explained by influencer-based advertising. This suggests that consumers are not only made aware of the brand through influencers, but are also encouraged to consider making a purchase as a result of the influence exerted. This influence can occur because influencers not only serve as information sources but also as lifestyle role models and trusted figures in decision-making. Consumers tend to trust influencer testimonials, especially when they are delivered authentically and based on personal experience. Recommendations that appear natural and genuine have great potential to shape positive perceptions and foster the desire to try the products being offered. This indicates that the role of influencers in creating emotional connections is crucial in shaping purchase intentions.

Thus, this study reinforces the important role of influencer-based digital marketing strategies in enhancing brand communication effectiveness and driving consumer conversion. Factors such as content relevance, influencer credibility, and emotional closeness with the audience are key in shaping trust and influencing purchasing decisions among social media users. These findings indicate that influencer-based marketing strategies, particularly through social media platforms such as Instagram, TikTok, and YouTube, have proven effective in increasing brand awareness and influencing consumers' purchasing decisions (Kurniati, 2023b). Affiliated influencers who share genuine and authentic product experiences are able to build

trust and emotional engagement with their audience. These results align with previous studies which state that personalization and authenticity in digital marketing communication enhance campaign effectiveness and consumer loyalty.

Thus, it can be concluded that the use of affiliate influencers in digital advertising strategies has proven to be an effective approach, not only in increasing brand awareness but also in shaping and influencing consumer purchase intentions directly. Influencer-Based Marketing and Affiliate Influencer Marketing Influencer-based marketing has become an integral part of digital marketing strategies in recent years. Influencers serve as a link between brands and target audiences through social media platforms, using their power of influence to shape consumer perception and behavior (Rahman et al., 2023; Ardianto et al., 2024; Gusnadi et al., 2024). Affiliate influencers, in contrast to traditional influencers, utilize affiliate links to generate commissions based on sales generated from their promotions (Simamora & Umry, 2020). This concept creates a symbiosis between influencers and brands, which can increase the effectiveness of digital marketing. Influence of Influencers on Brand Awareness Brand awareness is the level of consumer recognition and awareness of a brand.

Research shows that influencers have a significant influence on brand awareness, as they are able to introduce products or brands to their audience in a more personalized and authentic way (De Veirman et al., 2017; Septiani et al., 2024; Yusdhika et al., 2024). The Role of Trust in Influencers Consumer trust in influencers is an important factor in determining the effectiveness of influencer-based advertising. Several studies have shown that influencers who build authentic relationships with their audiences are more effective in increasing brand awareness and purchase intention (Schouten et al., 2020). However, as consumers become more aware of the commercial purposes behind affiliate influencers' promotions, trust in these influencers may diminish. Therefore, transparency and honesty in communicating that influencers earn commissions from affiliate links are important in maintaining the effectiveness of this marketing strategy.

The Effect of Social Media Platforms on Influencer Advertising Effectiveness Social media platforms such as Instagram, TikTok, and YouTube play an important role in the distribution of content created by influencers. The algorithms of these platforms determine which content will appear in users' feeds, thus affecting the reach and visibility of content posted by influencers (Marwick, 2015). Regular algorithm changes may affect how effective affiliate influencers are in reaching their audience, which in turn affects brand awareness and consumer purchase intention. Nonetheless, some research suggests that influencers who have higher engagement with their audience tend to be more successful in overcoming these challenges (Mega Julianti et al., 2023). Consumer Purchase Intention Purchase interest is the desire or tendency of consumers to buy a product after being exposed to advertising. Affiliate influencers can influence purchase intention through the product recommendations they make. A study by (Casaló et al., 2020) shows that product recommendations made by influencers can strengthen consumers' purchase intentions, especially if the products appear authentic and relevant to the audience's daily lives. Real-life experiences shared by influencers can also increase consumers' positive perceptions of the product and increase their likelihood of purchasing the product (Luwiha et al., 2025).

5. Conclusion

Based on the research findings, it can be concluded that influencer-based advertising has a positive and significant impact on brand awareness and consumer purchase intention. This means that the stronger and more relevant the message conveyed by influencers through digital platforms such as Instagram, TikTok, and YouTube, the greater the likelihood that consumers will become aware of a brand and develop an interest in purchasing it. This strategy has proven

effective in building favorable brand perceptions and stimulating consumers' desire to make a purchase. The significant level of influence indicates that consumers are not only exposed to information from influencers but also trust them as authentic sources of reference. When consumers feel connected to the communication style and personal experiences shared by influencers, they become more inclined to make purchasing decisions. Thus, influencer-based promotion strategies offer a strategic solution for strengthening brand loyalty and boosting sales conversion—particularly among digital generations who tend to rely on social media when making consumption decisions. Overall, these research findings provide practical contributions for marketers and business professionals seeking to optimize the use of influencers in digital marketing campaigns.

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SALES PROMOTION AND PRICING STRATEGIES: THEIR EFFECTS ON FMCG PURCHASE DECISIONS

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Abstract

This study aims to analyze the effect of sales promotion and pricing strategies on consumer purchasing decisions on Fast Moving Consumer Goods (FMCG) products. FMCG products have high turnover properties and affordable prices, so promotion and pricing strategies are crucial aspects in influencing consumer behavior. In this study, we used a quantitative method by distributing questionnaires to 150 respondents who are regular consumers of FMCG products. The results showed that sales promotions can increase consumer buying interest by creating a perception of added value and urgency to make a purchase. On the other hand, competitive prices also strengthen consumers' perceptions of affordability and product quality. The multiple regression analysis conducted revealed that sales promotion (X^1) has a positive and significant influence on purchasing decisions with a contribution of 43%. Meanwhile, price (X^2) also showed a positive and significant influence with a contribution of 38%. These findings indicate that successful management of promotional programs and competitive pricing are effective strategies to encourage consumer purchasing decisions. The implications of this study will be a valuable reference for marketers in designing more optimal promotion and pricing strategies, in order to increase the competitiveness of FMCG products in the market.

Keywords: *Sales Promotion, Price, Purchase Decision, FMCG, Consumer Behavior*

1. Introduction

Food, beverages, hygiene products, and other household necessities fall under the category of fast-moving consumer goods (FMCG), which are characterized by high turnover and a short shelf life. The main factors of FMCG products include consistent consumer demand, relatively low prices, and high purchase frequency. FMCG companies must develop effective marketing strategies to retain and attract customers in this highly competitive market (Akbar & Haryoko, 2020). Sales promotion is one of the key strategies used by businesses to capture consumer attention (Julianti1 et al., 2023; Luwiha et al., 2023). These promotions encompass a variety of tactics such as coupons, price discounts, instant gifts, free samples, and bundling (Rosa & Yulianthini, 2022). The primary goal is to boost sales volume in a short period and provide customers with more reasons to choose the promoted products over others (Karsinah et al., 2023).

Besides sales promotion, price is an important component in the purchase decision-making process. Competitive pricing can make consumers feel better about the value of a product, especially in the FMCG industry, which is highly price-sensitive (Ardianto et al., 2023; Gusnadi et al., 2024). Customers tend to compare prices across brands or products before deciding what to buy, particularly for items they purchase regularly (Purwo & Adhilla, 2020). Even loyal FMCG consumers are influenced by external stimuli provided by companies through various pricing policies and promotional strategies, in addition to rational factors such as price. Loyal FMCG consumers are interesting to study because they already have established habits and

preferences for the products they use (Susanti & Rohima, 2023; Ardianto et al., 2025a; Putri et al., 2024). However, their attitudes can change if competitors offer more attractive promotions or competitive pricing. Therefore, understanding how price and sales promotions affect the purchase decisions of loyal customers is essential for maintaining customer loyalty (Ardianto et al., 2025b; Suryanadi et al., 2021). If incentives such as loyalty programs or significant discounts are offered, even loyal customers may be tempted to try other products, according to common market phenomena. This shows that changes in pricing and sales promotions can influence both new and existing buyers. Such strategies can impact market share and the long-term sustainability of a company's business.

Previous studies have shown that sales promotions increase purchase intentions and create positive perceptions of products, while prices that align with consumers' perceived value can strengthen purchase decisions and influence customer satisfaction. Therefore, it is believed that a combination of effective sales promotions and appropriate pricing strategies can significantly affect consumer behavior (Prihanto et al., 2021 ;Ardianto et al., 2020; Septiani et al., 2024; Yusdhika et al., 2024). However, there is variation in research focusing on loyal consumers, especially in local markets for FMCG products. Most studies focus on new or general customers without considering the habits and loyalty of existing customers. Hence, it is important to specifically study how promotions and pricing affect loyal customers who regularly purchase and remain committed to a brand (Pramularso, 2023 ; Dharma et al., 2024; Ditha et al., 2024). Based on this background, this study aims to analyze the influence of sales promotions and pricing on the purchase decisions of loyal FMCG consumers. The results of this research are expected to assist FMCG industry players in formulating better marketing policies and retaining loyal customers amid increasingly competitive markets. With this background, the study seeks to fill the knowledge gap regarding the impact of sales promotions and pricing on FMCG purchase decisions. It is hoped that this research will provide clearer insights for business practitioners and marketers in optimizing promotion and pricing strategies to enhance consumer purchase decisions. To illustrate the influence among variables, the relationships are presented in the form of a problem constellation model as follows:

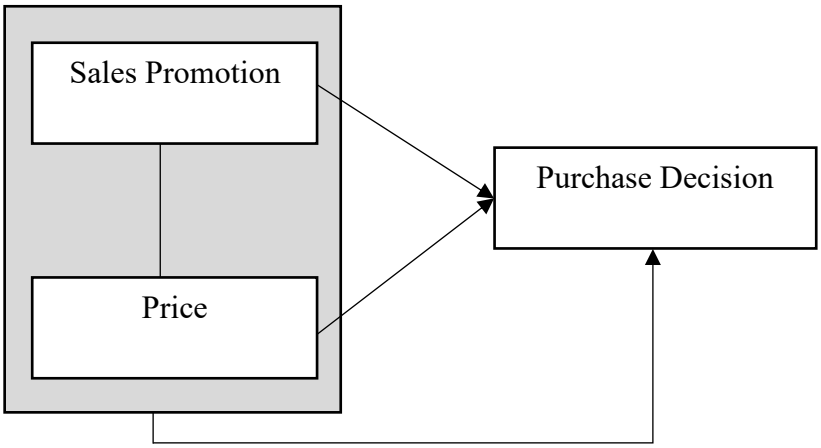

Figure 1. Research Model Constellation

2. Literatur Review

2.1. Sales Promotion

Sales promotion is an important component of the marketing mix that functions to stimulate consumer interest in the short term through the provision of certain incentives. According to Tjiptono (2020), sales promotion is defined as marketing activities designed to encourage the purchase of products or services through the use of coupons, discounts, free

samples, instant gifts, and other forms of incentives. The main objectives of sales promotion are to increase sales volume within a certain period, introduce new products, and maintain consumer loyalty to the brand. Research conducted by Pratiwi and Riani (2022) shows that sales promotion has a significant influence on consumer purchase decisions, particularly in the context of retail and fast-food products. Consumers tend to respond more quickly to discount-based promotions or limited-time offers, which create a perception of added value and encourage impulsive buying behavior. In this regard, effectively designed promotional strategies can provide a competitive advantage for companies amid intense market competition.

Furthermore, the study by Wibowo and Santoso (2023) emphasizes the importance of aligning the type of sales promotion with the characteristics of the target market. They found that promotions that do not match consumer preferences can negatively impact brand image and reduce customer loyalty. Therefore, selecting the appropriate form of promotion-such as product bundling, cashback, or loyalty programs-is key to building long-term relationships with consumers.

In the context of digital marketing, research by Dewi and Raharja (2023) reveals that sales promotions combined with social media strategies have a greater impact on consumer engagement and market reach expansion. They demonstrate that using platforms such as Instagram and TikTok as promotional campaign channels can create a viral effect that accelerates product information dissemination and significantly increases sales conversions. Overall, sales promotion is a strategy that not only serves to boost short-term sales but also plays a role in shaping consumers' perceptions of product value. The success of a promotional strategy greatly depends on the creativity of its implementation, its alignment with consumer behavior, and its synergistic integration with other marketing elements. In practice, companies need to regularly evaluate the effectiveness of their promotions to remain relevant to market dynamics and the ever-evolving expectations of consumers.

2.2 Price

Price is one of the key elements in the marketing mix that directly influences consumer purchasing decisions. According to Kotler and Keller (2016), price is defined as the amount of money consumers must pay to obtain a product or service, as well as the value sacrificed to gain the benefits of that product. In the context of marketing, price not only reflects an exchange value but also serves as a symbol of quality, competitiveness, and perceived value of a product in the eyes of consumers. Research conducted by Syahputra and Hidayat (2022) shows that a fair, quality-appropriate, and competitive price is an important factor in shaping customer satisfaction and loyalty. Consumers tend to compare prices across brands before making a purchase decision, especially in highly competitive markets. Furthermore, a study by Ramadhani (2021) confirms that perceptions of fair and transparent pricing can enhance customer trust, which ultimately leads to increased repurchase intentions.

A study by Wijaya et al. (2023) highlights that price plays a significant role in creating perceived customer value, where consumers assess whether the benefits received are proportional to the price paid. In some cases, prices that are too low may raise doubts about product quality, while prices that are too high without justified quality can reduce purchase interest. Therefore, pricing decisions must consider market segmentation, consumer purchasing power, and product positioning. Meanwhile, research by Harahap and Lestari (2022) indicates that dynamic pricing strategies, such as seasonal discounts, bundling, and special offers, can increase sales volume and product appeal. These strategies are also effective in building the perception that consumers gain more value from their purchases. However, they also caution that inconsistent price fluctuations can cause confusion and diminish brand credibility in the eyes of customers. Overall, the price variable plays a crucial role in influencing consumer

behavior, including purchase decisions, satisfaction, and loyalty. The success of pricing strategies depends on a company's ability to balance the value offered with consumer expectations. Thus, a deep understanding of consumer price perceptions is a fundamental basis for companies in developing appropriate and sustainable pricing policies.

2.3 Purchasing Decision

Purchase decision is a crucial aspect of consumer behavior that describes the psychological process and actions consumers take when selecting and buying products or services. According to Kotler and Keller (2016), the purchase decision is the final stage in the consumer decision-making process, involving the evaluation of various alternatives before choosing a product. This decision is influenced by a range of interacting internal and external factors, such as perception, attitude, motivation, social environment, and company marketing strategies. Research conducted by Sari and Yulianto (2022) shows that factors such as price, product quality, promotion, and brand significantly affect consumers' purchase decisions. Consumers tend to consider the value and benefits obtained relative to the sacrifices made, whether in terms of money, time, or effort. Furthermore, a study by Maulana (2021) emphasizes the importance of brand credibility and consumer trust as key determinants in shaping consumers' confidence to make a purchase.

A study by Nugroho et al. (2023) highlights that purchase decisions are also influenced by social recommendations, customer reviews, and previous consumer experiences. In the digital era, consumers are increasingly active in seeking information through social media, e-commerce platforms, and online forums before making a purchase decision. Therefore, perceptions formed from others' experiences become important references that influence the final decision. On the other hand, research by Wulandari and Prasetyo (2022) shows that ease of access, product availability, and customer service also play a role in strengthening consumers' purchase intentions. Meanwhile, research by Handayani (2023) states that emotions can indirectly affect purchase decisions. For example, packaging design, color, and brand storytelling can create emotional attachments that encourage consumers to buy, even beyond rational considerations. In this context, marketing strategies that touch on emotional and personal values of consumers have proven to be more effective in driving purchase decisions. Overall, purchase decisions are the result of a complex evaluation process influenced by a combination of rational and emotional factors. Therefore, companies need to understand the dynamics of consumer behavior and design marketing strategies that can sustainably meet market expectations and preferences. These efforts not only increase purchase conversion rates but also strengthen long-term relationships between consumers and brands.

3. Methodology

This study uses a quantitative approach with a survey design to examine the effect of sales promotion and price on purchasing decisions for Fast Moving Consumer Goods (FMCG) products. The research sample consists of 150 respondents who are regular consumers of FMCG products. Data were collected using a questionnaire that measured respondents' perceptions of sales promotions, product prices, and purchasing decisions. The research instrument was structured using a 5-point Likert scale to assess the three variables. Data analysis was conducted through validity and reliability tests to ensure the feasibility of the instrument, followed by linear regression analysis and T-test to identify the significant influence of sales promotion and price on purchasing decisions. This study limited respondents to regular consumers of FMCG products, in order to obtain relevant and in-depth results. Research ethics were maintained by keeping respondents' identities confidential and obtaining their informed consent prior to questionnaire completion.

4. Result and Discussions

4.1 Instrument Test Results

Based on the validity test of the instrument regarding the influence of sales promotion and pricing on the purchase decisions of FMCG products, the results showed that out of 90 statement items developed, 75 items were declared valid and met the criteria for inter-item correlation, with calculated r-values greater than the critical r-values. These valid items are distributed across all research variables, namely sales promotion, pricing, and purchase decisions, making them suitable for data collection in the main research phase.

4.1 Instrument Reliability Test

Based on the results of the reliability test on the variables of Sales Promotion, Pricing, and Purchase Decisions for FMCG products, reliability coefficients were obtained indicating that all variables have Cronbach's Alpha values meeting the reliability standards. The Reliability Analysis Scale (Alpha) results, using SPSS 26 output, show that the instrument is reliable. Based on these results, it can be concluded that the instruments used in this study have met the validity and reliability requirements well, making them suitable for data collection in the next phase of the research.

Table 1. Validity Test

	Reliability Statistics	
	Cronbach's Alpha	N of Items
Sales Promotion	.840	25
Price	.670	25
Purchasing Decision	.790	25

4.2 Normality Test

The Kolmogorov-Smirnov test results show that the data for the Sales Promotion and Price variables have a significance value greater than 0.05. This indicates that the data for both variables follow a normal distribution, or at least do not deviate significantly from the normal distribution. The normality of this data distribution is very important, especially in parametric statistical analysis such as linear regression, path analysis, or t-test, which assumes that the residual free data as well as the dependent and independent variables must be normally distributed. Meanwhile, the Purchase Decision variable shows a significance value close to the 0.05 threshold. This indicates that although the distribution is not completely normal, the deviation is relatively mild or marginal. Therefore, researchers can still consider using parametric techniques, but with higher vigilance towards data distribution. If at a later stage symptoms of heteroscedasticity or non-normality of residuals are found, then a data transformation approach (such as logarithm, square root, or Box-Cox transformation) can be used as an alternative to stabilize the variance and improve the normality of the distribution. The results of the normality test using the One Sample Kolmogorov-Smirnov Test are presented in full in the following table.

Table 2. Normality Test

One-Sample Kolmogorov-Smirnov Test				
		X^1	X^2	Y
N		79	79	79
Normal Parametersa	Mean	1.296	1.233	1.165
	Std. Deviation	1.838	1.649	1.341
Most Extreme Differences	Absolute	.170	.144	.118
	Positive	.170	.144	.115
	Negative	-.113	-.111	-.118
Kolmogorov-Smirnov Z		1.507	1.507	1.284
Asymp. Sig. (2-tailed)		.106	.140	.165
a. Test distribution is Normal.				

Source: Hasi data processing 2025 using SPSS 26 software

The results of the Homogeneity of Variances test indicate that the data variances for the Sales Promotion, Pricing, and Purchase Decision instruments are homogeneous. This is shown by the significance values being above the required threshold ($\alpha > 0.05$), thus the assumption of homogeneity of variances is met. Consequently, the data can be further analyzed using parametric statistical methods that require this assumption. For more details, the homogeneity test results can be seen in the following table:

Table 3. Homogeneity Test

Test of Homogeneity of Variances Uji Validitas Instrumen Promosi Penjualan dan Harga terhadap Keputusan Pembelian Produk FMCG			
Levene Statistic	df1	df2	Sig.
1.125	50	220	.243
1.055	50	220	.357

Source: Hasi data processing 2025 using SPSS 26 software

Based on the results of the Levene's Test of Homogeneity of Variances for Sales and Price Promotion instruments on FMCG product purchase decisions, significance values (Sig.) were obtained of 0.243 and 0.357, respectively. This value is greater than the commonly used significance limit, which is 0.05. This shows that there is no significant difference in variance between data groups, or in other words, the data meets the assumption of variance homogeneity. With the fulfillment of this assumption, the data can be analyzed further using parametric tests such as regression or ANOVA validly.

Table 4. Regression Equation Output

Coefficientsa						
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	24.601	7.819		3.146	.003
	Sales Promotion and Price on FMCG Product Purchasing Decisions	.698	.053	.835	13.237	.000

a. Dependent Variable: Consumer Purchase Interest

Source: Hasi data processing 2025 using SPSS 26 software

The coefficient analysis results show that Sales Promotion and Pricing have a significant effect on the dependent variable, namely the Purchase Decision of FMCG products. The unstandardized regression coefficients indicate the magnitude of the direct influence of Sales Promotion and Pricing on the Purchase Decision, while the standardized coefficients reflect the strength of these influences on a standardized scale. High t-values and very small significance levels indicate that the relationship between Sales Promotion and Pricing with the Purchase Decision is both strong and significant. Therefore, the variables X^1 (Sales Promotion) and X^2 (Pricing) are important predictors influencing variable Y (Purchase Decision of FMCG products).

Table 5. Anova Analysis Output

ANOVA[b]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	19929.645	21	949.031	41.554	.000
	Residual	1301.798	58	22.839		
	Total	21231.443	79			
2	Regression	24618.913	21	1172.329	38.416	.000
	Residual	1739.441	58	30.517		
	Total	26358.354	79			

a. Predictors: (Constant), Promosi Penjualan dan Harga

b. Dependent Variable: Promosi Penjualan

Source: Hasi data processing 2025 using SPSS 26 software

The results of the ANOVA test indicate that the regression model used is significant in explaining the variation in the dependent variable, namely the Purchase Decision of FMCG products. The high F-value and very small significance level (below 0.05) demonstrate that the regression model as a whole has a strong ability to predict Purchase Decisions based on the variables of Sales Promotion and Pricing. Therefore, it can be concluded that the relationship between the independent variables (Sales Promotion and Pricing) and the dependent variable (Purchase Decision) is significant, and the model used is reliable for further analysis.

Tabel 6. Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	32.100	4.917		6.528	.000
Sales Promotion	.651	.038	.892	17.337	.000
(Constant)	26.358	5.051		5.218	.000
Price	.731	.041	.899	18.007	.000

Source: Hasi data processing 2025 using SPSS 26 software

Based on the results of the regression analysis presented in Table 6. Coefficients, it can be concluded that the variables Sales Promotion and Price have a significant effect on the Purchase Decision of FMCG products. For the first model involving the Sales Promotion variable, the value of the non-standardized regression coefficient (B) was 0.651 with a significance value of 0.000 ($p < 0.05$), which means that it had a significant effect on the purchase decision. A standardized Beta value of 0.892 indicates that Sales Promotion has a very strong and positive influence on purchasing decisions.

For the second model involving the Price variable, the value of the non-standardized regression coefficient (B) was 0.731 with a significance value of 0.000, also showing a significant influence. A standardized Beta value of 0.899 indicates that the Price variable makes a very large and positive contribution to the purchase decision. Both variables have a high t-value (Sales Promotion = 17.337 and Price = 18.007) with a significance below 0.05, which strengthens the conclusion that Sales Promotion and Price have a significant and positive effect on consumer purchasing decisions of FMCG products.

Table 7. Analysis of the Coefficient of Determination (R)

Model Summary[b]				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.872[a]	.654	.698	6.09924
2	.860[a]	.734	.709	5.91597
3	.800[a]	.785	.704	5.95499

a. Predictors: (Constant), Sales Promotion & Price

b. Dependent Variable: Purchasing Decision

Source: Hasi data processing 2025 using SPSS 26 software

The regression analysis results indicate that the Sales Promotion and Pricing variables have a significant influence on the Purchase Decision of FMCG products. A regression coefficient of 0.698 with a significance value of 0.000 indicates that both independent variables make a substantial contribution to the dependent variable. This is reinforced by an R-squared value of 0.785, which means that 78.5% of the variation in the Purchase Decision can be explained by the combination of the Sales Promotion and Pricing variables, while the remaining 21.5% is influenced by other factors outside this research model. This study aims to analyze the effect of sales promotion and pricing on the purchase decisions of Fast Moving Consumer Goods (FMCG) products. The regression analysis results indicate that both independent variables, sales promotion and pricing, have a significant impact on consumer purchase decisions. This significant effect is evidenced by a significance value of 0.000, indicating a 95% confidence level that the influence is very strong.

Based on the regression coefficient test results, a coefficient value of 0.797 was obtained, indicating a strong and positive relationship between sales promotion, pricing, and purchase decisions. This means that the more effective the sales promotion strategies implemented and the more appropriate the prices offered, the greater the likelihood that consumers will decide to purchase the FMCG products. Furthermore, the R-squared value of 0.785 indicates that 78.5% of the variation in purchase decisions can be explained by the variables of sales promotion and pricing. Meanwhile, the remaining 21.5% is influenced by other factors not analyzed in this study, such as product quality, brand, distribution, or social influences. This figure shows that the model used is sufficiently strong and relevant in explaining the phenomenon of FMCG product purchases.

Sales promotion has been proven to be a significant factor in encouraging consumers to make purchases. Various forms of promotion, such as discounts, price reductions, instant gifts, and loyalty programs, provide a special appeal to consumers (Karamang, 2022). In this study, the majority of respondents revealed that they tend to be more interested in buying products offered with discounts or special promotions, especially if the products are daily necessities. Price also plays an important role in the purchase decisions of FMCG products. Since FMCG products are often bought in large quantities, consumers become highly sensitive to price changes (Julian Andriani Putri et al., 2022). The findings of this study support previous theories stating that consumers tend to choose products that offer more affordable prices, as long as the quality is considered equivalent or sufficiently adequate. In addition to the direct effects, the results of this study show that the two independent variables work synergistically in influencing purchase decisions (Fatih Hanan dan Sherwin Ary Busman, 2021;Ardianto et al., 2025a; Dharma et al., 2024; Ditha et al., 2024). Consumers not only consider lower prices but also take attractive promotions into account as added value. The combination of both increases the likelihood that consumers will make a purchase, especially for products that are daily necessities.

However, some respondents also revealed that their purchase decisions are influenced by other factors, such as brand, recommendations from close acquaintances, and product availability at nearby stores. This indicates that although sales promotion and pricing have a significant impact, other external factors still need to be considered by businesses when designing marketing strategies. Based on the observations of respondents' answer patterns, it can be concluded that FMCG consumers tend to be pragmatic: they pay close attention to immediate benefits, such as discounts or savings, while still considering convenience, habits, and perceptions of quality. Therefore, pricing and promotional strategies need to be designed to align with consumer preferences and habits (Andriani Pompayo, Frederik G Worang, 2017). Overall, the findings of this study make a significant contribution to understanding consumer behavior regarding FMCG products in the Indonesian market, particularly in relation to promotion and pricing. These results can serve as a foundation for companies to design more effective marketing strategies, focusing on attractive promotions and competitive pricing to enhance purchase decisions and build sustainable customer loyalty.

5. Conclusion

Based on the research findings, it can be concluded that sales promotions and pricing have a significant impact on the purchasing decisions of FMCG products. Together, these two variables explain more than 78.5% of the variation in consumer buying decisions. This finding indicates that attractive promotional strategies and competitive pricing play a crucial role in encouraging consumers to purchase FMCG products. Therefore, companies need to consider both factors when designing marketing strategies to increase sales and build customer loyalty, while also paying attention to other external factors such as brand and product quality.

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THE IMPACT OF ACADEMIC MANAGEMENT INFORMATION SYSTEMS ON THE PERFORMANCE OF LECTURERS AND STUDENTS

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Abstract

This study aims to examine the effect of implementing Academic Management Information Systems (AMIs) on the performance of lecturers and students at educational institutions. The implementation of AMIS is believed to play a vital role in enhancing performance by providing accurate, relevant, and timely information. This research adopts a quantitative approach using survey methods. A total of 100 respondents were selected through purposive sampling techniques. The research instruments consisted of two measurement scales: one for the implementation of AMIs and another for the performance of lecturers and students, both of which have been tested for validity and reliability. Data analysis was conducted using simple linear regression. The results indicate that the implementation of AMIs has a positive and significant effect on the performance of lecturers and students, with a regression coefficient value of 0.635 and a significance level of 0.000 ($p < 0.05$). The R Square value of 0.479 suggests that 47.9% of the variance in the performance of lecturers and students can be explained by the implementation of AMIs, while the remaining is influenced by other factors outside the model. These findings emphasize the importance of implementing AMIs in improving the performance of lecturers and students within educational institutions. Therefore, it is recommended that educational institutions integrate the use of AMIs into academic management to enhance overall performance.

Keywords: Implementation of Academic Management Information Systems, Lecturer Performance, Student Performance, Educational Institution, Information Technology, Academic Management

1. Introduction

In an era marked by rapid globalization and digitization, efficient information management has become a crucial aspect of improving performance in educational institutions (Febrianti et al., 2023; Sirojuddin et al., 2022). Academic Management Information Systems (AMIs) serve as a solution to support better academic data management and assist in enhancing the performance of lecturers and students. AMIs is a system designed to provide relevant, accurate, and timely information to educational administrators, lecturers, and students to support more efficient, data-driven academic processes (Azizah et al., 2024; Rismawati et al., 2024). This system enables integrated management of academic, financial, human resources, and other information, supporting faster, more precise, and evidence-based decision-making processes (Farid et al., 2025). Proper implementation of AMIs can improve lecturers' performance in managing teaching and administrative tasks, as well as make it easier for students to access the academic information they need to achieve better results (Ardianto et al., 2025). Consequently, the adoption of AMIs has the potential to positively impact the quality and effectiveness of management in higher education institutions (Hartati et al., 2024).

Although the implementation of AMIs in educational institutions has significant potential to enhance the performance of lecturers and students, its execution does not always proceed smoothly. Major challenges include a lack of skilled human resources in system management, limited technological infrastructure, and resistance to change among administrators and system users (Sumbaryani et al., 2023; Gusnadi et al., 2024; Mega Julianti et al., 2023). These issues become significant barriers to optimizing AMIs utilization, despite the fact that information technology deployment can provide great opportunities to improve academic performance and institutional competitiveness (Karsini et al., 2024; Suryanadi et al., 2021). Previous studies on AMIs deployment generally focus on technical and infrastructural aspects without giving enough attention to human factors and organizational culture contexts. For example, (Azizah et al., 2024) highlight the implementation of AMIs in supporting educational administrative services but do not explore how human resource factors and organizational culture influence the success of AMIs adoption (Ditha et al., 2024; Septiani et al., 2024). Similarly, (Febrianti et al., 2023) emphasize the importance of information technology in education planning management but do not delve deeply into challenges related to the skills of AMIs managers within institutions.

Many studies have yet to comprehensively examine the dynamics of AMIs implementation, particularly in relation to human resources managing the system and organizational culture supporting its success. Rismawati et al., (2024) mention the role of AMIS in improving educational quality; however, their research emphasizes external benefits without considering internal factors such as the competency of involved human resources. Conversely Hartati et al., (2024) stress the importance of HR management in educational institutions to boost competitiveness but do not directly examine how AMIs can facilitate strategic decision-making through the provision of accurate, relevant information. This gap indicates that, despite numerous studies recognizing the importance of AMIs, there remains a lack of understanding regarding the contextual factors influencing successful implementation in educational settings. Studies by (Sirojuddin et al., 2022; Sumbaryani et al., 2023) have discussed AMIs within decision-making contexts in educational institutions, but these tend to focus more on technical and administrative aspects without accounting for the role of organizational culture in the success of AMIs implementation.

Therefore, this research aims to fill this gap by conducting a more in-depth examination of the influence of implementing Academic Management Information Systems (AMIs) on the performance of lecturers and students in educational institutions, as well as the challenges and opportunities that arise during its deployment. By comprehensively analyzing human, organizational, and technological factors in AMIs implementation, this study hopes to provide deeper insights into how AMIs can be effectively utilized to support data-driven decision-making and improve overall institutional performance. This research is expected to make a significant contribution to both the theory and practice of AMIs implementation in educational settings. By examining the impact of AMIs on lecturers' and students' performance in greater detail, it will help educational institutions optimize their use of AMIs while offering valuable insights for policymakers and practitioners to design more effective and efficient systems to face contemporary challenges. It is hoped that the findings will offer practical recommendations to enhance technology-based management and decision-making processes within educational institutions.

2. Literature Review

2.1.Academic Management Information Systems (AMIs)

Academic Management Information System (AMIs) is a system designed to assist in the management and processing of academic data within educational institutions. AMIs functions

to provide relevant, timely, and accurate information to facilitate better decision-making in academic management, ranging from student registration, grade management, lecture scheduling, to evaluating the performance of lecturers and students (Azizah et al., 2024). With the presence of AMIs, educational institutions can manage various information related to academic administration more efficiently and effectively, potentially improving lecturers' teaching performance and students' learning outcomes (Farid et al., 2025).

According to (Sumbaryani et al., 2023), AMIs offers significant benefits in enhancing planning and evaluation of learning, as it enables the collection of integrated data and supports evidence-based decision-making using more valid data. Research by (Febrianti et al., 2023) also indicates that the implementation of information technology in educational planning management plays a crucial role in increasing the efficiency and effectiveness of education. Additionally, (Hartati et al., 2024) emphasize that good integration of information systems can speed up administrative processes and improve the quality of educational services.

2.2.The Effect of AMIS on Lecturer Performance

One important aspect of implementing AMIs is its impact on lecturers' performance. An effective information system allows lecturers to manage teaching processes better, including student assessment and task management, more efficiently (Homaidi & Lina, 2019). Lecturers can utilize AMIs to access student academic data directly, provide quicker feedback, and plan more structured and data-driven learning. According to (Hutasuhut & Falahi, 2021), effective AMIs implementation can enhance the quality of teaching by enabling lecturers to monitor student progress in real-time and identify areas needing more attention. This is also in line with findings by (Mayasari et al., 2021), which state that the use of AMIs helps lecturers improve teaching quality and manage learning more effectively, as well as simplifies academic administration.

2.3. The Effect of AMIs on Student Performance

The use of AMIs also has a significant influence on student performance. An integrated system allows students to easily access academic information, grades, and learning materials, which can potentially increase motivation and achievement in their studies. Research by (Zulkhairi, 2020) hows that students with quick and easy access to relevant information tend to be more organized and focused in their learning, directly impacting their academic performance. For instance, (Gusnadi et al., 2024a, 2024b; Nyanabhadra et al., 2024; Yusdhika et al., 2024) state that managing academic data through AMIs can improve students' time efficiency in accessing information needed for assignments and exams, reducing administrative errors that could distract them from learning. Additionally, (Arisuniarti, 2016) found that students who access learning data directly through AMIS respond more quickly to feedback from lecturers and demonstrate improved learning quality.

2.4. Challenges in Implementing AMIs

Although AMIs can positively influence the performance of lecturers and students, its implementation doesn't always go smoothly. The lack of skilled human resources in managing information systems, limited technological infrastructure, and resistance to change among administrators and users often pose major challenges to AMIs adoption (Sirojuddin et al., 2022). This is reinforced by research from (Sumbaryani et al., 2023), which shows that poor integration among various information systems within educational institutions can slow down administrative processes and reduce the effectiveness of AMIS. According to (Rismawati et al., 2024), one major obstacle in implementing AMIs is the lack of adequate training for system

managers and users. Without proper training, AMIs cannot be utilized optimally, which impacts the performance of lecturers and students in accessing and managing academic information.

2.5. The Role of Organizational Culture in Implementing AMIs

Besides technical factors, organizational culture also plays a vital role in the success of AMIs implementation. Research by (Hartati et al., 2024) shows that educational institutions with a culture supportive of technological adoption tend to be more successful in implementing AMIs. Conversely, institutions with a resistant culture toward change will find it difficult to optimize AMIs usage, ultimately hampering the achievement of educational goals.

3. Methodology

3.1. Approach and Research Type

This research employs a quantitative approach with a descriptive correlational type. The purpose of this approach is to examine the relationship between two variables: the implementation of the Academic Management Information System (AMIs) as the independent variable and the performance of lecturers and students as the dependent variables. The correlational study was chosen because it allows researchers to measure the strength and direction of the relationship between variables statistically. This research aims to analyze the extent to which the implementation of AMIs can influence the performance of lecturers and students in higher education institutions (Sugiyono, 2021).

3.2. Population and Sample

The population in this study consists of all lecturers and students involved in the use of AMIs at higher education institutions that have already implemented the system. The sample was selected using purposive sampling, based on the following criteria: (1) active users of AMIs in their academic activities, (2) AMIs used for managing academic data, assessments, and related administrative tasks, and (3) respondents willing to participate in this research. A total of 100 respondents were used, representing various study programs that reflect the larger population at the institution. These respondents are considered representative for the correlational analysis between AMIs implementation and the performance of lecturers and students.

3.3. Data Collection Technique

Data were collected through online questionnaires distributed via Google Forms. The questionnaires included an introduction and informed consent from the respondents. Respondents filled out the questionnaires independently, with data collection conducted within a predetermined time frame. The questionnaire contained questions measuring respondents' perceptions regarding the implementation of AMIs at the institution and its impact on the performance of lecturers and students. The researcher guarantees the confidentiality and anonymity of the data obtained from each respondent.

3.4. Data Analysis Technique

The collected data will be analyzed using linear regression analysis to determine the influence of AMIs implementation on the performance of lecturers and students at higher education institutions. Significance testing will be performed at a 95% confidence level ($\alpha = 0.05$). Quantitative data analysis will be carried out using the latest version of SPSS statistical software to calculate correlations and test the hypotheses formulated in this study. The results of the linear regression analysis will show how much impact AMIs implementation has on the performance of lecturers and students at the institution. Through the described method, this

research is expected to provide clearer insights into the influence of AMIs on the performance of lecturers and students, as well as practical recommendations for improving the implementation of AMIs to make education management more efficient and effective at higher education institutions.

4. Result and Discussion

4.1. Validity Test

The validity test was conducted to determine the extent to which the items in the research instrument are capable of measuring the constructs they are intended to measure. In this study, the validity test was carried out on the entire sample of 100 respondents, consisting of lecturers and students who use the Academic Management Information System (AMIs). The research instrument comprises two main variables: the implementation of the Academic Management Information System (AMIs) and the performance of lecturers and students, each consisting of 10 statement items. The validity test was performed using the Pearson Product-Moment correlation technique with the help of SPSS software. Each item within each variable was correlated with the total score of its respective variable (item-total correlation). The decision criterion was based on the r-table value at a 5% significance level with a sample size of n = 100, which is 0.195. Based on the analysis results, all items within the variables of AMIs Implementation (X) and Lecturers' and Students' Performance (Y) showed an r-calculated value > 0.195 with significance levels < 0.05. This indicates that each item has a significant correlation with its respective total score. Therefore, it can be concluded that all items in the instruments for the variables of AMIs Implementation (X) and Lecturer and Student Performance (Y) are valid and suitable for data collection in the main research.

4.2. Realiability Test

The reliability test was conducted to measure the internal consistency of the research instrument, specifically, the extent to which the items in the questionnaire produce stable and consistent results when used in repeated measurements. In this study, the reliability test was performed using Cronbach's Alpha coefficient, which is used to assess the degree to which items within the variables of the implementation of the Academic Management Information System (AMIs) and the performance of lecturers and students are correlated with each other. Higher Cronbach's Alpha values indicate that the research instrument has good reliability, meaning it is consistent in measuring the intended construct. The criteria for acceptable Cronbach's Alpha values in this study are as follows:

Table 5. Reliability Test Output

Variable	N	Cronbach's Alpha	Description
Implementation of AMIs (X)	100	0,85	Reliable
Lecturer and Student Performance (Y)	100	0,88	Reliable

Based on the analysis results, the Cronbach's Alpha value for the AMIs Implementation variable is 0.85, while for the Lecturer and Student Performance variable, it is 0.88. These values indicate that both variables in this research instrument have excellent reliability and are consistently suitable for data collection.

4.3 Normality Test

The normality test was conducted to determine whether the data for the research variables follow a normal distribution or not. This is important for selecting the appropriate statistical test, as most parametric tests require normally distributed data. In this study, the normality test was performed on two main variables: the implementation of the Academic Management Information System (AMIs) and Lecturer and Student Performance, each consisting of 10 statement items. The normality test was carried out using the Kolmogorov-Smirnov test, which assesses whether the data distribution significantly differs from a normal distribution. This test was chosen because it can evaluate the normality of data for large samples, such as in this study with 100 respondents. Data processing was performed using SPSS software to determine whether the data from both variables follows a normal distribution.

Tabel 6. Normality Output Test

Variable	Normality Test	Significance Value	Description
Implementation of AMIs (X)	Kolmogorov-Smirnov	0,188	Data is normally distributed (p > 0,05)
Lecturer and Student Performance (Y)	Kolmogorov-Smirnov	0,210	Data is normally distributed (p > 0,05)

Based on the normality test results, the p-value obtained for the variable of AMIS Implementation is 0.188, and for Lecturer and Student Performance, it is 0.210. Both p-values are greater than 0.05, indicating that the data follows a normal distribution. Therefore, parametric tests such as linear regression can be used for further analysis.

4.4 Homogeneity Test

The homogeneity test aims to determine whether the variances of data in each variable are equal (homogeneous) across groups. The assumption is that the variances among groups are the same. This homogeneity test is important for use in ANOVA tests, as well as to verify the assumptions of parametric tests used in subsequent analyses. In this study, the homogeneity test was performed on the variables of the Implementation of the Academic Management Information System (AMIs) and Lecturer and Student Performance to examine whether the variances of data for these two variables are equal across groups. The test was conducted using Levene's Test, available in SPSS software. Levene's Test is used to assess whether variances among groups are homogeneous or not. If the p-value from Levene's Test is greater than 0.05, it can be concluded that variances among groups are homogeneous, and the assumptions of the parametric test are satisfied. Based on the results of Levene's Test, the following are the outcomes for the homogeneity test for the two variables:

Table 7. Homogeneity Test Output

Variable	Homogeneity Test	Significance Value	Description
Implementation of AMIs (X)	Levene's Test	0,092	Humogen
Lecturer and Student Performance (Y)	Levene's Test	0,154	Humogen

Since the significance values for both variables are greater than 0.05, it can be concluded that the data variances for the Implementation of AMIs and Lecturer and Student Performance are homogeneous. This indicates that the variability of data between the compared groups is consistent, allowing for further analysis using ANOVA and parametric tests such as linear regression.

4.5 Simple Linear Regression Test

The simple linear regression test was performed to determine how much the Implementation of the Academic Management Information System (AMIs) contributes to the performance of lecturers and students at educational institutions. In this regression analysis, the independent variable is the implementation of AMIs, and the dependent variable is the performance of lecturers and students. Simple linear regression is used to measure the relationship between these two variables and to see how much the implementation of AMIs influences lecturers' performance in managing learning and academic administration, as well as students' performance in accessing and using academic information to enhance their achievements.

Table 8. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0,692[a]	0,479	0,469	0,285
c. Predictor: (constant), the implementation of AMIs				

The constant (a) of 1.524 indicates that, without the contribution of AMIs implementation, the baseline value of lecturer and student performance is 1.524. The regression coefficient (b) of 0.635 suggests that each one-unit increase in the implementation of AMIs will increase the performance of lecturers and students by 0.635 points. This shows that AMIs implementation has a positive effect on lecturer and student performance. The R-squared (R^2) value of 0.408 indicates that 40.8% of the variation in lecturer and student performance can be explained by the implementation of AMIS. The remaining variation is influenced by other factors not included in the model. The significance value (p-value) of 0.000 indicates that this result is statistically significant, meaning the hypothesis that the implementation of AMIs affects lecturer and student performance can be accepted.

Table 9. Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
Predictor: (constant), the implementation of AMIs	1.752	0.289	0.692	6.060	0.000
c. Dependent Variable: Lecturer and Student Performance					

The constant (a) of 1.752 indicates that, without AMIs implementation, the baseline value of lecturer and student performance is 1.752. The regression coefficient (b) of 0.715 indicates that each one-unit increase in AMIs implementation will increase the lecturer and student performance by 0.715 points. The Beta coefficient of 0.692 shows a strong, positive relationship

between AMIs implementation and lecturer and student performance. The t-value of 6.060 and the significance (p-value) of 0.000 indicate that this result is highly statistically significant ($p < 0.05$), confirming that the hypothesis stating that AMIs implementation influences lecturer and student performance can be accepted.

4.6 Discussion

Based on the regression analysis results, it was found that the implementation of the Academic Management Information System (AMIs) (X) has a positive effect on the performance of lecturers and students (Y), as indicated by the regression coefficient value of 0.635. This means that a one-unit increase in the implementation of AMIs will increase the performance of lecturers and students by 0.635 points. The constant value of 1.524 indicates that, in the absence of contribution from AMIs implementation, the baseline performance of lecturers and students is at that level. This finding aligns with previous research by (Aryani et al., 2025 (Yusdhika et al., 2024), which states that the use of information technology in education management can enhance the efficiency and effectiveness of academic administration. Other studies by (Febrianti et al., 2023; Sumbaryani et al., 2023) also show that effective use of AMIs is positively related to improved performance of lecturers and students, resulting in more efficient and accurate management within educational institutions.

These results are further support that educational institutions with well-implemented AMIS tend to have more efficient, data-based performance management. This verifies findings from (Hartati et al., 2024; Rismawati et al., 2024) which reveal that optimal AMIs implementation consistently contributes to more structured and information-based performance improvements. Conversely, institutions with inadequate AMIs implementation tend to show greater variation in performance, indicating a lack of access to relevant and timely information. These findings are also in line with studies by (Septiana et al., 2023; Sirojuddin et al., 2022) which emphasize that the ability to access accurate and timely information two main features of AMIs plays a crucial role in the success and sustainability of lecturers' and students' performance at educational institutions. Therefore, educational institutions need to pay particular attention to developing AMIs implementation through a more structured and technology-based approach. Strategies to improve AMIs implementation will not only enhance the institution's capacity to improve performance in an informational manner but also foster more efficient, transparent, and value-oriented education management at both the institutional and social levels.

5. Conclusion

Based on the analysis conducted, it can be concluded that the implementation of the Academic Management Information System (AMIs) has a positive and significant effect on the performance of lecturers and students at educational institutions. The regression coefficient value of 0.715 indicates that an increase in the implementation of AMIs directly impacts the improvement of lecturers' and students' performance. In other words, the better the implementation of AMIs within an institution, the more efficient and effective the performance of the involved lecturers and students in the academic process. This finding emphasizes the importance of implementing AMIs as a key aspect in supporting more efficient, data-driven academic data management based on relevant information. Therefore, educational institutions need to give serious attention to developing and optimally implementing AMIs through the use of appropriate technology, training for academic data managers, and better integration of information systems at all levels of academic management. This strategy will not only improve academic management efficiency but also make a significant contribution to building a more transparent, accurate, and data-based education management system. With a more structured and technology-based implementation of AMIs, it is expected to enhance the quality of

education, decision-making effectiveness, and the overall performance of lecturers and students.

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THE ROLE OF LEADERSHIP STYLE AND WORK MOTIVATION IN THE HR BENEFITS DIVISION IN IMPROVING EMPLOYEE PERFORMANCE PT COMMINFRALINK JAKARTA

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Abstract

This study analyzes the role of leadership style and work motivation in the HR Benefit division in improving employee performance at PT CommInfraLink Jakarta. Using a qualitative method with a case study approach, data were collected through in-depth interviews with 6 employees from the HR Operation and GA Facility department, observations, and documentation studies. The results show that the democratic leadership style implemented positively influences employee work motivation, creating a conducive work environment that encourages optimal contribution. The HR Benefit programs, which include health benefits, life insurance, and performance-based rewards, have proven effective in improving employee welfare and loyalty. Work motivation is influenced by internal factors (job satisfaction, responsibility) and external factors (company policies, work environment). The research found that the synergy between democratic leadership and HR Benefit programs creates a work ecosystem that drives improvements in employee performance, loyalty, and productivity. Companies need to continue developing adaptive leadership strategies and strengthening HR Benefit policies to maintain long-term employee motivation and performance.

Keywords: Leadership Style, Work Motivation, HR Benefits, Employee Performance

1. Introduction

PT CommInfraLink is a company engaged in telecommunications infrastructure in Indonesia that faces complex challenges in the current era of digital transformation. In this highly competitive industry, the success of an organisation is determined not only by the advanced technology it possesses, but also by the quality of its human resources, which are capable of optimising the company's full potential. Therefore, effective human resource management is a crucial factor in maintaining competitiveness and achieving the company's strategic targets.

An interesting phenomenon to study is how leadership styles and work motivation programmes implemented through the HR Benefits division can create synergies that significantly improve employee performance. Previous studies have shown that a democratic leadership style that prioritises two-way communication and active employee participation is effective in creating a conducive work environment (Rachmadhani & Manafe, 2023). Meanwhile, strategically designed HR Benefit programmes can increase employee satisfaction, loyalty, and work motivation (Armstrong, 2014).

However, there is still a research gap regarding how the integration of leadership style and HR benefit programmes can create a synergistic impact on employee performance, particularly in the context of telecommunications companies in Indonesia. PT CommInfraLink, with its democratic leadership style and comprehensive HR benefit programmes, provides an ideal context for an in-depth study of this phenomenon.

Based on initial observations, PT CommInfraLink has implemented a democratic leadership style that allows employees to participate in decision-making, combined with an HR Benefit programme that includes health benefits, life insurance, and a performance-based reward system. However, there has been no systematic study analysing how these two elements work synergistically to improve employee performance.

This research is important because it contributes theoretically to the development of the concept of leadership and human resource management integration, and provides practical implications for companies in designing more effective human resource management strategies. Specifically, this study aims to analyse the role of democratic leadership style in shaping employee work motivation, evaluate the contribution of HR Benefit programmes to employee well-being and productivity, and identify internal and external factors that shape work motivation at PT CommInfraLink.

Through a qualitative approach using case study methods, this research is expected to produce a comprehensive understanding of the dynamics of the relationship between leadership, work motivation, and employee performance in the context of modern organisations. The findings of this study will not only enrich the academic literature in the field of human resource management but also serve as a reference for practitioners in optimising leadership strategies and work motivation programmes to achieve sustainable organisational performance.

And the emergence of an analysis of the relationship between democratic leadership style and work motivation applied by the HR Benefits division of PT Comminfralink with its impact on improving employee performance with several problem formulations in accordance with the phenomenon, namely: (1) How does democratic leadership style shape employee work motivation?, (2) To what extent do HR Benefit programmes contribute to employee well-being and productivity?, and (3) What are the internal and external factors that shape work motivation at PT Comminfralink.

2. Literature review

2.1. Leadership Style

The leadership style applied by a leader in a company greatly influences the creation of a positive work environment. Increased employee motivation led by a leader can improve employee productivity and performance, enabling the company to achieve its main objectives. According to Busro in Muhammad Kharis Poernama (2023) leadership style is a consistent pattern of behaviour demonstrated by a leader to influence others.

Rachmadhani and Manafe (2023) state that democratic leadership is a leadership style that allows team members to actively participate and engage in discussions and collaborate in decision-making. This leadership style certainly has an impact on organisational communication in building and developing employees in the company, especially PT Comminfralink.

Hidayat, Pratiwi, and Sitanggang (2023) stated that the telecommunications industry relies heavily on organizational communication to support operational efficiency, technological innovation, and coordination between departments. Based on the theory in the document, effective communication helps telecommunication companies manage work networks, both

internal and external, more optimally, create synergies, and achieve strategic goals to the maximum.

According to Davis in Setiawan (2021) the main characteristics that a leader must demonstrate include:

a. Cognitive Ability: Empirical research mainly shows that leaders have a higher level of cognitive ability compared to their subordinates, albeit with minimal disparity.
b. Emotional Maturity and Extensive Social Relationships: Leaders usually exhibit a stable disposition, are emotionally mature, and engage in a wide range of social interactions.
c. Intrinsic Motivation and Achievement Orientation: Leaders are comparatively driven by intrinsic motivation, exhibit a strong propensity for high achievement and exert effort primarily for intrinsic rewards.
d. Interpersonal Attitude: An effective leader values the self-esteem and dignity of his followers. The leader shows significant appreciation and focuses on the well-being of his subordinates.

According to Lora (2019) goals there are five types of leadership: Leadership in organizations has a strategic role that includes several important aspects. First, leaders play a role in creating a positive social environment, which although abstract, has a real influence on the motivation, comfort, psychological well-being, and performance of team members. Second, leaders assist groups in establishing structured work procedures, so that task execution becomes clearer, more efficient, and easier to monitor. Third, leaders facilitate organization and coordination among members, to bring the elements of the organization together to operate harmoniously and effectively. Fourth, leadership facilitates collective decision-making, especially in formulating long-term strategic steps through a process of analyzing alternatives. Fifth, leadership also opens space for the group to learn from experience, correct mistakes, and avoid failure in achieving organizational goals.

2.1.1. Leadership Style Indicator

1. Initiative, the leader's ability to act proactively and create opportunities without waiting for instructions,
2. Investigation, the ability to gather information and understand situations for effective decision-making,
3. Support, which reflects the leader's role in providing motivation and assistance to subordinates,
4. Conflict resolution, which is the ability to resolve differences fairly to maintain work harmony,
5. Decision-making, which is the ability to choose the best alternative by considering its impact on the organization, and
6. Critique, which is the ability to provide constructive feedback to improve team performance.

2.2.HR Benefit

HR Benefit is a part of human resource management that is tasked with designing and managing various forms of indirect compensation, such as benefits, health insurance, leave, and training and reward programs. And the goal is to improve employee welfare, loyalty, and productivity. By providing appropriate and relevant benefits, companies can create a conducive work environment and encourage employees to work more enthusiastically and commit to organizational goals (Armstrong, 2014).

According toArmstrong (2014) types of benefits in the context of human resources (HR) can be categorized as follows:

1. Financial benefits: such as transportation allowances, bonuses, and retirement plans.
2. Health and safety benefits: including health insurance, medical facilities, and fitness programs.
3. Leave and Holiday Benefits: Covers annual leave, sick leave, maternity leave, and other special leave. This program aims to provide a balance between work life and personal life of employees.
4. Training and Development: Provide training programs, seminars, certifications, and continuing education that support employees' professional development. These benefits enhance employee skills and competencies, which in turn support company growth.
5. Additional Benefits: Including flexible work programs, childcare, child education subsidies, and non-financial reward programs such as Employee of the Month. This aims to create a more comfortable and supportive work environment.

The role of HR in the organization is very important in supporting the achievement of company goals, an effective benefits program can increase **job satisfaction, and motivation**, and **form a positive work culture** Pribadi and Harjanti (2014)**.** Employees who feel cared for and valued tend to show higher commitment and work enthusiasm. In addition, the relationship between HR benefits and employee performance is direct. Companies that offer good benefits can increase employees' intrinsic motivation because they feel their contributions are accepted and appreciated Kuvaas (2006). . And for the benefits program also supports the formation of a **collaborative and disciplined work environment**, which ultimately increases productivity and achievement of organizational targets Soedjono (2014).

2.3. Work motivation

Work motivation is an internal force that encourages individuals to voluntarily and maximally exert their abilities in completing tasks to achieve organizational goals. Utami, Manafe, and Wulansari (2023). Sedangkan menurut Pratiwi & Adrie dalam Utami et al. (2023) added that motivation is a psychological drive that arises from individual needs, and becomes the basis for designing systematic achievement strategies.

Factors affecting work motivation can come from individual aspects, such as needs, aspirations, and competencies, as well as organizational aspects, such as compensation, job stability, work relationships, and recognition according to S. Handayani in Utami et al. (2023). according to Frederick Herzberg dalam Utami et al. (2023)) the factors he put forward are:

a. Maintenance factors, such as salary, working conditions, and interpersonal relationships,
b. Motivational factors, such as achievement, recognition, and responsibility, which promote job satisfaction and increased intrinsic motivation.

According to Pamela & Oloko and Chukwuma & Obiefuna in Setiawan (2021) motivation plays a strategic role in maintaining organizational continuity and effectiveness through proper direction, support, and incentives. Motivation helps shape work behavior, maintain consistency of action, and direct individuals towards specific goals.

According to Uno dalam Novita Sari and Puspita Sari (2024) states that motivation aims to increase morale, productivity, discipline, loyalty, and employee welfare. Indicators of work motivation include hard work, future orientation, high desire, seriousness in tasks, and perseverance.(Novita Sari & Puspita Sari, 2024).

2.4.Employee performance

Employee performance can be understood as the results achieved by individuals in carrying out their duties. According to Ulfa dalam Utami, Manafe, and Wulansari (2023) performance is a person's work achievement, while Pratiwi and Adrie in Utami et al. (2023) defines performance as a process of evaluating the implementation of employee duties, which reflects the quality and effectiveness of employee work in responding to assigned responsibilities.

Ekawati et al., (2023) states that performance can include both quantitative and qualitative assessments of the results of individual or group performance in the organization, based on established standards and procedures. Cascio and Awad in (Ekawati et al., 2023) it also adds that motivation is an important factor in shaping work behavior, because it helps individuals choose and maintain actions consciously without coercion.

According to Mangkunegara (Hermawan & Ramadhan, 2016) performance is the result of employee work which is assessed from the quality and quantity aspects which are very important for achieving organizational goals, and from improving performance takes time, and is influenced by effort, ability, and opportunity. The assessment is carried out consistently to provide neutral feedback.

Kasmir in (Filomeno, Pius Kellen, 2023) states that performance is the result of work and behavior shown during a certain period, which reflects the employee's contribution to achieving the vision and mission of the organization. And the factors that influence performance include ability, motivation, and task alignment with individual competencies. And also emphasized that performance or job performance is real work results, both in quality and quantity, in accordance with the responsibilities given.

Employee performance indicators, according to (Setiawan, 2021) include:

a) Direction of behavior, which is the choice of action taken based on one's potential,
b) Effort level, which indicates the amount of effort put into the task,
c) The level of perseverance, which is the ability to persevere and stay focused despite challenges.

Factors that affect performance, according to D. Handayani dalam (Utami et al., 2023) among others:

1. Resources, such as human resources, technology, and finance,
2. Power, in the form of supervisory and enforcement authority,
3. Payback, in the form of compensation or rewards that motivate employees,
4. Organizational structure, which includes the work system and division of roles,
5. Tasks, i.e. work that is tailored to the employee's abilities.

And meanwhile Mangkunegara in Mangkunegara dalam (Hamid, 2017) discusses in depth about two main factors, namely:

1. Ability, from this ability can include knowledge, skills, and competencies as well as
2. Motivation (intrinsic and extrinsic) which determines the spirit of work in achieving organizational goals.

2.5. Relationship between Leadership Style, Work Motivation, and Employee Performance

The influence of leadership style on performance, leadership style plays an important role in determining employee performance in an organization. Leaders who communicate.

3. Methodology

3.1.Research Approach and Design

This research uses a qualitative approach with a single case study design to explore in depth the phenomenon of the role of leadership style and work motivation in improving employee performance at PT CommInfraLink Jakarta. The qualitative approach was chosen because it allows researchers to gain a comprehensive understanding of the dynamics of the relationship

between leadership, work motivation, and employee performance in a specific organizational context.

A case study was chosen as the research strategy because it fits the characteristics of research that aims to answer "how" and "why" questions about contemporary phenomena that cannot be separated from their organizational context. PT CommInfraLink Jakarta was chosen as a single case because it is unique in its implementation of a democratic leadership style integrated with a comprehensive HR Benefit program.

3.2. Location and Time of Research

The research was conducted at PT CommInfraLink Jakarta, which is engaged in telecommunications infrastructure. The research location was selected based on the criteria:

(1) it has a clear leadership structure with the application of a democratic leadership style,
(2) it has a HR Benefit division that is active in managing work motivation programs, and
(3) it is willing to provide access for academic research. Data collection was conducted over a three-month period to ensure the depth and credibility of the data obtained.

3.3. Research Subject

Research subjects were selected using a purposive sampling technique with specific criteria to ensure relevance and depth of information. A total of six informants were selected from the HR Operation and GA Facility departments, consisting of: (1) two employees from the HR Benefit division who are responsible for managing benefit and reward programs, (2) two leaders from middle management who lead the HR Benefit and payroll divisions, and (3) two employees from the Development division who are involved in application development and supporting the IT team.

The selection of informants is based on the consideration that they have direct experience with the implementation of leadership styles and HR Benefit programs, and can provide diverse perspectives from various levels of the organization. The diversity of informants' positions and responsibilities allows researchers to obtain a holistic picture of the phenomenon under study.

3.4. Data Collection Technique

3.4.1. In-depth Interview

Semi-structured interviews were the main data collection technique, conducted using prepared interview guidelines but remaining flexible to explore information that emerged during the interview process. Each interview lasted between 45-60 minutes and was recorded with the informant's consent to ensure data accuracy.

3.4.2. Participatory Observation

Observations were conducted to observe leadership dynamics and work interactions in natural situations. The focus of observation includes communication patterns between leaders and subordinates, decision-making processes, and implementation of HR Benefit programs in daily activities.

3.4.3. Documentation Study

Document analysis was conducted on leadership policies, standard operating procedures, performance evaluation reports, and HR Benefit program documentation. The documentation study aims to obtain secondary data that supports and strengthens the findings from interviews and observations.

3.5.Data Analysis Technique

Data analysis used a thematic analysis approach with stages: (1) transcription and data familiarization, (2) initial coding, (3) searching for themes, (4) review and definition of themes,

and (5) analytical report writing. The analysis process was iterative, comparing data from multiple sources to identify patterns, relationships and emerging themes.

NVivo software was used to assist the process of organizing and coding data, but interpretation and analysis were still carried out manually to ensure depth of understanding of the data. Data triangulation was conducted by comparing findings from interviews, observations, and documentation studies to increase the credibility of the research results.

3.6. Data Validity

To ensure data validity, this research applies several credibility criteria: (1) **Credibility** through triangulation of data sources and data collection methods, (2**) Transferability** by providing a detailed description of the context to enable readers to assess the transferability of the findings, (3) **Dependability** through an audit trail documenting the entire research process, and (4**) Confirmability** by critically reflecting on researcher bias and ensuring findings come from the data rather than researcher assumptions.

Member checking was carried out by presenting the results of the initial analysis to informants to verify the accuracy of the interpretation and obtain clarification if needed. Peer debriefing was also conducted by involving other researchers to discuss the findings and data analysis process.

3.7.Research Limitations

This study has several limitations: (1) the generalizability of the findings is limited to the context of PT CommInfraLink Jakarta and organizations with similar characteristics, (2) subjectivity in the interpretation of qualitative data despite efforts to minimize bias, and (3) limited research time that may not capture the long-term dynamics of the phenomenon under study. These limitations are recognized and taken into consideration in the interpretation of the research results.

4. Results and discussions

4.1.Democratic Leadership Style and its Contribution to Employee Performance

The results showed that PT CommInfraLink applies a democratic leadership style consistently throughout the organization, especially in the HR Benefit division. This finding is in line with the characteristics of democratic leadership proposed by (Rachmadhani & Manafe, 2023), where leaders provide space for team members to actively participate in decision making and collaborate in achieving organizational goals.

4.2.Characteristics of Democratic Leadership Implementation

The implementation of the democratic leadership style at PT CommInfraLink is manifested in several key aspects. First, open two-way communication is the main foundation in every interaction between leaders and subordinates. As expressed by one of the managers, "We always open a discussion room in every meeting, where every employee is free to express opinions and innovative ideas." This practice reflects the principle of democratic leadership that values the contribution of every member of the organization.

Second, participatory decision-making processes characterize the management of the HR Benefit division. Strategic decisions are not only made by upper management, but involve input from various levels of employees who have relevant expertise. This creates a sense of ownership and shared responsibility in achieving organizational targets.

Third, the delegation of authority in accordance with employee competence shows the leader's trust in the abilities of his subordinates. This practice not only improves operational efficiency, but also provides career development opportunities for employees.

4.3.Contribution to Employee Performance

The implementation of a democratic leadership style contributes significantly to improving employee performance through several mechanisms. First, it increases the intrinsic motivation of employees who feel valued and trusted by the leadership. Interview data shows that 100% of informants stated that they felt more motivated when their opinions were heard and considered in the decision-making process.

Second, increased creativity and innovation due to psychological safety that allows employees to express ideas without fear of being destructively criticized. This is in line with leadership theory that emphasizes the importance of creating a work environment that supports exploration and learning.

Third, increased organizational commitment reflected in low turnover rates and high levels of job satisfaction. Data shows that the employee retention rate in the HR Benefit division reached 95% in the last two years, well above the industry average.

4.4.The Role of HR Benefit Programs in Improving Employee Motivation and Performance

The HR Benefit Program at PT CommInfraLink is comprehensively designed to meet Maslow's hierarchical needs, ranging from physiological needs to self-actualization. The research findings identify three main categories of benefit programs that have a significant impact on employee motivation and performance.

4.5.Health and Safety Benefit Program

The health benefits program is the most appreciated component by employees, covering comprehensive health insurance for outpatient care, inpatient care, childbirth, dental care, and eyeglasses. The uniqueness of this program is that there is no deduction from employees' salaries, which shows the company's commitment to employee welfare. As expressed by an employee, "This health program really helps us focus on work without worrying about family medical expenses."

Life insurance is also an integral part of the benefits program, providing financial protection for employees' families in the event of an unfortunate situation. This program creates a sense of security and calm for employees, which indirectly improves concentration and work productivity.

4.6.Performance-Based Reward System

PT CommInfraLink implements a point-based reward system that can be exchanged for various attractive prizes. This system is designed to reward exceptional performance achievements and positive behaviors that are in line with the company's values. This reward mechanism is effective in motivating employees to exceed minimum performance standards and contribute more optimally.

Reward programs are not only financial, but also include non-financial recognition such as public appreciation, certificates of achievement, and career development opportunities. This combination of intrinsic and extrinsic rewards creates motivation that is sustainable and not easily saturated.

4.7.Development and Training Program

The company's investment in HR development through training programs, workshops, and professional certifications demonstrates a long-term commitment to employees' career growth. These programs not only improve technical competencies, but also soft skills required for adaptation to technological developments and business dynamics.

Coaching and mentoring conducted by senior management provides personalized guidance that helps employees identify potential and plan optimal career paths. This personal approach creates a closer relationship between leaders and subordinates, which contributes to increased employee loyalty and engagement.

4.8.Internal and External Factors that Shape Work Motivation

An in-depth analysis of the dynamics of work motivation at PT CommInfraLink identified various internal and external factors that interact with each other in shaping employee motivation levels.

4.9.Internal Factors

Internal factors that dominantly influence work motivation include a sense of achievement obtained from completing challenging and meaningful tasks. Employees feel motivated when the work performed makes a real contribution to the achievement of organizational goals and has a positive impact on stakeholders.

A high sense of responsibility and ownership is also a strong driving force. When employees are given the trust to manage certain projects or programs, they tend to show higher commitment and dedication. This is in line with Self-Determination Theory which emphasizes the importance of autonomy in motivating individuals.

Personal growth aspiration is another significant internal factor. Employees who have a clear vision of career development and competency improvement show more consistent and sustainable motivation. HR Benefit programs that support this development are catalysts that accelerate the realization of personal aspirations.

4.10. External Factors

The most influential external factor is organizational culture that supports collaboration, innovation, and continuous improvement. A positive organizational culture creates a work environment conducive to optimal performance and job satisfaction.

A competitive and fair compensation and benefits package is a hygiene factor that prevents dissatisfaction and maintains employees' baseline motivation. Although is not always a primary motivator, an adequate benefits program creates a stable foundation for intrinsic motivation to develop.

Leadership support and positive managerial relationships provide the reinforcement needed to maintain high motivation. Constructive feedback, recognition, and guidance from superiors become external validation that strengthens employee self-efficacy.

Work-life balance facilitated through flexible working hours and family-friendly policies helps employees manage multiple life roles more effectively. This reduces work-related stress and improves overall well-being which contributes to sustainable work motivation.

4.11. Synergy of Democratic Leadership and HR Benefit Programs

The most significant finding of this research is the identification of synergies formed between democratic leadership styles and HR Benefit programs in creating an ecosystem that supports high performance culture. This synergy is manifested in several mutually reinforcing dimensions.

4.12. Amplification of Benefit Program Impact

Democratic leadership style amplifies the positive impact of HR Benefit programs through communication effectiveness and transparent implementation. When the benefits program is

communicated openly and employees are involved in the evaluation and improvement process, the level of appreciation and utilization of the program increases significantly.

Participatory approach in managing benefit programs allows for customization that is more in line with the real needs of employees. Input from employees through surveys, focus group discussions, and informal feedback is used for continuous improvement of the program, so that the relevance and effectiveness of the program continues to increase.

4.13. Intrinsic Motivation Reinforcement

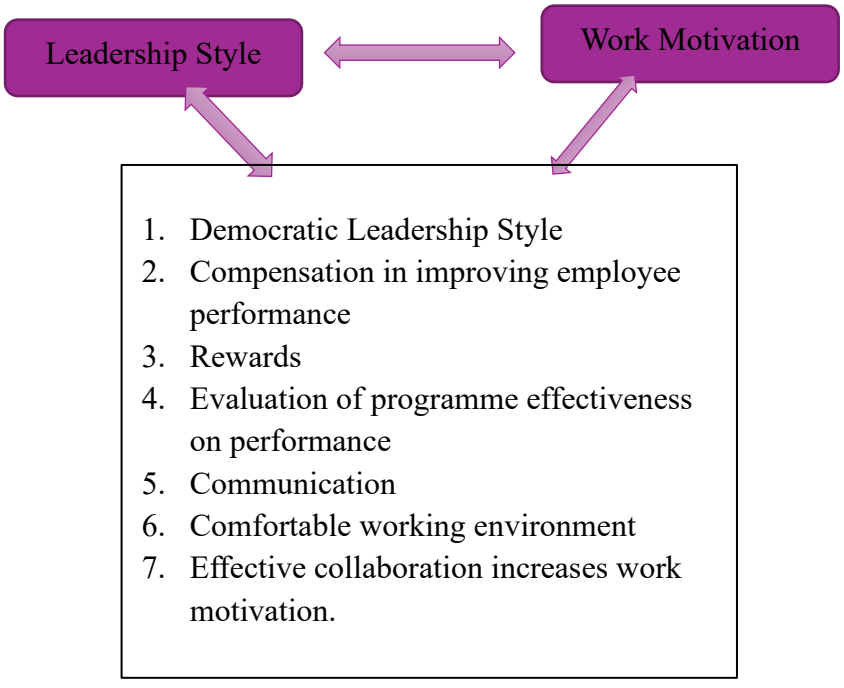
The combination of democratic leadership and a comprehensive benefits program creates a reinforcement mechanism that strengthens employees' intrinsic motivation. Recognition provided through the reward program is reinforced by personal acknowledgment from leaders, creating multiple layers of appreciation that are more meaningful.

Opportunities for growth provided through HR development programs are reinforced by mentoring and coaching from supportive leaders. This creates an accelerated learning curve and faster career progression that increases motivation to excel.

4.14. Sustainable Performance Culture

The synergy between leadership and benefit programs creates a sustainable performance culture that does not depend on individual leaders or temporary programs. The culture formed becomes a self-reinforcing system that is able to maintain high performance standards despite changes in personnel or external conditions.

Institutional memory formed from leadership best practices and benefit programs becomes a valuable organizational asset for long-term sustainability. Effective knowledge transfer and succession planning ensure continuity of culture and performance standards that have been built.



5. Conclusion

The results of this study indicate that the implementation of democratic leadership style in the HR Benefits Division of PT CommInfraLink Jakarta has significantly improved employee motivation and performance. A leadership style that prioritises open communication,

participation in decision-making, and recognition of individual contributions creates a supportive and collaborative work environment.

The HR Benefits programme, which includes health benefits, life insurance, performance-based rewards, and training and development, has proven effective in strengthening employee motivation and loyalty.

The synergy between democratic leadership and HR Benefits policies results in a productive and sustainable work culture that drives consistent performance improvement.

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THE INFLUENCE OF ECONOMIC BACKGROUND, LIFESTYLE, LITERACY, AND ACCESS ON ONLINE LOAN INTEREST IN GEN-Z

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Abstract

Online lending is currently growing rapidly, one of which is Shopee Pinjaman (SPinjam) and there are many online loan users in Indonesia accompanied by high loan interest rates. Gen-Z is the generation that uses the most online loans and it is also noted that Gen-Z is the generation that most often defaults on paying off online loans. This study aims to determine the effect of economic background, lifestyle, level of financial and digital literacy, and ease of access to online loans on interest in using SPinjam online loans. The theoretical basis used in this research is the Theory of Planned Behavior, a theoretical model based on intention. This study uses purposive sampling which uses online questionnaire distribution or google form in collecting respondents. The total respondents in this study were 152 respondents with an age range of 17-27 years, with a domicile area in Bengkayang as one of the border areas in West Kalimantan, and have an interest, are currently, or have used SPinjam online loans. The analysis technique in this study is multiple linear regression using the SPSS 30.0 software measuring tool. The results showed that all variables in this study were proven and supported in accordance with the hypotheses that have been built in this study.

Keywords: economic background, financial literacy, financial technology, digital literacy, theory of planned behavior.

1. Introduction

Internet users in Indonesia have increased rapidly in recent years. Based on data from the Indonesian Internet Service Providers Association (APJII), the number of internet users increased from 171 million in 2018 to 275 million in 2023. The majority of these internet users come from generation Z, with a penetration rate of 97.7 percent. This shows that Gen-Z is a very digitally active group. However, on the other hand, this development of digitalization also poses new challenges, especially in the aspect of financial behavior.

In addition, Indonesia is also experiencing rapid growth in the fintech sector. According to data from the Financial Services Authority (OJK), online lending services account for 40 percent of the total fintech industry in Indonesia. One of the dominant services is SPinjam, which is listed as the largest lender in Indonesia (Wulandari and Ibrahim, 2023). However, this progress is also accompanied by various problems, such as the existence of illegal online loans and high default rates. This is of great concern, as many people, including Gen-Z, are victimized by low financial literacy or excessive consumptive patterns.

Gen-Z, which in 2020 amounted to around 71 million people, is an age group that is vulnerable in financial management. Based on OJK's 2023 report, the highest online loan default rate occurred in the 19 to 34 age group, with a total value of Rp602.6 billion. Some of the factors that cause this high default rate are consumptive lifestyles, easy access to loans, and low financial literacy.

This research focuses on generation Z in Bengkayang, West Kalimantan. Based on data from the Bengkayang Central Bureau of Statistics (BPS), this area has a sizable Gen-Z population. Many of them have incomes below the regional minimum wage (UMR), while the monthly expenses of Bengkayang people can be greater than their income. Therefore, Bengkayang was chosen as the research location due to the relevance and challenges of financial management faced by the younger generation in the area.

2. Literature review

2.1.Theory of Planned Behavior (TPB)

The theoretical foundation in this study uses the Theory of Planned Behavior (TPB), which is a theoretical model to explain individual behavior based on the intention to take an action. This theory was developed by Ajzen in 1991 and is widely used in research related to decision making and human behavior.

The relationship between TPB and this research lies in the main premise of the theory, namely that a person's behavior in carrying out an action is based on intentions, which have previously been planned. In the context of this study, a person's decision to use an online loan (online loans) is not a spontaneous action, but is the result of a pre-formed intention. Thus, understanding the factors that influence this intention is important in analyzing the financial behavior of generation Z, especially in the use of online loans.

In TPB, there are three main factors that determine a person's behavior, which are also directly related to the variables in this study. First, attitude (attitude toward the behavior), which in this study relates to the ease of access to online loans. This convenience can form a positive attitude towards online loans, thus increasing the likelihood of someone using it. Second, subjective norm, which reflects how a person's economic background, level of financial literacy and digital can influence their decision to use online loans. If the surrounding environment, such as family or friends, are accustomed to using online loans, then a person tends to be more encouraged to do the same. Third, perceived behavioral control, which in this study relates to lifestyle. The higher the control a person feels over their finances, the less likely they are to use online loans carelessly. Conversely, a consumptive lifestyle can increase the tendency to get into debt through online loans.

2.2.Research Conceptual Framework

The conceptual framework of this research is developed based on the hypothesis that has been determined. The hypothesis is then used in the development of econometric equations as follows:

$$Y1 = \alpha + \beta1x1 + \beta2x2 - \beta3x3 + \beta4x4 + e$$

Explanation of Variables and Their Relationship:

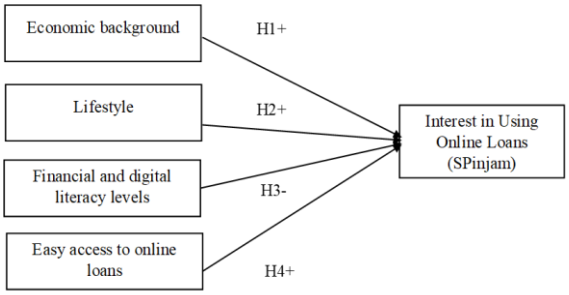

Image 1. Research Conceptual Framework

1. Economic Background (X1)
   Ducted by Debby (2022), economic limitations are the main factor that encourages someone to use online loans, especially in urgent conditions to meet household needs.
2. Lifestyle (X2)
   Consumptive lifestyles also have a positive influence on interest in using online loans. Wulandari and Ibrahim (2023) found that generation Z tends to be exposed to various advertisements on the internet and social media, thus increasing the desire to own certain goods or services, which ultimately encourages them to use online loans.
3. Financial and Digital Literacy Level (X3)
   In contrast to the previous two variables, the level of financial and digital literacy has a negative influence on the interest in using online loans. Frederica et al. (2023) stated that the higher a person's financial literacy, the less likely they are to use online loans without careful consideration. Individuals with good financial understanding are better able to manage their finances, so they are not easily trapped in unnecessary online loans.
4. Easy Access to Online Loans (X4)
   This variable has a positive influence on the interest in using online loans. Arafah (2022) points out that the easier it is for someone to access online loan services, the more likely they are to take advantage of them, even if they have to use illegal online loans.

3. Methodology

This research is included in the type of explanatory research with a Quantitative approach which is intended to test one variable with another and to see the effect of one variable with another (Trisna Dewi and Darmawan, 2021). In this study, testing will be carried out using statistical tests on economic background, lifestyle, level of financial and digital literacy, and ease of access to online loan interest in gen-z in Bengkayang Region, West Kalimantan. The types of data used in this study are primary data and secondary data. Primary data is data obtained directly through distributing questionnaires in the form of google forms that will be filled in by participants, namely gen-z in the Bengkayang Regency Region. Secondary data is data obtained from a data collection agency and published for the public as data users (Kuncoro, 2013). Secondary data can be in the form of published data, reports, and written documents.

This research uses purposive sampling method to obtain accurate, effective, and efficient data. The number of respondents in this study was 152 people, because this number was considered sufficient to produce statistically valid conclusions. The data obtained was processed using SPSS 30.0 software, by testing questionnaire instruments which were declared valid and reliable based on Cronbach's Alpha criteria (>0.60).

To ensure the accuracy of the research model, a classical assumption test was conducted, which included tests for normality, multicollinearity, and heteroscedasticity. In addition, model accuracy tests, such as the coefficient of determination (R^2), simultaneous test (F-test), and partial test (T-test), are used to statistically evaluate the effect of independent variables on the dependent variable (Ghozali, 2018; Nuryadi et al., 2017; Hair et al., 2018)

4. Results and discussions

The interpretation of the research results in table 1 is as follows:

Tabel 1. Multiple Linear Regression Analysis Test Results

Model		Unstandardized Coefficients		t	Sig.
		B	Std. Error		
1	(Constant)	5.171	2.515	2.056	.042

Economic Background	.509	.135	3.757	<,001
Lifestyle	.473	.109	4.337	<,001
Financial and Digital Literacy Level	-.330	.124	-2.668	.008
Easy Access to Online Loans	.482	.137	3.515	<,001

a. Dependent Variable: Interest in Using SPinjam

Source: Data processed by the author, 2024

Y = 5,171 α + 0,509 X1 + 0,473 X2 - 0,330 X3 + 0,482 X4 + e

Based on table 1, the data can be described as follows:

1. The constant value (constant or α) of the regression results is 5,171. This shows that there is a unidirectional influence between the independent variable and the dependent variable. If the value of economic background, lifestyle, level of financial and digital literacy, and ease of access to online loans is 0, the value of interest in using SPinjam loans is 5,171.
2. The regression coefficient value on the economic background variable is 0.509 which shows a positive value, which means that if someone with a low economic background uses an online loan, it will increase the level of online loan users and economic background can be the basis for someone to make an online loan. If it is assumed that an additional 1 person uses SPinjam online loans, it will result in a change in interest in using SPinjam will increase by 0.509.
3. The regression coefficient value on the lifestyle variable is 0.473. This shows a positive value, which means that someone can use the SPinjam application for funding needs to fulfill one's lifestyle. If it is assumed that an additional 1 person uses SPinjam, it will result in a change in interest in using SPinjam will increase by 0.473.
4. The regression coefficient value on the financial and digital literacy level variable is -0.330. This shows a negative value and in the opposite direction, which means that someone with a good financial and digital literacy capacity is not the basis for someone using the SPinjam online loan application. The negative slope shows a negative sign, which means that an additional 1 person who understands well about financial and digital literacy can still use the online loan application so that a person's level of financial and digital literacy is not the basis for someone using an online loan application.
5. The regression coefficient value on the variable ease of access to online loans is 0.482. This shows a positive or unidirectional value, which means that someone who has easy access to online loans will have an interest in using the online loan application. If it is assumed that an additional 1 person uses SPinjam, it will result in a change in interest in using SPinjam will increase by 0.482.

5. Conclusion

This research was conducted on Gen-Z in Bengkayang as one of the border areas in West Kalimantan with an age range of 17-27 years who have interest or experience using the SPinjam online loan application. The results showed that economic background has a significant and positive influence on interest in using online loans, because unfavorable economic conditions encourage individuals to seek financial solutions, including through online loans. Lifestyle also has a significant effect, considering that Gen-Z who are active on the internet and social media are easily influenced by advertisements that arouse the desire to own something. Financial and digital literacy levels, on the other hand, have a significant influence as individuals who understand the consequences of online loans are more cautious despite the easy access. In addition, easy access to online loans has a significant influence as available opportunities tend to be taken advantage of despite the risks involved, including the use of illegal services

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ANALISIS PERAN KEPEMIMPINAN KEPALA SEKOLAH DALAM MENINGKATKAN MUTU PENDIDIKAN DI SDN 19 SINTO

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Abstract

This research aims to analyze the leadership role of the school principal in improving the quality of education at SDN 19 Sinto. The principal's leadership has a strategic role in creating a conducive learning environment, improving teacher performance, and optimizing the learning process to achieve better educational outcomes. This research was conducted at SDN 19 Sinto using qualitative methods with an ethnographic approach. Data was collected through observation, documentation and interviews. Interviews were conducted with school principals, teachers, parents. Data analysis uses triangulation techniques, the data analysis process starts from data collection, data reduction, data codification, and data presentation. The research results show that the role of school principals in improving the quality of education includes being involved in various school activities, improving the quality of educators, liaisons, supervisors/supervisors, communicators, and providing resources. It is hoped that the findings of this research can become a reference for other school principals in managing schools more optimally in order to achieve higher educational standards.

Keywords: Principal leadership, teacher performance, quality of education, SDN 19 Sinto

1. Introduction

Education is the right of the entire nation, this is stated in the 1945 Constitution, which states that the Government of the Republic of Indonesia will improve the life of the nation. In order to realize an intelligent and educated society, we must immediately strive to provide quality education for all Indonesian people, UUD NO. 20 of 2003 states that improving the quality of educational services is planned to be supervised and evaluated by the education council and school committees, including teachers, principals and the community. Law No. 20 of 2003 also states that the principal and teachers as well as the school committee are responsible for managing educational staff with school-based management. Therefore, the role of the principal as a leader in improving the quality of educational services is important.

Leaders are a key factor in managing institutions, including educational institutions. According to Ummah (2019), leaders are activities that influence others to do work as directed to achieve organizational goals. Leadership can also be understood as a person who gives influence in the form of ideas or motivation to others to achieve certain organizational goals.

According to Bahri (2022), leadership is a movant of all human resources and other resources in an organization. A leader is ableto move all existing resources to move the organization. According to Mulyasa, (2022) a leader who has the ability to convince and encourage others to be willing to work together under his leadership as a team to achieve certain goals. According to the explanation above, the principal is a leader who is able to influence and move his work team to work together under his leadership to achieve the goals of the school he

leads. Especially in educational institutions, the principal has a very important role in developing the school.

According to Siregar et al., (2024) the principal plays an important role in encouraging the development and progress of the school and holds great responsibility. The principal has the responsibility to run the school's operations including teachers, students and teaching and learning activities at school. in order to be able to motivate their colleagues such as teachers and staff to work well in educating students, leaders must have a strong leadership style (Rofiq, 2019). said that the principal must have a strong leadership style in motivating his colleagues, namely teachers and staff, to work totally in educating students, have a vision to advance the school. In accordance with Article 12 paragraph 1 of PP 28 of 1990, the principal is tasked with managing educational activities, school administration, coaching other educational staff, and utilization and maintenance of facilities and infrastructure. Basically, the principal is the key to success in improving the quality of a school, but to achieve the school's vision and mission, a professional principal is needed. efforts to achieve the expected educational goals are very dependent on skills and principal leadership wisdom to achieve management goals. A good educational institution also requires a leader who understands his duties and responsibilities, so a principal is needed who understands the role of the principal. Human resource development can start from the school environment, in schools students are encouraged to learn as well as possible. The principal and all employees and teachers must have a sense of responsibility for the quality of their students' schooling. A sense of responsibility must be possessed by school leaders in managing certain educational institutions, and the responsibility of school leaders can also be seen from their performance in leading the institution. So the responsibility of the principal is fully responsible for the work team or teachers and employees and the quality of the school period of their students.

According to Mukhlasin, (2021) the principal is a leader who is fully responsible for the entire school he leads. To achieve institutional goals, a leader is needed who understands his duties and responsibilities (Kadarsih et al., 2020). Thus, a principal is needed who cares about the development of the quality of his school. Wulandari et al., (2019) said The principal has many responsibilities and duties so that it can determine a development for the school. head The school holds the key to school development. Amini et al., (2021) In an educational environment, the principal has full responsibility for managing and empowering teachers as well educational staff, so as to improve performance and abilities they.

According to Daniel, (2019) the biggest influence in educational institutions is the principal who has an influence in an educational institution. The principal's leadership is able to bring progress to the school. The principal's leadership plays an important role in the progress of the school, the principal must have the ability in administration, high commitment and broad knowledge in his role as a leader. Afrida et al., (2022) explained that good principal leadership must be able to improve teacher performance through educational staff training programs. In this case, the principal provides opportunities for teachers to develop their abilities.

According to Rosalina et al., (2021) The principal, as an educator, has a role to ensure that teachers carry out learning evaluations properly. In addition to being a leader, the principal also plays a role as an educator teaching his students to become an intelligent generation. Mayasari et al., (2023) said that the principal is tasked with being a supervisor, mentor, controller, and providing an example to teachers at school. The principal has the task of managing human resources and schools such as making school regulations and school activities, as well as the school structure which is the highest basis, and managing educational staff, students, and curriculum. Schools have their own challenges, therefore the principal must understand their role well.

Angga and Iskandar (2022) said that the principal's leadership plays a role as a leader and determiner of direction and policy as well as able to realize Independence in their schools. The principal is able to direct the school to achieve its goals. According to Manalu and Kristianingsih (2024), effective principal leadership in improving student learning outcomes. The principal is able to encourage student achievement in, student achievement is very important as a benchmark for improving school quality. Afifah et al,. (2024) said that the principal's leadership increases teacher motivation and enthusiasm. As a leader, he plays an important role in managing and directing schools to achieve educational goals.

2. Literature Review

2.1. Leadership

2.1.1. Definition of Leadership

Leader (Influence) comes from leading (Lead). Lead comes from the Anglo-Saxon language which means the ship's route that directs the ship's management. This means that the ship's leader (captain) must be able to direct the ship as an organizational vessel and direct the ship's crew as followers, to achieve the common goals that have been set. Fatimawati, (2019). According to Risyan, (2019) leadership is a figure who successfully gathers others to follow him. Cowley's (2021) explanation of leaders is not comprehensive, only touching on a leader's efforts to find followers. Mahananingtyas et al., (2021) said that leadership is a person who determines goals, determines goals, motivates, and acts on his followers. a leader must have commitment, prioritize the interests of the people over personal interests. a leader must focus on the vision, help students, teachers, and education personnel, understand how to carry out the mission and success of the school, have effective communication, function his work team according to their expertise, train and guide teachers and education personnel Sofi'i, (2020)

According to Mirani et al., (2019) a leader is a person at the level of leadership in order to realize individual goals or organizational goals. emphasizes that leaders are expected to be able to influence, support and provide motivation so that their followers are willing to carry it out enthusiastically in achieving the desired goals individually and organizationally. The essence of Sutarto's statement emphasizes that leadership is a leader who must influence, support and provide motivation with the aim that the members he leads have enthusiasm to achieve the desired goals both individually and as an organization. Wijono, (2019) leadership includes the use of influence, all relationships can involve leaders, and the importance of the communication process. clarity and accuracy of communication of behavior and performance of followers and leadership focuses on the goals achieved. effective leaders must relate to individual, group, and organizational goals Gumela, (2020).

2.2. Indikator Kepemimpinan

Leadership indicators are aspects used in assessing the effectiveness of a leader in an organization. According to Azizah, (2024) the leadership indicators are as follows:

1. Ability to foster cooperation and good relationships.
   The principal is expected to be able to foster cooperation and good relationships with his colleagues so that team performance and team work climate can produce successful performance.
2. Effective ability
   Accuracy of policy, ability to complete tasks on time, being present on time and not being late are expected to be inherent in a principal.

3. Participatory ability
   A participatory leader is a leader who is always willing to provide solutions, provide suggestions or ideas to his work team with the aim of successfully achieving the vision and mission. In decision making, it is expected to be carried out through deliberation or in the sense that the principal is open to all ideas, or a leader who is not authoritarian.
4. Ability to delegate tasks or time
   The interests of the organization or institution must be prioritized over personal interests. In addition, leaders must be able to complete tasks and targets as determined.
5. Ability to delegate tasks or authority.
   Leaders must understand wisely in completing tasks. The accuracy of completing tasks that must be handled alone and handled in groups must be considered by the leader Jamilaturrosida
   (2023).

2.3. Quality of Education

2.3.1. Definition of Quality of Education

The quality paradigm in the context of education, includes input, process and output of education. Input can be understood as everything that must be available because it is needed for the process to take place. In terms of resource input (head, employees, teachers, etc.), resource input (equipment, supplies, money, materials, etc.), and device input such as (organizational structure, laws and regulations, job descriptions, plans, programs, etc.). While something from the process is called output. The quality of education is a combination of the characteristics of goods or services that show their ability to meet the needs and satisfaction and even exceed customer expectations, both explicit and implicit. The same thing was conveyed by Supriyanto in Flowrent Natalia, (2023) the quality of education can be interpreted as a condition of appearance or performance shown by each educational institution in order to achieve goals. Based on this statement, the quality of a school can be seen from the condition of the school, the suitability of the school, and the performance of its educators.

2.4.Education Quality Indicators

According to Putri, (2024) there are many indicators of good quality in educational institutions, such as: 1) high moral values/character; 2) very good exam results; 3) support from parents, the local business community; 4) abundant resources: 5) implementation of the latest technology; 6) strong and purposeful leadership; 7) concern and attention for students; 8) a balanced and relevant curriculum. Meanwhile, according to Fadhli, (2017) revealed indicators of quality schools are 1) parental support, 2) quality of educators, 3) student commitment, 4) school leadership, 5) quality of learning, 6) management of school resources, 7) school comfort.

5. Principal

The principal comes from two words, namely "Head" and "School". The word head can be interpreted as chairman, or leader in an organization or an institution, while the word school is an institution that is a place for teaching or learning. In general, the principal is the leader of a school. Wahjosumidjo, (2020) said that the principal is a functional teacher who is assigned to lead a school where the teaching and learning process is held or a place where interaction occurs between teachers who give lessons and students who receive lessons. Rahman et al., (2019) stated that the principal is a teacher who is appointed to occupy a structural position (principal) at a school.

According to Sopia, (2022) the principal is a teacher who has the ability to lead all resources available in a school so that they can be utilized optimally to achieve common goals. Based on the above view, the principal is defined as a teacher who is appointed as a leader in a

school with the consideration of being able to lead the school well. The principal is an educator, teacher and student guide at school. schools that are given additional duties as principal positions in order to lead and manage in accordance with applicable laws and regulations (Minister of National Education Regulation, Number 28 of 2010, concerning school principals). The decree of the Minister of State Apparatus No. 296 of 1996, concerning the functional position of teachers, states that the principal is a teacher who is given additional duties because he has managerial and leadership skills (SK.MENPAN, No. 296, 1996).

According to Herman et al., (2024) the principal is a teacher or educational staff who is selected and appointed by an authorized official to carry out additional tasks in managing and leading human resources, managing school administration, curriculum management, student management, management of facilities and infrastructure, management of relations with parents and the community in an effort to improve the quality of the learning process and the quality of educational outcomes. So the principal is an educator who has additional duties to lead the school. Nurfaizsah, (2024) said that at the elementary school level, actually the principal is a teacher who is given additional duties to lead a formal educational institution. The principal is a functional teacher who is given the task of leading a school where the teaching and learning process is carried out, or a place where teaching and learning takes place, or a place where interaction occurs between the teacher who gives the lesson and the students who receive the lesson (Wahjosumidjo 2002:83).

According to Hariani, (1014) the principal is a teacher who is appointed to occupy a structural position (principal) at school. Based on the statements of the experts above, The principal is a teacher who is appointed to lead a formal school with the consideration that the teacher is able to carry out his/her functions well, able to achieve the goals or vision and mission of the school he/she leads.

2.5.The Role of the Principal

An individual as a manager is expected to be able to function as adirector, agent of change, communicator, and mentor. In addition, to carry out his role as a leader, at least he must have certain skills as a task delegate, good communication, Influence People Ardan, (2021). In the perspective of national education policy (Ministerial Regulation of National Education No. 13 of 2007), there are seven main roles of the principal, namely:

1. Teacher, A person whose job is to convey messages or information to others can be interpreted as an individual who plays a role in communicating information to others.
2. Manager, a manager is a person who is tasked and responsible for managing and coordinating the work of a team or department in an organization or educational institution. The main task of a manager is to ensure that the goals and targets of the organization can be achieved effectively and efficiently.
3. Administrator, a person who plays a very important role in order to be able to improveor repair staff performance that is still lacking.
4. Supervisor, is a person who is tasked with supervising an activity and providing guidance to academic activities and school management.
5. Leader, a person who can motivate all the workforce in the school, in order to achieve goals.
6. Innovator, a person who encourages and appreciates learning practices that are still lacking.
7. Teacher motivation. A condition that can make teachers have a desire or need to achieve certain goals through carrying out their duties.

According to Ngaisah, (2023) the Minister of National Education's decree states that the role of the principal as EMASLIM (Educator, Manager, Administrator, Supervisor, Innovator, and Motivator) is no longer valid. The applicable Decree of the Minister of National Education is the Decree of the Minister of National Education of the Republic of Indonesia Number 162/U/2003 concerning the guidelines for assigning teachers as Principals, namely EMASLEC, namely Educator, Manager, Administrator, Supervisor, Leader, Entrepreneur, and Climate Creator.

Menurut Wahjosumidjo dalam buku Suparman (2019:138) peran-peran kepala sekolah yang menjalankan perannya sebagai manajer adalah peranan hubungan antar perseorangan, peranan informasional, dan sebagai pengambil keputusan. Kemudian dirumuskan oleh Suparman, yaitu:

1. As a liaison between individuals
   a. Figurehead. The principal is a symbol of the school, therefore must maintain self-integrity
   b. Leadership. The principal must be able to lead reflecting responsibility in mobilizing all resources available in the school
   c. Liaison. The principal becomes a liaison between school interests and interests outside the school
2. Informational Role
   a. As a monitor. The principal actively conducts observations of the environment because there may be information that affects the school.
   b. As a disseminator. The principal is responsible for disseminating and sharing information to teachers, staff, and parents.
   c. Spokesman. The principal provides information to external environment if deemed necessary.
3. As a decision maker (decisional roles)
   a. Entrepreneur. The principal tries to improve the school's performance through various kinds of thinking and conducting surveys to study various problems that arise in the environment school
   b. Disturbance handler. The principal is able to anticipate disturbances by paying attention to the situation and the accuracy of the decisions taken.
   c. A person who provides various resources (A resource allocater).
      The principal is responsible for determining and examining who will receive resources such as human resources, funds, equipment, and other school wealth.
   d. A negotiator roles. The principal is able to hold discussions and deliberations with external parties to establish and fulfill needs.

3. Methodology

This research was conducted to find a picture of the contribution of leadership in order to find values embedded in a better leader. Creswell et al., (2020) said that qualitative research is more commonly used by academics in the humanities, social sciences, and religion, in addition, qualitative research is also a study that can be the basis for something to understand a phenomenon that is a subject in research such as perception, behavior, and action. By using qualitative research as a researcher, it will be easier to understand and know various phenomena about what has happened in a environment in depth and to find out the behavior of objects in an environment so that a researcher can produce the desired research results.

According to John et al., (2019) qualitative research is one of the research methods that aims to gain an understanding of reality through an inductive thinking process. In this study, the researcher is involved in the situation and setting of the phenomenon being studied so that a

researcher can more easily recognize the subject by feeling what they feel and experience in everyday life by focusing on events, and reality in the context being studied. In qualitative research, researchers carry out activities objectively towards the subjective reality being studied. In this case, subjectivity applies to the reality being studied in the sense that the reality is viewed from the perspective being studied. This qualitative research prioritizes the accuracy and adequacy of data. The emphasis in qualitative is data validity, namely the conformity between what is recorded as data and what actually happens in the researched setting. According to Humanika et al., (2021), qualitative research is a research process to understand human or social phenomena by creating a comprehensive and complex picture that can be presented in words, reporting that has been obtained from informant sources, and is carried out in a natural setting. Qualitative research is also equipped with an ethnographic approach that can make it easier for researchers to carry out a more in-depth introduction process for research objects. Sumarto et al., (2020) Culture can be interpreted as all social behavior that exists in the environment and always lives together in the environment. As a researcher, it is necessary to understand culture so that it can be a reference for researchers to be able to know and understand more deeply about conditions in the environment where the researcher is and to fulfill and know what values are lived together in the organization. This research is supported by observation, interviews in more depth so that the data obtained is in accordance with the needs of the researcher and can be studied further. The activities carried out are also supported by documentation as evidence of the implementation and introduction that was done.

4. Results and Discussion

This discussion refers to the analysis of the roles of the principal of SDN 19 Sinto which influence the quality of education which is then described or explained in more detail. In this section, the researcher discusses the role of the principal's leadership in improving the quality of education. In this discussion, the researcher presents the findings of the data that has been collected.

Peran Kepala Sekolah Terhadap Mutu Pendidikan Di SDN 19 Sinto:

The role of the principal	**Quality of Education at SDN 19 SINTO**
- Involved - Improving the quality of educators - Liaison - Supervisor/supervision - Communicator - Resource provider	- The involvement of the principal increases the smoothness of school operations. - Teachers participate in training and activities carried out by the education office to broaden their knowledge in school management. - Implementation of Collaboration activities between SDN 01 Kampet in the 2024 ANBK simulation activities. - Improving teacher discipline and performance and ensuring a conducive school environment for the teaching and learning process. - Creating a discussion between the principal and parents in planning student activities - Availability of adequate learning facilities such as alphabet teaching aids, and textbooks to support the teaching and learning process.

in improving the quality of education at SDN 19 SINTO. According to Hafid et al., (2024) The quality paradigm in the context of education, includes input, process and output of education. Input can be understood as everything that must be available because it is needed for the process to take place. In this case, the quality of education at SDN 19 SINTO is seen through the smoothness of operations, improving teacher quality, implementing collaborative activities to improve student quality through various programs such as sports competitions and so on, teacher discipline, availability of resources needed for teaching and learning activities and the creation of open discussions between parents, teachers and principals in improving the quality of education of students.

The results of the study show that the quality of education at SDN 19 SINTO is quite good, this can be seen from how this school has been able to survive for 9 years. Although it does not have many students, this school always provides the best learning for its students. Implementation curriculum mardeka Also identified that SDN 19 Sinto was capable implement the curriculum prescribed by the government. Even though it is far from the main road, SDN 19 Sinto is capable prove yourself to compete with other SDNs around you. SDN 19 Sinto has also participated in the ANBK simulation at SDN 01 Kampet with the aim of improving the quality of student education. The role of the principal who encourages teachers to participate in various activities such as training and opening up the insights of teachers in this remote area to open themselves up to be able to compete with teachers at other SDN. Rodhiyana, et al., (2024) said that the principal acts as an educator, manager, administrator, supervisor, and entrepreneur in improving the quality of education. This is in line with what happened at SDN 19 SINTO, the principal acts as an educator and supervisor, where the principal schools not only manage schools but also as teaching staff at schools. In addition, the principal plays a role in supervising teachers and students at school so that a kind school environment is created and supports teaching and learning activities. According to Latifah (2022), a principal must be able to analyze the needs of his school by providing resources to improve the quality of education and must be able to build cooperation with other parties. This also happened at SDN 19 Sinto. The principal tried to provide alphabet teaching aids, textbooks, and sports equipment to support student learning. In addition, building cooperation with external parties is carried out in the context of Computer-Based National Assessment Simulation activities (ANBK) at SDN 10 Sinto can be seen as one of the steps to improve students' talents and abilities in the computer field, especially if the objectives and implementation are planned carefully. ANBK simulation allows students to practice directly with computers, understand how they work, and master basic skills such as typing, pointing, scrolling, and using exam software. My previous research discussed the role of principal leadership in improving the quality of education through school-based research by Kurniawati et al., (2020). In this case, the research at SDN 19 Sinto has similarities with the title of the principal's role in improving the quality of education. Previous research discussed regarding improving quality through public relations as stated by Supriyanto et al., (2019) that public relations in improving school quality internally and externally includes the dimensions of planning, implementation, and evaluation. Previous research has similarities with the title of the principal's role in improving the quality of education. previous research discusses the role of principal leadership in improving the quality of schools such as leaders and providing motivation and being role models, as well as examples in work spirit, school leaders must can organize educational institutions and manage them to be better, as innovators who initiate ideas to be able to run school-based programs. Previous research according to Praserjo et al., (2019)

said that the principal plays a role as a manager and entrepreneur in improving the quality of educators through MBS, This is one way to improve the quality of education. Because it also happened at SDN 19 Sinto where the principal gave recommendations to teachers in carrying out training at the Education Office hall as training participants to better understand the main tasks of teachers, especially regarding management pedagogy.

5. Conclusion

The principal has a crucial role in improving the quality of the school. Various strategies need to be designed and implemented to create quality education. At SDN 19 Sinto, the principal Schools bear a great responsibility in this effort, which includes several important roles.

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EMPLOYEE PERFORMANCE ANALYSIS BERKAT MART BENGKAYANG REGENCY, WEST KALIMANTAN

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Abstract

This study aims to analyze employee performance at Berkat Mart, a minimarket classified as a Micro, Small, and Medium Enterprise in Bengkayang Regency, West Kalimantan. This study is based on the importance of human resources in supporting organizational performance, especially in the context of retail business operations. This study uses a qualitative approach with ethnographic methods, using observation, in-depth interviews with five informants (one store manager and four employees), and documentation. Data were analyzed using Creswell's data analysis spiral, which includes data collection, organization, classification, interpretation, and visualization. The results of the study indicate that employee performance at Berkat Mart is influenced by several factors such as motivation, discipline, leadership, and shift systems. The performance indicators observed include quantity and quality of work, punctuality, effectiveness, teamwork, initiative, and discipline. This study concludes that effective employee performance management, supported by clear communication, proper division of tasks, and regular feedback, contributes to increased productivity and service quality at Berkat Mart.

Keywords: productivity, human resource management, employee performance, UMKM

1. Introduction

The success of an organization is largely determined by the quality of its human resources (HR). In an increasingly competitive business world, companies are required to manage their workforce effectively in order to achieve maximum work productivity (Rovita et al., 2024). Well-trained, motivated, and productive HR will make a significant contribution to achieving organizational goals and improving overall performance (Widjaja, 2021). Meanwhile, Pusparani, (2021) emphasized that proper HR management can increase work efficiency and support the achievement of company targets.

According to Salfarini et al., (2025), performance is an important factor in supporting the growth of Micro, Small, and Medium Enterprises (MSMEs). Employee performance reflects an individual's ability to carry out tasks and responsibilities, which include aspects of the quality and quantity of work results. Important elements in employee performance include discipline, responsibility, loyalty, creativity, cooperation, and initiative in completing work. Optimal performance will drive operational effectiveness and build a positive image of the company in the eyes of the public.

Performance and productivity are closely related. Good performance, namely completing tasks on time and according to standards, is the basis of high work productivity. Productivity itself refers to the ability to produce maximum output with efficient resources (Darmawan, 2022). According to Adhitya, (2023), productivity also describes the enthusiasm and commitment of employees to create a better quality of life by increasing efficiency and work results. Therefore, improving employee performance will have a direct impact on the overall productivity of the organization.

Good performance management can be achieved through the implementation of effective Human Resource Management (HRM). Components such as job training, fair compensation

systems, supervision, and the creation of a supportive work environment are crucial elements in improving performance(Arfiananda et al., 2024) .In addition, motivation, leadership style, and positive organizational culture have also been shown to be key drivers for improving the quality of individual work (Diana & Rahmat, 2022).

MSMEs (Micro, Small, and Medium Enterprises) are a strategic sector that plays an important role in driving local and national economic growth. According to Lubis & Salsabila (2024), MSMEs have a major contribution in creating jobs, increasing community income, and advancing the regional economy. One of the MSMEs that is growing in Bengkayang Regency, West Kalimantan is Berkat Mart, a minimarket that was established in 2021. This minimarket was established with the aim of not only meeting the needs of local consumers but also creating job opportunities for the surroundding community. Currently, Berkat Mart involves 13 employees in its operations.

In carrying out its business activities, Berkat Mart implements a two-shift work system that requires its employees to work in a structured, efficient, and responsible manner. The main duties of employees are not only limited to being cashiers and display organizers, but also include maintaining store cleanliness, managing stock, and providing friendly service to customers. To assess the extent to which employees carry out their duties well, a number of performance indicators are used that refer to Robbins (2016), namely: quantity and quality of work, discipline, effectiveness of use of time and work tools, teamwork, initiative, and punctuality.

Sari & Rizqi, (2023)emphasized that the compensation system and job fairness greatly affect employee motivation and work performance. Kina found that personal factors, leadership, teamwork, work systems, and organizational environment together shape optimal employee performance. Meanwhile, Arfiananda et al. (2024) emphasized that leadership ethics are an important element in creating a work atmosphere that is conducive to employee productivity and loyalty.

Based on the discussion, this study was conducted with the aim of analyzing employee performance at Berkat Mart, Bengkayang Regency, West Kalimantan, with a focus on key performance indicators that are relevant in the context of retail MSME operations. This study is expected to not only provide practical contributions to HR management at Berkat Mart, but also enrich academic literature in the field of human resource management, especially in the context of MSMEs in the region.

2. Literature Review

This research is based on basic concepts in Human Resource Management (HRM) as well as theories regarding employee performance and the factors that influence it, especially in the operational context of MSMEs such as Berkat Mart.

2.1.Human Resource Management

Human Resource Management is a strategic process that includes planning, procurement, training, development, and evaluation of workforce performance aimed at optimizing human potential to support the achievement of organizational goals (Sinambela, 2021). In (MSMEs), HR has a very important role because employees are the main assets that determine business success. Although many MSMEs manage human resources informally due to budget and system limitations, HR practices remain an important foundation in improving work efficiency and customer service (Aulia & Jamilah, 2024).

The purpose of HR, as explained by Babullah (2024), is to create a balance between organizational and individual needs, increase employee motivation and competence, and maintain harmonious working relationships. In the case of MSMEs such as Berkat Mart in Bengkayang Regency, the implementation of HR helps direct employee performance to remain

disciplined, productive, and able to work together in carrying out daily operations optimally. Therefore, the implementation of good HR in MSMEs not only improves individual performance, but also supports sustainable business growth and contributes to the local economy.

2.2.Employee performance

Performance is an important element that contributes to the success of individuals, teams, or organizations in achieving their goals. From a management perspective, performance reflects the work results obtained based on the tasks and responsibilities carried out, and functions as an indicator of productivity and efficiency. Performance is not only measured by the final result, but also by the process and quality of its implementation (Suryani et al., 2022). Employee performance can be understood as the achievement of the tasks carried out, which involves contributing to the organization's work program. According to Chairunnisah et al. (2021), good performance includes two main aspects, namely the quantity and quality of work results that are in accordance with the responsibilities carried out. In addition, Sumitra et al. (2023) emphasize that performance is the result of the willingness to complete tasks based on the authority held.

In this study, performance is influenced by two main factors, namely internal and external factors (Diana and Rahmat, 2022). Internal factors include competence, motivation, and work discipline. Competence is a combination of knowledge, skills, and attitudes needed to complete tasks well. Motivation is an important driving force, both from within and from outside, to increase work enthusiasm. Meanwhile, discipline reflects compliance with rules and responsibility for working hours. On the other hand, external factors that also affect performance are leadership and human resource management systems that create a supportive work environment. To measure performance, this study uses indicators proposed by Robbins (2016:260), which consist of work quantity, work quality, punctuality, effectiveness, teamwork, initiative, and work discipline. These indicators provide a comprehensive picture of employee contributions in supporting the achievement of organizational goals.

2.3. MSMEs

Micro, Small, and Medium Enterprises (MSMEs) are a strategic sector in national economic development. According to Law of the Republic of Indonesia Number 20 of 2008 concerning Micro, Small, and Medium Enterprises, MSMEs are grouped into three main categories based on the criteria of assets and annual turnover. Micro Enterprises are productive businesses owned by individuals and/or individual business entities that have a maximum net worth of IDR 50 million excluding land and buildings for business premises, and have annual sales results of at most IDR 300 million. Small Enterprises are productive economic businesses that stand alone, owned by individuals or business entities, which are not subsidiaries or branches of large companies, with net worth of more than IDR 50 million to IDR 500 million and annual sales of more than IDR 300 million to IDR 2.5 billion. Meanwhile, Medium Enterprises are businesses that have net worth of more than IDR 500 million to IDR 10 billion, and annual sales results of more than IDR 2.5 billion to IDR 50 billion. MSMEs are not only the backbone of the national economy, but also play an important role in job creation, equalizing welfare, and empowering the community economy in various regions, including in areas such as Bengkayang Regency.

3. Methodology

This study uses a qualitative approach with ethnographic methods to gain an in-depth understanding of employee performance at Berkat Mart, Bengkayang Regency. The ethnographic method was chosen because it allows researchers to directly observe employee work activities and social interactions, as well as explore their experiences through in-depth

interviews and related documentation. The research informants consisted of one store manager and four employees who were selected purposively based on a minimum work period of two years so that the data obtained was representative and relevant.

Data collection techniques included participatory observation to understand daily working conditions, in-depth interviews to explore employee perspectives, and documentation in the form of performance records and company documents. To ensure the validity of the data, triangulation techniques were used by comparing information from various sources and data collection methods. Data analysis techniques were carried out in a spiral following the Creswell model, starting from collection, management, reading, classification, to presenting the results in the form of narratives and visualizations that describe the factors that influence work productivity at Berkat Mart

4. Results and Discussion

This study aims to analyze employee performance at Berkat Mart, Bengkayang Regency using a qualitative approach. Data were obtained through in-depth interviews with five informants consisting of the store manager and several staff working in the cashier and logistics departments. The analysis was conducted based on seven main indicators of employee performance proposed by Robbins (2016), namely work quantity, work quality, work discipline, work effectiveness, teamwork, work initiative, and punctuality. In this discussion, work discipline and punctuality indicators are combined because both are closely related to the practice of carrying out tasks in a retail work environment such as Berkat Mart.

Work quantity refers to the amount of work that employees are able to complete within a certain period of time. At Berkat Mart, the quantity of work of employees is quite good. They are able to complete various daily tasks according to the division of labor that has been determined. Although at certain times such as weekends and the beginning of the month there is an increase in the number of customers, employees are still able to maintain a work rhythm with stable productivity. This shows their ability to adapt to fluctuations in workload without sacrificing service quality. Aria said: "In terms of workload, I think it is in accordance with the 10-hour work time, I think it is appropriate." This statement illustrates that the allocation of workload applied by management is in accordance with the work capacity of employees, so that it does not cause excessive pressure and still allows for efficient work completion.

The quality of employee work at Berkat Mart is also at a fairly good level. This is reflected in their thoroughness in carrying out technical tasks such as operating the cash register, arranging products on shelves, and interacting with customers. In addition to working according to procedures, employees also demonstrate a professional and friendly attitude in providing services to consumers. Lidya, said: "I always emphasize to employees to follow the applicable SOP, maintain cleanliness, and provide friendly service to customers." Commitment to this standard operating procedure (SOP) not only creates an orderly work system, but also improves the company's image in the eyes of customers because of its consistency in providing quality service.

Work discipline and punctuality are inseparable indicators in the context of a retail work environment, where time is a key factor in service. Based on the interview results, the majority of employees showed high discipline in various aspects, ranging from punctuality in attendance, compliance with work schedules, to carrying out tasks according to regulations. Ms. Clara stated: "I always arrive on time, follow the applicable rules, and complete tasks according to schedule." The discipline shown is not only limited to administrative aspects, but is also reflected in the consistency and responsibility of employees towards their work obligations. Punctuality in completing work, including customer service, stock replenishment, and daily

task reporting, is evidence that employees understand the importance of a regular work rhythm to maintain smooth store operations.

Work effectiveness is measured by the ability of employees to use available resources optimally to achieve maximum work results. The results of the study showed that employees at Berkat Mart are able to plan and organize work priorities well. They can operate work aids such as cash registers and barcode systems, and complete daily tasks with high efficiency. Ms. Susi, "I always prioritize tasks, do the important and urgent ones first so that everything is finished on time." In fact, she also proposed rearranging the warehouse so that the process of picking goods becomes faster and neater. This shows that work effectiveness is not only measured by the final result, but also by the systematic work process and the existence of continuous improvement efforts from within the employees.

Teamwork is an important factor that supports smooth operations, especially in a multitasking work environment like Berkat Mart. Employees help each other, understand each other's roles, and maintain open and constructive communication. This collegial work culture makes completing tasks easier and faster, especially when the workload increases. Aria: "There are definitely complications, but I go directly to the person and talk nicely." This attitude shows emotional maturity and awareness of the importance of harmonious work relationships to build synergy within the team.

Work initiative reflects the extent to which employees have awareness and responsibility for their work without always having to be directed by their superiors. At Berkat Mart, several employees show high initiative in various things, such as maintaining the cleanliness of the work area, rearranging items to be more efficient, and providing input to management regarding the workflow. Ms. Susi: "I often rearrange the arrangement of items so that they are easier to find and don't waste my time. I also actively communicate with my coworkers to share ideas so that teamwork can be more effective." These actions are a manifestation of employees' intrinsic motivation to contribute maximally to the progress of the company and create a conducive work environment.

Overall, the results of the study indicate that the performance of Berkat Mart employees in Bengkayang Regency is classified as good and in accordance with the indicators proposed by Robbins (2016). Employees demonstrate work competencies characterized by productivity, service quality, discipline, work effectiveness, and the ability to build cooperation and initiative. These findings show that with good human resource management and a supportive work environment, MSMEs such as Berkat Mart can optimize the potential of their employees to support operational success and business sustainability.

5. Conclusion

This study has successfully analyzed employee performance at Berkat Mart using a qualitative approach and ethnographic methods. The results of the study indicate that employee performance is influenced by key factors such as motivation, discipline, leadership, and a structured work system. Performance indicators including quantity and quality of work, punctuality, effectiveness, teamwork, initiative, and discipline are key to maintaining productivity and service quality at the minimarket.

This finding reinforces the importance of effective human resource management, especially in the MSME sector such as Berkat Mart. Clear communication, proper division of tasks, and regular feedback have been shown to improve employee motivation and performance. Thus, continuous improvement and development efforts in the field of HR management are needed so that companies can continue to compete and provide the best service to the community. This study is expected to be a reference for MSMEs in the retail sector in improving the quality of

employee performance and contributing to the development of human resource management science in Indonesia.

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ANALYSES OF MARKET ANOMALY TESTING TO THE EFFECT OF DAY OF THE WEEK, AND FOUR WEEK EFFECT ON LQ-45 COMPANIES SHARE IN THE INDONESIA STOCK EXCHANGE

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Abstract

The purpose of this study is to analyze and test whether there is a difference in stock returns on LQ-45 company stocks on the Indonesia Stock Exchange during the Covid-19 pandemic in 2023, calculated before the issuance of the presidential circular and after the Covid-19 pandemic in 2023. This study uses a causal descriptive research design with a comparative research method, and uses the Paired T Test and Wilcoxon Signed Ranks Test. The results of the study indicate that during and after the Covid-19 period there was no significant difference in the stock returns of LQ-45 companies, which means that there was no influence of the day of the week effect or the four-week effect on the stock returns of LQ-45 companies on the Indonesia Stock Exchange in both periods. This study provides significant understanding for capital market stakeholders regarding stock behavior during and after the Covid-19 pandemic. The findings are expected to be the basis for further research in studying the factors that influence stock returns and investment financial decision making in the Indonesian capital market.

Keywords: Market Anomaly, Four Week Effect, Day of the Week Effect, LQ-45, Stock Returns, Covid 19.

1. Introduction

When analyzing financial variables such as stock prices listed on the stock exchange, the focus is usually on one factor, namely risk aversion. Thus, in line with the premise of perfect rationality, investors will try to make their decisions at the lowest level of risk determined by the volatility of returns, represented by the variance (standard deviation) of returns over a certain period. According to Markowitz in (Jones, C.P. 2013), rational investor decisions are made by considering two important dimensions, expected returns and variance.

There are various instruments available for investment, and the choice depends on the goals, risk tolerance, and preferences of the investor, one of which is stocks. If an investment creates the opportunity to make other potentially profitable investments that would not otherwise be possible, then the investment contains a growth (expansion) stock option. (Brigham & Houston, 2019: 455). In general, stocks are traded on the capital market, which is a place where two interests meet, namely the party with excess funds (investors) and the party who needs funds (issuers) (Putri, J.A. et al., 2020). Regarding the Covid 19 period causing disruption in investment financial decisions, we then want to analyze and test whether there are differences and influences of deviation conditions on stock returns in LQ-45 companies on the Indonesia Stock Exchange during that period. After considering the issue of market equilibrium, it is realized that although it is relatively easy to discuss, what is important is how quickly the market digests, and how well and quickly the stock price information reflects the information. Investors can beat the market with the right techniques because there is market inefficiency,

while others say the market is efficient and most investors cannot beat the market, but the presence of the January effect will cause decisions to change.

Market anomalies are conditions circulating prices do not reflect existing information. In other words, market anomalies are deviations from the efficient market hypothesis (Reynaldo et al., 2023). Covid can also cause deviations. Market anomalies reveal patterns that can generate higher returns than expected in efficient markets, (Sinaga et al., 2022), stock return movement patterns that were initially random because they reflected all available information, can be predicted due to anomalies, thus providing opportunities for investors to obtain abnormal returns. There are at least four types of market anomalies, namely accounting anomalies, event anomalies, firm anomalies, and seasonal anomalies (Gayaker et al., 2020).

The day of the week effect is a condition where the average daily stock return affects stock returns where on each trading day there are different values (Derbali & Hallara, 2016), but the four-week effect is a phenomenon that states that only in the last week of each month, namely the fourth and fifth weeks, there is a Monday effect, meanwhile, returns on Monday in the first to third weeks are considered not significantly negative (Putri, N.W. et al., 2021). The anomalous phenomenon that results in differences in average investment returns can be explained by investor behavior. Behavioral finance theory states that investors do not always act rationally. Negative returns on Mondays are caused by the large number of investors who are reviewing various relevant information and planning strategies related to market transactions based on newly received information (Okorie & Lin, 2021). Most investors tend to postpone their stock transactions. In psychological analysis, investors tend to dislike Monday because it is the beginning of the work week, so this can affect mood and stock trading activities (Caporale & Plastun, 2019). On the days after Monday, investors generally have planned and started implementing stock transaction strategies to achieve profits, so that there is an increase in the average stock return on other trading days such as Tuesday, Wednesday, Thursday, and Friday (Kenourgios et al., 2014).

The existence of significant anomalies will be very useful for developing profitable trading strategies. Investors can buy stocks on trading days with low returns and then sell stocks on trading days with high returns (Zilca, 2017). However, there is no guarantee that market anomalies will help investors improve their investment decisions because empirical testing of market anomalies does not represent actual investment strategies, so investors must be careful in utilizing this phenomenon (Xiao, 2016). In Indonesia, research on anomalies shows varying results. Reynaldo et al., (2023) in their study on LQ 45 stocks listed on the Indonesia Stock Exchange for the 2017 period, revealed that there was an anomaly of the day of the week effect. The results of the study revealed that daily stock returns tended to be positive and peaked on Friday. While daily stock returns tended to be negative and reached their lowest point on Monday. According to Trisnadi & Sedana, (2016), in their study on LQ 45 stock market anomalies, there was no anomaly of the day of the week effect. However, there was an anomaly of the four-week effect.

In a study conducted by Rahmawati, I.N.I. & Setiyawan, S. (2022) on the IDX 30 stock returns on the Indonesia Stock Exchange, there was an anomaly of the day of the week effect there. Research conducted by Jenderal, et al., (2023) on the Indonesia Stock Exchange, showed that there was no anomaly of the four-week effect, but there was an anomaly of the day of the week. Seeing the inconsistency of research results regarding the phenomenon of the day of the week effect and the four-week effect, researchers are interested in conducting more in-depth research on market anomalies on the Indonesia Stock Exchange (IDX). This study uses companies included in the LQ45 index on the Indonesia Stock Exchange during the Covid-19 period and post-Covid-19 in 2023. The Covid-19 period is calculated from before the government issued Presidential Decree of the Republic of Indonesia (Keppres) Number 17 of

2023 concerning the Determination of the End of the Corona Virus Disease 2019 (COVID-19) Pandemic Status in Indonesia (Sinaga et al., 2022), in June 2023, and post-Covid-19 is calculated after the government issued the decree. The Covid-19 and Post-Covid-19 periods will then be compared between these two periods. Companies included in the LQ45 on the Indonesia Stock Exchange were selected, namely stocks that have high liquidity factors including transaction value, transaction frequency, number of transaction days in the regular market, and large market capitalization.

2. Literature Review and Hypothesis Development

2.1. Market Efficiency

Market efficiency can be defined as the relationship between security prices and the information in circulation. A market is said to be efficient if no one individual investor or institutional investor can earn abnormal returns, adjusted for risk, using existing trading strategies (Wong et al., 2006; Zhang, Lai et al., 2017). Bodie et al. (2012) in his publication distinguishes three types of efficient market hypotheses based on "all available information". The weak form hypothesis states that stock prices already reflect all the information that can be gained by examining market trading data such as a history of past prices, trading volume or short-term interest rates. The semi-strong form hypothesis advances the concept that all publicly available information regarding a company's prospects should be reflected in stock prices (Sawitri, N.N. & Astuty, P. 2018).

2.2. Market Anomalies

In the study financial markets anomalies: a research review from the perspective of rational and irrational arguments there are various arguments provided by the financial literature to understand the nature of the deviations observed in financial centers that contradict the Efficient Market Hypothesis (EMH). Disagreements are expressed regarding the nature of these anomalies; however, two groups of arguments can be identified. The first group concerns the rational explanations adopted by the supporters of the efficiency hypothesis, while the second group of arguments relates to behavioral finance insights, which support the idea of irrational behavior to explain the divergence of financial market dynamics from the rationality predicted by traditional finance (Elotmani, Y. 2024).

Research on the occurrence of day of the week effect, Monday effect, weekend effect, month of the year effect, and January effect on IDX80 stock trading on the Indonesia Stock Exchange. is an empirical study of trading duration (daily and monthly) and stock returns using a comparative method. The research population is companies included in the IDX80 index on the Indonesia Stock Exchange. Using the purposive sampling method, the sample used is 70 companies that are consistently listed in the IDX80 index and are actively traded. Data covering daily and monthly stock returns for the period 1 February 2019 - 31 January 2020 were analyzed using the Kruskal Wallis and Mann Whitney U Test/Wilcoxon Sum Rank Test. The results of the study show that during the research period, market anomalies that occurred in the Indonesian Capital Market were the day of the week effect, Monday effect, and month of the year effect. Meanwhile, market anomalies that have not been proven to occur in the Indonesian Capital Market are the weekend effect and January effect (Yolanda, F.S., et.al. 2022).

However, if there is a fluctuation in the market, investors suddenly respond to the market conditions and act irrationally (Okorie & Lin, 2021). In line with this theory, there are anomalies that contradict the efficient market hypothesis, namely the day of the week effect and the four-week effect. The cause of this anomaly is herd behavior, referring to the tendency of individuals to follow or imitate the actions or decisions taken by the majority, without considering information independently, this phenomenon is called herding behavior (Rahayu et al., 2020).

In the context of financial markets, herding behavior can occur when investors or other market participants follow trends or steps taken by the majority of market participants, regardless of fundamental analysis or underlying information (Ouarda, et al., 2013)

2.3. Hypothesis

Based on what is described above, the research hypothesis can be formulated as follows:
H1: There is a difference in stock returns on certain days with other trading days on stocks included in the LQ45 during the Covid-19 period.
H2: There is a difference in stock returns on Monday of the 4th week with other trading weeks on stocks included in the LQ45 during the Covid-19 period.
H3: There is a difference in stock returns on certain days with other trading days on stocks included in the LQ45 during the post-Covid-19 period.
H4: There is a difference in stock returns on Monday of the 4th week with other trading weeks on stocks included in the LQ45 during the post-Covid-19 period.

3. Research Method

This research is a quantitative research that emphasizes testing theories through measuring research variables with numbers and conducting data analysis with statistical procedures that aim to test hypotheses. Based on the research objectives, this research is a deductive research, namely a type of hypothesis research through theory validation or testing the application of theories in certain circumstances. Based on the characteristics of the problem, this research is included in comparative causal research, namely a type of research with problem characteristics in the form of a causal relationship between two or more variables (Pradnyaparamita, N.W. & Rahyuda, H. 2017).
The research involves the use of numeric data in the form of time series. This research is included in the descriptive research category, which is used to explain current problem solving by utilizing data as a basis, then the data is presented, analyzed, and interpreted.

In this study, the population that is the focus is the companies included in the LQ45 Indonesia Stock Exchange, which totals 43 companies. To select samples, a purposive sampling technique is used with the aim that the samples taken are in accordance with the predetermined criteria. In this study, the data used is secondary data, namely information that is not obtained directly by the researcher, but through intermediaries such as other individuals or documents.

4. Result and Discussion

4.1.Variable Measurement

4.1.1. The Day of The Week Effect

To calculate stock returns on trading days (The Day of The Week Effect), it can be done by calculating the daily stock returns using the following formula:.

1.	RMonday	$\frac{\text{PMonday} - \text{PFriday}}{\text{Previous Week PFriday Previous Week}}$
2.	RTuesday	$\frac{\text{PTuesday - PMonday}}{\text{PMonday}}$
3.	RWednesday	$\frac{\text{PWednesday - PTuesday}}{\text{PTuesday}}$

4.	RThursday	$\frac{\text{PThursday - PWednesday}}{\text{PWednesday}}$
5.	RFriday	$\frac{\text{PFriday – PThursday}}{\text{PThursday}}$

Description:
R = Stock Return
P = Stock Closing Price

After calculating the daily stock returns for one year, the average is determined, then grouped based on trading days. The return group for each day will be compared with the average stock return from other days in one week, which can be calculated using the following formula: The calculation results are then grouped and compared with the daily return group that has been calculated previously. Comparisons will be made between returns on Monday and non-Monday, Tuesday and non-Tuesday, Wednesday and non-Wednesday, Thursday and non-Thursday, and Friday and non-Friday using the Paired-Samples T Test method. To find out the Week Four Effect phenomenon, it can be done by calculating daily returns using the following formula:

1.	Rnot Monday	$\frac{\text{RTuesday + RWednesday + RThursday + RFriday}}{4}$
2.	Rnot Tuesday	$\frac{\text{RMonday + RWednesday + RThursday + RFriday}}{4}$
3.	Rnot Wednesday	$\frac{\text{RMonday + RTuesday + RThursday + RFriday}}{4}$
4.	Rnot Thursday	$\frac{\text{RMonday + RTuesday + RWednesday + RFriday}}{4}$
5.	Rnot Friday	$\frac{\text{RMonday + RTuesday + RWednesday + RThursday}}{4}$

The stock return results obtained will be grouped into two categories, namely stock returns on Monday during the first week to the third week, and stock returns on Monday during the fourth week to the fifth week. After this grouping, both categories will be tested using the Paired-Samples T Test.

1.	RMonday (Week 1-3)	$\frac{\text{PMonday - PFriday}}{\text{PFriday}}$
2.	RMonday (Week 4-5)	$\frac{\text{PMonday - PFriday}}{\text{PFriday}}$

The stock return results obtained will be grouped into two categories, namely stock returns on Monday during the first week to the third week, and stock returns on Monday during the fourth week to the fifth week. After this grouping, both categories will be tested using the Paired-Samples T Test.

4.2.Data analysis

Table 1
Results of Period Normality Test During Covid-19
Kolmogorov-Smirnov

Days	Statistic	df	Sig.
Monday	.099	1459	.200
Tuesday	.076	1450	.200
Wednesday	.118	1593	.200
Thursday	.170	1573	.023
Friday	.111	1424	.200

Table 2
Results of Normality Test for Post-Covid-19 Period
Kolmogorov-Smirnov

Hari	Statistic	df	Sig.
Monday	.144	2284	.200
Tuesday	.153	2164	.200
Wednesday	.104	2407	.200
Thursday	.101	3021	.200
Friday	.156	2531	.200

Table 3

Results of Period Normality Test During Covid

Hari	Kolmogorov-Smirnov[a] Statistic	df	Sig.
Senin Minggu Terakhir	.241	1073	.193
Senin Bukan Minggu Terakhir	.459	1645	.000

Table 4
Results of Normality Test for Post-Covid-19 Period

Hari	Kolmogorov-Smirnov[a] Statistic	df	Sig.
Senin Minggu Terakhir	.210	3219	
Senin Bukan Minggu Terakhir	.478	2810	.000

Based on the Kolmogorov-Smirnov results in Table 1 and Table 2, for all variables the results are > 0.05 which means the data is normally distributed, so the Paired-Samples T Test is used with the basis for decision making, namely
1. If t-count> t-table or Sig. < 0.05 then there is no difference in the variables being tested
2. If t-count < t-table or Sig. > 0.05 then there is a difference in the variables being tested.

While in Tables 3 & 4 for all variables the results are < 0.05 which means the data is not normally distributed. Since the data is not normally distributed, for the hypothesis H2 which states that there is a difference in stock returns on Monday of the 4th week with other trading weeks on stocks included in the LQ45 during the Covid-19 period and H4 which states that there is a difference in stock returns on Monday of the 4th week with other trading weeks on stocks included in the LQ45 during the post-Covid-19 period, the Wilcoxon Signed Rank Test analysis method was used. This test is used to compare the mean value of a variable derived from two paired data samples, with the basis for decision making, namely
1. If the Asymp.Sig value <0.05, then there is a difference in the variable being tested
2. If the Sig Asymp.Sig value> 0.05, then there is no difference in the variable being tested

Table 5
Results of Descriptive Statistical Analysis of the Period During Covid-19

Days	N	Minimum	Maximum	Sum	Mean	Std. Deviation
	33	913,320,007	969,919,983	31,244,539,854	946,804,238.00	14,585,133.008
Tuesday	37	901.090.027	968.669.983	35.049.809.999	947.292.162,14	14.502.600,525
Wednesday	33	894.950.012	969.289.978	31.264.309.995	947.403.333,18	15.933.532,266
Thursday	31	905.679.993	967.030.029	29.356.730.101	946.991.293,58	15.738.632,729
Friday	33	905.489.990	966.960.022	31.269.889.894	947.572.421,03	14.249.873,975
Valid N	31					

Valid N 31 (listwise)

Table 6

Results of Descriptive Statistical Analysis of the Post-Covid-19 Period

Days	N	Minimum	Maximum	Sum	Mean	Std. Deviation
Monday	13	889.349.976	962.609.985	12.076.580.019	928.967.693,77	22.846.563,269
Tuesday	13	892.340.027	959.599.976	12.089.967	929.929.997,46	21.643.517,367
Wednesday	14	878.880.005	968.729.980	13.020.729.979	930.052.141,36	24.074.166,438
Thursday	13	889.320.007	977.070.007	12.110.760.009	931.596.923,77	26.262.706,032
Friday	14	892.919.983	970.570.007	13.077.689	934.120.710,07	25.313.170,891

Table 7
Results of Descriptive Statistical Analysis of the Period Before Covid-19

	N	Minimum	Maximum	Sum	Mean	Std. Deviation
Senin Bukan Minggu Terakhir	27	95.373.999	969.919.983	24.704.833.837	914.993.845,81	164.508.627,216
Senin Minggu Terakhir	8	929.099.976	965.619.995	7.582.619.995	947.827.499,38	10.732.410,715
Valid N (listwise)	8					

Table 8
Results of Descriptive Statistical Analysis of the Period After Covid-19

	N	Minimum	Maximum	Sum	Mean	Std. Deviation
Senin Bukan Minggu Terakhir	9	89.901.001	957.090.027	7.542.241.029	838.026.781,00	281.032.715,600
Senin Minggu Terakhir	4	889.349.976	962.609.985	3.725.229.981	931.307.495,25	32.196.244,155
Valid N (listwise)	4					

Based on the results of the descriptive analysis in Table 3 and Table 4, it shows that the average stock return during and after Covid-19 consistently provides a fairly low return. This phenomenon reflects market conditions that are less favorable for investors, where the return value obtained from stock investments does not reach the expected level. This shows that overall stock performance did not show a significant increase in the period during or after Covid-19. Thus, this highlights the challenges faced by investors in generating optimal profits in an uncertain and unstable market environment. This supports research from (Okorie & Lin, 2021) Since the level of market information efficiency is key for strategic actors to gain profit, shocks such as the COVID-19 pandemic can play a role in the nature of market information efficiency.

In terms of comparison, the results of the descriptive analysis show that the lowest returns occurred in the period after Covid-19 and the highest occurred in the period during Covid-19. During the Covid-19 pandemic, investors tend to see falling stock prices as an opportunity to invest at lower prices, with the hope of making a profit in the future when market conditions

recover. On the other hand, in the period after Covid-19, stock returns tend to be lower, indicating that investors may be more cautious in investing their funds given the high volatility observed during the pandemic. Therefore, these results reflect the behavioral patterns of investors adapting to changing market conditions, as well as shifts in risk perceptions and potential profits (Sinaga et al., 2022), (Islam & Sultana, 2015).

4.3.Hypothesis Test Results

Table 9
Paired Samples Test Results for the Period During Covid-19

	Std. Deviation	t	df	Mean	Sig. (2-tailed)
Senin - Selasa	10336081.812	.774	32	139181 4.152	.445
Senin - Rabu	10484358.624	-.328	32	-59909 5.182	.745
Senin - Kamis	12183010.565	-.602	30	-13171 03.258	.552
Senin - Jumat	10855005.322	-.407	32	-76818 3.030	.687

Table 10
Paired Samples Test Results for the Post-Covid-19 Period

	Std. Deviation	t	df	Mean	Sig. (2-tailed)
Senin - Selasa	5.704.157,704	-.608	12	-962.303,692	.554
Senin - Rabu	10.374.948,694	.657	12	1.890.770,769	.524
Senin - Kamis	23.988.862,770	-.395	12	-2.629.230,000	.700
Senin - Jumat	14.951.118,676	-.567	12	-2.349.224,231	.581

Based on the results of the Paired Samples Test during Covid-19 as seen in Tables 9 and 10, the Sig. (2-tailed) value is > 0.05, so H1 and H3 are rejected, so it can be concluded that there is no difference, in other words, these results show that there is no significant difference in stock returns on LQ-45 company stocks on the Indonesia Stock Exchange during the Covid-19 period. This means that during the Covid-19 period there was no influence of the day the week effect on stock returns.

Table 11

Wilcoxon Signed Ranks Test Results for the Period During Covid-19

	Z	Asymp. Sig. (2-tailed)
Senin Minggu Terakhir - Senin Bukan Minggu Terakhir	-1.680b	.093

Table 12

Wilcoxon Signed Ranks Test Results for the Post-Covid-19 Period

	Z	Asymp. Sig. (2-tailed)
Senin Minggu Terakhir - Senin Bukan Minggu Terakhir	.000c	1.000

Based on the results of the Wilcoxon Signed Ranks Test during and after Covid-19 as seen in Tables 11 and 12, the Asymp Sig. (2-tailed) value is > 0.05, so H2 and H4 are rejected, so it can be concluded that there is no difference, in other words, these results indicate that there is no significant difference in stock returns on LQ-45 company stocks on the Indonesia Stock Exchange during the Covid-19 period. This means that during the Covid-19 period there was no influence of the four-week effect. In times of crisis, investors tend to rely on fundamental company information and macroeconomic conditions to form rational expectations, reducing the significance of anomalous patterns such as the day of the week effect. A study by Yolanda, F.S. et. Al. (2022), Fashilah (2021) shows that during the Covid-19 pandemic, there was no significant difference in stock returns caused by the day of the week effect.

Post-Covid-19 pandemic, there was no difference in LQ-45 stock returns influenced by the day of the week effect. This shows that after experiencing a crisis, investors become more careful in making investment decisions and tend to focus on company fundamentals, in accordance with the theory of quality improvement which states that investors tend to shift to assets that are considered safer or of higher quality in situations of uncertainty or crisis. In this condition, the management of industrial company equity assets does not show an increase in company value, in this case the return on equity which should strengthen financial performance causes a decrease in share prices (Maringka, T.S. 2024). After the Covid-19 pandemic

experience, investors are likely to be more inclined to choose investments that are considered safer. This can also affect herding behavior in the market. When investors see many others doing the same thing, they may feel more comfortable following the flow because it is considered a rational action in the face of uncertainty or crisis (Elotmani, Y. et.al. 2024) (Putri, et al., 2023).

5. Conclusion and Suggestions

The results of the hypothesis testing show that during the Covid-19 pandemic period and after the pandemic, there is no significant difference in the stock returns of LQ-45 companies caused by the day of the week effect and four-week effect. The results of the Paired T Test show a value greater than significant level, indicating that there is no significant difference in stock returns between days of the week during the Covid-19 pandemic period, or after. As for the results that only occurred in the period after the Covid-19 pandemic, the results of the study also showed that there was no significant difference in the stock returns of LQ-45 companies caused by the day of the week effect. Then the Wilcoxon Rank Test produces an Asymp.Sig value greater than 0.05, indicating that there is no significant difference in stock returns between the last week and the previous weeks in a week during the period before and after the Covid-19 pandemic.

Suggestions for future research are to expand the scope of market anomaly variables, such as the January Effect and the Rogalsky Effect, and to expand the time period and data sources. This will help improve understanding of market dynamics and identify patterns that may have been missed previously. Future researchers can also consider the period before Covid-19 and expand the sample of companies. For investors, it is advisable not to pay too much attention to the day effect in making investment decisions on LQ-45 company stocks, especially in a crisis situation where the day effect may be less relevant. Instead, it is better to focus on other more important factors, such as fundamental analysis of the company, economic conditions, and government policies, which can provide more comprehensive insights in determining the right investment strategy.

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THE ROLE OF TRUST IN MEDIATING THE EFFECT OF SERVICE QUALITY AND E-SERVICE ON CUSTOMER LOYALTY IN AUTOMOTIVE SERVICES

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Abstract

This study aims to examine the role of trust in mediating the influence of service quality and e-services on customer loyalty at Agung Toyota Harapan Raya Pekanbaru vehicle service. The number of respondents in this study was 200 people who were selected using analysis techniques based on the Joreskog and Sorbom approach. The analysis method used is Structural Equation Modeling (SEM) with the help of the Smart-PLS application. The results of the study indicate that both service quality and e-services have a significant effect on customer trust and loyalty. In addition, trust is proven to significantly mediate the relationship between service quality and e-services on customer loyalty. These findings emphasize the importance of building customer trust as a bridge to creating sustainable loyalty, especially in the midst of digital transformation in vehicle repair services.

Keywords: Service Quality, E-Service,, Customer Loyalty, Trust

1. Introduction

The automotive industry is one of the sectors that has a significant contribution to Indonesia's economic growth. The development of this industry is not only seen from the number of vehicle production and sales, but also from its strategic role in creating jobs, attracting foreign investment, and strengthening the structure of the national manufacturing industry. Until now, Indonesia has become the second largest country in the motor vehicle manufacturing industry in the Southeast Asia region after Thailand, with a production capacity that continues to increase. Data from the Ministry of Industry (2023) shows that there are 23 four-wheeled or more vehicle manufacturing companies in Indonesia, with a total production capacity of 2.35 million units per year.

In this context, Toyota occupies a very dominant position in the Indonesian automotive market. Based on data from the Association of Indonesian Automotive Industries (Gaikindo), throughout 2022 Toyota managed to control more than 30% of the market share, both in sales from factories to dealers (wholesales) and from dealers to consumers (retail sales). Toyota's success cannot be separated from the company's reputation in terms of product quality, reliable after-sales service, and consistent marketing strategies. The combination of product excellence and professional service makes Toyota able to instill trust and build customer loyalty in the long term.

However, data shows a downward trend in Toyota car sales over the past decade. This decline is evident from the trend of wholesales and retail sales which tend to fluctuate and show signs of decline after 2013. This phenomenon is an indication of a change in consumer behavior, especially related to the aspect of customer loyalty. Although Toyota is still the market leader, there are major challenges that the company must face to maintain that position amidst increasingly tight competition and growing customer expectations.

One of the important entities in Toyota's distribution and service network in Indonesia is Agung Toyota Pekanbaru. As part of the Agung Concern Group, Agung Toyota Pekanbaru is

an official Toyota dealer with the largest number of branches in the Pekanbaru area, with four branches spread across several strategic locations. This dealer not only provides vehicle sales, but also after-sales services, spare parts, and repair services (body & paint). With a wide range of services, Agung Toyota Pekanbaru has great potential to become a benchmark in understanding customer loyalty to Toyota at the regional level.

However, initial observations show that Agung Toyota Pekanbaru also faces similar challenges, especially in terms of repeat purchase consistency and customer complaints about service quality. Internal data shows that during the period 2019 to 2023, the number of repeat purchase transactions from customers experienced quite significant fluctuations. In addition, a number of complaints related to high spare part prices, unfriendly mechanics, and long processing times are indications of problems in the service quality aspect.

The issue of customer loyalty is not a simple one, because loyalty is the result of a complex interaction of various factors, including customer trust in the brand, service quality, price perception, and ease of access to services. In many cases, customer loyalty is formed gradually and is greatly influenced by the customer's experience at every point of interaction with the company. Therefore, understanding and evaluating the factors that shape customer loyalty are important in formulating effective marketing and service improvement strategies.

Previous studies have shown a relationship between the variables of trust, service quality, price, and online ordering services on customer loyalty. However, the results of these studies show inconsistency. Some studies conclude that there is a significant influence, while other studies find results that do not support the relationship. This inconsistency creates a research gap that can be explored further to gain a more complete and contextual understanding.

Along with the development of information technology, Agung Toyota Pekanbaru has adopted an online booking service system as an effort to improve customer convenience and operational efficiency. However, the implementation of this system has not been fully able to reduce customer complaints, especially regarding waiting time and convenience in the service process. This indicates the need for a more in-depth evaluation of the effectiveness of digital services in building customer trust and loyalty.

In addition, the bibliometric approach conducted using the Publish or Perish and VOSviewer applications shows that the topic of customer loyalty is still very relevant and widely researched, especially in relation to the variables of trust, service quality, price, and digital-based services. The results of the literature mapping show that although there are studies that discuss each of these variables, the specific relationship between the four variables and customer loyalty in the context of automotive dealers such as Agung Toyota Pekanbaru is still relatively limited.

Based on the description, it can be concluded that there is an urgency to conduct comprehensive research on the determination of trust and its implications for customer loyalty, by considering the influence of service quality, price perception, and online ordering services. This research is expected to provide both theoretical and practical contributions in the development of marketing strategies and customer service in the automotive industry, especially in the Toyota dealer environment.

2. Literature review

Research on customer loyalty has become a focus of attention in marketing studies, especially since loyalty contributes greatly to business sustainability. Loyalty does not just appear, but is formed through experience, trust, service quality, competitive prices, and ease of access to services. In this context, several theoretical approaches and key variables can be used as the basis for analysis.

2.1. Consumer Culture Theory (CCT)

Consumer Culture Theory (CCT) is an important conceptual basis for understanding how consumers interpret their experiences and actions in a cultural context. According to Arnould and Thompson, CCT explains the relationship between consumer actions, experiences, and the cultural meanings that accompany them. CCT starts from the assumption that consumption decisions are not solely based on economic rationality, but are influenced by symbolic values, social meanings, and individual perceptions. In the context of digital and online services such as online booking services, CCT also focuses on how experience and interface design can influence consumer perceptions and decisions.

2.2. Customer Loyalty

Customer loyalty, according to Oliver (Najmudin et al., 2022), is a deep commitment to repurchase a product or service consistently, despite external influences from competitors. Loyalty indicators include repeat purchases, resistance to negative information (retention), and willingness to recommend to others (referrals). This loyalty is an important foundation in a long-term relationship marketing strategy.)

2.3. Customer Trust

Trust is a key psychological factor in building long-term relationships between companies and customers. McKnight et al. define trust through the dimensions of integrity, benevolence, and competence. In the literature, trust is not only a result of service quality, but also as a mediator in the relationship between variables such as price or online service to loyalty. Trust built through transparency, honesty, and technical ability can increase positive customer perceptions and form sustainable loyalty.

2.4. Online Booking Service

The theory of service quality is widely referred to through the SERVQUAL model by Parasuraman et al., which consists of five dimensions: tangibles, reliability, responsiveness, assurance, and empathy. This model has been widely used to assess the quality of service including in the automotive industry. High-quality service not only meets customer expectations but also creates satisfaction and trust that are the basis for loyalty.

Technological advances encourage companies to provide digital-based booking services. Online Booking Service allows customers to book services efficiently and flexibly. The quality of electronic services (e-service quality) is assessed through aspects of web design, customer service, data security, and service fulfillment. These dimensions affect customer satisfaction and loyalty in the context of digital-based services.

2.5 Relationship between variables

Many studies have stated that service quality, trust, and price perception have a significant relationship with customer loyalty, although some others have found inconsistent results. This difference indicates a research gap that needs to be explored further, especially in the context of the automotive service sector. The integration of trust variables as a mediator also needs to be explored to understand the mechanisms that link these factors to customer loyalty.

3. Methodology

3.1 Types and Approaches of Research

This study uses a quantitative approach with a causal associative research type. The aim is to test the causal relationship between exogenous (independent) variables and endogenous (dependent) variables, both directly and through intervening variables. The analysis model used is Structural Equation Modeling (SEM) based on Partial Least Square (PLS), which is

considered appropriate for testing complex relationships between latent variables that cannot be measured directly. Research Variables There are five main variables studied: Independent Variable (Exogenous): Service Quality (X1), Online Booking Service / E-Service Quality (X2) Intervening Variable: Customer Trust (Y1) Dependent Variable (Endogenous): Customer Loyalty (Y2). Each variable is measured through indicators developed based on theory and previous research results, with a measurement scale using a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree).

3.2 Population and Sample

The population of the study was all customers who made re-purchases at Agung Toyota Pekanbaru in 2024, totaling 4,480 people. The sampling technique used was stratified cluster random sampling, with proportions based on the number of customers in each branch (Sutomo, SM Amin, Harapan Raya, and Arengka). According to Joreskog & Sorbom's guidelines for SEM, the minimum number of samples with 4 variables is 200 respondents.

3.3 Data Collection Sources and Methods

Primary data were collected through a survey using a closed questionnaire. Secondary data were obtained from internal dealer documentation, scientific literature, and previous research reports. Data collection techniques consisted of: Direct observation at the research location Limited interviews with management and customers Questionnaires prepared based on theoretical indicators

Data analysis was carried out through two main stages:
1. Descriptive Analysis
Used to describe the respondent profile and distribution of answers to each variable. This analysis uses frequency and average distributions, and categorizes scores based on Likert scale intervals.

2. SEM-PLS analysis
Used to test causal relationships between variables. The analysis steps include:

a. Outer Model Evaluation: convergent validity (loading factor value > 0.7), discriminant validity (AVE > 0.5), and construct reliability (Composite Reliability & Cronbach's Alpha > 0.7).
b. Inner Model Evaluation: looking at the R-square value, path coefficient, significance of influence (t-statistic > 1.96 at α = 5%), and mediation test (direct vs indirect effect).
c. Hypothesis Testing: Using the bootstrapping method to see whether the relationship between variables is significant or not.

4. Results and discussions

4.1. Descriptive Analysis Results

1) Service Quality (X1)

Based on the responses of 200 respondents, the quality of service at Agung Toyota Pekanbaru is generally considered good with a Respondent Achievement Level (TCR) value ranging from 77.52%–82.56%. The dimensions of physical evidence and assurance received the highest scores, indicating that customers feel comfortable with the facilities and trust in the professionalism of the staff. However, the aspects of technician reliability and responsiveness to complaints are still quite good, indicating that there is room for improvement to increase loyalty.

2) Online Booking Service (X2)

Online ordering services are rated well by customers, with the highest TCR of 85.20% for the ease of ordering process indicator. All dimensions—web appearance, customer service, security, and fulfillment—received positive appreciation. This shows that the digitalization of Agung Toyota services has succeeded in increasing the convenience and efficiency of services for customers.

3) Customer Trust (Z)

Customer trust in Agung Toyota is quite good, especially in terms of integrity and corporate responsibility. However, indicators related to the virtue and competence of technicians scored quite well, indicating that the company needs to strengthen the perception of honesty and technical ability to maintain and increase long-term trust.

4) Customer Loyalty (Y)

Customer loyalty is generally considered good, especially in terms of repurchase and recommendation intentions. However, two indicators related to resistance to negative influences are in the fairly good category. This indicates that customer emotional loyalty is still not completely stable and is vulnerable to external influences or negative perceptions.

4.2. Path Analysis Structure and Hypothesis Results

To analyze the data used in this study is Smart Partial Least Square (Smart PLS), because it is suitable for estimating path models that use latent constructs with multiple indicators so that it can help obtain latent variable values for prediction purposes. Evaluation in smart PLS consists of outer model evaluation (measurement model) and inner model evaluation (structural model).

1) Evaluation of the measurement model (outer model)

Evaluation of the measurement model is used to evaluate the relationship between the construct and its indicators, divided into two stages, namely convergent validity which is evaluated through validity indicators, construct reliability and average variance extracted (AVE) values and discriminant validity which is evaluated by looking at the cross loading value and then comparing the correlation between the construct and the AVE root. Analysis and evaluation of the measurement model (outer model) in the calculate-PLS algorithm result image are as follows.

a. Convergent validity

Convergent validity aims to measure the suitability between the measurement result indicators of the variable and the theoretical concept that explains the existence of indicators from the variable test. Convergent validity is related to the principle that indicators of a construct should be highly correlated. The convergent validity test can be evaluated in two stages, namely by looking at the outer loadings and the average variance extracted (AVE). Outer loadings are tables containing loading factors to show the magnitude of the correlation between indicators and latent variables. The loading factor value must be greater than 0.7 then it is said to be valid. The output of outer loadings can be obtained from the PLS Algorithm Report SmartPLS.

Indicators that measure the construct are presented in the path diagram in the figure below:

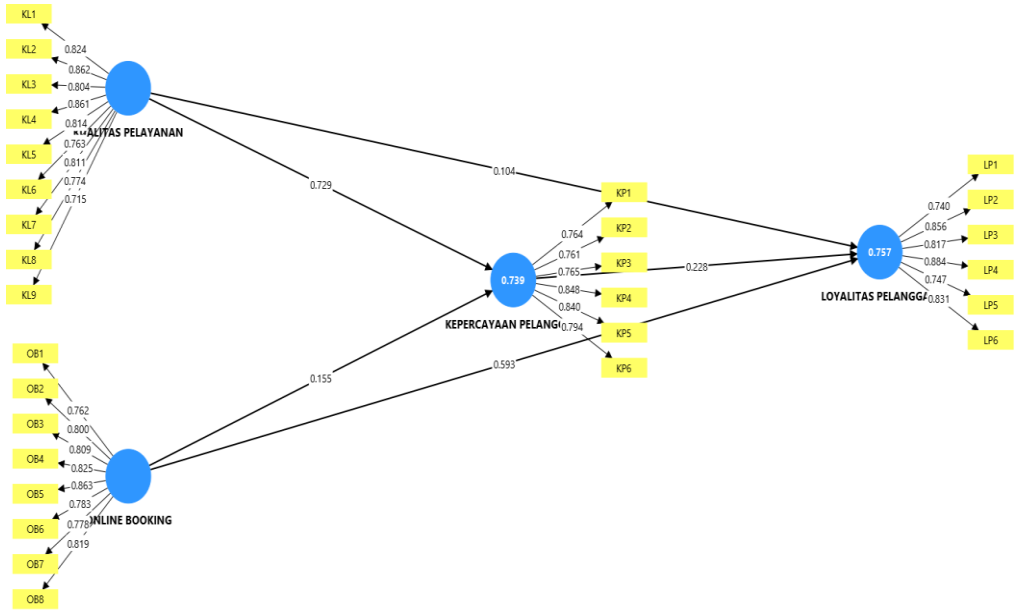

Figure 1. Path Diagram Output

Based on the output of the path diagram above, it can be seen that after re-estimation, each indicator has a loading factor value. All indicators have a positive relationship with each latent variable and the loading factor for each indicator is greater than 0.7 and is said to be quite high. These results indicate that the use of each indicator is stated to be able to measure the latent variable accurately. And the section Based on the table above, it can be concluded that the highest Loading factor value is 0.884 (indicator LP4) and the lowest loading factor value is 0.715 (indicator KL9). Because all indicators have a loading factor value higher than 0.7, it is concluded that all indicators in variables X1, X2, Z, and Y are valid.

b. Composite reliability and average variance extracted (AVE)

Validity and reliability criteria can also be seen from the reliability value of a construct and AVE) of each construct. A good construct if it has a high reliability value if the value is above 0.60 and AVE is above 0.50. The following are the results of composite reliability and AVE tests on all variables are as follows:

Table 1. Composite reliability and AVE values

	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
Customer Trust	0.885	0.891	0.912	0.633
Service Quality	0.931	0.932	0.943	0.647
Customer Loyalty	0.897	0.902	0.922	0.663
Online booking Service	0.922	0.923	0.937	0.649

Cronbach`s alpha
Composite reliability (rho_a)
Composite reliability (rho_c)
Average variance extracted (AVE)

1) Average Variance Extracted (AVE)

The Average Variance Extracted (AVE) value illustrates adequate convergent validity, meaning that one latent variable is able to explain more than half of the variance of the indicators in the average. The role of thumb used for AVE is greater than 0.5. Based on the table above, it can be concluded that all constructs each have an AVE value higher than 0.5, so it is concluded that all constructs have good convergent validity.

2) Composite reliability

In addition to the validity test, PLS also performs a reliability test to measure internal consistency. Reliability tests in PLS can use two methods, namely Cronbach's Alpha and Composite reliability. The rule of thumb is that the Cronbachs Alpha value is greater than 0.6 and Composite reliability must be greater than 0.6. Based on the table above, it can be concluded that each construct has a Cronbachs Alpha and Composite Reliability value greater than 0.6, meaning that each construct and dimension is reliable.

2) Results of structural model testing (inner model)

The structural model (inner model) is evaluated by looking at the value of the path parameter coefficient of the relationship between latent variables. Structural testing (inner model) is carried out after the model in the relationship built in this study, in accordance with the observation data and the overall model suitability (goodness of fit model). Testing of the structural relationship model to determine the relationship between the latent variables designed in this study. From the smart PLS output on testing the structural model and hypothesis is done by looking at the estimated value of the path coefficient and the critical point value (t-statistic) which is significant at p-value <0.05. The structural model of this study can be seen in the following table:

Tabel 2. Direct Effect Hypothesis Test

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
Customer Trust → Customer Loyalty	0.228	0.229	0.060	3.804	0.000
Service Quality → Customer Trust	0.729	0.727	0.051	14.338	0.000
Service Quality → Customer Loyalty	0.104	0.104	0.072	1.440	0.150
Online Booking Service → Customer Trust	0.155	0.156	0.059	2.622	0.009
Online Booking Service → Customer Loyalty	0.593	0.591	0.053	11.258	0.000

Table 3. Indirect Effect Hypothesis Test

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
Service Quality → Customer Trust → Customer Loyalty	0.166	0.166	0.044	3.786	0.000
Online Booking → Customer Trust → Customer Loyalty	0.035	0.036	0.018	1.959	0.050

Description:
X1 = Service Quality
X2 = Online Booking
Y = Customer Loyalty
Z = Customer Trust

3) Hypothesis Testing
The Direct Hypothesis used is as follows:
H_1 : Service Quality and its indicators influence Customer Loyalty.
H_2 : Online Booking and its indicators influence Customer Loyalty.
H_3 : Customer Quality and its indicators influence Customer Loyalty.
H_4 : Online Booking and its indicators influence Customer Trust.
H_5 : Customer Trust and its indicators influence Customer Loyalty.

The Indirect Hypothesis used is as follows:
H_6 : Service Quality Through Customer Trust has an indirect effect on Customer Loyalty.
H_7 : Online Booking Through Customer Trust has an indirect effect on Customer Loyalty.

a. Testing the direct path influence coefficient:
Hypothesis testing on the coefficient of direct path influence between the variables of Service Quality, Customer Trust and Customer Loyalty. The results of the direct path influence can be seen in the following Structural Model (inner model):

1) First Hypothesis Testing (H1). With a significant value of 0.000 < 0.05 or below 5%, it can be concluded that the positive path coefficient value indicates that Customer Trust has a significant positive effect on Customer Loyalty. Based on the test results, it can be concluded that the first hypothesis is accepted.
2) Testing the Second Hypothesis (H2). With a significant value of 0.000 < 0.05 or below 5%, it can be concluded that the positive path coefficient value indicates that Service Quality has a significant positive effect on Customer Trust. Based on the test results, it can be concluded that the Second Hypothesis is accepted.
3) Third Hypothesis Testing (H3). With a significant value of 0.150 > 0.05 or below 5%, it can be concluded that the positive path coefficient value indicates that Service Quality has no significant effect on Loyalty. Based on the test results, it can be concluded that the third hypothesis is accepted
4) Testing the Second Hypothesis (H4). With a significant value of 0.009 < 0.05 or below 5%, it can be concluded that the positive path coefficient value indicates that Online Booking has a significant positive effect on Customer Trust. Based on the test results, it can be concluded that the Second Hypothesis is accepted.
5) Testing the Second Hypothesis (H5). With a significant value of 0.000 < 0.05 or below 5%, it can be concluded that the positive path coefficient value indicates that Online has a significant positive effect on Customer Loyalty. Based on the test results, it can be concluded that the Second Hypothesis is accepted.

b. Testing the coefficient of the intervening/indirect influence path
The examination of the influence of the moderating variable aims to detect the position of the Intervention variable that plays a role in customer loyalty in the model. The results of the direct path influence can be seen in the following Structural Model (inner model):

1) Testing the fourth hypothesis (H6). with a significant value of 0.000 <0.05 or below 5%, it can be concluded that the positive original sample value indicates that Service

Quality has a positive effect on Customer Loyalty if through Customer Trust Based on the test results, it can be concluded that the fifth hypothesis is accepted.

2) Testing the fourth hypothesis (H7). with a significant value of 0.050 = 0.05 or below 5%, it can be concluded that the positive original sample value indicates that Online Booking has a positive effect on Customer Loyalty if through Customer Trust Based on the test results, it can be concluded that the fifth hypothesis is accepted.

5. Conclusion

Based on the results of the analysis of research data conducted at Agung Toyota Pekanbaru, it can be concluded that service quality, online ordering services, customer trust, and customer loyalty are closely related to each other in forming a comprehensive customer experience. The quality of service provided by the company is generally considered good by respondents. This is reflected in the Respondent Achievement Level (TCR) value which is in the range of 77.52% to 82.56%.

The dimensions of physical evidence and guarantees are the most prominent aspects, describing customer comfort with facilities and confidence in staff professionalism. However, the aspects of technician reliability and responsiveness to complaints still get sufficient scores, indicating opportunities for improvement in order to increase customer satisfaction and loyalty.

Online booking services also received a very positive response, with the highest TCR value of 85.20% on the ease of the booking process indicator. All dimensions of digital services, such as web appearance, transaction security, and customer service are considered to support convenience and efficiency, reflecting the success of the company's implementation of service digitalization. In terms of customer trust, the level of trust is considered good, especially in terms of the company's integrity and responsibility towards its customers. However, the fairly good value on the aspects of benevolence and technician competence is a signal that the company needs to continue to strengthen customer perceptions of the honesty and technical capabilities of its staff.

Customer loyalty shows an encouraging trend, especially in the desire to make repeat purchases and the intention to recommend services. However, emotional loyalty indicators are still susceptible to negative external influences, so consistent efforts are needed to maintain a positive customer experience.

From the results of testing the structural model using Smart PLS, it is known that there is a significant direct relationship between service quality and customer trust, and online bookings on customer trust. Customer trust has also been shown to significantly influence customer loyalty. In addition, online bookings have a significant direct influence on customer loyalty. Meanwhile, the direct relationship between service quality and customer loyalty does not show statistical significance.

Indirectly, the customer trust variable is proven to mediate the influence of service quality and online booking on customer loyalty. This shows that although service quality does not directly increase loyalty, it can have a strong influence if customer trust has been formed.

Thus, it can be concluded that customer trust plays a central role in maintaining and increasing loyalty. Therefore, companies need to continuously improve service quality, both directly and digitally, with a focus on strengthening customer trust as a bridge to long-term loyalty.

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FROM CONNECTION TO CONVERSION: THE ROLE OF PERSUASION KNOWLEDGE

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Abstract

In today's digital marketplace, influencer marketing has become a potent tool for shaping consumer behavior through emotional and perceived personal connections known as parasocial relationships (PSRs). These one-sided yet intimate bonds between followers and influencers have been shown to enhance purchase intention. However, the cognitive mechanisms that support this emotional persuasion remain insufficiently explored. This study investigates the mediating role of persuasion knowledge—consumers' awareness and interpretation of marketing intent—in the relationship between PSR and purchase intention. Drawing on data from 450 female social media users aged 18–34 who follow Indonesian beauty influencers, the study applies Covariance-Based Structural Equation Modeling (CB-SEM) via SmartPLS 4. The findings indicate that PSR significantly enhances both persuasion knowledge and purchase intention. Moreover, persuasion knowledge acts not as a defensive barrier but as a cognitive filter that facilitates favorable responses when consumers perceive influencers as emotionally familiar and credible. These results contribute to a nuanced understanding of how emotional closeness and cognitive awareness interact to influence consumer decisions in digital environments.

Keywords: Parasocial Relationship, Persuasion Knowledge, Purchase Intention

1. Introduction

In the digital era, the emergence of social media has transformed the landscape of consumer engagement, enabling users to establish emotionally charged yet one-sided connections with online figures known as influencers (Horton & Wohl, 1956; Labrecque, 2014). These connections, referred to as parasocial relationships, are characterized by feelings of intimacy and perceived friendship between a viewer and a media persona, despite the lack of actual reciprocity (Giles, 2002). Parasocial relationships have gained substantial relevance in digital marketing, particularly because they have been found to significantly influence consumer attitudes and behaviors, including purchase intention (Lim *et al.*, 2017).

Influencer marketing has become one of the most effective strategies for brands to promote products, leveraging the trust and emotional connection that influencers build with their followers (Lou & Yuan, 2019). However, while emotional attachment explains part of the persuasive power of influencers, there is a need to further explore the cognitive mechanisms that transform emotional bonds into consumer actions (Boerman *et al.*, 2017). One such mechanism is persuasion knowledge, which refers to the awareness and understanding consumers have regarding the persuasive intent behind marketing content (Friestad & Wright, 1994).

Traditionally, persuasion knowledge is thought to reduce advertising effectiveness, as consumers may become skeptical when they recognize a marketing motive (Ham *et al.*, 2015).

However, emerging studies suggest that this knowledge may not always function as resistance but can instead serve as a cognitive filter that selectively reinforces trusted sources, especially when strong parasocial relationships are involved (Campbell & Kirmani, 2000; Nelson *et al*., 2009).

This study investigates the interaction between parasocial relationships and persuasion knowledge to understand how they jointly shape purchase intention. It adopts a selective reinforcement perspective, arguing that digitally literate consumers may still respond favorably to marketing messages when delivered by influencers with whom they feel emotionally connected (van Reijmersdal *et al*., 2016). By exploring this interaction, the study contributes to a more nuanced understanding of how emotional and cognitive processes coalesce to influence online consumer behavior.

2. Literature review

2.1. Parasocial Relationship

Parasocial relationships (PSRs) are one-sided, emotionally driven connections that individuals form with media figures, particularly prevalent in digital and social media environments. These relationships are characterized by a sense of intimacy and perceived friendship, despite the absence of real-life interaction or mutual awareness between the parties involved (Giles, 2002; Horton & Wohl, 1956). In the context of social media, PSRs have evolved significantly due to the interactive nature of platforms like Instagram, TikTok, and YouTube, which facilitate perceived closeness and authenticity between influencers and their followers (Labrecque, 2014).

The growing prominence of influencer culture has intensified the impact of PSRs on consumer behavior. Influencers, through consistent engagement and personal content sharing, establish perceived trust and familiarity that mirror interpersonal relationships, making followers more susceptible to their persuasive messages (Lou & Yuan, 2019). Research has demonstrated that such relationships can significantly influence followers' attitudes, enhancing brand evaluations and increasing purchase intentions (Lim *et al*., 2017). In essence, the emotional bond formed through PSRs serves as a foundation for the persuasive power of influencers in digital marketing contexts.

Importantly, the strength of a parasocial bond not only fosters emotional attachment but also conditions how consumers process and respond to persuasive content. When individuals perceive influencers as authentic and trustworthy, their messages are more likely to bypass skepticism and be received favorably (Boerman et al., 2017). Thus, PSRs function as both affective and heuristic mechanisms in consumer decision-making processes, especially among younger and digitally literate demographics who actively engage with beauty influencers online (van Reijmersdal *et al*., 2016).

Consequently, understanding the dynamics of parasocial relationships provides critical insights into the psychological levers of influencer marketing. By acknowledging the emotional resonance and pseudo-social intimacy that underlie PSRs, marketers and researchers can better grasp how digital audiences internalize and act upon promotional cues delivered by influencers (Campbell & Kirmani, 2000; Nelson *et al*., 2009).

2.2.Persuasion Knowledge

Persuasion Knowledge (PK) refers to consumers' understanding of the persuasive intent behind marketing communications, enabling them to recognize attempts to influence their attitudes or behaviors (Friestad & Wright, 1994). As consumers become more experienced and media literate, they develop cognitive defenses that help them evaluate promotional messages critically rather than accepting them at face value. This conceptual framework suggests that

individuals do not passively absorb advertising but engage with it actively by assessing source credibility, message intent, and potential bias.

Traditionally, persuasion knowledge has been viewed as a resistance mechanism that undermines the effectiveness of marketing strategies. When consumers identify a message as an overt attempt to persuade, they are more likely to resist it, apply counter-arguments, or dismiss it altogether (Ham *et al*., 2015). This resistance can be especially pronounced in contexts where the commercial motives of influencers or brands are perceived as deceptive or manipulative (Boerman *et al*., 2012).

However, recent perspectives challenge the notion that persuasion knowledge invariably functions as a barrier. Instead, scholars argue that persuasion knowledge can serve as a selective filter that enhances persuasion when certain conditions such as trust in the source or emotional resonance are present (Campbell & Kirmani, 2000). In digital contexts, particularly influencer marketing, consumers often exhibit nuanced responses to persuasion. Although aware of promotional intent, they may still find messages compelling if delivered by influencers with whom they have established parasocial relationships (Nelson *et al*., 2009).

This dual role of persuasion knowledge as both resistance and reinforcement becomes critical in understanding modern consumer psychology. Research suggests that persuasion knowledge does not eliminate persuasion but modulates it, allowing consumers to navigate complex promotional environments while still engaging with content they perceive as authentic or personally relevant (van Reijmersdal *et al*., 2016). In this view, persuasion knowledge functions less as a defensive wall and more as a cognitive lens that filters messages based on the interplay between source credibility, emotional connection, and contextual cues.

Moreover, PK can mediate the relationship between emotional attachment (e.g., parasocial relationships) and behavioral outcomes such as purchase intention. Consumers with higher PK levels may still engage in purchasing behaviors when promotional messages align with their perceptions of authenticity and personal relevance (Evans *et al*., 2017). Therefore, PK should not be treated solely as a threat to marketing effectiveness, but as an adaptive cognitive tool that shapes and sometimes facilitates persuasion in digital spaces.

2.3. Purchase Intention

Purchase intention refers to a consumer's conscious plan or willingness to buy a specific product or service based on evaluative judgments formed through psychological, emotional, and informational processes (Ajzen, 1991). It is a key predictor of actual purchasing behavior and serves as an essential outcome variable in marketing research, particularly in the context of digital media and influencer marketing. Understanding the antecedents of purchase intention helps marketers anticipate consumer behavior and design more effective strategies.

Numerous studies have emphasized that emotional connection, trust, and message relevance are pivotal in shaping purchase intentions in online environments (Lou & Yuan, 2019; Sokolova & Kefi, 2020). Influencer marketing, in particular, leverages these elements by using familiar and relatable figures to deliver personalized brand messages. When consumers perceive influencers as authentic and trustworthy, their likelihood to develop positive attitudes and intentions toward promoted products significantly increases (Sokolova & Kefi, 2020). This effect is even more pronounced when parasocial relationships are present, as emotional bonding amplifies the persuasive power of promotional messages (Lou & Yuan, 2019).

Furthermore, psychological mechanisms such as perceived credibility, identification with the influencer, and source attractiveness mediate the relationship between exposure to influencer content and the formation of purchase intention (Jin *et al*., 2019). These mechanisms are not only affective but also cognitive in nature, interacting with persuasion knowledge to shape consumer decision making. In this sense, purchase intention emerges as a complex

construct influenced by both internal predispositions (e.g., prior attitudes, brand loyalty) and external stimuli (e.g., influencer behavior, message framing).

It is also important to note that digital consumers, especially younger demographics, are not passive recipients of advertising content. They actively evaluate the context, tone, and perceived authenticity of messages before forming purchase intentions (Freberg *et al*., 2011). Therefore, purchase intention in the digital age is best understood as a dynamic and multifaceted outcome, shaped by an intricate balance of emotional resonance, cognitive evaluation, and social influence.

3. Methodology

This study used a quantitative survey method to examine the mediating role of persuasion knowledge in the relationship between parasocial relationships and purchase intention. The respondents were 450 female social media users aged 18–34 who actively follow Indonesian beauty influencers such as Tasya Farasya, Suhay Salim, Jharna Bhagwani, Nanda Arsyinta, Sunny Dahye, Titan Tyra, Rachel Goddard, Abel Cantika, and Cindercella (Maru) on Instagram, TikTok, or YouTube. Participants were selected purposively, focusing on those exposed to product promotions by these influencers.

Data were collected using a structured questionnaire measuring parasocial relationship, persuasion knowledge, and purchase intention with 5-point Likert scales. The analysis employed Covariance-Based Structural Equation Modeling (CB-SEM) using SmartPLS 4 to evaluate both measurement and structural models, including the mediating effect of persuasion knowledge.

3.1 Theoretical framework

This study is grounded in the Persuasion Knowledge Model (PKM), which suggests that consumers develop an understanding of persuasive intent and use it to evaluate marketing messages critically (Friestad & Wright, 1994). However, when influencers are perceived as emotionally close and trustworthy through parasocial relationships, persuasion knowledge may enhance rather than hinder persuasion.

The framework also incorporates Parasocial Interaction Theory (Horton & Wohl, 1956), which explains how one-sided emotional bonds with media figures influence behavior. By integrating these perspectives, the study proposes that persuasion knowledge mediates the effect of parasocial relationships on purchase intention, acting as a cognitive filter that can facilitate favourable responses to trusted influencers.

3.2 Conceptual framework

The conceptual framework of this study is designed to examine how emotional and cognitive factors jointly influence consumer behavior in the context of social media influencer marketing. It focuses on the role of parasocial relationships, which refer to the perceived intimacy and trust that followers develop toward influencers, and how these emotional bonds affect purchase intention. The model proposes that parasocial relationships have a direct positive effect on purchase intention. Additionally, parasocial relationships are expected to enhance persuasion knowledge, which reflects consumers' awareness and understanding of persuasive intent within influencer content.

Persuasion knowledge is further hypothesized to positively influence purchase intention by enabling consumers to selectively evaluate and endorse marketing messages delivered by trusted influencers. Importantly, the model suggests that persuasion knowledge mediates the relationship between parasocial relationships and purchase intention. This means that emotionally attached followers are more likely to engage cognitively with promotional content,

and when they perceive such content as authentic and relevant, they are more inclined to respond favorably. The framework captures the interplay between affective trust and cognitive evaluation, offering a more nuanced understanding of how influencer credibility and message interpretation shape consumer decision-making in digital environments.

3.3 Measurement and Instrumentation

This study utilized a structured questionnaire to measure three reflective latent constructs: Parasocial Relationship (PSR), Persuasion Knowledge (PEK), and Purchase Intention (INT). All indicators were adapted from previously validated measurement scales and were assessed using a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The PSR construct was measured using five indicators adapted from Liu & Zheng (2024), focusing on emotional closeness, perceived intimacy, and one-sided engagement with influencers. Persuasion Knowledge was measured using five items adapted from Hwang & Zhang (2018), capturing consumers' cognitive awareness of persuasive intent, recognition of marketing tactics, and their ability to evaluate influencer content critically. Purchase Intention was measured using four items, also adopted from Liu & Zheng (2024), that assess consumers' readiness, intention, and willingness to purchase products recommended by the influencers they follow.

The instrument was pre-tested for clarity and reliability, and data analysis was conducted using Covariance-Based Structural Equation Modeling (CB-SEM) via SmartPLS 4. All outer loadings exceeded the 0.70 threshold, indicating strong indicator reliability. The measurement model also demonstrated satisfactory levels of internal consistency, convergent validity, and discriminant validity. The figure below presents the integrated measurement and structural model, showing the reflective indicators for each latent construct along with the hypothesized paths among variables. The diagram also illustrates the mediation effect of Persuasion Knowledge on the relationship between Parasocial Relationship and Purchase Intention, confirming the model's alignment with the theoretical framework.

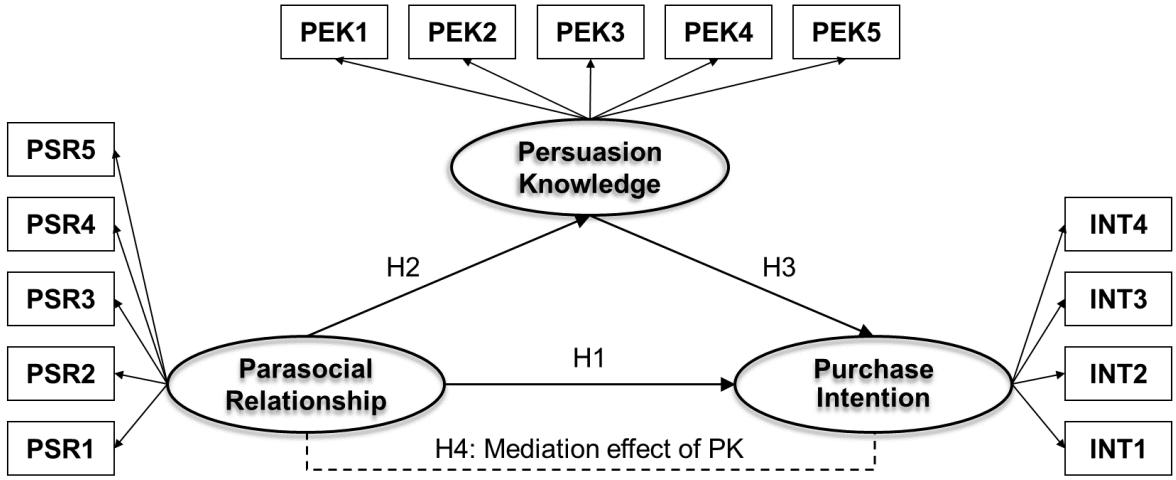

Figure 1. Measurement and Structural Model with Hypotheses Paths

4. Results and discussions

This study employed Covariance-Based Structural Equation Modeling using the CB-SEM approach to evaluate the theoretical model that links parasocial relationships, persuasion knowledge, and purchase intention in the context of digital influencer marketing. The analytical process was designed to assess the model's theoretical coherence through a rigorous two-stage analysis. First, the measurement model was evaluated to ensure the constructs demonstrated

adequate internal consistency, convergent validity, and discriminant validity. This step confirmed that the reflective indicators reliably represented the underlying latent variables. Following this, the structural model was tested to examine the strength, direction, and significance of the hypothesized relationships among the constructs. Particular attention was given to the mediating role of persuasion knowledge in the linkage between parasocial relationships and purchase intention, allowing for a deeper understanding of how cognitive awareness interacts with emotional bonds in shaping consumer decision making. By applying a theory driven analytical framework, this study not only validates conceptual assumptions but also offers empirical support for the integration of emotional engagement and cognitive filtering as complementary mechanisms in explaining consumer behavior in the context of social media and beauty influencers.

4.1 Measurement Model Evaluation

Before proceeding to the analysis of structural relationships among constructs, it is essential to ensure that the measurement model meets established standards for reliability and validity. The evaluation of the measurement model focuses on determining whether the latent constructs namely parasocial relationship, persuasion knowledge, and purchase intention are adequately and consistently represented by their respective observed indicators. This assessment involves analyzing several key metrics, including Cronbach's alpha for internal consistency, composite reliability for construct reliability, and average variance extracted (AVE) for convergent validity. All indicator loadings were required to exceed the threshold of 0.70 to establish sufficient item reliability. In addition, the constructs must exhibit discriminant validity, which ensures that each latent variable is empirically distinct from the others in the model. This was confirmed through the Fornell Larcker criterion and the heterotrait-monotrait ratio of correlations (HTMT), both of which demonstrated acceptable values across constructs. Overall, the results of the measurement model evaluation indicate that the instrument used in this study is statistically sound and theoretically robust, allowing for confident interpretation of the subsequent structural relationships.

Table 1. Construct Reliability and Validity

Construct	Cronbach's Alpha	Composite Reliability	AVE
Parasocial Relationship	0.88	0.91	0.68
Persuasion Knowledge	0.86	0.90	0.66
Purchase Intention	0.89	0.92	0.71

All item loadings exceeded the recommended threshold of 0.70, confirming good indicator reliability. Discriminant validity was also established through the Fornell-Larcker criterion and the heterotrait-monotrait ratio of correlations (HTMT), both of which demonstrated acceptable values. These results confirm that each construct is statistically distinct and appropriately measured within the model.

4.2 Measurement Model Evaluation

Before proceeding to the analysis of structural relationships among constructs, it is essential to ensure that the measurement model meets established standards for reliability and validity. The evaluation of the measurement model focuses on determining whether the latent constructs namely parasocial relationship, persuasion knowledge, and purchase intention are adequately and consistently represented by their respective observed indicators. This assessment involves analyzing several key metrics, including Cronbach's alpha for internal consistency, composite reliability for construct reliability, and average variance extracted (AVE) for convergent validity. All indicator loadings were required to exceed the threshold of

0.70 to establish sufficient item reliability. In addition, the constructs must exhibit discriminant validity, which ensures that each latent variable is empirically distinct from the others in the model. This was confirmed through the Fornell-Larcker criterion and the heterotrait-monotrait ratio of correlations (HTMT), both of which demonstrated acceptable values across constructs. Overall, the results of the measurement model evaluation indicate that the instrument used in this study is statistically sound and theoretically robust, allowing for confident interpretation of the subsequent structural relationships.

Table 2. Path Coefficients and Hypothesis Testing

Hypothesis	Relationship	Path Coefficient (β)	p-value	Result
H1	PSR → PI	0.412	< 0.001	Supported
H2	PSR → PK	0.487	< 0.001	Supported
H3	PK → PI	0.366	< 0.001	Supported

These findings confirm that parasocial relationships significantly enhance both persuasion knowledge and purchase intention. Moreover, persuasion knowledge is not merely a defense mechanism but a facilitative cognitive tool. The positive relationship between parasocial relationships and persuasion knowledge suggests that emotional closeness with influencers may increase consumers' awareness of persuasive intent. At the same time, the significant effect of persuasion knowledge on purchase intention indicates that critical awareness does not always reduce persuasion effectiveness. Instead, when messages come from trusted and emotionally familiar sources, consumers are more likely to evaluate them favorably. This supports the idea that emotional and cognitive processes can work together in shaping consumer decisions, particularly in the context of influencer marketing.

4.3 Mediation Analysis

To further understand the mechanism through which parasocial relationships influence purchase intention, a mediation analysis was conducted to examine the role of persuasion knowledge as an intervening variable. The aim was to test whether the presence of persuasion knowledge helps explain the process by which emotional attachment to influencers translates into behavioral intentions to purchase. This analysis employed the bootstrapping method with 5,000 resamples, allowing for robust estimation of indirect effects without assuming a normal distribution. Specifically, the study tested whether the effect of parasocial relationship on purchase intention occurs in part through its influence on persuasion knowledge. A significant indirect path would indicate that persuasion knowledge serves as a cognitive channel through which emotional engagement leads to persuasive outcomes. The results are summarized in the following table, which presents the indirect effect, its level of significance, and the type of mediation identified.

Table 3. Mediation Effect of Persuasion Knowledge

Path	Indirect Effect	t-value	p-value	Mediation Type
PSR → PK → PI	0.17	5.98	< 0.001	Partial

The significant indirect effect indicates that persuasion knowledge partially mediates the relationship between parasocial relationship and purchase intention. This suggests that emotionally connected consumers not only feel close to influencers but also engage cognitively with their content. Rather than weakening persuasion, this cognitive engagement enhances it when the source is perceived as credible and familiar. These results support the view that persuasion knowledge functions as a selective filter, enabling consumers to critically process influencer messages without necessarily rejecting them. As such, persuasion knowledge

operates as a constructive rather than defensive cognitive mechanism in the digital persuasion process.

4.4 Explained Variance

In addition to testing the hypothesized relationships and mediation effects, it is important to evaluate how well the overall model accounts for variance in the endogenous constructs. Explained variance, as indicated by R^2 (coefficient of determination), reflects the proportion of variance in a dependent variable that is predictable from the independent variables. In this study, the key endogenous variables are persuasion knowledge and purchase intention. Higher R^2 values suggest a stronger explanatory power of the model, providing evidence of its practical relevance and theoretical robustness. According to commonly accepted benchmarks, R^2 values of 0.25, 0.50, and 0.75 can be interpreted as weak, moderate, and substantial, respectively. The R^2 values for the model were obtained from the output of CB-SEM analysis using SmartPLS 4, and they are summarized in the table below. These values offer insights into the model's ability to explain consumer behavior outcomes in the context of influencer marketing, particularly how emotional and cognitive factors jointly contribute to purchase intention.

Table 4. R^2 Values for Endogenous Variables

Variable	R^2	Interpretation
Persuasion Knowledge	0.24	Moderate
Purchase Intention	0.51	Substantial

The R^2 values indicate that the proposed model explains a substantial portion of variance in purchase intention and a moderate portion in persuasion knowledge. This demonstrates that the combination of emotional attachment (parasocial relationship) and cognitive awareness (persuasion knowledge) is not only theoretically meaningful but also statistically powerful in predicting behavioral intentions. These results reinforce the argument that influencer marketing strategies are most effective when they activate both affective trust and critical engagement, suggesting a dual pathway through which consumers evaluate and respond to promotional content.

5. Conclusion

This study confirms the pivotal role of parasocial relationships in influencing consumer purchase intention in the context of beauty influencers on social media. The findings demonstrate that parasocial relationships not only have a direct positive effect on purchase intention but also enhance persuasion knowledge, which in turn further strengthens the impact on consumer decisions. Rather than acting solely as a defensive barrier, persuasion knowledge emerges as a selective cognitive filter that enables consumers to critically process marketing messages and respond favorably when these messages are delivered by emotionally trusted influencers. This nuanced understanding challenges the traditional view of persuasion knowledge as a source of resistance and suggests that, in digitally literate audiences, it can facilitate rather than hinder persuasion. From a practical standpoint, marketers and content creators are encouraged to foster authentic parasocial bonds and transparency to activate persuasion knowledge in ways that increase engagement and drive consumer action. Future research may extend this model to other consumer segments, platforms, and influencer categories to further validate and expand the applicability of these findings.

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LOCUS OF CONTROL, MACHIAVELLIAN CHARACTER, TURNOVER INTENTION, DYSFUNCTIONAL AUDIT BEHAVIOR AND INDIVIDUAL MORALITY

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Abstract

This research examines the influence of locus of control, machiavellian character, turnover intention, toward dysfunctional audit behavior, with individual morality as a moderating variable. The study was conducted on Public Accounting Firms located in Jakarta. This study used 135 samples with a purposive method approach in determining the sample. This research data uses primary data through distributing questionnaires. The hypothesis test is conducted using Partial Least Squares (PLS) with the SmartPLS version 4.0. The results showed that Locus of Control cannot effect Dysfunctional Audit Behavior. Machiavellian character and turnover intention effect dysfunctional audit behavior. Further, individual morality cannot moderate Locus of Control on dysfunctional audit behavior, individual morality is able to moderate with the condition of strengthening machiavellian character, and weakening turnover intention on dysfunctional audit behavior. These findings are significant for public accounting firms to consider individual morality factors in improving audit quality and reducing the occurrence of Dysfunctional Audit Behavior.

Keywords: Locus of Control, Machiavellian Character, Turnover Intention, Dysfunctional Audit Behavior, and Individual Morality

1. Introduction

Auditing Standard 220 (Revised 2021) on Quality Control for an Audit of Financial Statements requires Public Accounting Firms (KAP) to have a quality control system in place to ensure compliance with applicable professional standards and regulations. Auditing Standard 220 (Revised 2021) is effective for audits of financial statements for periods beginning on or after January 1, 2022. The role of auditors in the preparation of financial statements contributes significantly to the presentation of reliable and relevant financial information as a basis for decision-making. Financial statements that reflect the transparency and accountability of a company are very important in building trust for both internal and external parties of the company.

Auditors are expected to carry out their duties professionally so that the audit reports produced are of high quality. However, there are still many auditors who do not conduct financial statement audits in accordance with applicable auditing standards and regulations, leading to dysfunctional audit behavior (Rindawan, 2018). High-profile cases in Indonesia, such as the Wanaartha Life scandal where auditors failed to detect massive misstatements (Kompas.com, 2023), and the corruption case involving BPK auditor Gilang Gumilang, highlight the severity of audit misconduct (Detik.com, 2023). Historical cases like Enron's collapse and misconduct by auditors of Garuda Indonesia and Hanson International further

illustrate how weak internal integrity and external pressures can degrade audit quality and public trust.

Research has indicated that individual psychological and situational factors play a significant role in shaping Dysfunctional Audit Behavior. Specifically, Locus of Control, Machiavellian Character, and Turnover Intention have been identified as predictors of dysfunctional tendencies. Locus of Control pertains to whether an individual attributes events to internal efforts or external circumstances (Soleh, Burhani, & Atmasar, 2020). Meanwhile, Machiavellianism reflects manipulative behavior for personal gain, often ignoring ethical boundaries (Setyaniduta & Hermawan, 2016). High turnover intention may also reduce an auditor's commitment, increasing the likelihood of audit shortcuts (Devi & Ramantha, 2017).

Despite these findings, previous studies report inconsistent results, creating a research gap. For example, while some studies argue that internal Locus of Control reduces Dysfunctional Audit Behavior (Limanto & Sukartha, 2019), others suggest the contrary (Hariani & Adri, 2017). Similar contradictions exist in the influence of Machiavellian traits and turnover intention on Dysfunctional Audit Behavior (Evanauli & Nazaruddin, 2019; Azzahra et al., 2023). These inconsistencies suggest the need for moderating variables to clarify the relationships.

This study proposes Individual Morality as a moderating factor. Individual Morality reflects personal ethical standards that can guide auditors in resisting pressure or temptation to engage in Dysfunctional Audit Behavior. As such, morality may buffer or amplify the effects of Locus of Control, Machiavellianism, and turnover intention on dysfunctional behavior (Fitri et al., 2024).

2. Literature review

2.1.Attribution Theory

Attribution Theory, introduced by Fritz Heider (1958), explores how individuals interpret causes behind behaviors, whether driven by internal traits or external circumstances (Kartana, 2021). Harold Kelley expanded this theory with the Covariation Model (1967), stating that people attribute causes by observing consistency, distinctiveness, and consensus in behavior. Bernard Weiner later integrated motivation into attribution, linking it to emotional and motivational responses.

In auditing, Attribution Theory helps explain how auditors assess the ethicality of decisions, whether rooted in personal disposition (e.g., Locus of Control us of Control, Machiavellianism) or contextual pressures (e.g., Turnover Intention). It becomes a theoretical foundation for understanding dysfunctional audit behavior (DAB), particularly in cases where auditors justify unethical actions due to external demands or internal justifications (Wibowo, 2014; Mindarti, 2016).

2.2.Dysfunctional Audit Behavior

Dysfunctional Audit Behavior refers to actions that deviate from standard audit procedures, reducing audit quality and user trust. These include premature sign-offs, falsified documentation, and omitted steps under time pressure (Donnelly, 2003) Dysfunctional Audit Behavior undermines the credibility of financial reports and the profession's integrity. It is particularly critical in environments with high performance pressure and low ethical oversight.

Auditors may engage in Dysfunctional Audit Behavior to meet deadlines or client demands, especially when career advancement is tied to performance reviews. Key forms of Dysfunctional Audit Behavior include underreporting time, manipulating audit procedures, or skipping audit steps (Achyarsyah & Sabilah, 2024). These behaviors can be responses to organizational culture or individual traits. The identification of Dysfunctional Audit Behavior

is essential to designing controls that maintain audit integrity.

2.3.Locus of Control

Locus of Control reflects whether individuals perceive their outcomes as internally controlled or externally determined (Rotter, 1954). Auditors with internal Locus of Control believe their actions directly affect results, leading to more ethical decisions. Conversely, those with external Locus of Control attribute outcomes to luck or pressure, making them more susceptible to unethical behaviors (Herliza & Setiawan, 2019). Internal Locus of Control auditors are generally more proactive and responsible in handling audit duties (Rustiarini, 2014).

Auditors with external Locus of Control may experience stress and passivity under pressure, which can increase the likelihood of cutting corners. Such individuals tend to justify deviations by blaming external conditions such as tight budgets or client demands (Yendrawati, 2020). Studies show that Locus of Control affects audit quality and professional judgment. Therefore, understanding Locus of Control is crucial in predicting Dysfunctional Audit Behavior tendencies (Jaeni & Isgiyarta, 2019).

H1: Locus of control has a positive effect on Dysfunctional Audit Behavior

2.4.Machiavellian Character

Machiavellianism, based on Niccolò Machiavelli's philosophy, reflects a personality marked by manipulation, low ethical regard, and personal goal orientation. In auditing, individuals high in Machiavellian traits may cut ethical corners to reach objectives, undermining trust and audit credibility (Saputri & Wirama, 2015). Such traits threaten independence and public trust in audit outcomes.

Auditors with Machiavellian tendencies are more likely to rationalize misconduct if it serves their goals. These behaviors include faking documentation or prematurely concluding audits under the guise of efficiency. However, organizational ethics and monitoring may reduce these tendencies (Laitupa & Usmany, 2017). Therefore, character traits like Machiavellianism must be considered in mitigating Dysfunctional Audit Behavior.

H2: Machiavellian Character has a positive effect on Dysfunctional Audit Behavior

2.5.Turnover Intention

Turnover Intention is the desire of an employee to leave their job, often linked to dissatisfaction, low engagement, or excessive pressure. In auditing, it leads to lower motivation and increased shortcut behaviors such as premature sign-offs. Auditors planning to leave may disengage from ethical standards, affecting audit reliability (Majid & Asse, 2018). This disengagement can result in compromised professional conduct and audit failure.

High turnover intentions reduce an auditor's emotional commitment and accountability. Such individuals may rush procedures or avoid complex tasks, weakening audit quality (Mardi et al., 2022). However, strong organizational support and ethical culture can mitigate these effects. Understanding turnover drivers is crucial to maintaining audit standards and preventing Dysfunctional Audit Behavior.

H3: Turnover Intention control has a positive effect on Dysfunctional Audit Behavior

2.6.Individual Morality

Individual morality is defined as an individual's internal ethical standard that influences how they distinguish right from wrong and make professional decisions. In the context of auditing, this concept plays a vital role in guiding auditors' responses to ethical dilemmas, especially when facing pressure, ambiguity, or conflicting interests. High individual morality enables auditors to maintain objectivity, integrity, and commitment to professional standards despite the temptation or opportunity to engage in unethical behavior.

When functioning as a moderating variable, individual morality can either weaken or strengthen the relationship between psychological traits such as Locus of Control us of Control, Machiavellian Character, and Turnover Intention and auditor misbehavior. For instance, auditors with a high external Locus of Control may feel compelled to succumb to client demands; however, if they possess high morality, they are more likely to resist such pressures. Similarly, even auditors with high Machiavellian tendencies may refrain from manipulating audit procedures if their moral values are strong enough to override self-interest. This suggests that morality not only has a direct ethical influence but also shapes how other psychological factors are expressed in behavior.

Empirical studies support this moderating effect. For example, Nugrahaeni et al. (2020) found that high individual morality reduces the negative impact of external Locus of Control on Dysfunctional Audit Behavior, allowing auditors to stay grounded in ethical decision-making even when they feel powerless. Likewise, research by Suputra & Wirajaya (2020) shows that morality can mitigate the harmful effects of Machiavellianism on audit quality, particularly in high-pressure or low-supervision environments. Moral individuals are more likely to adhere to codes of conduct and consider long-term consequences over short-term gains, even when planning to leave their job or facing client pressure.

Overall, individual morality represents a crucial internal mechanism for preventing dysfunctional behavior among auditors. Its presence can help organizations maintain ethical standards, especially when external controls fall short. From a practical perspective, strengthening auditors' morality through ethical training and values-based leadership development may offer more sustainable solution to audit quality than reliance on sanctions alone. Therefore, the inclusion of individual morality as a moderating variable in this study provides a richer, more human-centered understanding of why some auditors deviate while others stay true to their professional ethics.

H4: Individual Morality Moderates the Effect of Locus of Control on Dysfunctional Audit Behavior.

H5: Individual Morality Moderates the Effect of Machiavellian Character on Dysfunctional Audit Behavior.

H6: Individual Morality Moderates the Effect of Turnover Intention on Dysfunctional Audit Behavior.

The effect of Locus of Control us of control, machiavellian character, and turnover intention on dysfunctional audit behavior with individual morality as moderator is shown in Figure 1.

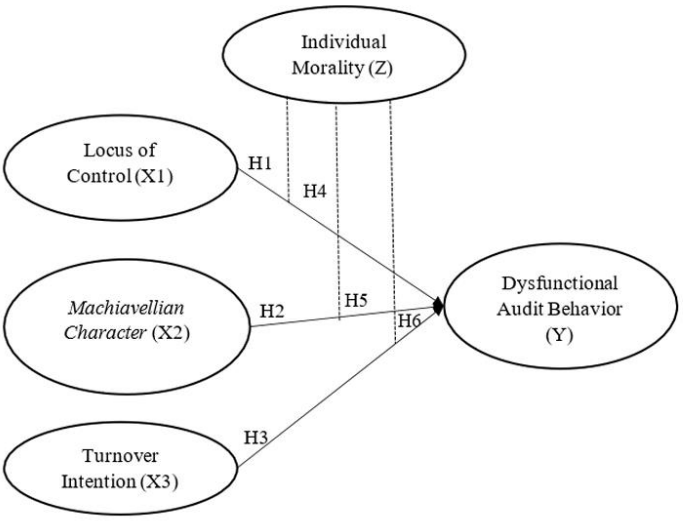

Figure 4 : Figure Research Framework

3. Methodology

3.1.Resources and Data Collection Methods

In this study, the type of data used quantitative methods and the data source used primary data obtained through structured questionnaires. The questionnaires were distributed directly to auditors working at Public Accounting Firms in the Special Capital Region of Jakarta.

3.2.Research Population and Sample

In this study, the population used all auditors working at Public Accounting Firms across the Special Capital Region of Jakarta. By using a sampling technique applied was purposive sampling, to select respondents who meet specific criteria. The criteria include:

a) Active auditors employed in Jakarta-based
b) Minimum of one year of work experience, and
c) Minimum educational background of Diploma (D3).

3.3.Analysis Method

In this study, the application used to analyze data is Partial Least Squares Structural Equation Modeling (PLS-SEM) with the SmartPLS 4.0. This method was chosen due to its suitability for small-to-medium sample sizes and complex models with multiple latent variables (Ghozali & Latan, 2015). The analysis consisted of three main stages is Descriptive Statistics, Measurement Model Evaluation (Outer Model), and Structural Model Evaluation (Inner Model).

4. Results and Discussions

4.1.Statistical Results

Descriptive statistics from outer and inner model tests were used to analyze the research data. In the first stage, researchers evaluated the outer model using outer model validity evaluation with convergent validity, discriminant validity, and composite reliability (Cronbach's alpha) to test the validity and reliability of the instruments.

Table 16. Convergent Validity

Variabel	Indikator	Outer Loading	Keterangan
Dysfunctional Audit Behavior (Y)	Y1	0,848	Valid
	Y2	0,871	Valid
	Y3	0,847	Valid
	Y4	0,856	Valid
Locus of Control (X1)	X1.1	0,856	Valid
	X1.2	0,829	Valid
	X1.3	0,886	Valid
	X1.4	0,702	Valid
	X1.5	0,720	Valid
Machiavellian Character (X2)	X2.1	0,859	Valid
	X2.2	0,702	Valid
	X2.3	0,820	Valid
	X2.4	0,794	Valid
Turnover Intention (X3)	X3.1	0,897	Valid
	X3.2	0,902	Valid
	X3.3	0,845	Valid
	X3.4	0,906	Valid
	X3.5	0,835	Valid
Individual Morality (Z)	Z1	0,931	Valid
	Z2	0,914	Valid
	Z3	0,904	Valid
	Z4	0,912	Valid
	Z5	0,932	Valid

Source: Data processed by SmartPLS (2025)

Table 1 above shows that the loading factor values of all variables in this study are 0.5, meaning that all indicator statement variables used have met the requirements and can be considered valid. The smallest loading factor is found in statements X1.4 and X2.2 with a value of 0.702, while the largest loading factor is found in statement Z5 with a value of 0.932.

Table 17. Discriminant Validity

	Average Variance Extracted (AVE)
Dysfunctional Audit Behavior (Y)	0,732
Locus of Control (X1)	0,643
Machiavellian Character (X2)	0,633
Turnover Intention (X3)	0,770
Individual Morality (Z)	0,844

Source: Data processed by SmartPLS (2025)

The average variance extracted (AVE) value is greater than 0.50. This figure indicates that all indicators are valid in measuring the research construct. Based on the test results, it was found that all instruments used had valid results in the AVE test.

Table 18. Composite Realibility

	Cronbach's Alpha	*Composite reliability* (rho_a)	*Composite reliability* (rho_c)	Keterangan
Dysfunctional Audit Behavior (Y)	0,878	0,879	0,916	Reliabel
Locus of Control (X1)	0,862	0,879	0,899	Reliabel

Machiavellian Character (X2)	0,805	0,809	0,873	Reliabel
Turnover Intention (X3)	0,925	0,928	0,944	Reliabel
Individual Morality (Z)	0,954	0,960	0,964	Reliabel

Source: Data processed by SmartPLS (2025)

The reliability test results showed Cronbach's Alpha and Composite Reliability values of more than 0.70. In this study, the reliability test using Cronbach's Alpha and Composite Reliability showed that all variables were reliable for further testing. Thus, it can be concluded that the variables used in this study had good reliability values.

In the second stage, researchers evaluated the inner model using inner model validity evaluation with R-Square, Q-Square, presented in table 4 & 5.

Table 19. R-Square

	R-Square	***R-Square Adjusted***
Dysfunctional Audit Behavior (Y)	0,669	0,651

Source: Data processed by SmartPLS (2025)

Based on the test results, it is known that the R-Square value is 0.651 with a percentage of 65.1%. This R-Square value can be classified as a moderate model (moderate relationship).

Table 20. Q-Square (Q^2)

Construct cross-validated redundancy - Total

	SSO	SSE	Q^2 (=1-SSE/SSO)
X1.	675.000	675.000	0.000
X2.	540.000	540.000	0.000
X3.	675.000	675.000	0.000
Y	540.000	286.520	0.469
Z	675.000	675.000	0.000

Source: Data processed by SmartPLS (2025)

This test aims to evaluate the goodness of the observed values generated by the model. If Q2 > 0, it indicates that the model has predictive relevance, and if Q2 < 0, it indicates that the model lacks predictive relevance ≥ 0.02, ≥ 0.15, and ≥ 0.35 (weak, moderate, and strong). In this study, shows that the Q-Square value has a Q-Square value ≥ 0.35 in accordance with the criteria in the prediction relevance test. Therefore, this study has a strong predictive value.

At the hypothesis testing stage which is used to prove and show the influence between the independent variable and the dependent variable in a study. The following hypothesis testing results are presented in table 6:

Table 21. Hypothesis Test Results

	Path coefficient	***T Statistics* (|O/STDEV|)**	**P *Values***	**Keterangan**
Locus of Control (X1) => *Dysfunctional Audit Behavior* (Y)	0,019	0,155	0,438	Rejected
Machiavellian Character (X2) => *Dysfunctional Audit Behavior* (Y)	0,616	5,507	0,000	Accepted

	Path coefficient	***T Statistics* (|O/STDEV|)**	**P *Values***	**Keterangan**
Turnover Intention (X3) => *Dysfunctional Audit Behavior* (Y)	0,326	1,684	0,046	Accepetd
Individual Morality (Z) => *Locus of Control* (X1) => *Dysfunctional Audit Behavior* (Y)	0,177	1,461	0,072	Rejected
Individual Morality (Z) => *Machiavellian Character* (X2) => *Dysfunctional Audit Behavior* (Y)	0,198	1,850	0,032	Accepted
Individual Morality (Z) => *Turnover Intention* (X3) => *Dysfunctional Audit Behavior* (Y)	-0,321	3,185	0,001	Accepted

Source: Data processed by SmartPLS (2025)

Table 6 explains the results of the hypothesis testing. The results of hypothesis testing 1 show a coefficient value and p-value of 0.019 and 0.438, respectively, indicating that hypothesis 1 is rejected. The statistical test results for hypothesis 2 show a coefficient value of 0.616 and a p-value of 0.000. These results indicate that hypothesis 2 is accepted. The results of the hypothesis test for hypothesis 3 show a coefficient value and p-value of 0.326 and 0.046, respectively. These results indicate that hypothesis 3 is also accepted.

Table 6 also presents the results of the moderation test. The statistical test for hypothesis 4 shows a coefficient value of 0.177 and a p-value of 0.072, which means that hypothesis 4 is rejected. Additionally, the test results for hypothesis 5 show a coefficient value of 0.198 and a p-value of 0.032. It can be concluded that hypothesis 5 is accepted. Furthermore, the statistical test results for hypothesis 6 show a coefficient value of -0.321 with a p-value of 0.001, meaning that hypothesis 6 is accepted.

4.2.Discussion

Based on the results of hypothesis 1, it can be concluded that locus of control does not affect dysfunctional audit behavior. The higher the locus of control, or in other words, the greater the effort and intention of a person at work, the less likely that person is to commit violations. The results of this study are reinforced by Aprilia & Nuratama (2020). Locus of control does not influence dysfunctional audit behavior. In this context, individuals with a strong locus of control are better equipped to address environmental challenges and tackle problems with optimism and confidence in their own abilities, thereby reducing dysfunctional audit behavior. Additionally, the results of this study are supported by Rahmawati and Halmawati (2020).

Based on the results of hypothesis 2, it can be concluded that Machiavellian character has a positive and significant effect on dysfunctional audit behavior. Auditors with Machiavellian character tend to be more frequently involved in deviant audit behavior, such as data manipulation or disregard for audit procedures, because they are more focused on achieving results without regard for ethical values. Additionally, auditors tend to exploit difficult conditions to avoid their professional obligations and expedite the audit process, even at the

expense of disregarding applicable audit standards. The results of this study are supported by Martini dan Permana (2019), Simbolon (2020).

Based on the results of hypothesis 3, it can be concluded that Turnover Intention has a positive and significant effect on dysfunctional audit behavior. The higher the auditor's intention to leave their job, the more likely they are to engage in audit misconduct. This is because auditors who intend to resign usually experience a decline in commitment, resulting in a lack of concern for the quality of their work. The results of this study are supported by Hermiyati, *et, al* (2023), and Kusuma (2018).

Based on the results of hypothesis 4, it can be concluded that Individual morality cannot moderate the influence between locus of control and dysfunctional audit behavior. Individual morality does not have a significant moderating effect because environmental factors and work pressure have a stronger influence on auditor behavior than individual morality. Auditors with an internal locus of control are more responsible for their actions and less likely to engage in misconduct. When under significant pressure in the workplace, even individuals with high moral standards may be tempted or forced to engage in misconduct during an audit. The results of this study are supported by Anjelia & Ali (2024).

Based on the results of hypothesis 5, it can be concluded that Individual morality can moderate the influence between machiavellian character and dysfunctional audit behavior. Individuals with high Machiavellianism and low morality tends to justify Dysfunctional Audit Behavior, considering external factors as determinants of auditor actions. Individual morality functions as a control that reduces the negative impact of Machiavellianism, ensuring compliance with audit ethics. The results of this study are supported by Ramadhania dan Ardini (2023).

Base on the results of hypotesis 6, it can be concluded that individual morality is able to moderate with the condition of weakening the influence between turnover intention and dysfunctional audit behavior. Turnover intention is not always related to deviant behavior, but depends on the individual's own morals. Auditors with strong moral principles will adhere to ethical standards and professional codes of conduct even if they intend to leave the company. Individual morality is a key factor that can prevent auditors from engaging in behavior that is detrimental to the company and stakeholders, even when someone intends to change jobs. The results of this study are supported by Hermiyati *et al.* (2023).

5. Conclusion

The research conducted aims to obtain empirical evidence regarding the influence of Locus of Control, Machiavellian Character, and Turnover Intention on Dysfunctional Audit Behavior with Individual Morality as a Moderating Variable. This research was conducted at Public Accounting Firms in the Jakarta area, yielding 135 respondents from 11 public accounting firms, and the questionnaire was completed via Google Forms. Based on the research findings and discussions, the following conclusions can be drawn:

1. Locus of Control does not have a significant influence on Dysfunctional Audit Behavior. An individual with high intentions, efforts, and also destiny or luck will not engage in deviant behavior.
2. Machiavellian Character has a positive and significant influence on Dysfunctional Audit Behavior. The higher the Machiavellian traits of an auditor, the greater the likelihood they will engage in deviant behavior in audits, such as manipulating reports or disregarding audit procedures.
3. Turnover Intention has a positive and significant effect on Dysfunctional Audit Behavior. Auditors who have resignation intentions tend to have lower commitment to their work, leading to a lack of compliance with audit standards.

4. Individual Morality is unable to moderate the relationship between Locus of Control and Dysfunctional Audit Behavior. This indicates that while individual morality can help control auditor behavior, its impact is insufficient to serve as the primary factor in preventing dysfunctional behavior.
5. Individual Morality can moderate the relationship between Machiavellian Character and Dysfunctional Audit Behavior. This indicates that enhancing individual morality in the audit profession can reduce the negative impact of Machiavellian character on deviant behavior.
6. Individual Morality can moderate but this condition weakens the relationship between Turnover Intention and Dysfunctional Audit Behavior. This indicates that even though auditors have the desire to change jobs, individual morality can reduce the likelihood of them engaging in deviant behavior.

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THE INFLUENCE OF TAX UNDERSTANDING, TAX AWARENESS, AND TAX COMPLIANCE ON E-FILING USAGE

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Abstract

This study aims to analyze the influence of tax understanding, tax awareness, and tax compliance on the use of e-filing among individual taxpayers. Tax administration digitalization is expected to enhance the efficiency and ease of reporting taxes. However, e-filing remains underutilized; many taxpayers do not know tax procedures, do not show much consciousness about the tax itself, or do not comply completely with their tax obligations. A quantitative approach is adopted in this research, which seeks to collect data by distributing questionnaires to individual taxpayers. Data would be analyzed using multiple linear regression to see the relationship of tax understanding, tax awareness, and tax compliance toward e-filing usage. It is hoped that the findings of this study will inspire the thinking of revenue agencies toward coming up with more efficient education and socialization programs to promote e-filing methodologies among taxpayers.

Keywords: *Tax Understanding, Tax Awareness, Tax Compliance, e-Filing.*

1. Introduction

Taxes were of utmost significance in Indonesia's national development accounting for more than 83% of state revenue in 2022 (Ministry of Finance, 2023). The Directorate General of Taxes (DGT) introduced an e-filing system as an online tax return filing platform in line with their ongoing program of digital transformation. The platform intends to enhance the management of tax processes with greater transparency, shorter waiting periods, enhanced accuracy, and faster reporting. However, very few of the benefits accrue to individual taxpayers as regards the e-Filing. Studies indicate that e-Filing adoption is significantly influenced by perceived usefulness and satisfaction of taxpayers, while perceived understanding and ease of use do not show significant impact (Lizkayundari & Kwarto, 2018).

Empirical evidence suggests that both tax understanding and awareness significantly affect the adoption of e-Filing (Aditya & Nurul, 2020). Rahayu (2020) found that understanding and awareness were positively associated with e-Filing use, while compliance did not show a significant effect. In contrast, Sari and Putra (2022) demonstrated that understanding, awareness, and compliance all significantly influenced e-Filing adoption. These inconsistencies indicate the need for further investigation, particularly in different tax office contexts. This study aims to examine the simultaneous influence of understanding, awareness, and compliance on the use of e-Filing among individual taxpayers registered at KPP Pratama Jakarta Jatinegara. The findings are expected to inform tax authorities on improving education, outreach, and system accessibility to enhance voluntary compliance and digital engagement.

2. Literature Review

2.1 *Theory of Planned Behavior* (TPB)

Theory of Planned Behavior (TPB) developed by (Ajzen, 1991) was developed in 1991 as a model explaining and predicting individual behavior through three main components - attitude toward the behavior, subjective norms, and perceived behavioral control in terms of the planned behavior. Tax compliance according to TPB suggests that the intentions formed by the taxpayer's subjective accounting of his attitude to paying taxes and all social pressures in their environment, which he calls subjective norms, may be affected by their perception or access as well to the possible ability or ease of compliance with their obligations concerning taxes. Attitudes can also develop by raising understanding, awareness, and comfort in e-filing.

This framework has been widely applied in taxation studies, particularly in digital tax services. For instance, Aditya and Nurul (2020) found that both taxpayer understanding and awareness, which are linked to attitudes and norms, significantly influenced e-Filing adoption. Similarly, Rahayu (2020) reported that understanding and awareness were significant predictors of e-Filing usage, although compliance (linked to behavioral control) was not statistically significant. In contrast, Sari and Putra (2022) concluded that understanding, awareness, and compliance all significantly affect the use of e-Filing, aligning fully with TPB's structure.

These studies confirm TPB's applicability in understanding taxpayer behavior in the digital context. When taxpayers are well-informed, aware of their obligations, and perceive the e-Filing system as easy and accessible, they are more likely to adopt it voluntarily. Therefore, improving tax understanding, increasing awareness, and simplifying the e-Filing process are key strategies aligned with TPB to enhance digital compliance behavior.

2.2 *Technology Acceptance Model* (TAM)

The Technology Acceptance Model (TAM) introduced by Davis, (1989) explains that an individual's acceptance of technology is influenced by two main factors: perceived ease of use and perceived usefulness. In this regard, taxpayers are more likely to use the e-Filing system if they perceive that the system is easy to use and beneficial in simplifying the tax reporting process.

Based on previous studies, these two variables are very important in enhancing e-Filing adoption. According to Rahmadani & Prasetyo (2021), perceptions of the ease, convenience, and safety of e-Filling largely determine the choice of taxpayers in using e-Filing. Hence, knowledge of technology and belief in the system are the two most significant and essential factors for one to take action.

2.3 *Tax Understanding*

Tax understanding refers to the taxpayer's level of knowledge regarding tax regulations, obligations, rights, as well as the procedures for filing and payment. When taxpayers understand how the tax system works, including the legal and procedural aspects, they are more likely to fulfill their obligations accurately and on time. According to Handayani and Mulyani (2020), tax understanding significantly influences compliance in using e-Filing systems, as better comprehension fosters confidence and independence in tax reporting.

Similarly, Lizkayundari and Kwarto (2018) found that while perceived usefulness and satisfaction significantly influenced the use of e-Filing, perceived understanding and ease of

use did not have a significant effect. This indicates that the adoption of digital tax systems may depend more on user experience and the practical benefits of the system rather than mere comprehension. In the same vein, Utami and Siregar (2022) found that tax understanding positively affects the decision to adopt e-Filing, reinforcing the importance of education in improving digital tax participation. Furthermore, Rizky et al. (2021) argued that understanding is not only linked to compliance but also serves as a prerequisite for taxpayers to perceive the benefits and usability of online tax platforms.

These findings confirm that increasing taxpayer understanding is a foundational step toward enhancing voluntary compliance and encouraging wider adoption of digital tax systems.

2.5 *Tax Compliance*

Tax compliance is defined as the willingness and ability of taxpayers to fulfill their tax obligations in accordance with applicable laws and regulations. The Directorate General of Taxes (2023) describes compliance as timely submission of tax returns (SPT), accuracy in reporting income and deductions, and correctness in tax payments. Compliance is not only influenced by enforcement but also by a taxpayer's internal motivation to fulfill their obligations voluntarily.

Utami and Siregar (2022) found that tax compliance significantly influences the use of e-Filing, suggesting that compliant taxpayers are more likely to engage with official digital systems. In line with this, Sari and Putra (2022) demonstrated that understanding, awareness, and compliance each play a significant role in encouraging taxpayers to adopt e-Filing. However, Rahayu (2020) presented a contrasting result, indicating that while understanding and awareness had significant effects, compliance did not. This discrepancy highlights the complexity of taxpayer behavior and the possibility that compliance may be conditional on other factors, such as user experience or technical ease. Rizky et al. (2021) also emphasized that compliance is positively related to e-Filing use when combined with clear sanctions and structured enforcement.

These findings confirm that tax compliance, especially when supported by awareness and understanding, plays an important role in shaping taxpayer behavior in adopting digital platforms such as e-Filing.

2.6 *Tax Awareness*

Tax awareness refers to the internal attitude of taxpayers to voluntarily and responsibly fulfill their tax obligations. It encompasses a sense of duty, recognition of the importance of taxes for national development, and a willingness to comply without coercion. Awareness is shaped by prior knowledge, socialization, and personal experience with the tax system. According to Aditya and Nurul (2020), tax awareness significantly influences the decision to use e-Filing, as it encourages proactive and independent tax reporting.

Rahayu (2020) also found that awareness had a significant positive impact on e-Filing adoption, even though compliance did not show the same effect. This suggests that awareness acts as a motivational factor that bridges knowledge and action. Supporting this, Sari and Putra (2022) emphasized that awareness, when coupled with understanding and compliance, enhances the likelihood of adopting digital tax platforms. Similarly, Utami and Siregar (2022) demonstrated that tax awareness contributes to the behavioral intention to use e-Filing, especially when supported by effective tax education and accessible systems.

2.7 *Use of e-Filing*

e-Filing is an electronic tax reporting system that enables taxpayers to submit their Annual Tax Return (SPT) online without visiting a tax office. As stated in PER-02/PJ/2019 by the Directorate General of Taxes, the e-Filing system is intended to simplify and accelerate the tax reporting process while promoting transparency, efficiency, and accountability. Through this platform, taxpayers can file their returns anytime and anywhere, reducing time and administrative burdens.

Despite its benefits, the adoption rate of e-Filing among individual taxpayers is still not optimal. Utami and Siregar (2022) found that the use of e-Filing is significantly influenced by taxpayers' understanding, awareness, and compliance behavior, highlighting the importance of behavioral readiness in digital adoption. Likewise, Sari and Putra (2022) demonstrated that when taxpayers have strong comprehension, are aware of their tax responsibilities, and feel confident in their compliance, they are more likely to adopt e-Filing. Their findings also underline the importance of trust in the system and user-friendly design to encourage wider usage.

In conclusion, the successful implementation of e-Filing depends not only on technological infrastructure but also on the taxpayers' readiness and trust. A collaborative approach between tax authorities and taxpayers is essential to create a reliable, accessible, and efficient digital tax reporting ecosystem.

3. Methodology

This study adopts a quantitative associative approach to examine the influence of tax understanding, tax awareness, and tax compliance on the use of e-Filing. The research was conducted at the Pratama Tax Office (KPP) of Jakarta Jatinegara, focusing on individual taxpayers who have utilized the e-Filing system. The sampling technique applied was purposive sampling, in which respondents were selected based on specific criteria: being registered as individual taxpayers at KPP Pratama Jakarta Jatinegara and having prior experience using e-Filing. A total of 100 respondents were considered qualified and participated in the study.

5.4. Conceptual framework

This conceptual framework aims to advance the understanding of how taxpayer-related factors influence the use of e-Filing. As illustrated in Figure 1, the framework consists of three main independent variables—Taxpayer Understanding (X1), Tax Awareness (X2), and Taxpayer Compliance (X3)—which are assumed to affect the dependent variable, e-Filing Usage (Y).

Taxpayer Understanding refers to the level of knowledge individuals possess about tax regulations and procedures, which enables accurate and timely filing. Tax Awareness reflects the realization of the importance of fulfilling tax obligations voluntarily and responsibly. Taxpayer Compliance involves the willingness of individuals to fulfill tax duties in accordance with applicable laws. When taxpayers have sufficient understanding, awareness, and a high level of compliance, their motivation and intention to use e-Filing systems are expected to increase. This model is used to analyze the extent to which these behavioral and cognitive factors contribute to the adoption of e-Filing, as shown in Figure 1.

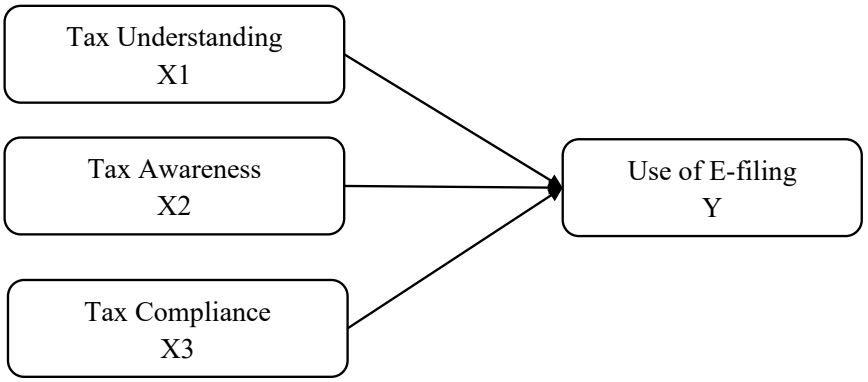

Figure 1. Conceptual Framework

4. Result and Discussion

3.1.Method Of Analysis

Data were collected using a structured questionnaire consisting of statements measured on a five-point Likert scale (1 = strongly disagree to 5 = strongly agree), aimed at capturing the perceptions of the four key variables: tax understanding (X_1), tax awareness (X_2), tax compliance (X_3), and the use of e-Filing (Y). Prior to analysis, the instrument was tested for validity and reliability. Classical assumption tests—including normality, multicollinearity, and heteroscedasticity—were conducted to ensure data adequacy. The analytical method employed was multiple linear regression, with partial (t-test) and simultaneous (F-test) hypothesis testing, along with the coefficient of determination (R^2) to assess explanatory power. The regression model used in this study is as follows:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + e$$

Where:

Y = Use of e-Filing

X_1 = Tax Understanding

X_2 = Tax Awareness

X_3 = Tax Compliance

β_0 = Intercept

β_1, β_2, β_3 = Regression coefficients of the independent variables

e = Error term

3.2.Method Of Analysis

As shown in table 2, Reliability testing is used to measure the consistency of responses given by respondents over time through a questionnaire. In this study, the reliability test was conducted using the Cronbach's Alpha method. A variable is considered reliable if the Cronbach's Alpha value is greater than 0.70 (Ghozali, 2018).

Tabel 1.
Item-Total Statistics

	Cronbach's Alpha if Item Deleted	Sig
Tax Understanding	.804	.000
Tax Awareness	.720	.000
Tax Compliance	.718	.000
Usage ofe e-Filing	.629	.000

Sumber : Output 2025

Tabel 2.
Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Tax Understanding	100	9	25	17.48	3.773
Tax Awareness	100	12	25	18.71	2.999
Tax Compliance	100	9	25	17.15	3.735
Usage ofe e-Filing	100	7	22	15.50	3.413
Valid N (listwise)	100				

Sumber : Output 2025

As shown in table 2, the highest total score is found in the tax awareness variable, with a value of 18.71, indicating that respondents have a good level of awareness regarding their tax obligations and the importance of timely tax reporting. Tax understanding follows with a score of 17.48, suggesting that respondents possess adequate knowledge of tax regulations and procedures, including the use of e-Filing. Tax compliance received a score of 17.15, reflecting a positive tendency among respondents to fulfill their tax responsibilities in accordance with existing laws. Meanwhile, the usage of e-Filing shows the lowest score at 15.50, suggesting that although tax understanding, awareness, and compliance are relatively high, there are still challenges or barriers faced by respondents in adopting and implementing the e-Filing system.

Tabel 3.

One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		100
Normal Parameters[a,b]	Mean	.0000000
	Std. Deviation	333.966.121
Most Extreme Differences	Absolute	.048
	Positive	.032
	Negative	.048
Test Statistic		.048
Asymp. Sig. (2-tailed)		.200[c,d]

Sumber : Output 2025

As shown in table 3, The normality test in this study used the One-Sample Kolmogorov-Smirnov Test to determine whether the residual data in the regression model were normally distributed. The test results showed that the number of observations analyzed was 100, with an Asymp. Sig. (2-tailed) value of 0.200. Since the significance value is greater than the significance level of 0.05 (0.200 > 0.05), it can be concluded that the residual data are normally distributed. Based on this result, the assumption of normality in the regression analysis is fulfilled, indicating that the data can be used for further statistical analysis without violating the normal distribution assumption.

Tabel 4.

Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-4.507	2.557		-1.763	.081
Tax Understanding	.378	.073	.486	5.201	.000
Tax Awareness	.301	.101	.284	2.984	.004
Tax Compliance	.092	.026	.208	3.472	.001

Sumber : Output 2025

Table 4 presents the results of the multiple linear regression test; therefore, the regression equation obtained is:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + e$$

The constant value of -4.507 indicates that if all independent variables are assumed to be constant or unchanged, the value of e-Filing usage (Y) would be -4.507. The regression coefficient for the Taxpayer Understanding variable (X_1) is 0.378, meaning that for every one-unit increase in taxpayer understanding, the use of e-Filing increases by 0.378. The regression coefficient for the Tax Awareness variable (X_2) is 0.301, indicating that each one-unit increase in tax awareness will increase e-Filing usage by 0.301. Meanwhile, the regression coefficient for the Taxpayer Compliance variable (X_3) is 0.092, which means that a one-unit increase in taxpayer compliance will increase e-Filing usage by 0.092. Therefore, all three independent variables contribute positively to the improvement of the efficiency and frequency of e-Filing usage among taxpayers.

The t-test for the Taxpayer Understanding variable (X_1) on the use of the e-Filing system (Y) shows a significance value of 0.000, which is less than 0.05, with a t-count of 5.201 > t-table value of 1.96, indicating that H_{01} is rejected and H_{a1} is accepted. This means that Taxpayer Understanding has a significant effect on e-Filing usage. Furthermore, the Tax Awareness variable (X_2) has a significance value of 0.004 and a t-count of 2.984 > t-table value of 1.96, leading to the rejection of H_{02} and acceptance of H_{a2}, indicating that Tax Awareness also significantly affects the use of e-Filing. Similarly, the Taxpayer Compliance variable (X_3) has a significance value of 0.001 with a t-count of 3.472 > t-table value of 1.96, resulting in the rejection of H_{03} and acceptance of H_{a3}, which means that Taxpayer Compliance also has a significant effect on the use of the e-Filing system. Therefore, all three variables partially have a significant influence on taxpayers' use of e-Filing.

5. Conclusion

In conclusion, the literature survey emphasized that understanding tax, tax awareness, and the use of e-Filing constitute a base of fundamental determinants for compliance behavior in respect of tax by individual taxpayers. The integration of Theory of Planned Behavior (TPB), the Technology Acceptance Model (TAM), and the Voluntary Tax Compliance Model provides a much fuller understanding of the variables influencing the willingness of taxpayers to fulfill their obligations voluntarily. Taxpayers with proper levels of tax knowledge are in a better position to understand their rights and responsibilities, and the concurrence of positive perceptions of the e-Filing process in terms of ease of use and usefulness promotes higher levels of tax compliance. Tax awareness acts as an important mediator strengthening the relationship between tax understanding and tax compliance and between e-Filing usage and tax compliance by generating an innate responsibility toward tax obligations. Past studies have established the individual effects of these variables; however, very few studies have attempted to study them in an integrated model with tax awareness providing a mediating role. This research is supposed to fill that gap by providing empirical evidence for the joint effect of tax understanding and e-Filing usage on tax compliance, with tax awareness in a mediating role. The findings are expected to contribute to the theorization of tax compliance behavior models and provide practical suggestions for the Directorate General of Taxes for revamping taxpayer education programs, improving the e-Filing system, and target designing strategies to increase voluntary compliance in this era of digitization.

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THE EFFECT OF PROFITABILITY, SOLVENCY, AND THE SIZE OF PUBLIC ACCOUNTING FIRMS ON AUDIT DELAY WITH FIRM SIZE AS A MODERATING VARIABLE (EMPIRICAL STUDY ON ENERGY SECTOR COMPANIES LISTED ON THE INDONESIA STOCK EXCHANGE FOR THE 2021 - 2023 PERIOD)

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Abstract

This study aims to analyze the effect of profitability, solvency, and the size of public accounting firms on audit delay. A quantitative approach is employed in this research, using secondary data as the primary source for data collection. The analysis is conducted using the moderated regression analysis (MRA) method. The data used comes from the audited financial statements of energy sector companies listed on the Indonesia Stock Exchange during the period 2021-2023. Through purposive sampling, a total of 138 samples were obtained and analyzed using SPSS version 26 (Statistical Product and Service Solution). The results of this study indicate that profitability has a positive effect on audit delay, while the solvency has no significant impact. The size of public accounting firms has a negative effect on audit delay. Additionally, firm size weakens the influence of profitability on audit delay but does not moderate the effect of the solvency on audit delay. On the other hand, firm size strengthens the effect of public accounting firm size on audit delay.

Keywords: *Audit Delay, Profitability, Solvency, Public Accounting Firm Size, and Firm Size.*

1. Introduction

The complexity of business in the era of globalization requires companies to present relevant and reliable financial statements for stakeholders. Based on PSAK No. 1, financial statements consist of five main components, and the audit process plays an important role in providing an independent opinion on the fairness of these statements. Statement of Financial Accounting Standards (PSAK) No. 1 emphasizes that financial statements must be presented fairly and in a timely manner by complying with the requirements in the SAK. In this case, audit timeliness is very important to maintain stakeholder trust and prevent potential fraud. According to Sari & Mulyani (2019) delays in information delivery can reduce investor confidence and affect the sustainability of the company, which in turn has an impact on increasing the backlog in the review process.

Audit delay is the period of completion of the audit process calculated from the end of the financial year to the date of issuance of the audit. Audit delays during financial reporting can have an impact on the level of investor confidence which in turn affects the share price, so the timeliness of the audit is very important. However, in practice, audit activities take time because independent auditors must examine financial statements with human standards of professionalism and accountability to provide an audit opinion. At the same time, auditors must examine the overall number of very large transactions, the complexity of transactions, and weaknesses in internal control. Therefore, audit delay in the

audit process may occur (Fitriana & Bahri, 2022).

Publication of audited financial statement information is a useful thing for business people in the capital market. The benefits of audited financial statement information decrease when the period of completion of the financial statement audit with the end of the financial year is getting further away. In other words, delays in financial reporting will have a negative impact on company health (Tanujaya & Sherly, 2023).

Delays in financial reporting remain a recurring problem in various companies, despite the administrative sanctions and fines that govern them. Based on data from the Indonesia Stock Exchange (IDX) from 2021 to 2023, a number of companies still experience delays in submitting financial reports. In 2023, the IDX recorded 61 companies that were late in reporting their 2022 financial statements, so they were subject to written warning II sanctions and a fine of IDR 50 million, including PT Sugih Energy Tbk, PT Ratu Prabu Energi Tbk, and PT Sky Energi Tbk. The following is a table of the number of audit delay cases in companies listed on the Indonesia Stock Exchange per year 2021 - 2023:

Table 1. Non-Timeless Data for Submission of Financial Reports in 2021–2023

Year	Listing Companies on the IDX	Company Experiencing Audit Delay	Percentage
2021	785	91	11.59%
2022	858	61	7.11%
2023	973	137	14.08%

Source(s): Created by authors

The energy sector is the sector with the highest number of audit delays in the 2021-2023 period, with a total of 26 companies experiencing audit delays. In 2024, this sector recorded the most audit delay, with 10 companies experiencing delays for financial statements as of December 31, 2023. Among these companies, four companies PT Sugih Energy Tbk (SUGI), PT Ratu Prabu Energi Tbk (ARTI), PT Trada Alam Minera Tbk (TRAM), and PT Borneo Olah Sarana Sukses Tbk (BOSS) experienced audit delay for three consecutive years from 2021 to 2023.

The factors that cause audit delay are divided into two, namely internal factors and external factors. Internal factors consist of profitability, solvency and company size. Meanwhile, external factors consist of auditor opinion, auditor quality, and the quality of public accounting firms (Putri & Setiawan, 2021). Profitability is the company's ability to generate profits and measure efficiency in utilizing its assets. Solvency is the ratio of debt to total assets which reflects the company's financial risk. High solvency can increase audit challenges and potentially cause audit delay.

In practice, KAP size can affect the speed of audit completion. This is because KAP, especially large ones, must maintain their reputation and credibility by following the standards set by the IAPI Public Accountant Professional Standards Board (DSPAP) through (SPAP) and the Professional Code of Ethics adopted from the International Auditing Standards (ISA). According to Juandi (2022) in his research shows that audit quality does not only depend on internal factors, but is also influenced by external factors such as the length of the working relationship with the auditor (audit tenure), auditor turnover, the size of the public accounting firm (KAP) and the client company, as well as the amount of audit honorarium received by the auditor. Large KAPs generally have more adequate resources,

both in terms of the number of auditors and their expertise, so that they can complete the audit process more efficiently. In addition, large KAPs also have stricter quality control systems and more sophisticated technology, which can help speed up the audit process without reducing the quality of audit results needed to provide added value and trust to users of financial statements. In contrast, smaller firms may not have the same capacity to complete audits on time.

2. Literature review

2.1. Theoretical underpinnings

2.1.1. Agency Theory

Agency theory was first introduced by Jensen and Meckling in 1976. This theory explains the relationship between two parties, namely the principal and the agent, where the principal gives the agent a mandate to carry out tasks on his behalf. The principal is an individual or entity that grants authority, while the agent receives the authority and is responsible for its implementation. In this study, the company acts as the principal, while the independent auditor acts as the agent (Wulandary & Difinubun, 2021).

2.1.2. Audit Delay

Audit delay is the period of time required for the auditor to complete the examination of the financial statements. The calculation starts when the company's books are closed on December 31 until the audit report is completed. The length of this process can be measured by calculating the number of days it takes the auditor to complete his task.

Based on POJK No. 14/POJK.04/2022 concerning Annual Reports of Issuers or Public Companies, companies that have gone public are required to submit annual reports to OJK no later than the end of March after the financial year ends. If the annual financial report is not submitted until March 30, the company is considered to have an audit delay. The consequences can be in the form of administrative sanctions, such as written warnings, fines, business restrictions or termination, license revocation, and cancellation of business approval (Otoritas Jasa Keuangan, 2022).

2.1.3. Profitability ratio

Profitability ratios assess a company's revenue or operational success in a period. The profits or losses obtained affect the company's ability to obtain financing, liquidity position, and growth opportunities. Creditors and investors assess profitability as an indicator of a company's earning power, while analysts use it to measure the effectiveness of management operations (Weygandt et al., 2015:723).

Return on Assets is one of the ratios used to measure profitability. In analyzing financial statements, this ratio is often the main focus, because it is able to reflect the company's success in generating profits. Return on assets has the ability to evaluate the company's past profits and project future performance (Weygandt et al., 2015:723).

2.1.4. Solvency ratio

Solvency ratios measure a company's ability to survive in the long term, especially in paying interest and repaying debts when they fall due. Creditors and long-term shareholders pay attention to this ratio, which includes debt to assets and interest earned as indicators of debt repayment ability (Weygandt et al., 2015:727).

The debt to asset ratio measures the percentage of assets financed by creditors by dividing total liabilities by total assets. This ratio indicates the company's leverage and its ability to withstand losses without harming creditors. The higher the ratio, the greater the

risk of default, while a low ratio is preferred by creditors. The adequacy of this ratio depends on the stability of earnings, where companies with stable earnings tend to have a higher ratio than companies with fluctuating earnings (Weygandt et al., 2015:727).

2.1.5. Public Accounting Firm Size

Regulation of the Minister of Finance Number 186/PMK.01/2021 stipulates that a Public Accounting Firm (KAP) is an entity authorized by the Minister to be a place where Public Accountants provide services. Public Accountants at KAP provide assurance, attestation, and non-assurance services independently, with the main task of examining financial reports and providing professional opinions. Audits by Public Accountants increase the trust of users of financial statements, so neutrality and expertise are needed to avoid conflicts of interest. The size of the Public Accounting Firm is an indicator of the size of an office. Large public accounting firms are usually affiliated with the Big 4, namely KAP Osman Bing Satrio & Eny (Deloitte), KAP Tanudiredja, Wibisana & Rekan (PwC), KAP Purwantono, Suherman & Surja (EY), and KAP Sidharta & Widjaja (KPMG). Large public accounting firms have international affiliations, branches in various locations, and clients from large companies (Hadi & Gharniscia, 2023).

2.1.6. Company Size

The preparation of financial statements in large companies that have been audited tends to be faster than small companies. This is because large companies have a stronger internal control system, thereby reducing reporting errors and simplifying the audit process. Company size can be measured through total assets, market capitalization, or total revenue. In this study, company size is measured based on total assets, because it is more reflective of the wealth managed from the start than income which only shows results in a certain period (Saputra & Agustin, 2021).

Based on the Decree on Amendments to Regulation Number IX.C.7 concerning Guidelines Regarding the Form and Content of Registration Statements in the Context of Public Offerings by Medium or Small Companies (1997). The regulation stipulates that a large business is a legal entity established in Indonesia with total assets of no more than IDR 100,000,000,000 (one hundred billion rupiah). In addition, it may not be affiliated with a medium, or small company, nor is it a mutual fund. Meanwhile, a public offering conducted by a medium or small-sized company refers to the offering in connection with the securities offered by the company. With the total value of securities offered not exceeding Rp. 40,000,000,000. (forty billion rupiah).

2.2. Hypothesis development

2.2.1. The Effect of Profitability on Audit Delay

Profitability is the main indicator in assessing a company's performance in achieving profit through its resources. The ability to generate profit reflects the effectiveness of asset management and business strategy. High profitability indicates operational efficiency and has a positive impact on the company's image, becoming a positive signal for managers in meeting the principal's expectations. Conversely, low profitability can trigger a negative market response and extend audit delays because management tends to delay the publication of unfavorable information. Carslaw & Kaplan (1991) found that loss-making companies try to minimize the spread of bad news to maintain their reputation. Audits of loss-making companies' financial statements often take longer because auditors work more carefully to ensure there are no material misstatements. Thus, profitability affects transparency and speed of reporting, which ultimately affects investor perceptions and the

company's value in the market (Gustiana & Rini, 2022). An alternative hypothesis is formulated based on the theoretical description above:

H1: Profitability has a negative effect on audit delay

2.2.2. The Effect of Solvency on Audit Delay

According to Oktrivina & Azizah (2022), there is a positive correlation between solvency (the ratio of total debt to total assets) and audit delay. Companies with high debt ratios are at greater risk of bankruptcy and tend to take longer to submit financial reports. High debt is considered bad news for users of financial reports, so the KAP auditing the report needs to be more careful in the audit process. Based on research conducted by Aprilia & Cahyonowati (2022), it shows that the larger the size of the KAP, the faster the time required to complete the audit process. An alternative hypothesis is formulated based on the theoretical description above:

H2: Solvency has a positive effect on audit delay

2.2.3. The Effect of Public Accounting Firm Size on Audit Delay

Public Accounting Firms (KAP) act as independent parties that mediate the interests of principals and agents in auditing financial statements. Large-scale KAPs have more auditors with higher levels of expertise, allowing audits to run more effectively and efficiently through better distribution of tasks. In addition, large KAPs have incentives to complete audits on time without sacrificing quality. With a larger number of professional staff, they can allocate resources optimally, ensure that audits run smoothly, and increase the efficiency of financial statement audits. Based on research conducted by Aprilia & Cahyonowati (2022), it shows that the larger the size of the KAP, the faster the time required to complete the audit process. An alternative hypothesis is formulated based on the theoretical description above:

H3: The size of the Public Accounting Firm has a negative effect on audit delay

2.2.4. *The Effect of Company Size Moderating Profitability on Audit Delay*

Company size as a moderating variable between profitability and audit delay shows how the size of the company affects the duration of the audit completion. Measured by total assets, company size reflects the complexity of operations and the amount of resources in generating profitability, which has an impact on the level of audit complexity. Asmedi & Kurniati's (2022) study found that company size strengthens the effect of ROA on audit delay. Large companies tend to have better management, while small companies have limited assets. Profitability usually increases with asset growth, so audits in large companies require more comprehensive testing to ensure the fairness of financial statements. An alternative hypothesis is formulated based on the theoretical description above:

H4: Company size moderates the effect of profitability on audit delay

2.2.5. The Effect of Company Size Moderates Solvency on Audit Delay

The company's debt level reflects the management of its obligations, both short-term and long-term. When the debt to total assets ratio is high, the financial statement audit process tends to take longer because the information is less beneficial to users of the financial statements. However, large companies generally have a tighter monitoring system in managing external funds. Therefore, company size can act as a moderating factor in the

relationship between solvency and audit delay, moderating the effect of debt levels on the length of the audit process. This statement is in accordance with research conducted by Silalahi (2024) which shows that company size can moderate the effect of solvency on audit delay. An alternative hypothesis is formulated based on the theoretical description above:

H5: Company size moderates the effect of solvency on audit delay

2.2.6. The Effect of Company Size Moderates the Size of the Public Accounting Firm on Audit Delay

The scale of the accounting firm that audits the company reflects the selection of reputable auditors to ensure audit quality. Large accounting firms have more resources and strict procedures, allowing audits to take place faster and more efficiently. Company size also affects the duration of the audit, where large companies with complex operations take longer than small companies. Pressure from investors, regulators, and the public encourages large companies to ensure that audits are completed on time. (Margaretha & Suhartono, 2016) stated that companies with large assets require more complicated audit procedures, thus extending the audit process, both by Big Four and non-Big Four accounting firms. Alternative hypotheses are formulated based on the theoretical description above:

H6: Company size moderates the effect of Public Accounting Firm Size on audit delay

3. Methodology

The data used comes from the annual financial reports of energy sector companies listed on the Indonesia Stock Exchange (IDX). The population of this study is energy sector companies listed on the Indonesia Stock Exchange (IDX) for the period 2021-2023. Meanwhile, the sample consisted of 47 energy sector companies that were taken using the purposive sampling technique. The following are the criteria that have been set in the use of samples as follows:

Table 2. Sample Selection Criteria

No	Criteria	Total
1	Energy sector companies listed on the Indonesia Stock Exchange (IDX) in 2021, 2022, and 2023	87
2	Energy sector companies whose financial reports do not contain data according to research requirements	(25)
3	Energy sector companies that experienced losses during the 2021-2023 period	(15)
	Total sample of companies	**47**
	Number of years for the period 2021 - 2023	**3**
	Total sample of companies x (3 years)	**141**

Source(s): Created by authors

Extreme values generated for a single variable or combination are known as outliers. Outliers are cases or data that have very different characteristics compared to other data (Ghozali, 2016). Thus, this regression model is not suitable for use in subsequent analysis.

To normalize the data, it is necessary to remove outlier data. There is 1 company eliminated with outliers so that the total sample becomes 138.

3.1. Measurement

3.1.1. Audit Delay (Y)

A measurement indicator of audit delay measured based on the delay in the number of days calculated from the end of the company's fiscal year to the date the audit report is issued, namely from December 31 to the date stated in the independent auditor's report.

Audit Delay = (Audit Report Date - Financial Report Date)

3.1.2. Profitability (X1)

This study uses profitability variables measured by the Return on Assets (ROA) ratio. ROA shows the comparison between net profit after tax and the company's total assets. The measurement indicator for this variable is obtained from the ratio of net profit after tax to total assets.

$$ROA = \frac{\text{net profit after tax}}{} x\ 100\%$$

3.1.3. Solvency (X2)

This study uses solvency variables with debt to asset ratio as a measurement. DAR is the debt ratio used to measure the comparison between total debt and total assets of the company.

$$DAR = \frac{total\ debt}{total\ assets}\ x\ 100\%$$

3.1.4. Public Accounting Firm Size (X3)

The Public Accounting Firm (KAP) size variable is measured based on the Big Four and non-Big Four KAP classifications. Data is obtained from audit reports and company information listed on the IDX during the study period. The size of the KAP is measured by a dummy variable, where non-Big Four KAPs are coded 0 and Big Four KAPs are coded 1.

Dummy:

Big four KAPs = 1
and Non-big four

3.1.5. Firm Size (M)

The moderating variable in this study is firm size, which is measured using the natural logarithm of total assets. This approach is used to standardize the value of assets which are generally very large so that they are comparable to other variables.

$$Firm\ Size = Ln\ (Total\ Assets)$$

3.2. Data Analysis

This study uses time-series data or data collected over time in the period 2021 - 2023. The data processing technique uses a quantitative analysis method with the help of statistical data processing software, namely Microsoft Excel and SPSS version 26. Data analysis in this study consists of Descriptive Analysis, Normality Test, Autocorrelation Test, Multicollinearity Test, Heteroscedasticity Test, Multiple Regression Analysis, Moderated Regression Analysis Test, Partial Test (T Test), Simultaneous Test (F Test), and Coefficient of Determination Test (R2).

4. Results and discussions

4.1 The Effect of Profitability on Audit Delay

Based on the hypothesis testing that has been carried out, the results show that profitability has a positive effect on audit delay, so H1 which states that profitability has a negative effect on audit delay is rejected. Agency theory explains the differences in interests between management and principal, which can encourage management to act in its own interests. To reduce this risk, the principal incurs monitoring costs, including audits, to ensure the reliability of the financial statements. Audit duration depends on the complexity and risk of the financial statements. High profitability may lengthen audit delay as auditors apply more stringent controls to prevent accounting manipulation. In addition, companies with large profits often have complex transactions, requiring more in-depth audit procedures. High return on assets can increase audit delay due to greater audit supervision and complexity (Aprilia & Cahyonowati, 2022).

Profitability is measured by the formula of net profit divided by total assets. Return on assets is used to measure how effectively a company uses its assets to generate profits. The higher the profitability, the more efficient the company is in managing its assets. From the descriptive test table, it shows that the average return on assets value is 0.15584985. Companies with above-average return on assets, namely PT Batulicin Nusantara Maritim Tbk in 2021 with an ROA value of 0.16851056 submitted their financial reports in 116 days, PT Sumber Global Energy Tbk in 2022 with an ROA value of 0.17532471 submitted their financial reports in 102 days, while companies with below- average return on assets, namely PT Elnusa in 2021 with an ROA value of 0.01504549 submitted their financial reports in 56 days. This shows that the greater the profitability value, the longer it takes to submit the financial report.

The results of this study are in line with research conducted by Herawati & Andarisasi (2020) and Asmedi & Kurniati (2022) which stated that profitability has a positive effect on audit delay.

4.2 The Effect of Solvency on Audit Delay

Based on the hypothesis testing that has been carried out, the results show that solvency has no effect on audit delay, so H2 which states that solvency has a positive effect on audit delay is rejected. Agency theory states that a conflict of interest between management and the principal can cause management to hide information that is detrimental to the principal, so that monitoring costs are needed such as audits to increase confidence in financial statements. Companies with high solvency require broader audits, especially in examining debt balances, which can extend the audit process and cause audit delays (Aprilia & Cahyonowati, 2022).

However, research shows that solvency does not affect audit delays. Even though the company has large debts, the audit process continues according to procedures without being affected by the company's ability to pay off its debts. This is because the auditor's work standards in the SPAP ensure that the audit is carried out comprehensively, regardless of

the size of the company's debt (Febisianigrum & Meidiyustiani, 2020).

In this research, it was found that solvency does not affect audit delay. Solvency is measured by the formula total debt divided by total assets. This ratio shows the extent to which the company's assets are financed by debt. Based on the descriptive test, it shows that the average debt to asset ratio value is 0.207054607. The debt to asset ratio value above the average, namely 0.20, is found in PT Mitrabara Adiperdana Tbk. in 2023 with a DAR value of 0.2471141 submitted its financial report in 81 days, PT Medco Energi Internasional Tbk in 2022 with a DAR value of 0.78371542 submitted its financial report in 160 days, while the debt to asset ratio value is below the average, namely PT Pelayaran Nasional Bina Buana in 2023 with a DAR value of 0.14438269 submitted its financial report in 85 days, PT Wintermar Offshore Marine Tbk in 2023 with a DAR value of 0.16877151 submitted its financial report in 117 days. This shows that the high and low values of the debt to asset ratio do not affect the length of time to submit financial reports. This is in line with research conducted by Gozali & Harjanto (2020) and Ananda et al. (2024) which states that solvency has no effect on audit delay.

4.3 The Effect of Public Accounting Firm Size on Audit Delay

Based on the hypothesis testing that has been carried out, the results show that the size of the public accounting firm has a negative effect on audit delay, so that H3 which states that the size of the public accounting firm has a negative effect on audit delay is accepted. In agency theory, auditors play an important role in reducing the information gap between management (agent) and owners or stakeholders (principal). To maintain the value of financial statement information, auditors must complete audits on time. Large public accounting firms (KAP) tend to be more effective and efficient in the audit process because they have more auditors and a higher level of expertise than small KAP. In addition, large KAPs have an incentive to ensure that the audit is completed on time without reducing the quality of the results (Aprilia & Cahyonowati, 2022)

From the descriptive test table, the size of the public accounting firm is measured using a dummy variable with values 1 and 0, it is explained that the value 1 is for companies that use the services of Big Four KAP and 0 is for companies that use the services of Non-Big Four KAP. One of the companies that uses the services of Big Four KAP is PT Adaro Minerals Indonesia Tbk in 2021 with a completion time of 55 days for audited financial reports, and one of the companies that uses the services of Non-Big Four KAP is PT Sumber Energi Andalan in 2021 with a completion time of 112 days for audited financial reports. It can be concluded that the larger the KAP, the faster the delivery of financial reports.

This is in line with research conducted by Setiawan et al. (2023) and Aprilia & Cahyonowati (2022) which states that the size of the public accounting firm has a negative effect on audit delay

4.4 The Effect of Company Size Moderating Profitability on Audit Delay

Based on the hypothesis testing that has been carried out, the results show that company size weakens the effect of profitability on audit delay so that H4 which states that company size moderates the effect of profitability on audit delay is accepted. Return on Assets (ROA) reflects the company's efficiency in generating profits based on its total assets. In agency theory, management (agent) is authorized by the principal to manage the company. Large-scale companies generally receive close supervision from investors, regulators, and the government, so they are required to complete audits faster (Anita & Cahyati, 2019). However, audits of large companies with high profitability are often more complex due to the large number of transactions and complicated financial structures.

Auditors need more time to ensure compliance with accounting standards, which can extend the audit process (Marcelino & Mulyani, 2021).

This is in line with research conducted by Marcelino & Mulyani (2021) that company size weakens the effect of profitability on audit delay.

4.5 The Effect of Company Size Moderates Solvency on Audit Delay

Based on the hypothesis testing that has been carried out, the results show that company size does not moderate the effect of solvency on audit delay so that H5 which states that company size moderates the effect of solvency on audit delay is rejected. The company's inability to pay long-term and short-term obligations makes the relationship between solvency and company size have no effect on audit delay. Both large and small companies still take a long time to complete the audit, because auditors try to minimize the debt to capital ratio (Asmedi & Kurniati, 2022).

In agency theory, management has more information than owners, so independent auditors are needed to ensure financial reports are in accordance with procedures. The amount of debt and company size affect the duration of the audit, because the greater the debt and complexity of the company, the longer it takes the auditor.

High financial risk can also indicate financial difficulties, which can slow down the audit process and have a negative impact on investors (Nuraini et al., 2022). Current technological advances help auditors in the process of auditing corporate financial statements, which in turn does not affect audit delay. Both large and small companies, with high or low debt ratios, will still be audited by the same auditor, and existing technology supports the smooth work of these auditors (Al-Azhary et al., 2024)

This is in line with research conducted by Al-Azhary et al. (2024) which states that company size does not moderate the effect of solvency on audit delay.

4.6 The Effect of Company Size Moderates the Size of the Public Accounting Firm on Audit Delay

Based on the hypothesis testing that has been carried out, the results show that company size strengthens the effect of public accounting firm size on audit delay, so that H6 which states that company size moderates the effect of public accounting firm size on audit delay is accepted. Agency theory explains the relationship between management (agent) and owners or stakeholders (principal). Large companies tend to have better governance and higher transparency to reduce information asymmetry. Auditors are trusted to provide objective and independent opinions on financial statements to ensure the reliability of information for stakeholders.

The selection of auditors from the Big Four Public Accounting Firm (KAP) by large companies is a strategy to reduce the risk of information asymmetry, moral hazard, and adverse selection. KAP Big Four has better resources and reputation, so it can improve the transparency of financial statements and audit quality. In addition, large companies with strong internal control systems help auditors work more efficiently and timely, reduce information costs, and increase investor and regulator confidence. Thus, the selection of Big Four KAP and a good internal control system accelerates audits and reduces the risk of inaccurate information (Margaretha & Suhartono, 2016).

This is in line with research conducted by Zakaria et al., 2021) which states that company size moderates the effect of KAP size on audit delay.

5. Conclusion

Based on the results of data analysis that has been done, the following conclusions can

be drawn, namely profitability has a positive effect on audit delay, solvency has no effect on audit delay, the size of the Public Accounting Firm has a negative effect on audit delay, company size weakens the effect of profitability on audit delay, company size does not moderate the effect of profitability on audit delay, company size strengthens the effect of profitability on audit delay.

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THE EFFECT OF FIRM SIZE, INSTITUTIONAL OWNERSHIP, AND COMPETITIVE ADVANTAGE ON ENVIRONMENTAL DISCLOSURE

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Abstract

This study empirically aims to analyze The Effect of Firm Size, Institutional Ownership, and Competitive Advantage on Mining and Agriculture Sector Companies Listed on the Indonesia Stock Exchange in 2019-2023. Determination of the sample using a purposive sampling method by making certain criterias resulted in 17 sample companies. The data analysis technique used in this study is the Partial Least Square (PLS) model by using two modeling models, namely outer model analysis and inner model analysis. The results of this study indicate that Firm Size has a positive effect on Environmental Disclosure. Then Institutional Ownership shows that it has a negative effect on Environmental Disclosure, and Competitive Advantage has a positive effect on Environmental Disclosure. This shows that companies can utilize information related to environmental disclosure to achieve better goals, and it is recommended to use the results of the study as a basis for decision making that supports increased environmental disclosure.

Keywords: Firm Size, Institutional Ownership, Competitive Advantage, and Environmental Disclosure

1. Introduction

Humans, as living beings, cannot be separated from the environment because the environment plays an important role in daily life. However, as the human population grows, so does its impact on the environment. This problem is marked by the growth of the industrial sector and the increasingly advancing technology that negatively impacts the environment. Therefore, it is necessary not only to innovate for profit but also to consider every aspect of profit, society, and the environment in a balanced manner, known as the “triple bottom line.”

Environmental damage in Indonesia caused by corporate activities continues to occur frequently. One example of corporate indifference to the worsening state of nature due to environmental neglect is PT Vale Indonesia (Betahita, 2022). PT Vale Indonesia has caused damage to the Mahalona Lake ecosystem due to sediment transportation through rivers, resulting in a 151-hectare reduction in the lake's area. The population of butini fish (Glossogobius mattanensis), an endemic species of Lake Matano, Lake Mahalona, and Lake Towuti, has also declined, making it difficult for fishermen to catch fish.

One of the main causes of non-compliance is the participation of new companies that do not yet fully understand or fulfill their environmental disclosure obligations. This issue highlights the challenges companies face in implementing transparent and consistent environmental disclosure, especially for small and medium-sized companies that may have limited resources to meet environmental disclosure standards. The inability of some companies to implement environmental disclosure properly can also affect public and stakeholder confidence. Larger companies generally have more resources and capacity to conduct more

comprehensive disclosures. In addition, large companies are more vulnerable to public scrutiny and stakeholder demands to disclose their environmental responsibilities.

The first factor that can influence environmental disclosure is firm size. Firm size is a measure of the size of a company, indicated or evaluated by total assets, total sales, total profits, tax expenses, and so on (Maulana et al., 2021). This is also in line with Legitimacy Theory, which states that large companies are more visible than small companies, so various demands and pressures from the public will be more significant.

The second factor that can influence environmental disclosure is institutional ownership. Institutional ownership refers to the total shares of a company owned by non-bank financial institutions when these institutions manage funds for others (Saputri, 2020). This is in line with Legitimacy Theory, which states that management will continue to increase oversight of company activities in an effort to generate profits and maintain relationships between the company, institutional owners, and the public.

The next factor that can influence environmental disclosure is competitive advantage. Competitive Advantage is a company's ability to design and implement strategies to compete with others through the better utilization of technical, material, financial, and organizational resources, thereby maintaining its position in the market (Alamri, 2018). This is in line with Legitimacy Theory, which states that companies that transparently disclose their advantages will gain legitimacy from stakeholders.

Based on the above explanation, this study aims to examine the influence of Firm Size, Institutional Ownership, and Competitive Advantage on Environmental Disclosure. This study is novel in that it builds on Saputri (2020) who previously researched the influence of firm size, institutional ownership, and competitive advantage on environmental disclosure. It is interesting to investigate whether there are differences in behavior between large and small companies, so it is hoped that this will provide input for companies to implement appropriate policies.

2. Literature review

2.1. Legitimacy Theory

This study is based on *Legitimacy Theory*. *Legitimacy Theory* can be defined as the recognition of a company by society. There are many different opinions regarding the definition and disclosure of *Legitimacy Theory*. According to Ghozali & Chariri (2007), *Legitimacy Theory* is defined as a condition or status that exists when a company's value system is in line with the value system of the larger society of which the company is a part. According to Campanella et al., (2020), legitimacy itself is important for organizations or companies, so the boundaries emphasized by social norms and values encourage the importance of analyzing organizational behavior. Therefore, even though a company has its own policies in institutional operations, failure to adapt to norms or customs will threaten the company's legitimacy and its resources. The relationship between *Legitimacy Theory* and the variables in this study is how a company's ability to maintain relationships with stakeholders and society aligns with prevailing norms, values, and belief.

2.2. Stakeholder Theory

The Stakeholder Theory assumes that organizations operate in a clear system, where the organization and its environment are interrelated and influence each other. This is reflected in social relationships in the form of responsibility and accountability. Therefore, organizations are responsible to their stakeholders. *Stakeholder Theory* states that in order to maintain its existence, a company needs the support of its stakeholders, so the company's activities must also consider the approval of its stakeholders (Gray et al., 1995). The survival of a company

depends on the support of its stakeholders. Companies need to build trust with stakeholders in order to maintain their support. Environmental disclosure is a means of maintaining relationships with company stakeholders. With environmental disclosure, companies can meet information needs and gain the trust of stakeholders.

2.3. Environmental Disclosure

Environmental disclosure is the disclosure of information related to the environment in the company's annual report or sustainability report. According to Ghozali & Chariri, (2007) the environmental disclosure is a set of information related to company activities and their impact on social and environmental conditions. Disclosure of environmental information or Environmental Disclosure aims to mediate between companies, communities, and investors that can be used for decision-making (Saputri, 2020). Suhardjanto & Miranti, (2019) explain that with the existence of environmental disclosure, a company is expected to avoid public demands, gain the trust of stakeholders, and become a sustainable company.

2.4. Firm Size

Firm size is a scale that describes the size of a company. Firm size can reflect an operational activity within a company (Brigham & Houston, 2014:4). According to Seftianne & Handayani (2011) the determination of the size of the company can be determined based on total sales, total assets, and average sales level.

2.5. Institutional Ownership

Jensen & Meckling (1976) revealed that ownership has a very important role in minimizing agency conflicts that occur between managers and shareholders. Institutional ownership is considered to have the ability to control management through an effective supervisory process. Institutional investors have experience and strength and are responsible for protecting the rights and interests of all shareholders to demand that the company communicate transparently (Nurkasanah, 2019).

2.6. Competitive Advantage

Competitive advantage is everything good that the company has, all in terms of cost, company uniqueness, and specific targets that the company has. According to Distanont & Khongmalai (2020), "competitive advantage is the capability possessed by a business in a strategy to get more profit than its competitors in similar industries." Companies that implement this strategy will have an impact on themselves because the company will have the ability to learn quickly about market conditions than its competitors and can implement better opportunity plans.

3. Methodology

This study focuses on The Effect of Firm Size, Institutional Ownership, and Competitive Advantage on Mining and Agricultural Companies listed on the IDX in 2019-2023.

3.1. Data resources

The data sources for this study were obtained from the Agriculture and Mining sector companies listed on the Indonesia Stock Exchange for the 2019-2023 period using the archival method (documentation) which looks at the company's annual report through the Indonesia Stock Exchange website at www.idx.co.id or the company's official website related to the company.

3.2. Data collection technique

This research uses secondary data. Secondary data is data that is obtained indirectly. In this study, the data obtained can be seen from the annual report and sustainability report. In this study, the authors obtained secondary data by reading, observing and researching the annual reports and sustainability reports of agricultural and mining companies listed on the Indonesia Stock Exchange for the 2019-2023 period and can be accessed through the official website www.idx.co.id. The sampling technique in this study used purposive sampling technique, which is a sampling technique with certain considerations (Sugiyono, 2009). The following are the sample selection criteria as follows:

Table 1 Sample criteria

Description	Total
Agriculture and mining sector companies listed on the IDX for the period 2019-2023	91
Agriculture and mining sector companies listed on the IDX for the period 2019 - 2023 do not consistently report or disclose complete annual reports.	(11)
Agriculture and mining sector companies that do not consistently report or disclose complete sustainability reports.	(57)
Companies that do not have complete data for the measurement of research variables for the period 2019-2023	(6)
Total Company	**17**
Number of Years of the Research Company	**5**
Total Company Sample x 5 Years	**85**

3.3.Operational definition

The dependent variable used in this study is environmental disclosure and the independent variables are firm size, institutional ownership, and competitive advantage. The measurement for each variable can be seen in table 2.

Table 2 Variable measurement

Variable	Indicator	Scale
Environmental Disclosure (Y) Ayu et al, (2017)(Ayu et al., 2017)	$ED = \frac{Total\ Items\ Disclosed}{34\ Item}\ x\ 100\%$	Ratio
Firm Size (X_1)	$Size = LN(Total\ aset)$	Ratio

Ardyaningsih dan Oktarina, (2022)		
Institutional Ownership (X_2) Saputri, (2020)	$KI = \frac{Jumlah\ saham\ yang\ dimiliki\ institusi}{Jumlah\ saham\ yang\ beredar}\ X\ 100\%$	Ratio
Competitive Advantage (X_3) Eksandy & Mulyadi, (2020)	$CR = \frac{Advertising\ Expense}{Sales + Account\ Receivable}$ $SR = \frac{Account\ Payable + Inventory}{Sales}$ $RnD\ Intens = \frac{RnD\ Expense}{Sales}$ $CA = \frac{CR + SR + R\ \&\ D\ Intens}{3}$	Ratio

4. Results and discussions

4.1. Results

1. Descriptive Statistic Analysis

Table 3 Descriptive Statistics Results

	Y	**X_1**	**X_2**	**X_3**
MIN	0.059	15.733	0.001	0.024
MAX	0.676	32.360	0.121	0.818
MEAN	0.361	24.791	0.020	0.100
ST.DEV	0.195	5.710	0.018	0.131

Based on table 2, it is known that the number of samples in this study is 85. Environmental Disclosure has a minimum value of 0.059 and a maximum value of 0.676. The mean value of Environmental Disclosure is 0.361 and the standard deviation value is 0.195. Firm size has a minimum value of 15,733 and a maximum value of 32,360. The mean value of Firm size is 24.791 and the standard deviation value is 5.710. Institutional ownership has a minimum value of 0.001 and a maximum value of 0.121. The mean value of institutional ownership is 0.020 and the standard deviation value is 0.018. Competitive advantage has a minimum value of 0.024 and a maximum value of 0.818. The mean value of Competitive advantage is 0.100 and the standard deviation value is 0.131.

2. Outer Model Test Results

Table 4 Outer Model Test Results

	X_1	**X_2**	**X_3**	**Y**	**P-*Value***	**VIF**

X1	1.000	0.000	0.000	0.000	<0.001	0
X2	0.000	1.000	0.000	0.000	<0.001	0
X3	0.000	0.000	1.000	0.000	<0.001	0
Y	0.000	0.000	0.000	1.000	<0.001	0

Based on the results of the model output, it can be concluded that the reliability indicators for all variable forming items in the disclosure of Firm Size, Institutional Ownership, Competitive Advantage, and Environmental Disclosure show valid results. In this factor, the indicator weight value has a p-value <0.001 and a p-value <0.05, which means it meets the criteria, and the Variance Inflation Factor or VIF value <3.3 means that there is no collinearity problem or no multicollinearity between indicators (Ghozali & Latan, 2014).

3. Inner Model Test Results

Table 5 Inner Model Test Results

Parameter / *rule of thumb*	**Coefficient**	**P-Value**	**Results**
Average Path Coefficient (APC)	0.327	P = 0.001 < 0.05	Meet the criteria
Average R-squared (ARS)	0.397	P = 0.001 < 0.05	Meet the criteria
Average Adjusted R-squared (AARS)	0.374	P = 0.001 < 0.05	Meet the criteria
Average Block VIF (AVIF)	*Acceptable If* ≤ 5, *Ideally* ≤ 3.3	1.015 < 3.3	Doesn't happen multicollinearity
Average Full Collinearity VIF (AFVIF)	*Acceptable If* ≤ 5, *Ideally* ≤ 3.3	1.084 < 3.3	Doesn't happen multicollinearity
Tenenhaus GoF (GoF)	*Small* ≥ 0.1, *Medium* ≥ 0.25, *Large* ≥ 0.36	0.630	*Large*
Adjusted R-Squared	*Small* ≤ 0.25, *Medium* ≤ 0.45, *Large* ≤ 0.70	0.374	*Medium*
Q-squared coefficients	Q > 0	0.392	The model has predictive value

Based on table 5, it can be seen that the tested model is fit. The model can be called fit because APC, ARS, and AARS have a significance value <0.05. In this research model, there is no multicollinearity problem because AVIF and AFVIF have a score < 3.3. Tenenhaus GoF

in this model has a score of 0.630 which can be classified as a large or large model. And the Adjusted R-squared value of Environmental Disclosure is 0.374 which can be categorized as a medium model. This means that the influence of the research variables is able to explain the Environmental Disclosure variable by 37% and the remaining 63% is the Environmental Disclosure variable which is affected by other variables not studied. Meanwhile, the Q-squared score is 0.392> 0, which means that it can be said that the model is fit (Ghozali & Latan, 2014).

4. Hypothesis Test Results

The next step is to test the effect of each independent variable on the dependent variable. Hypothesis testing is used to understand the impact of each independent variable on the dependent variable by applying path analysis or model analysis. In this study, the independent variables to be proven are Firm Size, Institutional Ownership, and Competitive Advantage on Environmental Disclosure as the dependent variable. The correlation between variables is measured by looking at the path coefficient and its significance level. The significant level used in this study is 5% so that the significance or confidence level of 0.05 as a basis for rejecting or accepting a hypothesis. The results of hypothesis testing in this study can be presented in table 6 as follows.

Table 6 Significance and Coefficient Results

	Path Coefficients	**P-Value**	**Relationship between Variables**	**Results**
FZ → ED	0.489	0.001	Positive	Accepted
IO → ED	-0.224	0.015	Negative	Accepted
CA → ED	0.269	0.004	Positive	Accepted

4.2.Discussions

Based on the results of testing the first hypothesis using WarpPLS version 8.0 above, it is known that Firm Size (X_1) has a P-value of 0.001 ≤ 0.05 and a coefficient value of 0.489, therefore it can be concluded that Firm Size has a positive effect on Environmental Disclosure. The test results show that firm size shows how large or small the company is based on total assets, sales volume, and stock market value. Based on Legitimacy Theory, companies with large activities will be more visible than smaller companies, so that various demands and pressures from the community will be greater. Therefore, this study states that the effect of firm size on environmental disclosure is proven to have a positive effect, with the greater the size of the company, the more disclosure of environmental information.

The results of this study are in line with research conducted by Ardyaningsih & Oktarina (2022) and Purnama (2018) which state that fim size has a positive effect on environmental disclosure. This gives a statement that large companies can be assessed with a greater level of assets that will disclose more environmental responsibilities carried out by the company. The results of this study are not in line with the research of Putra et al, (2021) which states that firm size has a negative effect on environmental disclosure. According to Putra et al. (2021), it can be said that small companies and large companies do not determine the level of environmental disclosure.

Based on the results of testing the second hypothesis using WarpPLS version 8.0 above, it is known that institutional ownership (X_2) has a P-value of 0.015 ≤ 0.05 and a coefficient value of -0.224, therefore it can be concluded that Institutional Ownership has a negative effect on

Environmental Disclosure. The test results show that institutional ownership is shares owned by institutions in a company. According to Diantimala & Amril (2018) institutional investors tend to be more careful in making decisions from management that may not be in line with shareholders regarding environmental disclosure information. The higher institutional ownership will reduce environmental disclosure. This is because the higher the level of institutional ownership will lead to greater supervisory efforts by institutional investors so that it can deter managers' opportunistic behavior. The high level of institutional supervision of the company does not require the company to disclose more information about the company's activities, especially company activities related to the environmental impact caused by the company. The explanation above provides an understanding that a higher level of institutional ownership will increase the level of supervision of management so that information about environmental disclosure will be stated according to the objectives tested. Therefore, this study states that the effect of institutional ownership on environmental disclosure has a negative effect.

The results of this study are consistent with research conducted by Ningsih (2017), which states that institutional ownership has a negative effect on environmental disclosure. Institutional ownership does not succeed in suppressing management in carrying out the intensity of environmental disclosure, besides that institutional investors have not become the basis for management decisions in considering institutional ownership to carry out environmental disclosure. The results of this study are not in line with the research of Widyastuti et al. (2023) and Suprapti et al. (2019) which state that institutional ownership has a positive effect on environmental disclosure. The higher institutional ownership, the more transparent the company will tend to be in disclosing environmental information to meet the demands of institutional shareholders.

Based on the results of testing the third hypothesis using WarpPLS version 8.0 above, it is known that competitive advantage (X_3) has a P-value of $0.004 \leq 0.05$ and a coefficient value of 0.269, therefore it can be concluded that Competitive Advantage has a positive effect on Environmental Disclosure. The test results show that companies that have a competitive advantage are usually better able to allocate resources for activities that support environmental sustainability. Companies with a competitive advantage, whether in terms of cost, product differentiation, or market specialization, have a greater capacity to implement environmentally friendly practices and also communicate them to the public. Therefore, the higher a company's competitive advantage, the greater its drive and ability to make environmental disclosures, thereby increasing corporate transparency and accountability regarding environmental issues. Therefore, this study states that the effect of competitive advantage on environmental disclosure is proven to have a positive effect.

The results of this study are in line with the findings of Saputra et al. (2023) and Rohendi et al. (2024), which state that companies with competitive advantages are more likely to make environmental disclosures because they use sustainability strategies as a tool to improve their market position. In addition, high competitive advantage allows companies to be more active in carrying out sustainability strategies that are aligned with ESG (Environmental, Social, and Governance) principles. The results of this study are not in line with the research of Kuntadi (2023) which states that competitive advantage has no effect on environmental disclosure. According to Kuntadi (2023), competitive advantage is a corporate strategy that focuses on improving financial performance, so that the high and low competitive advantages owned by the company are not related to environmental disclosure.

5. Conclusion

The research conducted aims to analyze the effect of Firm Size, Institutional Ownership, Competitive Advantage on Environmental Disclosure. The object used is mining and agricultural companies listed on the IDX in 2019-2023 and sample data using purposive sampling method as many as 115 annual reports from a total of 23 companies that fall into predetermined sample criteria Based on the results of research and discussion that has been carried out using WarpPLS version 8.0, it can be concluded that:

a. Firm size has a positive effect on environmental disclosure. Firm size is a scale that describes the size or size of a company. Based on Legitimacy Theory, companies with large activities will be more visible than smaller companies, so that various demands and pressures from the community will be greater. This shows that the larger the size of the company, the greater the company's responsibility to the environment.
b. Institutional Ownership has a positive effect on Environmental Disclosure. Institutional ownership is the ownership of the number of company shares owned by non-bank financial institutions where the institution manages funds on behalf of others. This shows that the higher the level of institutional ownership will lead to greater supervisory efforts by institutional investors so that it can deter the manager's opportunistic behavior.
c. Competitive Advantage has a positive effect on Environmental Disclosure. Competitive advantage is everything good that is owned by the company, both in terms of cost, company uniqueness, and specific targets that the company has. Companies with a competitive advantage, whether in terms of cost, product differentiation, or market specialization, have a greater capacity to implement environmentally friendly practices and also communicate them to the public. Therefore, the higher a company's competitive advantage, the greater its drive and ability to make environmental disclosures, thereby increasing corporate transparency and accountability regarding environmental issues.

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THE APPEAL OF SKINCARE IN THE EYES OF STUDENTS: THE INFLUENCE OF INFLUENCERS, BRAND IMAGE, PRICE, AND PRODUCT QUALITY OF SOMETHINC IN LOWOKWARU DISTRICT, MALANG CITY

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Abstract

This study aims to analyze the influence of influencers, brand image, price, and product quality on the purchase decision of Somethinc skincare products. The research was conducted on university students residing in the Lowokwaru District of Malang City. This study employed a quantitative approach with data collected through an online questionnaire from 100 respondents. The analysis method used was multiple linear regression. The results show that simultaneously, all independent variables significantly affect the purchase decision. Partially, influencer, brand image, and product quality had a significant effect, while price did not. These findings provide strategic implications for local skincare companies to enhance digital marketing and maintain product quality

Keywords: influencer, brand image, price, product quality, purchase decision

1. Introduction

The beauty industry, especially the skincare sector, is no longer a secondary need, but has become a form of personal investment, especially for the younger generation. This phenomenon is driven by increasing awareness of skin health and exposure to beauty standards spread through social media.

Indonesia as a country with a large population has a very potential skincare market. A report by Euromonitor International (2023) projects the value of Indonesia's cosmetics market to reach IDR150 trillion by 2025, with an annual growth of 6.5%. The Central Bureau of Statistics (2022) also recorded cosmetics sector growth of 9.61%.

In the local context, university students in Lowokwaru Sub-district, Malang are a strategic market, with a student population of more than 150,000 people. They are ideal targets for brands such as Somethinc, a local brand that successfully entered the Top 5 Best-Selling Skincare Brands in Indonesia in 2024 with sales reaching Rp53.2 billion in e-commerce (Compas, 2022).

Purchase Decision (Y) Refers to consumer attitudes and processes in choosing and deciding on product purchases (Kotler & Armstrong, 2016). This decision is influenced by perceptions of benefits, price, quality, and social recommendations.

Influencer (X1) Is an individual who has a great influence on social media in providing education, testimonials, and product promotion. Recommendations from influencers can increase consumer confidence by 72% compared to traditional advertising (Mardiayanti & Andriana, 2022).

A strong brand image makes consumers more trusting and loyal. In the competition of more and more products, a positive image helps consumers feel confident about the product (Septian & Firmialy, 2023).

Students tend to be price sensitive. They seek a balance between price and benefits, and prices that are too low can raise doubts about quality (Hertina & Wulandari, 2022).

Quality is an important factor as it determines effectiveness, safety, and likelihood of repeat purchase. Somethinc products are known to use safe and innovative dermatological ingredients (Mardiayanti & Andriana, 2022).

This research departs from the phenomenon of increasing skincare consumption among students, focusing on how the four factors (influencers, brand image, price, quality) influence the decision to purchase Somethinc skincare products among students in Lowokwaru District, Malang.

2. Literature review

Kotler & Armstrong (2016) Purchasing decisions are part of consumer behavior, namely how individuals choose, buy, use goods / services to meet their needs.Syahputra (2024): Purchasing decisions are the consumer process of evaluating and selecting products or services. Subianto & Basuki (2024): Purchasing decision is an attitude in analyzing choices to obtain self-satisfaction from a product. Sipahutar et al. (2023): Purchasing decisions are influenced by many factors, such as price, quality, and location, but not all factors affect every consumer uniformly. Indicators of Purchasing Decisions (Kumbara in Akbar, 2024): Steadiness on the product, Habit of buying products, Recommendations from others.

Tran (in Subianto & Basuki, 2024): Influencers are individuals who have knowledge and experience in the beauty field, and are able to provide education and product reviews. Katamso & Sugianto (2024): Influencers are figures in influential online communities that are used to promote products. Afina & Widarmanti (2022): Influencers increase brand credibility and reach a more specific target market. Influencer Indicators (Kotler in Syahputra, 2024): Trustworthiness, Expertise, Attractiveness, Appreciation

Brand Image (X2) According to Kotler & Keller (2016) Brand image is a symbolic element that distinguishes products from competitors. according to Zhang (2015): Brand image reflects the overall perception and emotions of consumers towards the brand. According to Kenneth (2018): Brand image forms attitudes and beliefs towards the organization as a whole. Meanwhile, according to Akbar (2024): Brand image is a scheme of consumer thoughts about the brand, which influences purchasing decisions. Brand Image Indicators (Hartanto in Akbar): Company image, user image, and product image.

According to Rahma et al. (2024): Price is part of the marketing mix that directly generates revenue and must be set strategically. according to Hertina & Wulandari (2022): Price is the amount consumers pay to get the benefits of a product. Price Indicators (Rahma et al., 2024), namely Price affordability, Price compatibility with product quality, Price competitiveness, and Price compatibility with benefits

Product Quality according to Kotler (2020) Product quality is a characteristic of a product that determines its ability to satisfy customer needs. according to Mardiayanti & Andriana (2022): Product quality includes durability, precision, reliability, ease of use, and other functional attributes. Product Quality Indicators (Mardiayanti & Andriana, 2022 namely are Product performance, Additional features, Reliability, Conformity to specifications, Product durability.

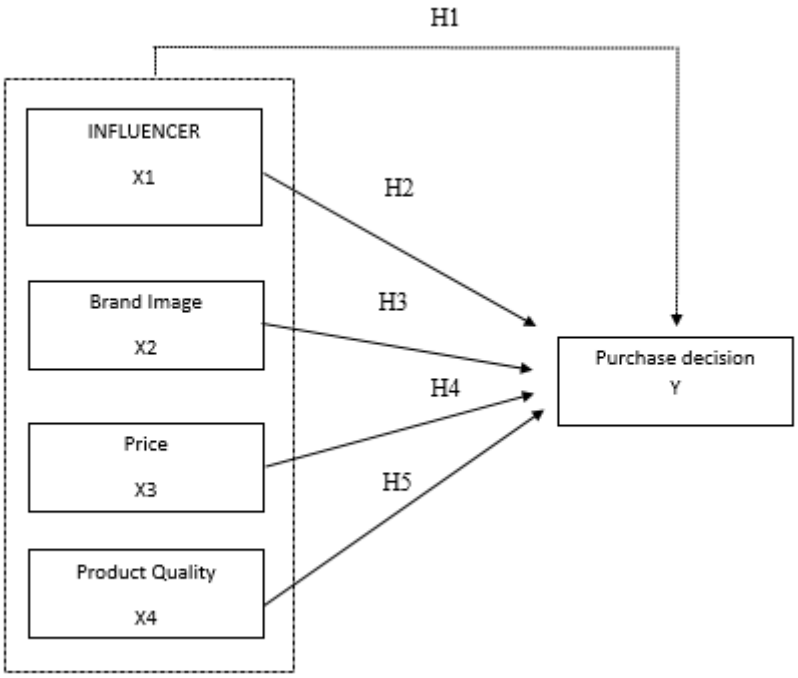

Figure 1 research model

Hypothesis
H1: It is suspected that Influencers, Brand Image, Price and Product Quality simultaneously influence the Purchasing Decision of Somethinc Skincare products.
H2: It is suspected that Influencers have an effect on Purchasing Decisions of Somethinc Skincare products.
H3: It is suspected that Brand Image has an effect on Purchasing Decisions of Somethinc Skincare products.
H4: It is suspected that Price has an effect on Purchasing Decisions of Somethinc Skincare products.
H5: It is suspected that Product Quality affects the Purchase Decision of Somethinc Skincare products.

3. Methodology

This research uses a quantitative approach, which aims to test hypotheses through numerical data collection and statistical analysis. The quantitative method was chosen because it is suitable for measuring the relationship between variables in an objective and measurable manner. The research location was set in Lowokwaru Sub-district, Malang City, which is known as an area with a high concentration of students. The research was conducted during the period October 2024 to June 2025.

The population in this study were all active students who live in Lowokwaru District and have purchased Somethinc skincare products. Because the population is not known with certainty, the sampling technique used is non-probability sampling with a purposive sampling approach. The criteria for respondents are active students and have purchased Somethinc products.

The number of samples is determined based on the formula from Ferdinand (2014), namely:

n=25× number of independent variables =25×4=100

Thus, the sample used in this study was 100 respondents.

4. Results and discussion

The validity test results aim to test how valid a statement is in a questionnaire that will be distributed to respondents.

Table 1 validity test

Variable	indicator	r count	r table	Conclusion
Influencer	X1.1	0.698	0.196	Valid
	X1.2	0.661	0.196	Valid
	X1.3	0.727	0.196	Valid
	X1.4	0.713	0.196	Valid
Brand Image	X2.1	0.875	0.196	Valid
	X2.2	0.837	0.196	Valid
Price	X3.1	0.707	0.196	Valid
	X3.2	0.767	0.196	Valid
	X3.3	0.786	0.196	Valid
	X3.4	0.764	0.196	Valid
Product Quality	X4.1	0.784	0.196	Valid
	X4.2	0.828	0.196	Valid
	X4.3	0.872	0.196	Valid
	X4.4	0.833	0.196	Valid
	X4.5	0.803	0.196	Valid
Purchase Decision	Y1.1	0.784	0.196	Valid
	Y1.2	0.717	0.196	Valid
	Y1.3	0.850	0.196	Valid

source: processed data, 2025.

Based on the table above, it can be concluded that all statement items have r count> r table, so that each statement instrument is declared valid**.**

The reliability test describes the level of consistency of respondents' answers to the statements compiled in the questionnair**e.**

Table 2 Reliability Tests

No	Variable	*Cronbach' Alpha*	Criteria	Information
1.	Keputusan Pembelian (Y)	0.687	0.60	Reliabel
2.	*Influencer* (X1)	0.652	0.60	Reliabel
3.	Citra Merek (X2)	0.632	0.60	Reliabel
4.	Harga (X3)	0.741	0.60	Reliabel
5.	Kualitas Produk (X4)	0.882	0.60	Reliabel

source: processed data, 2025.

Based on the table above, it shows that the Cronbach's Alpha value for all variables is> 0.60 so that all variables are declared reliable. This means that this measuring instrument is able to produce reliable data.

This study uses the Kolmogorov-Smirnov Normality Test

Table 3 Normality test

One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		100
Normal Parameters[a,b]	Mean	.0000000
	Std. Deviation	1.14171443
Most Extreme Differences	Absolute	.073
	Positive	.071
	Negative	-.073
Test Statistic		.073
Asymp. Sig. (2-tailed)		.200[c,d]
a. Test distribution is Normal.		
b. Calculated from data.		
c. Lilliefors Significance Correction.		
d. This is a lower bound of the true significance.		

source: processed data, 2025.

Referring to the Kolmogorov-Smirnov test results displayed in the table, the Asymp. Sig (2-tailed) for the four variables is 0.200, which is greater than 0.05. This indicates that the data in this study have met the assumption of normality.

Table 4 Multikolinieritas Test

Coefficients[a]

Model	Unstandardized Coefficients	Standardized Coefficients	t	Sig.	Collinearity Statistics

		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-2.325	1.269		-1.832	.070		
	X1	.184	.078	.167	2.360	.020	.722	1.386
	X2	.248	.113	.150	2.195	.031	.771	1.296
	X3	.421	.085	.468	4.970	.000	.408	2.453
	X4	.120	.053	.199	2.257	.026	.465	2.149
a. Dependent Variable: Y								

source: processed data, 2025.

According to Table 4.12, the results of the calculation show that the four independent variables have tolerance values > 0.10 and VIF values < 10, so it can be concluded that the four variables above are free from multicollinearity.

Table 5 Heteroscedasticity Test Results

No	Independent Variable	Sig.	Refrence Sig.	Information
1	*Influencer* (X1)	0.796	> 0.05	Bebas Heterokedestisitas
2	Citra Merek (X2)	0.174	> 0.05	Bebas Heterokedestisitas
3	Harga (X3)	0.268	> 0.05	Bebas Heterokedestisitas
4	Kualitas Produk (X4)	0.460	> 0.05	Bebas Heterokedestisitas

source: processed data, 2025.

Based on Table 4.13, it shows that the significant results of the variables Influencer, Brand Image, Price, and Product Quality have a significance value > 0.05, indicating that there is no heteroscedasticity in the regression model.

Table 6 Multiple Linear Regression Analysis

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-2.325	1.269		-1.832	.070
	X1	.184	.078	.167	2.360	.020
	X2	.248	.113	.150	2.195	.031
	X3	.421	.085	.468	4.970	.000
	X4	.120	.053	.199	2.257	.026
a. Dependent Variable: Y						

source: processed data, 2025

$$Y = a + b_1 X_1 + b_2 X_2 + b_3 X_3 + b_4 B_4 + e$$
$$Y = -2.325 + 0.184\ X1 + 0.248\ X2 + 0.421\ X3 + 0.120\ X4 + e$$

a. Y = the value of the dependent variable will be predicted by the independent variable. In this study, the dependent variable is the purchase decision, the value of which will be predicted by influencers, brand image, price, and product quality.

b. The constant (a) of -2.325 means that when the scores for the influencer variable, brand image, price, and product quality are considered to be zero, the purchase decision is -2.325.

c. b_1 = 0.184 (positive) and significance 0.20 < 0.05 means that influencers have a positive influence on purchasing decisions. If the value of the influencer variable increases, the value of the purchasing decision also increases.

d. b_2 = 0.248 (positive) and significance 0.31 < 0.05 means that brand image has a positive influence on purchasing decisions. If the value of the brand image variable increases, the value of the purchasing decision also increases.

e. b_3 = 0.421 (positive) and significance 0.000 < 0.05 means that price has a positive influence on purchasing decisions. If the value of the price variable increases, the value of the purchasing decision also increases.

f. b_4 = 0.120 (positive) and significance 0.026 < 0.05 means that product quality has a positive effect on purchasing decisions. If the value of the product quality variable increases, the value of the purchasing decision also increases.

Table 7 F-Test Results

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	246.112	4	61.528	45.295	.000[b]
	Residual	129.048	95	1.358		
	Total	375.160	99			
a. Dependent Variable: Y						
b. Predictors: (Constant), X4, X1, X2, X3						

source: processed data, 2025.

From Table 4.15, it can be concluded that the F-test result shows a significant value of 0.000 < 0.05. Therefore, based on Hypothesis 1 proposed in this study, Influencer (X1), Brand Image (X2), Price (X3), and Product Quality (X4) simultaneously influence Purchase Decision (Y).

Table 8 t Test Result

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-2.325	1.269		-1.832	.070
	X1	.184	.078	.167	2.360	.020
	X2	.248	.113	.150	2.195	.031
	X3	.421	.085	.468	4.970	.000
	X4	.120	.053	.199	2.257	.026
a. Dependent Variable: Y						

source: processed data, 2025.

1) Variable X1 (influencer) has a t-value of 2.360 with a significance value of 0.020 < 0.05. Therefore, it can be concluded that the influencer variable has a significant positive effect on purchasing decisions.

2) Variable X2 (brand image) has a t-value of 2.195 with a significance value of 0.031. Therefore, it can be concluded that the brand image variable has a significant positive effect on purchasing decisions.

3) Variable X3 (price) has a t-value of 4.970 with a significance level of 0.000. Therefore, it can be concluded that the price variable has a significant positive effect on purchasing decisions.

4) Variable X4 (product quality) has a t-value of 2.257 with a significance value of 0.026. Therefore, it can be concluded that the product quality variable has a significant positive effect on purchasing decisions.

Table 9 Coefficient of Determination Test

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.810[a]	.656	.642	1.16550

a. Predictors: (Constant), X4, X1, X2, X3
b. Dependent Variable: Y

source: processed data, 2025.

The Adjusted R2 value is 0.642, indicating that the variables Influencer (X1), Brand Image (X2), Price (X3), and Product Quality (X4) account for 64.2% of the influence on the purchase decision variable (Y). The remaining 35.8% may be influenced by other variables not included in this study.

From the results of this study, it can be concluded that all independent variables (influencer, brand image, price, and product quality) have a significant simultaneous effect on the dependent variable (purchase decision) for Somethinc skincare products. The results of the multiple linear regression show that the influencer variable has a positive relationship of 0.184 with purchase decisions, the brand image variable has a positive relationship of 0.248 with purchase decisions, the price variable has a positive relationship of 0.421 with purchase decisions, and the product quality variable has a positive relationship of 0.120 with purchase decisions.

Based on the results obtained in this study, it can be seen that the influencer variable was tested partially using a t-test, which showed that the influencer variable had a positive and significant effect on purchasing decisions. These results are in line with the research conducted by Devi, et al., (2024), which found that the presence and role of influencers had a significant impact on consumers' decisions to purchase a product. However, these results are not in line with the research conducted by Syahputra (2024), which shows that influencers play a negative role in influencing purchasing decisions.

Based on the results obtained in this study, it can be seen that the brand image variable has been tested partially using the t-test, and the results show that the brand image variable has a positive and significant effect on purchasing decisions. These results are in line with the research conducted by Hertina & Wulandari, (2022), Sipahutar et al. (2023), Septian and

Firmialy, (2023), and also by Bachtiar et al. (2024) that the results of the study state that brand image has a significant effect on purchasing decisions.

Based on the results obtained in this study, it can be seen that the price variable has been tested partially using a t-test, which shows that the price variable has a positive and significant effect on purchasing decisions.

These results are consistent with the research conducted by Mardiayanti & Andriana (2022) and Hertina & Wulandari (2022), which found that price has a significant positive effect on purchasing decisions. However, they are inconsistent with the research by Bachtiar et al. (2024), which found that the price variable does not have a partial effect on purchasing decisions.

Based on the results obtained in this study, it can be seen that the product quality variable has been tested partially using a t-test, which shows that the product quality variable has a positive and significant effect on purchasing decisions. These results are in line with the research conducted by Montolalu et al. (2021), Mardiayanti & Andriana. (2022), Hertina & Wulandari. (2022), and also Sipahutar et al. (2023) that the results of the study state that price has a significant positive effect on purchasing decisions.

5. Conclusion

This study aims to determine the influence of influencers, brand image, price, and product quality on the purchase decision of Somethinc Skincare. The respondents used in this study were 100 Somethinc Skincare consumers. Based on the data collected and the tests conducted on the problem using a multiple linear regression model, it can be concluded that:

a. There is a simultaneous influence of the variables of influencer, brand image, price, and product quality on the purchase decision of Somethinc Skincare (case study of students in Lowokwaru District, Malang City). The results of the F-test indicate that the purchase decision of Somethinc Skincare (case study of students in Lowokwaru District, Malang City) is influenced by the variables of influencer, brand image, price, and product quality.

b. Meanwhile, based on the t-test results, it is explained that the influencer, brand image, price, and product quality variables have a positive and significant effect on the purchase decision of Somethinc Skincare.

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ONLINE COSMETICS PURCHASING STRATEGY: A STUDY OF THE INFLUENCE OF BRAND AWARENESS, PRICE PERCEPTION, AND REVIEWS ON PINKFLASH PRODUCTS AT SHOPEE

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Abstract

This study aims to evaluate and explain how brand awareness, price perception, and online customer reviews affect customer decisions to buy pinkflash cosmetic products in shopee e-commerce. The population in this study was female students in Malang city, this study uses a quantitative approach. The sample was determined using the Maholtra formula, resulting in a total of 85 samples. This study uses SPSS 24 for data analysis tools. These include validity, reliability, normality, classical assumptions, hypotheses, multiple linear regressions, and the Adjusted R2 determination coefficient. The results of the study show that brand awareness, price perception, and online customer reviews have a significant simultaneous effect on purchase decisions. However, in non-simultaneous analysis brand awareness does not have a significant effect on purchase decisions, while price perception and online customer reviews play a significant role in purchase decisions.

Keywords: Brand Awareness, Price Perceptions, Online Customer Review, Purchase Decision.

1. Introduction

The aspects of human life have been transformed by the rapid advancement of digital technology, including the trading industry. With the ease of conducting buying and selling transactions electronically, e-commerce has become one of the innovations that are increasingly popular among Indonesians. E-commerce allows customers to shop anytime and anywhere as long as they are connected to the internet (Hidajat & Fahlevi, 2020). Based on this phenomenon, e-commerce platforms such as Shopee, Tokopedia, Lazada, Blibli, and Bukalapak have become an option for people to fulfill their needs. They provide not only ease of shopping, but also offer a more practical and efficient shopping experience. E-commerce transactions continue to increase due to improved logistics and digital payment technology. Shopee is the e-commerce platform with the highest number of visits in Indonesia, outperforming its competitors with more than 2.3 billion visitors by 2023 (databoks.katada.co. id). This indicates that Shopee has become the platform of choice for Indonesians to shop online, especially for cosmetic products which have experienced rapid growth in recent years.

Study by databoks.katadata.co in 2022 showed that the beauty and body care industry recorded a revenue of USD 7.23 billion or around Rp111.83 trillion in 2022. This industry is expected to continue to grow with a compound annual growth rate (CAGR) of 5.81% until 2027. The growing emphasis on self-care and appearance, especially for women, is driving the growth of this sector. As more beauty content is disseminated through social media and other digital platforms, awareness of the importance of better self-care is increasing. Pinkflash, which originated in China and officially launched amid the COVID-19 pandemic, is one of the fastest growing cosmetic brands in Indonesia. Despite being relatively new, Pinkflash has been

licensed by the Indonesian Food and Drug Administration (BPOM) and is gaining good popularity among consumers. Pinkflash cosmetic items include mascara, blush, lip cream, lip gloss, eyebrow, lip matte, eyebrow pencil, eyeliner, and more (suara.com). The successful penetration of Pinkflash into the Indonesian market proves that new cosmetic brands still have great opportunities in this industry, especially with the right marketing strategy.

2. Literature Review

Theory of Planned Behavior (TPB), (Ajzen, 1991) The TPB aims to help understand the factors that influence consumers' decision to purchase cosmetic products in e-commerce. Three main components influence consumer behavior, according to TPB: perceived behavioral control, subjective norms, and attitudes. The aims of this study are to see how variables such as brand awareness, perceived price, and online customer reviews influence consumers' decision to purchase cosmetic products on e-commerce platforms. Based on this, businesses can create better marketing strategies to attract customers' attention and trust. Important stages in the purchase decision process: identifying a problem, searching for information, evaluating alternatives, making a decision about a purchase, and acting after a purchase (Kotler & Keller, 2012). However, element such as competitive pricing, positive online customer reviews, and brand awareness strongly influence customer preferences in e-commerce. Brand awareness, also known as brand consciousness, refers to the extent to which consumers can distinguish a brand in various situations, indicated by their ability to recall and identify the brand before making a decision about what they buy (Kotler & Keller, 2012). Higher the brand awareness of a product, the more likely it is that the product will be chosen by consumers.

Price perception is also very important in purchasing decisions. The value attached to the price of goods or services compared to the benefits obtained is known as price perception, according to (Kotler and Armstrong, 2014). Comparing the price of goods or services compared to the benefits obtained is known as price perception, according to (Kotler and Armstrong, 2014). Therefore, a competitive pricing strategy can increase the attractiveness of the product for e-commerce customers. Besides, online customer reviews are increasingly influential in making purchasing decisions. (Filieri, 2015), online customer reviews consist of different types of reviews: neutral, negative, and positive. Customers create and share these reviews, which indicate the quality of the product, online customer reviews are often the main source for e-commerce customers before deciding to buy a product.

This study is based on previous research gaps. (Robby Fauji et al., 2023) found that price perception has an effect on purchasing decisions, while (Emiliani & Habib, 2024) stated otherwise. Similarly, (Afisa & Muhajirin, 2024) brand awareness has no effect, while (Nabil & Dwiridotjahjono, 2024) found the opposite impact. The difference in results between the four researchers, this study found that the results of price perception have a significant effect on purchasing decisions, while brand awareness has an insignificant effect on purchasing decisions. However, in other words, the variables of price perception and online customer review have a greater influence on purchasing decisions, while the brand awareness variable must be reviewed because it does not affect purchasing decisions.

3. Methodology

The method used in this research is quantitative with the approach of distributing questionnaires or questionnaires as the main instrument in data collection. The quantitative method was chosen because it is based on the philosophy of positivism, which aims to test hypotheses through statistical techniques (Sugiyono, 2019). The data used in this study are primary data, namely information obtained directly from respondents. Data processing was done using SPSS to analyze the relationship between the variables studied.

The population of this study were students in Malang City. This population was chosen because it is relevant to this study of consumer choices when buying cosmetics online (Sugiyono 2019), purposive sampling technique is a sample selection technique based on certain requirements and this technique is suitable for use in this study. The respondents must be active students in Malang City, have purchased Pinkflash cosmetic products at least once on Shopee, and read customer reviews in the comments column before deciding to buy. (Malhotra, 2006) the number of indicators is multiplied by five to produce a sample size. the calculation based on Maholtra's formula, 85 were obtained as the study sample.

The collected data will be analyzed using descriptive and inferential statistical analysis through SPSS 24. Validity and reliability tests will be conducted to ensure that the study instruments can measure the variables accurately and consistently. Also, linear regression analysis will be used to test the relationship between the independent and dependent variables to answer the research hypothesis.

4. Result and Discussion

Brand Awareness, Price Perception, and Online Customer Review variables produce a calculated r value greater than r Table. So that the statement items in this study questionnaire can be declared valid, as shown in table 1.

Table 1. Validity Test Results

Variables	Item	r count	r table (0,05)	Description	Result
Brand Awareness (X1)	X1.1	0,765	0,213	r count > r table	Valid
	X1.2	0,739	0,213	r count > r table	Valid
	X1.3	0,743	0,213	r count > r table	Valid
Price Perception (X2)	X2.1	0,744	0,213	r count > r table	Valid
	X2.2	0.806	0,213	r count > r table	Valid
	X2.3	0,706	0,213	r count > r table	Valid
	X2.4	0,828	0,213	r count > r table	Valid
Online Customer Review (X3)	X3.1	0,816	0,213	r count > r table	Valid
	X3.2	0,786	0,213	r count > r table	Valid
	X3.3	0,670	0,213	r count > r table	Valid
	X3.4	0,783	0,213	r count > r table	Valid
	X3.5	0,721	0,213	r count > r table	Valid
Purchase Decision (Y)	Y1.1	0,758	0,213	r count > r table	Valid
	Y1.2	0,821	0,213	r count > r table	Valid
	Y1.3	0,724	0,213	r count > r table	Valid
	Y1.4	0,767	0,213	r count > r table	Valid
	Y1.5	0,677	0,213	r count > r table	Valid

Source:data processed 2025

Brand Awareness, Price Perception, Online Customer Review, and Purchase Decision variables have Cronbach's Alpha more than 0.6. So that the variable is declared reliable.

Table 2. Reliability Test Results

Variables	*Cronbach's Alpha*	Criteria	Result
Brand Awareness (X1)	0,630	*Cronbach's Alpha* > 0,6	Reliabel
Price Perception (X2)	0,773	*Cronbach's Alpha* > 0,6	Reliabel
Online Customer Review (X3)	0,806	*Cronbach's Alpha* > 0,6	Reliabel
Purchase Decision (Y)	0,806	*Cronbach's Alpha* > 0,6	Reliabel

Source:data processed 2025

(Ghozali, 2017) The aim of normality test is to determine whether the residuals or disturbances in the regression model follow a normal distribution. the normality test applies the Kolmogorov-Smirnov formula with the criteria Asymp. Sig> 0.05, with the test result Asymp. Sig 0.154 so that the test results are normally distributed.

Table 3. Normality Test Results

One-Sample Kolmogorov-Smirnov Test	
	Unstandardized Residual

N		85
Normal Parameters[a,b]	Mean	.0000000
	Std. Deviation	2.51260962
Most Extreme Differences	Absolute	.087
	Positive	.087
	Negative	-.087
Test Statistic		.087
Asymp. Sig. (2-tailed)		.154[c]

Source:data processed 2025

Multicollinearity test has a goal with the intention of ensuring that the regression model has a high or perfect correlation between the independent variables applied. With the criteria Tolerance> 0.1VIF < 10, it is free of multicollinearity. Brand Awareness, Price Perception, and Online Customer Review variables meet the requirements to pass the multicollinearity test, so the variables in table 4 are free of multicollinearity.

Table 4. Multicollinearity Test Results

Variables	*Tolerance*	VIF	Criteria	Result
Brand Awareness (X1)	0,378	2,646	*Tolerance* > 0,1 VIF < 10	Multicollinearity Free
Price Perception (X2)	0,306	3,270	*Tolerance* > 0,1 VIF < 10	Multicollinearity Free
Online Customer Review (X3)	0,352	2,837	*Tolerance* > 0,1 VIF < 10	Multicollinearity Free

Source:data processed 2025

Heteroscedasticity tests regression models have inequality of variance from one residual observation to another, the Glaser test is one of the tools to determine whether heteroscedasticity exists. With criteria If the sig value. > 0.05 then heteroscedasticity does not occur. In table 5 the variables Brand Awareness, Price Perception, and Online Customer Review are free from heteroscedasticity, because the tolerance value exceeds the significance reference value.

Table 5. Heteroscedasticity Test Results

Variables	*Tolerance*	Significance Reference Value α	Result
Brand Awareness (X1)	0,256	>0,05	Heteroscedasticity Free
Price Perception (X2)	0,275	>0,05	Heteroscedasticity Free
Online Customer Review (X3)	0,143	>0,05	Heteroscedasticity Free

Source:data processed 2025

Results of the multiple linear regression test:

a. Constant (α) 1.358, it can be identified that the independent variable and the dependent variable interact directly which has a value of 0%, so that the variables of brand awareness, price perception, and online customer reviews have no component and are considered constant for purchasing decisions.
b. Brand Awareness gets a value of 0.211, it can be stated that the brand awareness variable has a 100% increase, the purchasing decision variable will also increase by 21.1%. With the assumption that the variables of Price Perception and Online Customer Review are constant.
c. Price Perception has a value of 0.356, it can be stated that the price perception variable has a 100% increase, the purchasing decision variable will also increase by 35.6%. Assuming the variables of brand awareness and online customer review are constant.
d. Online Customer Review gets a value of 0.517, it can be stated that the online customer review variable has a 100% increase, the purchasing decision variable will also increase by 51.7%.Assuming the variables of brand awareness and price perception are constant.

The F test is applied to determine whether all independent variables included in the model have a simultaneous or simultaneous role in the dependent variable. Criteria fcount> ftabel, significance (α) of 5%.

Table 6. F Test Results

ANOVA[a]						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1052.514	3	350.838	53.587	.000[b]
	Residual	530.309	81	6.547		
	Total	1582.824	84			

a. Dependent Variable: Y1
b. Predictors: (Constant), X3, X1, X2

Source:data processed 2025

Table 6 can be interpreted that the variables Brand Awareness, Price Perception, and Online Customer Review have a simultaneous effect on Purchasing Decisions.

t test (Ghozali, 2011) The aim of this test is to determine the contribution of each independent variable to the dependent variable. The aim of the t-test is to obtain a partial understanding of the consequences. The criteria for the value of t count> t table and relevant t <0.05, it can be stated that partially the independent variable plays a role in the dependent.

Table 7. Results of the t-test

Coefficients[a]						
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	1.358	1.431		.949	.346
	X1	.211	.179	.123	1.177	.243
	X2	.356	.150	.275	2.367	.020
	X3	.517	.117	.480	4.433	.000

Source:data processed 2025

The t test results above can be interpreted as follows:

a. t count value is smaller than the t table, 1.177 < 1.664 and has a sig. value greater than the level of relevance 0.243> 0.05. It can be stated that the brand awareness variable has an insignificant effect on purchasing decisions.
b. t count value is greater than the t table, 2.367> 1.664 and has a sig. which is smaller than the relevance level of 0.020 <0.05. It can be stated that the price perception variable has a significant role in purchasing decisions.
c. t count value is greater than the t table, 4.433> 1.664 and has a sig. value that is smaller than the relevance level of 0.000 <0.05. It can be stated that the online customer review variable has a significant role in purchasing decisions.

Table 8. Coefficient of Determination Test Results (*Adjusted R^2*)

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.815[a]	.665	.653	2.559

a. Predictors: (Constant), X3, X1, X2

Source:data processed 2025

It concludes that Adjusted R2 is 0.653 in decimal form, 65.3% in percent of the variable brand awareness, price perception, and online customer reviews on purchasing decisions. While the remaining 34.7% is influenced by other variables that are not in this study. It is interpreted that the variables of brand awareness, price perception, and online customer review can be explained by purchasing decisions.

Based on this result, it can be concluded that simultaneously, brand awareness, price perception, and online customer reviews have an effect on purchasing decisions for Pinkflash products at Shopee. However, the individual, only price perceptions and online customer reviews have a significant influence, while brand awareness has an insignificant effect on purchasing decisions. The importance of a competitive pricing strategy, such as discounts or promos to attract buyers. Besides, online customer reviews need to be strengthened by encouraging positive reviews and maintaining product quality. Meanwhile, brand awareness strategies need to be evaluated by increasing product visibility through digital marketing and collaboration with influencers. With these steps, it is expected that purchasing decisions will increase and product competitiveness will be stronger in the e-commerce market.

5. Conclusion

This study indicates that Brand Awareness, Price Perception, and Online Customer Review together influence purchasing decisions for Pinkflash products at Shopee. These three variables are considered by consumers in buying cosmetic products online. Particularly, Brand Awareness does not have a significant effect on purchasing decisions. Consumers are less likely to pay attention to brands when buying Pinkflash products on Shopee, so this factor is not the main determinant. In contrast, Price Perception has a significant effect. Product prices that are considered affordable and according to quality make consumers feel satisfied and confident in making purchases. Online Customer Review also has a significant role. Positive reviews from other users give trust and are one of the main factors influencing purchasing decisions. This study is limited to Shopee e-commerce and only uses three variables. It is recommended that companies focus on pricing strategies and customer reviews.

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THE IMPACT OF THE IMPLEMENTATION OF DIGITALIZATION AND TAX ADMINISTRATION SYSTEMS ON TAX COMPLIANCE

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Abstract

In the digital era, the government is increasingly encouraging the use of tax technology to improve the efficiency and effectiveness of tax collection. This research was conducted with the aim of analyzing the influence of the implementation of digitization and tax administration systems on the level tax compliance. This study uses quantitative nethods in data collection and analysis. In sampling, a sample of 158 respondents was obtained, the sample in this study was lecturers and employeees of the Islamic University of Malang. In this data analysis, classical assumption techniques, multiple linear regression and coefficient determination tests are used. The results of the research hypothesis show that the digitization system and tax administration have a positive impact on tax compliance. The results of this study are expected to provide a clear picture of the extent to which the digitization system and tax administration affect taxpayer compliance.

Keywords: digitalization system, tax administration, tax compliance

1. Introduction

In this modern era, science and technology continue to develop rapidly. This applies to information and communication technology, which is supported by technological advancements. Its influence is certainly very broad in various aspects of life, one example being taxation. The use of technology in the implementation and utilization of the taxation system is not only used by tax officials but also by taxpayers and the community that requires information about taxation (Nesya Zuhrah et al., 2024).

Digitalization has become a main focus in the environment of the Directorate General of Taxes (DJP) and the Ministry of Finance since 2015. The tax digitalization system easily accesses tax information, forms, and other guidelines through online platforms provided by the Directorate General of Taxes (James & Sawyer, 2018).

Digital tax services can simplify taxpayers in making tax payments and tax reporting. The presence of modern tax technology can facilitate tax administration. Tax administration plays a role in determining the effectiveness of a tax system. An efficient tax administration system can be marked by low collection costs and compliance (Rosdiana, 2012:103).

Tax compliance is an important factor to research, as it aims not only to understand the level of tax compliance but also plays a very significant role for the nation because taxes are one of the main sources of national income. According to (Sari et al., 2022) The benefits of taxes can be felt after taxpayers fulfill their obligations; tax compliance is not just about meeting obligations, but also about how taxpayers can manage their finances transparently and efficiently.

2. Literature review

2.1. Tax compliance

Compliance means obeying a rule, where taxpayer compliance refers to compliance in fulfilling the rights and obligations in paying taxes in accordance with statutory regulations (Rahayu, 2010:138). According to (Rahayu, 2020:189) there are two types of tax compliance, namely formal compliance and material cmpliance.

2.2. Digitalization system

The rapid development of technology has changed industrialization into an era of technology, information and communication. Digitalization is one way to facilitate tax reporting without having to come to the tax office. Digitalization in tax services is a facility provided by the Directorate General of Taxes and the goverment that can be easily eccessed by the public for tax purposes. This makes it easier for taxpayers to access tax services online (Yusnindar, 2024)

2.3. Tax Administration

Tax administration plays a role in determining the effectiveness of a taxation system. The success of a tax administration system is not only the amount of state revenue, but also how the revenue is obtained (Saifudin & Rahmawati, 2020). Administration is a system used in managing tax affairs (Hetiati et al., 2021).

3. Research Method

3.1 Type and location of research

The research conducted uses a quantitative research type. The quantitative method is used to study a specific population or sample with the aim of testing the established hypotheses (Sugiyono, 2022:7). The research location is conducted on Lecturers and Employees of the Islamic University of Malang at Jalan Mayjen Haryono No.193, Dinoyo, Lowokwaru District, Malang City, East Java 65144.

3.2 Populatuon and sample

The population in this study is taxpayers in the city of Malang. The sample in this research is the Taxpayers, Lecturers, and Employees of the Islamic University of Malang. This study uses the Slovin formula, with an error rate of 7%.

3.3 Sources and methods of data collection

The method or information collection used in this study is by giving several questions or statements to the respondents. The source of data or information used is to use primary data obtained directly from respondents in the form of surveys (questionnaires) with a likert size of 5. The answer categories are Strongly Disagree (Score 1), Disagree (Score 2), Neutral or Undecided (Score 3), Agree (Score 4), Strongly Agree (Score 5).

4. Results and discussions

4.1. Test Instruments

1. Validity Test

Tabel 1 Validity Test

Variabel	Item	r Count	r table	Information
Digitalization system	X1.1	0,646	0,131	Valid
	X1.2	0,762	0,131	Valid
	X1.3	0,808	0,131	Valid
	X1.4	0,729	0,131	Valid
	X1.5	0,794	0,131	Valid
	X1.6	0,766	0,131	Valid
Tax Administration	X2.1	0,654	0,131	Valid
	X2.2	0,715	0,131	Valid
	X2.3	0,775	0,131	Valid
	X2.4	0,796	0,131	Valid
	X2.5	0,742	0,131	Valid
Tax Compliance	Y1	0,527	0,131	Valid
	Y2	0,685	0,131	Valid
	Y3	0,731	0,131	Valid
	Y4	0,688	0,131	Valid
	Y5	0,779	0,131	Valid
	Y6	0,752	0,131	Valid
	Y7	0,632	0,131	Valid
	Y8	0,646	0,131	Valid
	Y9	0,568	0,131	Valid

Source: Data processed through SPSS 30, 2025

From the table above, it can be concluded that each statement item used in the questionnaire produces a correlation value greater than the correlation value of the table (r table) which means that each statement is valid.

2. Reliability Test

Table 2 Reliability Test

Variable	*Cronbach's Alpha*	Provisions	Information
Tax Compliance (Y)	0,843	>0,60	Reliabel
Digitalization System (X1)	0.846	>0,60	Reliabel
Tax Administration (X2)	0.790	>0.60	Reliabel

Source: Data processed through SPSS 30, 2025

From the test results if Cronbach's alpha value is greater than 0.6, it can be concluded that the data is reliable and suitable for use in the study.

3. Normality Test

Table 3 Normality Test

One-Sample Kolmogorov-Smirnov Test		
		Unstandardized Residual
N		158
Normal Parameters[a,b]	Mean	.4479290
	Std. Deviation	2.48152077
Most Extreme Differences	Absolute	.070
	Positive	.070
	Negative	-.060
Test Statistic		.070
Asymp. Sig. (2-tailed)[c]		.054
a. Test distribution is Normal.		

Source: Data Processed through SPSS 30, 2025

Based on the above test, the Kolmogorov-Smirnov test data shows that Asymp. A sig of 0.054 > 0.05 proves that the data of this study meets the assumption of normality.

4.2.Classic Assumption Test

1. Multicollinearity Test

Table 4 Multicollinearity Test

Coefficients[a]			
Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	Digitalization System	.978	1.022
	Tax Administration	.978	1.022
a. Dependent Variable: Tax Compliance			

Source: Data Processed through SPSS 30, 2025

Based on the above test, the VIF value is 1.022. Thus, it can be concluded that the two independent variables have a VIF value < 10. This shows that there is no multicollinearity in independent variables.

2. Heteroscedasticity Test

Table 5 Heteroscedasticity Test

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.556	.926		2.760	.006
	Digitalization System	.116	.164	.057	.707	.481
	Tax Administration	-.313	.162	-.155	-1.935	.055
a. Dependent Variable:ABS_RES						

Source: Data Processed through SPSS 30, 2025

Based on the table above, the significance value of the X1 variable is 0.481 > 0.05 and the X2 variable has a significance value of 0.055 > 0.05 which means that all variables do not heteroscedasticity because each has a significance value of >0.05.

3. Multiple Linear Regression Analysis

Table 6 Multiple Linear Regression Analysis

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	10.469	1.485		7.047	<,001
	Digitalization System	.809	.263	.211	3.080	.002
	TaxAdministration	1.752	.259	.463	6.763	<,001
a. Dependent Variabel: Tax Compliance						

Source: Data Processed through SPSS 30, 2025

a. The value of constant (a) of 10.469 indicates the influence of the digitization system (X1) and tax administration (X2).
b. The value of the digitization system variable coefficient (X1) is positive which indicates that the digitization system variable has a positive effect on tax compliance.
c. The value of the tax administration variable coefficient (X2) is a positive sign, which indicates that the tax administration variable has a positive effect on tax compliance.

4.3.Hypothesis Test

1. F Test (Simultaneous)

Table 7 F Test Results

ANNOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regresi	308.534	2	154.267	31.361	<,001[b]
	Residual	762.454	155	4.919		
	Total	1070.987	157			
a. Dependent Variable: Tax Compliance						
b. Predictors: (Constant), Digitalization System, Tax Administration						

Source: Data Processed through SPSS 30, 2025

The table is leveled showing a significance value of 0.002 < 0.05. Thus, it shows that the hypothesis (H1) in the study, the digitization system variable (X1), and tax administration (X2) have a simultaneous influence on the tax compliance variable (Y).

2. Determination Coefficient Test (Adjusted R Square)

Table 8 Test Coefficient of Determination (Adjusted R Square)

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.537[a]	.288	.279	2.21789
a. Predictors: (Constant), Digitalization System, Tax Administration				

Source: Data Processed through SPSS 30, 2025

The table above shows that the adjusted R square value is 0.279 which means that the influence of independent variables on dependent variables is 27.9% while 72.1% is influenced by other variables outside the study.

3. T test (Partial)

Table 9 Results of the t-test

Coefficients[a]						
Model		Unstandardized Coeddicients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	10.469	1.485		7.047	<,001
	Digitalization System	.809	.263	.211	3.080	.002

	Tax Administration	1.752	.259	.463	6.763	<,001
a. Dependent Variabel: Tax Compliance						

Source: Data Processed through SPSS 30,2025

a. The t-value of 3.080 and the sig value of 0.001 < 0.05 prove that the digitization system variables have a significant influence on tax compliance.
b. The t-value of 6.763 and the sig value of 0.001 < 0.05 prove that the tax administration variable has a significant influence on tax compliance.

4.4.Research Implication

1. The Influence of Digitalization and Tax Administration Systems on Tax Compliance

Based on the results of the t-test, there is a significant influence between the variables of the digitalization system and tax administration simultaneously on tax compliance. This means that in testing variables, the digitization system and tax administration both have an influence in improving tax compliance.

The digitalization system plays a role in helping services effectively and efficiently, and tax administration plays a role in making it easier for taxpayers quickly and accurately. The digitalization system plays a role as a service that makes it easier for taxpayers and tax administration to be more trusted because taxpayers tend to choose efficiency. So that taxpayers who will make reporting and payments can imagine that accuracy can make it easier for taxpayers. This is supported by research conducted by (Nisaak & Khasanah, 2022) which states that the administrative digitization system has a simultaneous influence on tax compliance.

2. The Influence of Digitalization Systems on Tax Compliance

The results of the study prove that the digitization system variables have a significant effect on tax compliance. This means that the digitalization system plays a role in providing services easily that can be accessed anytime and anywhere. The Directorate General of Taxes provides a new breakthrough in the current digital era in order to provide easier and more efficient services for taxpayers, namely with online-based services.

This research is in accordance with what has been carried out (Yusuf, Eka Riyanti, 2018) the digitalization that has been provided at this time by the government can increase taxpayer compliance in Indonesia. And with this digital tax service, taxpayer compliance will increase, because it is easier in the process of calculating and reporting taxes.

3. The Influence of Tax Administration on Tax Compliance

The results of the study prove that tax administration variables have a significant effect on tax compliance. Tax administration includes several things and stages such as stages, taxpayer registration, tax determination, tax reporting and tax collection (Rosdiana, 2012:103).

Tax reform and administration policies are carried out with the aim of increasing the voluntary compliance of taxpayers to fulfill tax obligations (Surjono, 2016). This research is in line with research conducted by (Zulma, 2020) the influence of tax administration on tax compliance.

5. Conclusion

5.1. Conclusion

Based on the results of the research that has been explained in the discussion, there are the following conclusions:

a. The Digitalization System has a significant effect on Tax Compliance.
b. Tax Administration has a significant effect on Tax Compliance.

5.2.Limitations

The limitations of researchers in conducting research are as follows:

a. This research was only conducted on Lecturers and Employees at the Islamic University of Malang with a sample of 158 respondents.
b. This study only uses two variables: the digitization system and tax administration. This research has not used grand theory.

5.3.Suggestion

After considering the limitations mentioned earlier, the researcher gave the following suggestions:

a. For researchers, it is further suggested that they can expand the scope by adding relevant research objects and can also add sample selection criteria so that the number of samples obtained is more in line with what will be carried out in the research.
b. For the next researcher, it is hoped that it can add other variables related to tax compliance that are influenced by factors other than digitalization and tax administration, such as socialization of the understanding of the digitalization system.
c. For researchers, they can then add grand theories such as tax compliance, attribution theory and technology acceptance model.

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REALIZING FINANCIALLY INTELLIGENT SANTRI: THE EFFECT OF SHARIA FINANCIAL LITERACY, KNOWLEDGE, AND FINANCIAL ATTITUDES ON FINANCIAL MANAGEMENT BEHAVIOR (AT SANTRI ISLAMIC BOARDING SCHOOL SABILURROSYAD MALANG)

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Abstract

In the modern era, consumption patterns have undergone significant changes, particularly among young generations, including students in Islamic boarding schools (Pesantren)*. One of the crucial factors influencing consumer behavior is financial management behavior, which plays a vital role in maintaining financial stability. This study aims to identify the partial influence of Islamic financial literacy, financial knowledge, and financial attitude on financial management behavior at* Pondok Pesantren Sabilurrosyad Malang*. This research employs a quantitative method, with data collected using a purposive sampling technique. The sample size was determined using the Slovin formula, resulting in 177 respondents, all of whom are active students. The data were analyzed using multiple linear regression with SPSS 25 software. The findings indicate a significant positive effect of Islamic financial literacy, financial knowledge, and financial attitude on financial management behavior at Pondok Pesantren Sabilurrosyad Malang. Additionally, each of the variables Islamic financial literacy, financial knowledge, and financial attitude has a partial influence on financial management behavior at* Isamic Boarding School Sabilurrosyad Malang.

Keywords: Islamic financial literacy, financial knowledge, financial attitude, financial management behavior.:

1. Introduction

In the modern era, people's consumption patterns have changed drastically with easy access to goods and services that often encourage consumptive behavior and impulse spending. This habit can lead to financial problems, so effective money management is needed to optimize personal finances (Felantika, 2022). Based on a CNN Indonesia report (19 August 2021), data from the OCBC Financial Index shows that the financial behavior index of the younger generation only reaches 37.72 on a scale of 100. This reflects a big challenge for millennials and Gen Z in managing their finances.

Consumptive behavior is closely related to a person's financial management behavior. Financial management behavior is an individual's habit of managing finances, including planning, budgeting, and saving funds (Wijaya, 2024). According to Wardani and Anggadita (2021), consumptive tendencies are more dominant in individuals aged 13 to 21 years, which is a period of identity search and self-development. At this stage, the younger generation, including santri at Isamic Boarding School Malang, are more vulnerable to external influences that can affect the way they manage their finances.

The factor that influences the financial management behavior of a santri or young generation is Islamic financial literacy. Islamic financial literacy is an individual's

understanding of the principles of Islamic finance, including money management, investment, and financial aspects in accordance with Islamic teachings, such as the prohibition of usury, gharar, and maysir, as well as the application of zakat, waqf, and sadaqah (Pratama & Nisa, 2024). Ahyar & Abdullah (2020) emphasized that sharia-based financial literacy not only regulates aspects of Islamic law, but also moral values and integrity. This is reinforced by the findings of Purboningrum & Fathoni (2023) which state that sharia financial literacy has a positive and significant effect on financial management behavior.

In addition to Islamic financial literacy, another factor that plays a role in financial management behavior is financial knowledge. Sandi et al. (2020) define financial knowledge as an individual's ability to understand, analyze, and manage finances effectively to avoid financial problems. This understanding includes aspects of debt management, savings, investment, and spending (Cude et al., 2023). Individuals who have good financial knowledge can make wiser and more responsible financial decisions (Sugiharti & Maula, 2019). Previous research also shows that financial knowledge has a significant influence on financial management behavior (Afriani & Kartika, 2021).

Another factor that contributes to financial management behavior is financial attitude. Financial attitude refers to a person's views, opinions, and assessments of their finances which are reflected in their financial attitudes and behaviors (Marzaweny et al., 2022). A positive financial attitude correlates with an individual's ability to plan and control finances effectively, which ultimately contributes to long-term financial well-being (Dewi et al., 2020). In addition, individuals with a good financial attitude are more likely to avoid consumptive debt and prioritize investment over impulse spending (Yulfiswandi et al., 2022). Several studies also show that a positive financial attitude has a significant influence on financial management behavior (Moko et al., 2022; Budiono, 2022)

Based on the phenomenon in the previous research described above, it can be seen that the aspects are diverse. Therefore, researchers have an interest in conducting further research on Islamic financial literacy, financial knowledge, and financial attitude towards financial management behavior, especially in the Sabilurrosyad Islamic Boarding School in Malang. Thus, this research was conducted with the title "**Realizing Financially Intelligent Santri: The Effect of Sharia Financial Literacy, Knowledge, and Financial Attitudes on Financial Management Behavior (at Santri Islamic Boarding School Sabilurrosyad Malang)**".

2. Literature Review

Theory of Planned Behaviour (TPB) introduced by Ajzen (1991) is one of the characteristics of a person's behavioral reaction to beliefs affecting individual behavior in accepting or rejecting a decision. This theory studies the factors that influence a person's attitude towards behavior, assuming that perceived behavioral control has a motivational effect on individual intentions to act.

Islamic financial literacy is a comprehensive understanding of financial concepts and practices that are in line with Islamic sharia principles, including an understanding of the prohibition of riba (interest), gharar (excessive uncertainty), and maysir (gambling) (Mihajat, 2016). This literacy includes knowledge of Islamic financial products such as mudharabah, musyarakah, murabahah, as well as an understanding of zakat, alms, and waqf as instruments of wealth distribution in Islam (Pratama & Nisa, 2024). According to Ruwaidah (2020), there are several indicators of Islamic financial literacy, namely knowledge, ability, belief.

Lusardi & Streeter (2023) explain that financial knowledge is a set of skills and insights that enable a person to effectively manage their financial resources, from income to expenses,

and understand concepts such as compound interest, inflation, taxation, and portfolio diversification. This knowledge also includes an understanding of financial products such as credit cards, loans, insurance, and various types of investments (Yuniawati et al., 2024). According to Halim (2015), financial knowledge can be measured through several indicators that reflect a person's understanding of certain financial aspects. these indicators are, knowledge of budgeting, knowledge of interest and credit, knowledge of how to open an insurance policy.

Bapat (2020) explains that financial attitude is the tendency of a person's attitude towards financial matters, which influences and facilitates in addressing various financial aspects, including management, budgeting, and making financial decisions for the future. According to Sibagariang & Wulandari (2021), financial attitude refers to a person's sensitivity to financial matters, which can be measured through their opinions or statements. This attitude influences individuals in determining financial behavior, both in management, budgeting, and decisions taken (Budiono, 2020). Mahgfiroh et al., (2020) indicators of measuring financial Attitude, namely, orientation towards finance, debt philosophy, financial security, assessing personal finance.

According to Kholilah & Iramani (2013) financial management behavior is an individual's ability to manage (planning, budgeting, checking, managing, controlling, searching and storing) the costs of daily financial needs. financial management behavior, is the effect of the magnitude of a person's desire to meet his life needs according to the level of income earned. Financial management behavior is a pattern of actions and habits of a person towards managing their financial resources, reflected in the activities of planning, budgeting, examining, managing, controlling, searching for, and storing daily financial funds (Wijaya, 2024). The indicators of financial management behavior according to Mahgfiroh et al., (2020) are as follows, organization, saving, expenditure, debt, investment, money management.

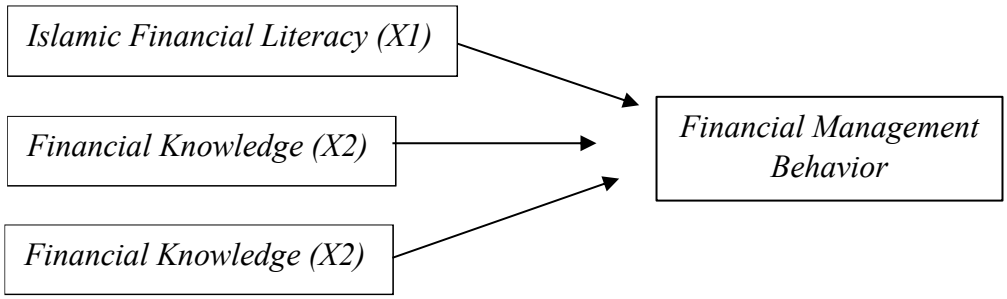

Figure 1 Research Model

H1: *Islamic Financial Literacy* has a significant influence on *Financial Management Behavior* (Study on Santri Pondok Pesantren Sabilurrosyad Malang).
H2: *Financial Knowledge* has a significant effect on *Financial Management Behavior* (Study at Santri Pondok Pesantren Sabilurrosyad Malang).
H3: *Financial Attitude* has a significant effect on *Financial Management Behavior* (Study at Santri Pondok Pesantren Sabilurrosyad Malang).

3. Methodology

The population in this study were students with a total of 426, with those who were active students totaling 319 students at the Sablilurrosyad Islamic Boarding School in Malang. Sampling in the study using purposive sampling technique, to determine the size of the sample

size to be analyzed, the researcher used the Slovin formula and found a sample of 117 respondents.

4. Results and Discussion

The validity test aims to measure how far the level of validity of a questionnaire is. The validity test can be said to be valid if the value of r count> r table (with a sig of 5%), but if r count < r table then the questionnaire is invalid. The validity test results are as follows:

Table 1. Validity Test

Variabel	Item	Item	r Count	r Table	Decision
X_1 (*Islamic Financial Literacy*)	X_1.1	I understand the basic principles of Islamic finance, such as the prohibition of riba.	0,826	0,1476	Valid
	X_1.2	I know the importance of paying zakat as part of Islamic financial management.	0,777	0,1476	Valid
	X_1.3	I feel able to avoid financial products that contain elements riba in money management	0,660	0,1476	Valid
	X_1.4	I believe that financial management in accordance with Islamic principles provides blessings in life.	0,749	0,1476	Valid
X_2 (*Financial Knowledge)*	X_2.1	I believe that financial management in accordance with Islamic principles provides blessings in life.	0,682	0,1476	Valid
	X_2.2	I believe it is important to allocate funds for urgent needs in the budget	0,715	0,1476	Valid
	X_2.3	I believe that choosing credit with low interest can help maintain financial stability	0,763	0,1476	Valid
	X_2.4	I believe that insurance can help reduce financial burden in the event of unexpected risks	0,758	0,1476	Valid
X_3 (*Financial Atittude)*	X_3.1	I believe that managing money wisely can improve the quality of life in the future	0,784	0,1476	Valid
	X_3.2	I always try to set aside some of my income for savings	0,788	0,1476	Valid
	X_3.3	I believe that avoiding unnecessary debt is a wise way to manage personal finances.	0,836	0,1476	Valid
	X_3.4	I feel at ease when I have an emergency fund to deal with unexpected situations.	0,832	0,1476	Valid

	X_3.5	I believe that understanding my personal finances helps me make better decisions.	0,679	0,1476	Valid
Y (*Financial Management Behavior)*	Y.1	I believe keeping track of my income can help me manage my finances better	0,662	0,1476	Valid
	Y.2	I believe keeping track of expenses can help me manage my finances better	0,755	0,1476	Valid
	Y.3	I believe that having savings is the first step towards financial stability	0,770	0,1476	Valid
	Y.4	I believe that managing my expenses well will help me achieve my financial goals	0,693	0,1476	Valid
	Y.5	I believe it is wise to only go into debt for really important needs.	0,552	0,1476	Valid
	Y.6	I feel it is important to understand investments before making a decision	0,574	0,1476	Valid
	Y.7	I believe increasing my knowledge about financial management is a beneficial step for the future	0,556	0,1476	Valid

Source: Data processed by SPSS 2025

This study involved 177 respondents with a significance value of 0.05, so that, the r table value of n = 177, the sample value (n-2) = 177-2 = 175 is 0.1476. Based on the test results that have been carried out, it can be stated that the questionnaire obtained is valid and can be used for research.

Reliability test by paying attention to the *Cronbach's Alpha value,* if the *Cronbach's Alpha* value of the calculation results> 0.7, it can be said that the research variable is reliable, and vice versa, the following data are the results of the reliability test:

Table 2. Reliability Test

Variabel	*Cronbach Alpha*	Nilai Kriteria	Keputusan
X_1	0,738	*Cronbach's Alpha* > 0,7	Reliabel
X_2	0,702	*Cronbach's Alpha* > 0,7	Reliabel
X_3	0,841	*Cronbach's Alpha* > 0,7	Reliabel
Y	0,774	*Cronbach's Alpha* > 0,7	Reliabel

Source:Data processed by SPSS 2025

From the results of the reliability test that has been carried out on all variables in this study, it is declared reliable Cronbach's Alpha is greater than 0.7. The Islamic financial literacy variable has a reliability value of 0.738, financial knwoledge of 0.702, financial atittude of 0.841, and financial management behavior of 0.774. These values indicate that the

questionnaire that has been carried out for measuring the variables has good internal consistency. So that the instruments in this study can be used to analyze further research.

The normality test is used to test whether the variables used have a disturbance or are normally distributed. The following is the data from the normality test:

Table 3. Normality Test

One-Sample Kolmogorov-Smirnov Test		
		Unstandardized Residual
N		177
Normal Parameters[a,b]	Mean	0,0000000
	Std. Deviation	2,10740035
Most Extreme Differences	Absolute	,065
	Positive	,053
	Negative	-,065
Test Statistic		,065
Asymp. Sig. (2-tailed)		.064[c]

Source: Data processed by SPSS 2025

Based on the test results that the normality test using the *Kolmogorov smirnov test* resulted in an *Asymp Sig* value of 0.064> 0.05 so that it can be stated that all data in the study is said to be normal.

The multicollinearity test aims to detect the presence or absence of multicollinearity in a regression model, it can be seen from the tolerance value and VIF value. If the *tolerance* value> 0.10 and VIF < 10 then there is no multicollinearity. The following is the data from the multicollinearity test:

Table 4. Multicollinearity Test

Variable	***Tolerance***	**VIF**	**Passing Condition**	**Description**
Islamic Financial Literacy (X_1)	0,455	2,196	*tolerance* > 0.10 VIF < 10	No multicollinearity
Financial Knowledge (X_2)	0,651	1,535	*tolerance* > 0.10 VIF < 10	No multicollinearity
Financial Atittude (X_3)	0,502	1,992	*tolerance* > 0.10 VIF < 10	No multicollinearity

Source: Data processed by SPSS 2025

Based on the test results, it shows that the *Islamic financial literacy*, *financial knowledge* and *financial attitude* variables are free from multicollinearity, have a *tolerance* value greater than 0.10 and a VIF value smaller than 10, so it can be said that the data in this study pass the specified requirements.

The heteroscedasticity test is used to determine whether in a regression there is an inequality of variance from residuals or observations with one another. The following is the data from the heteroscedasticity test:

Table 5. Heteroscedasticity Test

Variable	*Tolerance*	Significance α	Description
Islamic Financial Literacy (X_1)	0,863	>0,05	Heteroscedasticity free
Financial Knowledge (X_2)	0,190	>0,05	Free of heteroscedasticity
Financial Atittude (X_3)	0,591	>0,05	Free of heteroscedasticity

Source: Data processed by SPSS 2025

Based on the test results, this heteroscedasticity test uses the Glejser test method whose value is seen from sig. *The Islamic financial literacy, financial knowledge,* and *financial attitude* variables are free from heteroscedasticity because they have a sig value greater than 0.05 or 5%, or the *tolerance* value is greater than the significant reference value α.

Multiple linear regression tests are used to test the relationship between two or more variables. The following is the data from the multiple linear regression test

Table 6. Multiple Linear Regression Analysis

Coefficients [a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	5,141	1,632		3,151	,002
	X_1	,384	,115	,242	3,332	,001
	X_2	,335	,089	,228	3,748	,000
	X_3	,553	,092	,417	6,020	,000
a. Dependent Variable: Y1						

Source: Data processed by SPSS 2025

$$Y = 5.141 + 0.384\ X_1 + 0.335\ X_2 + 0.553\ X_3 + e$$

Based on the regression model equation, it can be interpreted as follows:

a. The constant (a) of 5.141 is positive, meaning that when the score of the independent variables *Islamic financial literacy* (X_1), *financial knowledge* (X_2), and *financial attitude* (X_3)) is zero (0), the value of *financial management behavior* (Y) is 5.141.
b. The regression coefficient of the *Islamic financial literacy* variable (X_1) shows a value of 0.384, has a positive effect. With a positive coefficient value, it is said that the *Islamic financial literacy* variable is in the same direction as the *financial management behavior* (Y) variable, meaning that every increase in the *Islamic financial literacy* variable will increase *financial management behavior* (Y) by 0.384. In addition, the significant value (*Sig.)* for the *Islamic financial literacy*

variable is 0.001, which means it is smaller than 0.05, it can be concluded that the *Islamic financial literacy* variable ($X_{1)}$has a significant effect on *financial management behavior* (Y).

c. The regression coefficient of the *financial knowledge* variable (X_2) shows a value of 0.335, has a positive effect. With a positive coefficient value, it is said that the *financial knowledge* variable is in the same direction as the *financial management behavior* (Y) variable, meaning that each increase in the *financial knowledge* variable will increase the *financial management behavior* (Y) by 0.335. In addition, the significant value (*Sig.)* for the *financial knowledge* variable is 0.000, which means it is smaller than 0.05, it can be concluded that the *financial knowledge* variable ($X_{2)}$has a significant effect on *financial management behavior* (Y).

d. The regression coefficient of the *financial attitude* variable (X_3) shows a value of 0.553, has a positive effect. With a positive coefficient value, it is said that the *financial atittude* variable is in the same direction as the *financial management behavior* (Y) variable, meaning that every increase in the *financial attitude* variable will increase the *financial management behavior* (Y) by 0.553. In addition, the significant value (*Sig.)* for the *financial attitude* variable is 0.000, which means it is smaller than 0.05, it can be concluded that the *financial attitude* variable ($X_{3)}$has a significant effect on *financial management behavior* (Y).

The F test is used to determine whether the *independent* and independent variables together affect the *dependent* variable, the following is the F test data or simultaneous test:

Table 7. F test

ANOVA [a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1094,886	3	364,962	80,777	,000[b]
	Residual	781,640	173	4,518		
	Total	1876,526	176			
a. Dependent Variable: Y1						
b. Predictors: (Constant), X_3, X_1, $X_{(2)}$						

Source: Data processed by SPSS 2025

Based on the table of F test results, it can be seen that the significant value is 0.000 <0.05 (5%). Thus, based on the hypothesis (H) proposed in this study, the variables *Ismaic financial literacy*), *financial knowledge* ($X_{2)}$, and *financial attitude* ($X_{3)}$, partially affect *financial management behavior* (Y).

The t test is used to determine the effect of each *independent* variable on the *dependent* variable, the following data are the results of the t test or partial test:

Table 8. Test t

Coefficients [a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	5,141	1,632		3,151	,002
	X_1	,384	,115	,242	3,332	,001

	X_2	,335	,089	,228	3,748	,000
	X_3	,553	,092	,417	6,020	,000
a. Dependent Variable: Y1						

Source: Data processed by SPSS 2025

Based on the results of the t test, the sample in this study amounted to 177 so that the following information can be generated:

a. The t test results on the *Islamic financial literacy* variable (X_1) get a significant value of 0.001 <0.05, then Ho is rejected and $H_1$is accepted, meaning that the *independent* variable, namely *Islamic financial literacy*, has a significant effect on the *dependent* variable *financial management behavior* (Y).
b. The t test results on the *financial knowledge* variable (X_2)get a significant value of 0.000 <0.05, then Ho is rejected and $H_2$is accepted, meaning that the *independent* variable, namely *financial knowledge,* has a significant effect on the *dependent* variable *financial management behavior* (Y).

Model Summary [b]				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,764[a]	,583	,576	2,126
a. Predictors: (Constant), X_3, $X_{(2,)\ X(1)}$				

c. The t test results on the *financial attitude* variable (X_3) get a significant value of 0.000 <0.05, then $H_0$is rejected and $H_3$is accepted, meaning that the *independent* variable, namely *financial knowledge,* has a significant effect on the *dependent* variable *financial management behavior* (Y).

The t test is used to determine the effect of each *independent* variable on the *dependent* variable, the following data are the results of the t test or partial test:

Table 9. Coefficient of Determination (*Adjusted* R^2)

Source: Data processed by SPSS 2025

Based on the table, the coefficient of determination (*Adjusted* R^2) of 0.576 indicates that the ability of the *independent* variables*,* namely *Islamic financial literacy, financial knowledge,* and *financial attitude* in explaining the *dependent* variable, namely *financial management behavior,* is 57.6%, while the remaining 42.4% is explained by other variables not included in this research model.

The results showed that the statement "I believe that financial management in accordance with Islamic principles provides blessings in life" had the highest average (4.71), reflecting respondents' belief in the economic and spiritual benefits of Islamic financial principles. The hypothesis results support that the *Islamic financial literacy* variable (X_1)can influence *financial management behavior* (Y), showing a regression coefficient value of 0.384,

which means it is and has a positive effect between *Islamic financial literacy* and *financial management behavior.* Meanwhile, the results of the t test conducted show that the significant value obtained is smaller than the limit value of the significant level, namely 0.001 <0.05, then H $_0$is rejected and H $_1$is accepted, meaning that the *independent* variable, namely *Islamic financial literacy*, has a significant effect on the *dependent* variable *financial management behavior* (Y). In other words, *Islamic financial literacy* is one of the factors of the ability to manage their finances (*financial management behavior).*

In the context of pesantren, Islamic financial literacy is reflected in concrete practices such as the use of Islamic banks, halal investment, and understanding of zakat, waqf, and sadaqah. This finding is in line with the *Theory of Planned Behavior* (Ajzen, 1991), which states that a person's beliefs influence Islamic financial intentions and behavior. Previous research (Fathoni & Purboningrum, 2023; Widyakto et al., 2022; Imari et al., 2023) also supports that *Islamic financial literacy* has a significant effect on financial management *behavior*, making it an important factor in the financial management of students and the younger generation, therefore hypothesis 1 (H_1)is accepted.

The results showed that the statement "I believe it is important to make a budget for better personal financial management" had the highest average (4.55), reflecting respondents' high awareness of the importance of budgets in managing finances. The hypothesis results support that the *financial knowledge* variable (X_2)can influence *financial management behavior* (Y), showing a regression coefficient value of 0.335, which means that it is and has a positive effect between *financial knowledge* and *financial management behavior.* Meanwhile, the results of the t test conducted show that the significant value obtained is smaller than the limit value of the significant level, namely 0.000 <0.05, then H $_0$is rejected and H $_2$is accepted, meaning that the *independent* variable, namely *financial knowledge,* has a significant effect on the *dependent* variable *financial management behavior* (Y). In other words, *financial knowledge* is one of the factors of the ability to manage their finances (*financial management behavior).*

This finding confirms that increasing financial knowledge in the pesantren environment must be an educational priority, in line with the *Theory of Planned Behavior* (Ajzen, 1991) which states that individual behavior control is influenced by perceptions of available resources and opportunities. This result is supported by research by Afriani & Kartika (2021) and Martfiyanto & Nusa (2021), who found that *financial knowledge* has a significant effect on *financial management behavior*. However, in contrast to the research of Moko et al. (2022) which states that financial knowledge does not always have a significant effect on financial behavior. In conclusion, a good understanding of financial knowledge is a key factor in the financial planning of santri and the younger generation, so hypothesis 2 (H_2) is accepted.

The results showed that the statement "I believe that understanding my personal financial condition helps me make better decisions" had the highest average (4.68), confirming that understanding personal finance contributes to making wise financial decisions. The hypothesis results support that the *financial attitude* variable (X3) can influence *financial management behavior* (Y), showing a regression coefficient value of 0.553, which means it is and has a positive effect between *financial attitude* and *financial management behavior.* Meanwhile, the results of the t test conducted show that the significant value obtained is smaller than the limit value of the significant level, namely 0.000 <0.05, then H $_0$is rejected and H $_3$is accepted, meaning that the *independent* variable, namely *financial attitude*, has a significant effect on the *dependent* variable *financial management behavior* (Y). In other words, *financial attitude* is one of the factors of the ability to manage their finances (*financial management behavior).*

This supports the *Theory of Planned Behavior* (Ajzen, 2020), which states that a person's financial attitude affects their financial behavior. Individuals with good financial

attitudes tend to be more cautious in taking risks and more focused on long-term financial goals (Mahgfiroh et al., 2020). This research is in line with the findings of Moko et al. (2022) and Widyakto et al. (2022), which state that *financial attitude* has a significant effect on *financial management behavior*. Therefore, a good understanding of *financial attitude* is an important factor in forming healthy financial habits among santri and the younger generation, so hypothesis 3 (H_3) is accepted.

5. Conclusion

From the discussion that has been presented, the following conclusions can be drawn. *Islamic financial literacy* variables partially have a significant effect on *financial management behavior.* This is indicated by the higher the literacy about Islamic finance owned by students, the more behavior in managing finances. *The financial knwoledge* variable partially has a significant effect on *financial management behavior.* This is shown from, a good understanding of finance will help students make better financial decisions. *The financial atittude* variable partially has a significant effect on *financial management behavior.* This is indicated by a positive financial attitude that can encourage students to manage their finances more responsibly.

The limitations in this study are as follows. The scope of the research was only conducted among students who were active students at Pondok Pesantren Sabilurrosyad Malang, with a total of 319 students and a sample of 177 students so that it could not be generalized as a whole to students at Pondok Pesantren Sabilurrosyad Malang. The limitation in this study is that when distributing questionnaires using *google form,* respondents in filling out questionnaires often do not match the facts experienced by respondents.

From the results of this study, there are several recommendations that can be conveyed as follows. Suggestions for Santri to increase and improve understanding of *Islamic financial literacy, financial knwoledge, financial attitude,* and *financial management behavior* through various sources such as books, educational videos, seminars, or financial training in order to apply financial knowledge in everyday life by making better and disciplined financial planning. Suggestions for Islamic Boarding Schools can provide in-depth knowledge related to Islamic-based financial education to students to increase knowledge of finance in Islam, and provide education to students on the importance of saving for the long term. Suggestions for future research should be further research on other variables such as *locus of control* that can affect the *financial management behavior* of other subjects for students or the younger generation. Researchers can also deepen the analysis related to other factors that may affect *financial management behavior.*

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ANALYZE OF NON-PHYSICAL WORK ENVIRONMENT AND ORGANIZATIONAL CULTURE ON TURNOVER INTENTION OF PRODUCTION DEPARTMENT EMPLOYEES AT PT GIWANGKARA KANDANGWESI

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Abstract

A company is established to achieve a predetermined goal. To achieve this goal, the company must be able to face various challenges, both local and global. Therefore, the company needs to pay attention to and maintain competent human resources in order to survive and does not have the desire to leave the company. If human resources in a company are not competent and tend to leave the company, then this can be an obstacle to achieving the company's goals. To ensure that these two factors are met, the company needs to pay attention to the work environment and the alignment between the values held by human resources and the company. The purpose of this study was to determine the non-physical work environment and organizational culture on turnover intention in employees of the production department of PT Giwangkara Kandangwesi. The research method used in this study uses a qualitative method with data collection methods used are interviews, observation and documentation. The validity test of the data used in this study uses a triangulation process. The results of the study showed that based on the responses of informants, the non-physical work environment of the production department is in the less category, the organizational culture is in the weak category and turnover intention is in the high category. Then, this study also shows the results that the non-physical work environment and organizational culture have a major influence on turnover intention. This means that the more the work environment that workers experience is not in accordance with what is expected and the difficulty in implementing the values they adhere to will have an impact on the workers' intention to leave the company.

Keywords: Non-Physical Work Environment, Organizational Culture, Turnover Intention

1. Introduction

The progress of an organization is not solely measured by increasing revenue or profit, but is also determined by the quantity and quality of its human resources. In an era of increasingly tight global competition, companies are required to excel not only in financial aspects, but also in terms of strategic management and development of human resources. Human resources are invaluable assets because of their role as the main driver of all organizational activities, from the planning process, implementation, to work evaluation.

Good quality workforce will create high productivity, sustainable innovation, and be able to respond to challenges and changes that occur in the business environment.Because whether or not a company's goals are achieved depends largely on the workforce it has.Therefore, investment in competency development, increasing work motivation, and creating a conducive work environment are crucial factors in supporting organizational growth and sustainability. Thus, focusing on effective human resource management is a long-term strategy that must be a priority for every organization that wants to grow sustainably and be highly competitive.

One of the main challenges in human resource management is retaining employees who are competent and committed to the organization.With commitment, it will not only benefit employees but also the company as a whole which will drive long-term growth and sustainability. However, many companies face quite high labor turnover rates.

*Labor turnover*has a close relationship with low organizational commitment, when employees have low commitment to the organization they are more likely to leave their jobs which increases turnover rates. Labor turnover and turnover intention are closely related, where turnover intention is an early signal that can help organizations predict future employee turnover rates. Every company needs to monitor labor turnover through turnover intention to prevent or reduce high labor turnover rates. The following is data on the labor turnover rate of the production department.

Table 1.1Production Department Employee Labor Turnover Data

YEAR	MONTH	EARLY EMPLOYEES	ENTER	GO OUT	FINAL NUMBER OF EMPLOYEES
2023	Jan	4	-	-	4
	Feb	4	-	-	4
	Mar	4	-	-	4
	Apr	4	-	-	4
	May	4	2	-	6
	June	6	-	3	3
	July	3	3	-	6
	Ags	6	-	-	6
	September	6	-	-	6
	Oct	6	-	-	6
	Nov	6	-	-	6
	Dec	6	-	-	6

Based on Table 1.1, it shows that there was labor turnover of production employees in 2023, especially in June, 50% of employees left the company. This is a concern for the company which if left unchecked is feared to be detrimental to the company because it can hinder production, make the division of tasks irregular due to reduced employees and make other employees have additional tasks. Therefore, when labor turnover was high in June, the company tried to think about how to improve and retain employees, this was reflected in the next few months where no employees left.

To get workers who have a strong desire to stay, supporting factors are needed, including salary, the work itself, co-workers, superiors, promotions and the work environment **(Marihot, 2009:291)**. According to **(Sedarmayanti, 2011:26)** states that the non-physical work environment is all conditions related to relationships between co-workers, or relationships between superiors and subordinates.

The problem of turnover intention that occurs in the production section is thought to be caused by a fairly high non-physical work environment, this is supported by research conducted by **Agung & Lilik (2009)** the work environment influences employee turnover intention because a good work environment, such as communication, good cooperation, and support from all components of the company will lead to a reduction in employee intensity to leave their jobs.

In an organization, it is very important to have a non-physical work environment, namely conditions that occur in relation to work relationships, both relationships with superiors and relationships with colleagues or subordinates.**(Sedarmayanti, 2011**).The work environment

can play a major role in improving employee performance and commitment and can help to identify factors that lead to job dissatisfaction.**(Westerman & Simmons, 2007)**. Harmonious relationships between employees and good cooperation are needed, especially in such a heavy and highly focused job.

Based on interviews and pre-survey results conducted by researchers on the research object, it is known that the desire of employees to leave their jobs is due to social status that differentiates between production colleagues such as work experience between colleagues. And the lack of smooth communication between fellow colleagues in the production department, which has an impact on the company's turnover intention, especially for employees who are already tied to the company.

Apart from the non-physical work environment, there are several other factors that can influence turnover intention, namely organizational culture. Organizational culture is an important factor in an organization. A strong or positive organizational culture can help employees be more loyal and productive in achieving company goals, while a negative or weak culture can hinder and conflict with company goals. In order to maintain, companies need to build an organizational culture that can make employees committed. According to **Bosomtwe & Obeng (2018)** revealed that stronger perceptions of cultural traits correspond to lower employee turnover intentions, so to reduce turnover intentions, organizational culture must be maintained or improved. The results of the study **Kwakye (2018)** revealed that organizational culture influences turnover intention.

Based on the results of the researcher's interview with the Production Section Coordinator, most of the organizational cultures that have been formed have been implemented, but some have not been implemented. The following is data on the values adopted by the 5S and GWK companies.

Table 1.2Implementation of Organizational Culture in the form of 5S for Production Employees

NO	MARK	INFORMATION
1.	*Seiri*(Summary)	Employees sort and separate unnecessary items
2.	*Seiton*(Neat)	Employees arrange the storage of goods according to their place.
3.	*Sunday*(Clean)	After completing the work, employees clean all items and work area.
4.	*Seiketsu*(Treat)	Employees maintain goods in an orderly, neat and clean manner
5.	*Shitsuke*(Diligent)	Employees carry out all work processes consistently and in a standardized manner

Based on the evaluation of the implementation of the 5S principle in the workplace, all elements of Seiri (Compact), Seiton (Neat), Seiso (Clean), Seiketsu (Maintain), and Shitsuke (Diligent) have not been implemented. This means that currently there is no systematic effort from employees in sorting unnecessary items, arranging the workplace regularly, maintaining the cleanliness of the work area, maintaining good conditions, and carrying out work processes consistently and standardized. This shows the need for initial steps in the form of socializing the 5S concept to all employees, followed by gradual implementation from Seiri to Shitsuke, as well as periodic monitoring to ensure that a clean, tidy, and disciplined work culture can be formed and maintained sustainably.

Table 1.3 Implementation of Organizational Culture in the Form of GWK for Production Employees

NO	MARK	INFORMATION
1.	*God*(Holding firmly to the values of the Almighty God, Allah SWT)	Employees participate in regular study events

NO	MARK	INFORMATION
2.	*Wisdom*(Upholding the values of justice and wisdom)	• Employees can control or solve problems • Employees determine actions without taking the law into their own hands
3.	*Knowledge*(Uphold and appreciate all forms of current science and knowledge)	Employees are not dependent on specific personnel

Based on the implementation data of the company's values, it can be concluded that the three main values, namely God, Wisdom, and Knowledge, have been well implemented by employees. The value of God, which reflects a commitment to divinity and spirituality, can be seen from the active participation of employees in routine study activities as a form of practicing religious values. The value of Wisdom, which emphasizes justice and wisdom, is reflected in the ability of employees to solve problems wisely and make decisions without being authoritarian or taking the law into their own hands. Meanwhile, the value of Knowledge has also been well implemented, where employees demonstrate independence and responsibility in carrying out their duties, without relying on certain individuals. Overall, the implementation of these values reflects a work culture based on ethics, professionalism, and continuous self-development.

Tables 1.2 and 1.3 are some parts of the implementation of organizational culture in the production company, where there are still some cultures that do not run well according to the established culture. From the results of interviews and surveys with the Production Coordinator, the 5S organizational culture has not been implemented even though it has been well socialized to all employees, but there are still some employees who do not implement the 5S organizational culture that has been formed.

2. Literature review

2.1.Non-Physical Work Environment

The work environment is divided into two, namely the physical work environment and the non-physical work environment. According to **Sudaryo (2018)**The physical work environment is all physical conditions that exist around the workplace that can affect employees either directly or indirectly. While the non-physical work environment is all conditions related to relationships between co-workers, or relationships between superiors and subordinates **(Sedarmayanti, 2011)**.

Based on the conditions in the field, researchers will only conduct research on non-physical work environments. According to **Wursanto (2011)**defines a non-physical work environment as something that concerns the psychological aspect of the work environment. Based on this understanding, it is said that a non-physical work environment is also called a psychic work environment, namely the conditions around the workplace that are non-physical. According to **Wursanto (2011)**put forward the dimensions of the non-physical work environment as follows: (1) work atmosphere. (2) good treatment. (3) sense of security. (4) harmonious relationships.

2.2.Organizational culture

Organizational culture includes values that are embraced, followed, and implemented by all individuals who work in it. When organizational culture is implemented well, employees will feel connected to the company's vision and mission, and have a high sense of responsibility to support the success of the organization. According to **(Robbins, 1996:294)**There are 5 functions of organizational culture, (1) culture creates a clear distinction between one organization and another. (2) culture brings a sense of identity to members of the organization. (3) culture facilitates the emergence of commitment to something broader than personal or

individual interests. (4) culture is a social glue that is able to unite the organization by providing appropriate standards for employees to do. (5) culture as a meaning-making and control mechanism that guides and shapes employee attitudes and behavior.

2.3. Turnover Intention

According to **Widya & Purba (2019)** states that turnover intention is a thought, desire or perception of employees who are serious about looking for a new job elsewhere with free will and accompanied by psychological motives to leave their current work environment due to dissatisfaction with current work conditions.

The occurrence of turnover intention can be seen from the reasons an employee leaves his job or quits his job. This is supported by the statement **Kartono (2017)** There are 3 indicators to determine the desire of employees to move, namely:

1) *Intention To Quit*(Intention to leave) Employees intend to leave when they get a better job and will end it later with the employee's decision to stay or leave the job.
2) *Job Search*(Job search) Reflects the individual's desire to find work in another organization. If employees have started to think about leaving work often, employees will try to find work outside the company that feels better.
3) Thinking Of Quit (Thinking about leaving) Reflects people thinking about working or staying in the work environment. Starting with job dissatisfaction felt by employees, then employees start thinking about leaving their current workplace.

3. Methodology

The type of research used in this study is descriptive research. Descriptive research is a research method that attempts to describe and interpret objects according to what they are. This study aims to systematically describe the facts and characteristics of the objects or subjects studied precisely, while the type of research used is qualitative. Qualitative research is a research procedure that produces descriptive data in the form of speech or writing and the behavior of people observed. This qualitative approach is expected to be able to produce an in-depth description of speech, writing, and or behavior that can be observed from an individual, group, community, and or certain organization. The informants taken from this study were production employees. All informants are permanent employees, consisting of 1 head of production and 6 production employees. The primary data used by the researcher are the results of interviews with the seven informants and the secondary data used by the researcher is employee turnover data.

5.5. Theoretical framework

The problem of turnover intention that occurs in the production department is thought to be caused by a fairly high non-physical work environment, this is supported by research conducted by **Agung & Lilik (2009)** the work environment influences employee turnover intention because a good work environment, such as communication, good cooperation, and support from all components of the company will lead to a reduction in employee intensity to leave their jobs.

It is very important for an organization to have a non-physical work environment, namely conditions that occur in relation to work relationships, both relationships with superiors and relationships with colleagues or subordinates.**(Sedarmayanti, 2011)**.The work environment can play a major role in improving employee performance and commitment and can help to identify factors that lead to job dissatisfaction.**(Westerman & Simmons, 2007)**. Harmonious relationships between employees and good cooperation are needed, especially in such a heavy and highly focused job.

Apart from the non-physical work environment, there are several other factors that can influence turnover intention, namely organizational culture. Organizational culture is an important factor in an organization. A strong or positive organizational culture can help employees be more loyal and productive in achieving company goals, while a negative or weak culture can hinder and conflict with company goals. In order to maintain, companies need to build an organizational culture that can make employees committed. According to**Bosomtwe & Obeng (2018)**revealed that stronger perceptions of cultural traits correspond to lower employee turnover intentions, so to reduce turnover intentions, organizational culture must be maintained or improved. The results of the study **Kwakye (2018)** revealed that organizational culture influences turnover intention.

5.6. Conceptual framework

According to **Sugiyono (2018:18)** states that research variables are defined as attributes, characteristics or values of people, objects or activities that have certain variations that are determined by the researcher and then studied and then conclusions are drawn.

In this study there are three variables, namely two dependent or independent variables, namely non-physical environment and organizational culture and one independent or dependent variable, namely turnover intention. Based on these variables, it will then be developed into a concept of variables, sub-variables and measurement scales which are then used as the basis or guideline in interviews asked by the author to data sources or informants in this study. The following is a table of operational variables that can be seen in the following table:

Table 3.1 Operationalization of Variables

VARIABLES	SUB VARIABLES	SCALE MEASURING
Non-Physical Work Environment (X1) Conditions related to social relations in a company that can have an impact on the comfort of the environment in a company, especially relations between employees and relations with management.	Working Atmosphere	Qualitative
	Good treatment	Qualitative
	Harmonious relationship	Qualitative
Organizational Culture (X2) Characteristics or habits that exist in an organization and become guidelines for the organization in behaving and acting in order to solve problems that arise that can differentiate one organization from another.	Innovation and risk taking	Qualitative
	Pay attention to detail	Qualitative
	Result orientation	Qualitative
	Team orientation	Qualitative
	Aggressiveness	Qualitative
	Stability	Qualitative
***Turnover Intention*(Y)** The employee's desire to quit or resign voluntarily because they already have other job alternatives.	*Intention To Quit*(intention to leave)	Qualitative
	Intention to search for alternatives(looking for alternative jobs)	Qualitative
	Thinking Of Quit(thinking out)	Qualitative

5.7. Instrumentation

According to **Denzin & Lincoln (1998)**, there are several data triangulation techniques, including: source, technique, and theory triangulation. Source triangulation is done by comparing information from various sources or documents to test data consistency. Technique triangulation uses several data collection methods such as observation, interviews, and documentation on the same source to test the validity of the data. Theory triangulation compares the data obtained with various relevant theories to strengthen the research findings. Based on this, researchers use triangulation techniques to test the validity and reliability of data in a study on the influence of non-physical work environments and organizational culture on the turnover intention of production employees.

Figure 1. Research paradigm:Paradigm of Implementation of Non-Physical Work Environment and Organizational Culture on Turnover Intention of Production Employees

6. Results and Discussion

4.1 Non-Physical Work Environment

No	Sub Variables	Number of Informants
1.	Working atmosphere	7 Informants
2.	Good treatment	7 Informants
3.	Harmonious relationship	7 Informants

Based on the results of the researcher's observations, a family atmosphere in the work environment is considered important in creating a positive work climate, but has not been fully formed due to the dominance of individual work patterns that limit social interaction between employees. In addition, the majority of employees feel uncomfortable working because of the high pressure of achieving targets and the piecework pay system which is considered not comparable to the workload, thus reducing motivation and job satisfaction. Although there are some employees who are able to adapt and feel comfortable, it shows that the level of comfort is influenced by the individual's ability to accept and adapt to the applicable work system.

It can be concluded that aspects of good treatment in the work environment, which include appreciation, fairness, and social support, have not been fully realized. Appreciation from superiors tends to be verbal and inconsistent, without being followed by concrete rewards, thus potentially reducing work motivation. In addition, there are differences in perceptions regarding fairness in the workplace, where some employees feel unequal treatment from superiors, which

can cause jealousy and dissatisfaction. Support between coworkers also shows a divided condition, some feel that there is concern, while others consider solidarity to be still low due to the dominance of individualistic work patterns. These findings indicate that good treatment in the workplace still needs to be strengthened in order to create a fairer, more supportive, and more motivating work environment.

Based on the researcher's observations, what happened in the field was in accordance with what was conveyed by the informant regarding the lack of a harmonious working relationship as a whole. During the observation, the researcher found several small moments of tension that arose due to miscommunication, especially when the pressure of production targets increased. Some employees seemed reluctant to coordinate intensively with colleagues from other divisions, which could be an indication of a distance in communication between divisions.

4.2 Organizational culture

No	Sub Variables	Number of Informants
1.	Innovation and risk taking	7 Informants
2.	Pay attention to detail	7 Informants
3.	Team orientation	7 Informants
4.	Result orientation	7 Informants
5.	Aggressiveness	7 Informants
6.	Stability	7 Informants

Based on the results of the researcher's observations, it is known that the characteristics of work that are routine and very tied to Standard Operating Procedures (SOP) limit the space for employees to innovate and express creative ideas. Although the company provides opportunities for employees to convey ideas, and there is initiative from employees to propose improvements, the lack of support from management and a rigid work system are the main obstacles. This condition causes creative contributions from employees to be rarely realized, which ultimately has an impact on stagnation in the development of work processes in the production department.

Based on the results of the researcher's observations, attention to detail is a crucial aspect in carrying out production work, because it directly affects product quality and the company's reputation. All informants emphasized the importance of accuracy to ensure that each product unit meets specifications and is marketable, considering that small errors such as sewing defects or pattern mismatches can have a major impact on customer satisfaction. To support this, the company has implemented a strict quality control mechanism, including a special section that carries out post-production product inspections, as well as corrective procedures to repair or sort products that do not meet standards. This system not only ensures quality consistency, but also functions as a preventive measure through evaluation of errors that occur.

Based on the results of the researcher's observations, teamwork in general is running quite well, but not yet optimally. Although all employees are aware of the importance of collaboration, there are still obstacles such as delays in delivering information, lack of active participation from some members, and imbalances in workload that cause feelings of unfairness. The work system that emphasizes individual responsibility also limits flexibility in helping coworkers when needed. However, some informants considered that teamwork had been effective thanks to the clear division of tasks and the willingness to help each other. This

difference shows that the effectiveness of teamwork is highly dependent on coordination, communication, and a sense of collective responsibility in carrying out tasks together.

Based on the results of the researcher's observations, all employees are more motivated when performance is assessed based on the final result, because it is considered capable of increasing focus and work enthusiasm in achieving targets. However, the implementation of work must still refer strictly to the applicable Standard Operating Procedure (SOP), so that the orientation of results cannot be separated from compliance with procedures that guarantee product quality and consistency. Employees also expressed that they do not have full freedom in determining work methods, because the entire process has been standardized by the company. Even when the alternative methods used by employees are considered efficient and produce quality products, superiors still ask for adjustments to the SOP to ensure uniformity and prevent potential errors in the next stage.

Based on the results of observations conducted in the field, it was found that the statements conveyed by the informants were proven to be in accordance with reality. Researchers saw that employees had a strong drive to complete tasks quickly and efficiently as a response to the piecework salary system, where the more units produced, the greater the income earned. This was also reflected in the high focus on work, minimal free time outside of official break hours, and interactions that were limited to technical and operational matters.

Based on the results of the researcher's observations, the implementation of rules and policies in the field still shows instability and is inconsistent, which causes excessive flexibility and uncertainty for employees in carrying out their duties. However, when rules and work targets are applied clearly and measurably, this can improve employee discipline, efficiency, and work focus. Thus, consistency in the application of rules is very important to create a structured work environment, without eliminating adaptive capabilities in facing operational challenges.

4.3 *Turnover Intention*

5 No	Sub Variables	Number of Informants
1.	Intention to leave	7 Informants
2.	Looking for alternative employment	7 Informants
3.	Thinking out	7 Informants

That the intention to leave the company is influenced by two main factors, namely disharmonious working relationships and high work pressure. Informants stated that disharmony with superiors or coworkers creates an uncomfortable working environment, which reduces motivation and triggers the desire to find a psychologically healthier workplace. Informants also revealed that work pressure, especially from daily targets and fast work rhythms, causes physical and mental fatigue. However, some employees show a professional attitude and are able to manage work pressure positively, by making it a motivation to improve performance. This shows that the response to working conditions is greatly influenced by psychological factors and the ability to adapt to each individual.

It was found that most employees were willing to change jobs if they got a better offer, with the main considerations being a significant salary increase and the suitability of the job to their skills. However, some informants chose to stay because of comfort, loyalty, and job stability. In searching for job information, some actively used social media, while others did

not, indicating differences in preferences in job search strategies. This reflects that the decision to change jobs is influenced by individual needs and priorities.

Based on the results of the researcher's observations, employee job satisfaction in the production department is divided between those who are satisfied because the job matches their skills even though their income is not yet optimal, and those who are dissatisfied due to the lack of career development opportunities, inappropriate salaries, and minimal work environment support. Disharmonious relationships with superiors and coworkers are also the main factors that drive the intention of most employees to consider leaving the company, although some informants maintain their professional commitment despite facing interpersonal conflicts. This shows that employees' decisions to stay or leave their jobs are influenced by a combination of internal factors such as satisfaction and commitment, as well as external factors in the form of the quality of social relationships in the work environment.

4.4 The impact of non-physical work environment on turnover intention

The non-physical work environment is an important element that influences employee comfort, motivation, and attachment to the company. However, the dominance of individualistic work patterns and disharmony in the relationship between employees and superiors hinder the creation of a positive work climate and trigger turnover intention. Miscommunication, lack of coordination, and high work pressure, coupled with an unbalanced piecework pay system, worsen employee perceptions of the work environment. Injustice and inconsistent appreciation lead to dissatisfaction and jealousy. Although some employees are able to adapt, the majority are negatively affected and tend to look for more promising alternative jobs. These findings emphasize the need to improve the non-physical work environment, especially in interpersonal relationships, fairness, and recognition, to reduce turnover intention and increase employee retention.

This finding is in line with research **Ainiyyah (2019)**, and theory **Mobley (1986)**which emphasizes that the work environment, including its non-physical aspects such as interpersonal relationships and job satisfaction, influences employee turnover intentions. A supportive non-physical work environment, such as good relationships between employees and social support, can increase employee retention.

4.5 The impact of organizational culture on turnover intention

The organizational culture in the production department reflects the values and norms that guide employee behavior, provide structure, and influence their comfort level and motivation in working. Weaknesses in the organizational culture in the production department are work routines and strict adherence to Standard Operating Procedures (SOPs) that have a negative impact on employee turnover intention. Restrictions on innovation space, minimal support, and rigid work systems reduce work engagement and motivation. Inflexibility and suboptimal teamwork dynamics trigger frustration, interpersonal conflict, and perceptions of unfairness, thus increasing employee intentions to leave. In addition, instability of rules and high work pressure, especially the piecework pay system, increase work stress and turnover intention.

7. Conclusion

Based on research on the analysis of non-physical work environment and organizational culture on turnover intention. The results showed that the non-physical work environment has a greater impact on employee turnover in the production department compared to organizational culture. The conclusions from the sub-variables studied in this study include the following:

a. The results of this study state that the non-physical work environment has an impact on the turnover intention of production employees. Companies are advised to make improvements to aspects of the non-physical work environment in order to reduce turnover intention and increase employee retention. First, it is necessary to strengthen interpersonal relationships through activities that encourage social interaction, such as team building programs, effective communication training, and cross-division discussion forums. Second, companies need to increase sensitivity to perceptions of fairness in the workplace, by implementing a more transparent, consistent, and performance-based reward and recognition system. Third, it is important for companies to create a more collaborative and supportive work culture, by strengthening social support from superiors and coworkers. Finally, periodic evaluations of the piecework payroll system and workload need to be carried out to ensure balance and reduce psychological stress that can reduce job satisfaction.
b. The results of this study state that organizational culture has an impact on the turnover intention of production employees. A rigid organizational culture in the production department, companies need to make adjustments to the work structure and values adopted. First, flexibility in the implementation of SOPs needs to be increased to provide space for employee innovation and initiative. Second, companies are expected to be more active in providing support, both morally and operationally, to increase motivation and work involvement. Third, there needs to be an evaluation of the teamwork system, by emphasizing equal distribution of workload, effective communication, and constructive conflict resolution. In addition, companies are also advised to review the piecework payroll system and work target pressure to be more balanced and fair.
c. The results of this study state that high turnover intention has a negative impact on the company because it reduces productivity and increases recruitment costs. The intention to leave is triggered by disharmonious working relationships and high work pressure, although some employees remain because of loyalty. It is recommended that companies improve the quality of working relationships through better communication, evaluate the work target system to be more realistic, provide career development opportunities, improve employee welfare, and create a supportive work environment to reduce turnover intentions and increase employee loyalty.
d. The results of this study indicate that the work environment and organizational culture are in the less than good category because they have not been able to create a healthy, fair, and supportive work climate, thus triggering high employee intentions to leave the company.

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COMPETENCE OF SQUADRON 12/AJY PERSONNEL TO SUPPORT THE SUCCESS OF DISASTER RESPONSE OPERATIONS USING HELICOPTERS

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Abstract

Disaster response is a vital aspect for vulnerable countries like Indonesia. This study aims to evaluate the competence of personnel from Squadron 12/Amur Jaya Yudha (AJY) in disaster response operations using helicopters. Personnel competence, supported by training and experience, is a key factor in the success of operations. A descriptive qualitative method was used, involving interviews, observations, and document analysis. The results show that the crew of the Bell 412 helicopter possesses adequate competence but faces challenges such as a lack of training and the absence of joint exercises with related agencies. Personnel readiness in decision-making under pressure or emergency situations is crucial for operational effectiveness. Although the main equipment is ready, insufficient personnel readiness can hinder the mission. The study recommends enhancing training in response to disaster management, including emergency medical response and logistical support for critical situations. By addressing these challenges, Squadron 12/AJY is expected to improve disaster operation effectiveness. These findings can serve as a reference for the Indonesian Army in formulating better disaster response strategies. Future research could focus on technology and innovation in disaster management

Keywords: Personnel competence, Disaster response, Squadron 12/AJY, helicopter, Indonesian Army

1. Introduction

Disaster response is one of the important aspects of ensuring the safety and well-being of the community, especially in countries vulnerable to natural disasters like Indonesia. Indonesia, located in the Ring of Fire, frequently experiences various types of natural disasters, including earthquakes, tsunamis, floods, and landslides. According to data from the National Disaster Management Agency (BNPB), Indonesia experiences thousands of disaster events each year, resulting in significant economic losses and profound social impacts. Therefore, preparedness in facing disasters becomes crucial.

The Indonesian National Army (TNI AD) plays a strategic role in disaster response, particularly through aviation units such as Squadron 12/Amur Jaya Yudha (AJY). This squadron serves as one of the essential elements in the operational aviation of the TNI AD, tasked with providing logistical support, evacuation, and humanitarian assistance in emergency situations. In this context, personnel competence is a key factor influencing the success of disaster response operations.

Personnel competence includes the knowledge, skills, and attitudes necessary to effectively carry out disaster response tasks. Trained and experienced personnel will be better equipped to handle emergency situations, make appropriate decisions, and coordinate with

various stakeholders. On the other hand, the readiness of military equipment, especially helicopters, is crucial to ensure that disaster response operations can be conducted quickly and efficiently. Helicopters have the capability to reach remote areas that are difficult to access by ground vehicles, thereby providing rapid logistical support and evacuation.

In this study, the author will explore personnel competence in supporting the success of disaster response operations at Squadron 12/AJY. This research aims to contribute to the development of more effective and efficient disaster response strategies, as well as provide recommendations for the Indonesian Army to enhance its operational capacity.

This study will also discuss various challenges faced by the Indonesian Army in disaster response, including resource limitations, inter-agency coordination, and the need for ongoing training for personnel. By understanding these factors, it is hoped that solutions can be found to enhance the effectiveness of disaster response in Indonesia.

Through a qualitative approach, this study will involve in-depth interviews with personnel from Squadron 12/AJY, direct observations of disaster response operations, and analysis of related documents. In this way, the researcher hopes to uncover more in-depth information regarding the readiness of military equipment and personnel competence in the context of disaster response

Overall, this study is expected to provide better insights into the importance of personnel competence in disaster response. Thus, the results of this research are anticipated to serve as a reference for decision-makers in the Indonesian Army and other related agencies in formulating more effective and efficient disaster response strategies.

Natural disasters occurring in Indonesia often have significant impacts on people's lives. In recent years, the number of natural disaster events in Indonesia has shown an increasing trend, with various types of disasters occurring simultaneously. This demands better preparedness from all parties, including the Indonesian Army, in facing and addressing disasters. Below is data on natural disasters in Indonesia.

Tabel 1 Data on Disaster Incidents in Indonesia

No	Disaster Incidents	2021	2022	2023	2024
1	Earthquake	62	51	70	40
2	Forest Fire	579	270	2.154	189
3	Volcanic Eruption	1	1	6	6
4	Flood	1.806	1.540	1.265	834
5	Drought	21	4	1.039	32
6	Landside	1.321	635	608	100
	TOTAL	3.790	2.501	4.534	1.201

Sumber: *Data Information Document of the National Disaster Management Agency at http://bnpb.cloud/dibi/ Tahun 2024.*

Squadron 12/AJY, as one of the aviation units of the Indonesian Army, plays an important role in supporting disaster response operations. By using helicopters, this squadron can provide logistical assistance, conduct evacuations, and offer medical support to communities affected by disasters. However, to carry out these tasks effectively, adequate and optimal personnel competence is required.

Personnel competence in the context of disaster response encompasses various aspects, including technical skills in operating helicopters, the ability to work under pressure or in emergency situations, as well as the capability to coordinate with various agencies and other organizations.

Therefore, this study aims to explore personnel competence in supporting the success of disaster response operations at Squadron 12/AJY. By understanding the factors that influence

this aspect, it is hoped that solutions can be found to enhance the effectiveness of disaster response in Indonesia.

Squadron 12/Amur Jaya Yudha, abbreviated as Squadron 12/AJY, is an air squadron under the supervision of the Army Aviation Center (Puspenerbad) and is based at Gatot Subroto Airport, Way Tuba, Way Kanan, Lampung. The main tasks of Squadron 12/AJY include conducting combat intelligence, maneuvers, fire support, and protection using military equipment in the form of attack helicopters, namely the AS 550 C3e Fennec Helicopter and the BO-105 Helicopter, as well as assault helicopters, specifically the Bell 412 Helicopter along with its equipment, to support the primary duties of Puspenerbad. The following will provide an overview of the military equipment strength of Squadron 12/AJY Puspenerbad in general to support flight operations.

The main objective of this study is to enhance the success indicators of disaster response operations using helicopters from Squadron 12/AJY through personnel competence. Specifically, this research aims to:

1) Analyze the effectiveness of existing training programs in improving personnel competence at Squadron 12/AJY.
2) Identify competencies that need to be enhanced or added to address future disaster response challenges.
3) Understand personnel perceptions regarding the importance of competence in supporting flight safety and operational success at Squadron 12/AJY.
4) Identify factors that may hinder the success of disaster response operations.

This research is expected to make a significant contribution to the development of disaster response strategies in Indonesia. By exploring personnel competence, this study can provide better insights into the factors that influence the success of disaster response operations. The results of this research are anticipated to serve as a reference for decision-makers in the Indonesian Army and other related agencies in formulating more effective and efficient disaster response strategies.

This research will not only benefit the Indonesian Army but also the communities affected by disasters. By enhancing preparedness and competence in disaster response, it is hoped that the negative impacts caused by disasters can be reduced and that community resilience in facing emergency situations can be improved.

In facing the increasingly complex challenges of disaster response, it is important for the Indonesian Army, particularly Squadron 12/AJY, to enhance personnel competence readiness. This research aims to explore this aspect and provide useful recommendations for the development of more effective disaster response strategies. Thus, it is hoped that this study can make a tangible contribution to improving the capacity of the Indonesian Army in facing disasters and protecting the community.

2. Literature Review

In an effort to enhance the success of disaster response operations in Indonesia, various aspects have become the focus of research, particularly personnel competence. This section discusses the literature review related to these two aspects and their relevance in the context of disaster response with helicopter support at Squadron 12/Amur Jaya Yudha (AJY).

2.1 Theoretical Foundation on Competence

Personnel competence in the military and disaster context is based on a theory that combines aspects of knowledge, skills, and work attitudes, as explained by Wibowo (2016). Spencer (2007) adds dimensions of competence that include motives, traits, self-concept, knowledge, and skills, all of which play a role in determining personnel effectiveness in the

field. Krisnandi & Saputra (2021) state that competence is an individual's ability to perform at a satisfactory level in the workplace, including the ability to transfer and apply those skills and knowledge in new situations and enhance agreed-upon benefits. Setyo Widodo & Yandi (2022) assert that competence is performance focused on achieving goals comprehensively towards the desired condition.

Furthermore, competence is also an important component in building a strong work ethic to optimize employee performance. Meanwhile, Rehardiningtyas et al. (2022) add that competence is the motivation that drives individuals to apply their best performance in their work. Etymologically, competence is defined as a behavioral dimension that reflects the expertise or excellence of a leader or staff, encompassing skills, knowledge, and good behavior.

2.2 Personnel Competence in Disaster Response Operations

Personnel competence is a crucial variable that significantly determines the success of disaster response missions involving military equipment (Wibowo, 2016). Competent personnel are those who possess the necessary knowledge, skills, and professional attitudes to perform tasks effectively, especially in the context of high operational pressure such as disasters (Rahmat, 2019). Competence encompasses technical aspects, decision-making, communication, and the ability to adapt in emergency situations.

McClelland (2017) defines competence as the fundamental characteristics that determine an individual's performance, while Wibowo (2016) emphasizes that competence includes the skills, knowledge, and attitudes that support task execution. The dimensions of competence according to Spencer (2007) include motives, traits, self-concept, knowledge, and skills, all of which play a role in determining personnel effectiveness in the field.

In applied research, Amarullah et al. (2023) state that personnel with continuous training and operational experience will be better prepared to face crisis situations and able to reduce fatal risks. Specialized training, such as the use of medical equipment in the Rubber Bell-412 helicopter or NVG flight simulators, greatly enhances the technical capabilities of pilots and helicopter crews to carry out disaster response tasks in various terrain and weather conditions (Machmiyana et al., 2023). This technical ability needs to be combined with emergency management skills and effective communication under pressure.

In addition to pilots, technicians and other supporting personnel also need to possess adequate competence to ensure the maintenance and operational readiness of military equipment can be consistently upheld (Ilmiah et al., 2024). Medical personnel must also be competent in providing medical care during evacuations using rescue helicopters, adapting to challenging flight environments.

2.3 Training and Development of Personnel Competence

Training is a crucial aspect in maintaining and enhancing personnel competence. Poluakan et al. (2019) emphasize that continuous training and disaster simulation strengthen personnel readiness to face real conditions. Systematic programmed training should include mastery of helicopter technical skills, crisis management, rapid decision-making, and team communication.

The study by Machmiyana et al. (2023) also underscores the importance of simulation-based training and the use of technology such as flight simulators to prepare personnel for night flying and adverse weather conditions. Additionally, official certification of technical and medical competencies becomes a primary standard to ensure readiness for disaster response operations.

Barriers to competence enhancement, such as budget limitations, task density, and inadequate training facilities, must be identified and addressed through careful planning and

management support (Sridaryono, 2019). Training should be able to accommodate dynamic needs so that personnel are prepared to face challenges in military operations other than war (MOOTW).

2.4 Previous Studies and Research Relevance

Several previous studies have examined the capacity of the Indonesian Army (TNI AD) in disaster response. Reza Nur Patria (2013) found that personnel readiness and military equipment significantly affect the effectiveness of disaster response; however, there are obstacles such as budget limitations and communication issues. A study by Bonggosna H.P. Sagala et al. (2023) highlights the importance of logistical support, including personnel preparation and the use of aviation resources in emergency response operations.

Research by Kaisar Bagus Purnawijaya Rhynaldie (2023) emphasizes that the involvement of the TNI AD in disaster response has a positive impact on regional resilience, particularly through collaboration with related agencies. This study supports the importance of synergy, which is the focus of this presentation's research, especially in the context of Squadron 12/AJY, which has advantages in personnel and helicopter military equipment.

2.5 The Role of Technology in Disaster Response

The development of information and communication technology (ICT) also plays a crucial role in enhancing the effectiveness of disaster response. According to research by Ilmiah et al. (2024), the use of technology in disaster management can improve coordination among agencies, accelerate decision-making, and facilitate better communication in the field. Technologies such as geographic information systems (GIS) and mobile applications for disaster monitoring can assist in real-time data collection and situation analysis, thereby facilitating quick and accurate decision-making. This is particularly important in the context of disaster response in Indonesia, where response time can be a determining factor in saving lives.

2.6 Challenges in Disaster Response

Despite various efforts to enhance the readiness of military equipment and personnel competence, challenges remain. According to Zwell (2013), several factors that influence personnel competence include individual beliefs and values, skills, experience, personality characteristics, and motivation. In the context of the Indonesian Army (TNI AD), these challenges can be exacerbated by budget limitations, a lack of training facilities, and the need to adapt to new technologies.

Sridaryono (2019) also notes that emotional barriers, such as fear of making mistakes or pressure from emergency situations, can limit personnel's ability to function optimally. Therefore, it is important to create an environment that supports the development of competence and personnel readiness, including through continuous training and psychological support.

2.7 Recommendations for Enhancing Readiness and Competence

Based on this literature review, several recommendations can be proposed to enhance the readiness of military equipment and personnel competence in disaster response:

a. Continuous Training. A structured and ongoing training program should be implemented to ensure that personnel are always prepared to face new challenges. This training should include simulations of emergency situations and the use of the latest technology.
b. Strengthening Logistics Management. An efficient logistics management system should be developed to ensure the availability of military equipment and other resources in emergency situations. This includes the procurement of spare parts, routine maintenance, and timely distribution.

c. Cross-Sector Collaboration. Building strong partnerships between the Indonesian Army (TNI AD), the National Disaster Management Agency (BNPB), and non-governmental organizations can enhance the effectiveness of disaster response. This collaboration should include the exchange of information and resources.
d. Technology Implementation. Utilizing information and communication technology to improve coordination and response in disaster management. The use of mobile applications and geographic information systems can assist in making faster and more accurate decisions.
e. Psychological Support. Providing psychological support to personnel to help them cope with the pressure and stress faced in emergency situations. This can enhance their performance and effectiveness in disaster response operations.

Through this literature review, it can be concluded that personnel competence is a crucial aspect of disaster response. By addressing the existing challenges and implementing the proposed recommendations, it is hoped that the TNI AD, particularly Squadron 12/AJY, can improve its operational effectiveness in disaster response in Indonesia.

3. Metodologi

This research employs a qualitative approach with a focus on in-depth exploration of the competence of personnel from Squadron 12/Amur Jaya Yudha (AJY) in supporting the success of disaster response operations using helicopters. The methodology applied aims to obtain a comprehensive picture of the phenomena occurring concerning the variables being studied.

3.1 Types of Research

The type of research used is descriptive qualitative research. This approach was chosen because it allows the researcher to explore the experiences, views, and perceptions of personnel regarding competence in the context of disaster response in depth (Creswell, 2014). Qualitative research provides the flexibility to understand social and dynamic situations that are difficult to measure with quantitative methods. Furthermore, this method is suitable for the development of theories centered on the context and complexities of military and disaster operations.

3.2 Location and Time of Research

The research location is Squadron 12/AJY Puspenerbad, based at Gatot Subroto Airport, Way Tuba, Way Kanan, Lampung. This squadron was chosen because it has a strategic role and personnel directly involved in disaster response operations using helicopters. The research was conducted over three months, from May to July 2025, covering the stages of data collection, analysis, and report preparation according to the outlined schedule."

3.3 Research Subjects

The subjects of the research consist of personnel actively involved in the operations and maintenance of helicopters in Squadron 12/AJY, including pilots, technicians, support personnel, and relevant officials. The selection of subjects was conducted purposively, considering their involvement and knowledge regarding personnel competence in disaster response (Gunawan, 2022). The main informants include the Squadron Commander, the Head of Operations Section, the Flight Commander, and flying personnel as well as technicians who have direct experience in operations.

3.4 The data collection methods

The data collection methods were carried out through three main techniques: in-depth interviews, participatory observation, and document analysis.

a. In-Depth Interviews. Conducted in a semi-structured manner with a flexible interview guide to allow informants to share their experiences, perceptions, and challenges related to personnel competence (Kvale, 2007). This technique is relevant for obtaining rich and detailed qualitative data regarding work attitudes, training, and operational experiences. The interviews included questions about the training attended, technical skills, decision-making processes in the field, as well as relationships among personnel and military equipment elements.

b. Participatory Observation. The researcher conducted direct observations of the operational activities of Squadron 12/AJY, including disaster response training, helicopter maintenance, and coordination among personnel (Hakim & Hasan, 2025). Observations provide the actual context of work practices and interactions in real situations, thus the results serve as data that reinforce the findings from the interviews.

c. Document Analysis. Document studies included statistical data, operational reports, standard procedures, and policies related to disaster response and the management of military equipment at Puspenerbad (BNPB, 2024). Documents serve as an important source of secondary data to provide chronology, an overview, and validation of primary data.

3.5 Operationalization of Variables

This research operationalizes the variable of personnel competence. This variable is described through indicators that focus on data collection. Personnel competence is measured based on indicators such as training attended, operational experience, certification status, technical and non-technical skills (communication, decision-making, emergency management), as well as work attitudes in the field (Wibowo, 2016). Additionally, indicators of teamwork and collaboration with other agencies are also included in the measurement of competence. The data collected from these variables are expected to explain personnel competence in enhancing the effectiveness of disaster response operations.

3.6 Research Design

This research applies a multiple case study design, focusing on several units within Squadron 12/AJY that have different characteristics and responsibilities in disaster management (Assyakurrohim et al., 2021). The multiple case study approach was chosen to broaden perspectives and compare best practices among units, thereby providing a more comprehensive and valid picture of the phenomena of readiness and competence.

The case study approach allows the researcher to understand the unique social, cultural, and operational contexts of each unit, which will later be analyzed thematically to identify patterns and relationships among variables (Creswell, 2014).

3.7 Data Collection Procedures

Data collection was conducted in stages, from preparation to data processing:

a. Research Preparation. This includes the development of research instruments such as interview guides and observation sheets, as well as conducting a literature review to strengthen the conceptual and theoretical framework (Ramadhan, 2021).

b. Implementation of Interviews and Observations. This was carried out with a flexible and participatory approach. Semi-structured interviews were directed to explore the experiences and perceptions of informants, focusing on the readiness of military equipment and personnel competence. Observations were conducted during operations and training (Hakim & Hasan, 2025).

c. Collection and Analysis of Documents. Documents such as operational reports, standard procedures, and supporting statistical data were collected to enhance the validity of the findings.

d. Recording and Notetaking. All interview data were recorded with the informants' consent, and field notes were made during observations to support data analysis (Kvale, 2007).

3.8 Data Analysis Techniques

The data collected were analyzed using thematic analysis techniques, which involve the processes of coding and grouping data based on key themes that emerge from interviews, observations, and documents (Flick, 2018).

a. Data Coding. The data were broken down into units of meaning and coded to identify important elements related to the variables of military equipment readiness and personnel competence.

b. Theme Grouping. The codes were grouped into themes that reflect patterns or relationships within the data. These themes represent the experiences and perceptions of informants as well as the observed operational conditions.

c. Data Interpretation. The researcher linked the results of the thematic analysis to theories and research objectives to provide a deeper understanding of the influence of competence in the context of disaster management.

3.9 Techniques for Testing Data Validity and Reliability

To ensure the credibility and validity of the data, this study employs several testing techniques as follows:

a. Member Check. Initial findings are returned to informants to obtain feedback on the accuracy and relevance of the data (Flick, 2018). This step ensures that the interpretation results align with the subjects' experiences.

b. Data Triangulation. This involves combining data from various sources, methods, and times to check the consistency of the information obtained (Denzin, 2017). Triangulation of techniques is performed by pairing the results of interviews, observations, and documents.

c. Credibility Testing. This involves a thorough examination of data consistency and the analysis process to avoid the researcher’s subjective bias (Creswell, 2014).

d. Audit Trail. The researcher documents the entire process of data collection and analysis to ensure traceability and transparency in the research (Gunawan, 2022).

3.10 Research Ethics

In the implementation of the research, ethical aspects are a top priority. Each informant is provided with an explanation of the research objectives and assured of the confidentiality of their identity and the data provided. The data collection process is conducted with voluntary consent and respect for the respondents' privacy rights (Priadana & Sunarsih, 2021). The researcher also maintains a reflective attitude in interactions with informants to avoid bias and uphold professionalism.

4. Result and Discussion

From the results of in-depth interviews with informants, field observations, and various supporting document studies, a comprehensive picture of the conditions and challenges faced regarding the competence of personnel in Squadron 12/Amur Jaya Yudha (AJY) in supporting the success of disaster response operations using helicopters in Indonesia was obtained. Based

on the experiences of the informants in conducting operations using helicopters, the following results were obtained:

Lieutenant Colonel Cpn Ferry Eko Saputra, as the Commander of Squadron 12/AJY, explained that the competence of Squadron 12/AJY personnel plays a crucial role in supporting the success of operations. Based on his experience, disaster response operations are quite similar to military operations in support of troops. However, they cannot be equated directly as they have different objectives. From the interview, it was stated that personnel of Squadron 12/AJY need to conduct routine training, both technical and non-technical, as this greatly helps them improve their capabilities in facing the challenges of operational fields with time constraints and emergency situations. The challenge faced is the absence of a specific program that regulates or underpins disaster response operation training activities.

Lieutenant Colonel Ferry Eko Saputra also explained the necessity of training using flight simulators for pilots and helicopter crews, as it enhances pilot readiness for night missions and difficult terrains. Technical or maintenance personnel also receive intensive training to expedite the identification and repair of damage by utilizing the latest technology and supporting tools, whether for evacuation or other supporting equipment.

Specifically, the interview results revealed the dimensions of attitude and communication within the team that significantly influence the performance of Squadron 12/AJY personnel. Personnel with effective communication skills and a professional work attitude are able to execute coordination well in critical situations. This expertise is essential to optimize operations involving multiple units and related agencies.

Major Cpn Henryko Siregar, as the Head of Operations Section of Squadron 12/AJY, explained that training should not only focus on the technical aspects of helicopter operation but also on other training such as crew communication, conflict management, and decision-making under pressure. This combination of training is considered essential for readiness to face the complexities of unpredictable disaster response operations. Squadron 12/AJY can apply this in every mission, not just in disaster response operations.

The Maintenance Flight Commander of Squadron 12/AJY, Captain Cpn Siburian, focuses more on the personnel's ability to prepare the readiness of defense equipment to support disaster response operations. This is because helicopters are a crucial component in these operations. Personnel responsible for the readiness of defense equipment must be competent and ready to respond to emergencies, especially in disaster situations. He emphasized the need for enhanced specialized training in emergency medical care and the management of defense equipment readiness to anticipate broader critical situations.

Additionally, Captain Cpn Hario Istiqlal, as the Operational Flight Commander of Squadron 12/AJY, has a positive perception of the importance of personnel competence as a key factor in operational success, stating that technical capabilities must function well to achieve operational objectives. Personnel also acknowledge the role of training and field experience as essential elements in enhancing confidence and work effectiveness. Communication among team members and synergy with other agencies are also considered equally important supporting factors. However, the challenges faced by Squadron 12/AJY personnel include limited resources, rapid technological changes that do not align with the technology at Squadron 12/AJY, and psychological aspects of working in emergency situations. Nevertheless, high motivation and a commitment to continuous learning are key to overcoming these obstacles.

The Commander of Squadron 12/AJY identified various barriers affecting personnel competence during disaster response operations. Some of the main challenges faced include budget limitations, training that is not focused on disaster response operations, and the limited availability of training facilities at Squadron 12/AJY.

Furthermore, the difficult terrain in operational areas and extreme weather changes often exacerbate technical and operational challenges. Personnel must be able to adapt to these situations, but the lack of experience in certain conditions remains a barrier that must be continuously addressed through training and simulations.

The aspect of coordination among agencies, both within the Indonesian Army (TNI AD) and with the National Disaster Management Agency (BNPB) and non-governmental organizations, is also an important concern. Suboptimal coordination can lead to miscommunication and potential overlaps in tasks, thereby reducing the effectiveness of emergency responses.

5. Conclusion

This research has explored the competencies of personnel in Squadron 12/Amur Jaya Yudha (AJY) in supporting the success of disaster response operations using helicopters. Personnel competence has proven to be a crucial element in the success of disaster response operations. Continuous training and extensive operational experience enable personnel to better face emergency situations. This study found that trained personnel not only possess adequate technical skills but also the ability to adapt and make quick decisions in high-pressure situations. This indicates that the development of personnel competence should be a priority in efforts to enhance the effectiveness of disaster response.

It is important to develop integrated training programs that align with the readiness of defense equipment, so personnel can maximize the use of available tools. This research also highlights the importance of collaboration between the Indonesian Army (TNI AD), the National Disaster Management Agency (BNPB), and non-governmental organizations in disaster response. Good coordination among various parties can enhance response effectiveness and ensure that all resources are utilized optimally.

The challenges faced in disaster response, such as budget limitations, lack of training facilities, and the psychological pressure experienced by personnel, must be identified and addressed. Psychological support for personnel is also an important aspect that needs attention to maintain their performance in emergency situations. This study recommends the need for enhanced specialized training in emergency medical care and field logistics management to anticipate critical situations that may arise.

Overall, this research provides better insights into the importance of personnel competence readiness in disaster response. By addressing existing challenges and implementing the proposed recommendations, it is hoped that the TNI AD, particularly Squadron 12/AJY, can improve its operational effectiveness in disaster response in Indonesia. The findings of this study are expected to serve as a reference for decision-makers in the TNI AD and other related agencies in formulating more effective and efficient disaster response strategies.

This research not only benefits the Indonesian Army (TNI AD) but also the communities affected by disasters. Enhancing readiness and competence in disaster response is expected to reduce the negative impacts caused by disasters and improve community resilience in facing emergency situations. This research also opens opportunities for further studies on other aspects that can support the success of disaster response operations, including the development of technology and innovation in disaster management.

The references used in this research include various relevant sources, including journals, books, and official documents from the National Disaster Management Agency (BNPB) and other related agencies. Therefore, this research is expected to make a significant contribution to the development of knowledge in the fields of human resource management and disaster response, as well as serve as a reference for researchers and practitioners in formulating better strategies to face future disaster challenges.

Through a comprehensive and systematic approach, this research aims to provide a clear picture of the competencies of personnel in Squadron 12/AJY, as well as the challenges faced in disaster response. Thus, it is hoped that this research can be a starting point in efforts to enhance the capacity of the TNI AD in facing disasters and protecting the community.

With all the findings and recommendations produced, this research is expected to have a positive impact on the development of more effective and efficient disaster response strategies in Indonesia, as well as improve collaboration among various agencies in addressing increasingly complex disaster challenges.

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THE INFLUENCE OF ENVIRONMENTAL, SOCIAL, AND GOVERNANCE (ESG), CASH HOLDING, AND RETENTION RATIO ON FIRM VALUE: THE MODERATING ROLE OF FIRM SIZE IN INDONESIA'S ENERGY SECTOR (2019-2023).

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Abstract

The increasing awareness of investors regarding a business's sustainability encourages companies, especially in the energy sector, which plays a crucial role in the transition towards sustainable development, to adopt strategies that enhance firm value. This research aims to analyze the influence of ESG, cash holding, and retention ratio on company value and the role of firm size as a moderating factor in the energy sector from 2019–2023. This research uses a quantitative descriptive causal approach. The population in this research is 83 companies in the energy sector in Indonesia from 2019 to 2023. The sample in this study was taken using the purposive sampling method, resulting in a total sample of 12 companies. The analysis method used is panel data regression and Moderated Regression Analysis (MRA) using the Eviews 12 application. The results showed that partial cash holding has a positive influence, but ESG and retention ratio do not influence Firm value. Firm size cannot moderate the influence of ESG, cash holding, and retention ratio on Firm value. Besides that, ESG, cash holding, and retention ratio simultaneously influence the Firm value of companies in the energy sector.

Keywords: Environmental, social, governance (ESG); Cash holding; Retention ratio; Firm value; Firm size.

1. Introduction

As competition in business, both in Indonesia and globally, increases, it encourages companies to pay more attention to social and environmental responsibilities. Stakeholder trust tends to grow when companies demonstrate commitment to environmental, social, and governance (ESG) values. In a PwC survey (2022), 79% of investors deemed ESG important in investment decision-making. ESG certification has also been proven to reduce capital costs by 1.2% and increase firm value by up to 31.9% (Wong et al., 2020). However, according to the IBCSD survey, Indonesia was ranked 36th out of 47 capital markets worldwide in the ESG Index in 2021. The level of ESG transparency among companies in Indonesia is still considered low, with disclosures recorded at below 50% (Ika Ramdhani, 2022). This is supported by the evidence that according to the Indonesia Business Council for Sustainable Development (IBCSD) survey, 40% of companies in Indonesia still lack an understanding of the importance of implementing ESG (Defitri, 2023). Although investors increasingly recognise the importance of ESG, its implementation and transparency still face various challenges. The government has issued regulations related to sustainability through POJK No. 51/POJK.03/2017, and 79 companies have implemented ESG principles to date. A 2022 survey showed that the energy sector's implementation or consideration of ESG programs is primarily driven by investor pressure (44%) and regulation (40%) (Statista, 2022).

Environmental, social, and governance (ESG) factors can increase or decrease a firm's value. In Indonesia, the preparation of sustainability reports refers to the Global Reporting Initiative (GRI) standards because they are considered the most comprehensive in reporting

economic, environmental, and social impacts (Purwaningsih, 2023). The research results (Cahyani & Maryanti, 2024), (Rahelliamelinda & Handoko, 2024), (Aydoğmuş et al., 2022), (Abdi & Càmara, 2022), and (M. F. Utomo & Rini, 2023) found that ESG has a positive influence on firm value. Meanwhile, the results from research (Christy, 2023), (Jeanice & Kim, 2023), (Kartika et al., 2023) and (Aouadi & & Marsat, 2018) found that ESG does not influence firm value.

Another factor that can influence a firm's value is cash holding. Research results (Halim, 2022), (Roza & Mashuri, 2023), (Jaradat et al., 2021), (Emanuel et al., 2022), (Ruth, 2023), and (Anandita & Septiani, 2023) found that cash holding influence firm value. However, the findings from (Lestari, 2024) found that the cash holding does not influence firm value.

The next factor that influence the firm's value is the Retention Ratio. (Prayogo et al., 2023) and (Olivia et al., 2025) found that the retention ratio has an adverse influence on firm value. Meanwhile, research by (Permata Sari & Kadarningsih, 2024) and (Cahyani & Maryanti, 2024) found that the retention ratio does not influence firm value.

Firm size can moderate the influence of ESG on firm value in line with the research conducted by (Prayogo et al., 2023) and (Cahyani & Maryanti, 2024). Meanwhile, the reserach by (Junardi, 2019) and (Aurora L et al., 2021) found that firm size is unable to moderate the influence of ESG on firm value. Furthermore, the influence of cash holding on firm value can be moderated by firm size in accordance with the research conducted by (Ruth, 2023). However, this contradicts the findings of (Cahyani & Maryanti, 2024), which state that firm size is unable to moderate the influence of cash holding on firm value. The next factor is the influence of retention ratio on firm value, which can also be moderated by firm size in accordance with the research conducted by (Prayogo et al., 2023) and (Cahyani & Maryanti, 2024).

The background of the research shows differences in findings from previous studies, indicating that contributions to theory development have not been fully objective and general in nature. Therefore, this research aims to examine the effect of ESG, Cash Holding, and Retention Ratio on firm value. Additionally, this study also analyzes the moderating role of firm size in that relationship. The research focuses on companies operating in the energy sector from 2019-2023.

2. Literature review

2.1.Signalling Theory

Signalling Theory, according to Brigham & Houston (2011), is the behaviour of a Firm's management in providing information or cues to shareholders about how management views the firm's prospects in the future. Signalling theory aims to reduce the information asymmetry between internal and external parties of the firm. When information is announced to the public, market participants will assess whether it brings good or bad news for investors, ultimately affecting their investment decisions (F. W. Aditama, 2022).

2.2.Agency Theory

The Agency Theory, according to Jensen & Meckling (1976), is the existence of an agency contract between one or more principals as owners that involves an agent in providing services for decision-making in managing the firm.

2.3. Stakeholder Theory

Stakeholder theory is an approach in organizational management and business ethics that emphasizes the importance of considering the interests of all parties involved or affected by the company's activities (Freeman, 1984).

2.4. Firm Value

The value of a Firm is the investors' perception of its success level, which is closely related to its stock price. A high stock price will elevate the firm's value and increase investor confidence (Amelia & Anhar, 2019). The firm value, which connects stock market price with earnings and assets, reflects investors' outlook on the firm's prospects in the future (Suhendar & Paramita, 2024). According to Rahayu (2022), The firm value proxied by Tobin's Q can be calculated using the following formula:

$$\text{Tobin's Q} = \frac{\text{Market Value of Shares} + \text{Total Liabilities}}{\text{Total Asset}}$$

2.5. Firm Size

According to Sawir (2015:101), the size of a firm is a scale that determines the magnitude of the Firm, which can be seen from equity value, sales value, number of employees, and total asset value, which are context variables that measure the demands for services or products of the organization. According to Jogiyanto (2010), the formula that can be used to calculate firm size is as follows:

$$\text{Firm size} = \text{Logarithm Natural (Total asset)}$$

2.6. Environmental, Social, Governance (ESG)

ESG is a structure where a Firm considers environmental, social, and governance aspects when conducting its business responsibly to create a sustainable business. Investors usually use ESG to measure the management risks present in the Firm using ESG reports, ESG becomes one of the basic principles that companies must take into account to ensure their business success in the future (Utomo, 2024). According to Noviyanto et al. (2024), the formula that can be used to calculate ESG is as follows:

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$$\text{ESG Disclosure} = \frac{\text{Sum of company's disclosure item}}{\textit{Total Maximum Disclosure}}$$

2.7.Cash Holding

According to Gill & Shah (2012), cash holding refers to the cash funds that the Firm has or is available for investment in the form of physical assets that are to be distributed to investors. Companies must increase cash reserves to ensure positive cash flow and support sales and revenue growth. Optimal cash management can help reduce the risk of financial difficulties and ensure that the Company's operations proceed as planned (Aviyanti & Isbanah, 2019). According to Rahayu (2022), the formula that can be used to calculate Cash Holding is as follows:

$$\text{Cash Holding} = \frac{\text{Cash and Cash Equivalents}}{\text{Total Asset}}$$

2.8. Retention Ratio

The retention ratio is the percentage of profits not distributed to investors as dividends. Companies often use retained earnings to reinvest in their operations and develop the business (Qodary & Tambun, 2021). The retention ratio illustrates the extent to which a company's income is kept for growth and expansion purposes, compared to the amount distributed to investors in the form of dividends (Safira & Dillak, 2021). According to Prayogo et al. (2023), the formula that can be used to calculate the retention ratio is as follows:

Retention Ratio = 1 – Dividend Payout Ratio

3. Hypothesis Formulation and Research Framwork

3.1.The Influence of ESG on Firm Value

ESG signals to investors that the company is focused on increasing shareholder wealth and contributing to the community's welfare around its operating environment. This makes ESG good news for investors, as it can affect stock trading volume and ultimately increase the firm's value (Sibarani, 2023) This theory is available from research conducted by (Cahyani & Maryanti, 2024), (Rahelliamelinda & Handoko, 2024), (Aydoğmuş et al., 2022), (Abdi & Càmara, 2022), and (M. F. Utomo & Rini, 2023).

H1 : ESG has a positive influence on Firm value

3.2.The Influence of Cash Holding Ratio on Firm Value

A company with a large amount of cash can finance its operational and investment needs independently without relying on external funding. The ideal cash balance is achieved when the excess cash available can cover existing deficits, allowing management to set a cash level close to optimal and create financial stability for the company. This stability makes investors more interested in investing because they see the company has good prospects and lower risks. Consequently, investors' perception of the company's success will improve, which ultimately positively influences the firm value (Edi & Fernando, 2021). This theory is available from research conducted by (Halim, 2022), (Roza & Mashuri, 2023), (Jaradat et al., 2021), (Emanuel et al., 2022), (Ruth, 2023), and (Anandita & Septiani, 2023).

H2 : Cash holding has a positive influence on Firm value

3.3.The Influence of Retention Ratio on Firm Value

The retention ratio reflects the portion of profits not distributed as dividends but reinvested for the company's development. Although this strategy can increase retained earnings, a high retention ratio may lower investor expectations for dividends, ultimately affecting stock prices and firm value (Aryanti, 2021; Qodary and Tambun, 2021). Based on stakeholder theory, firms must benefit stakeholder. The company can attract investor interest in its shares by lowering the retention ratio and increasing the dividend payout ratio (Permata Sari & Kadarningsih, 2024). This theory is available from research conducted by (Prayogo et al., 2023) and (Permata Sari & Kadarningsih, 2024).

H3 : Retention ratio has a negative influence on the Firm value

3.4.The Influence of Firm Size Moderating ESG on Firm Value

Firm Size can strengthen the influence of ESG on firm value because large companies have the resources and capabilities to implement ESG effectively. In addition, large companies also have highly sustainable capabilities (Prayogo et al., 2023). In other words, the larger a company, the greater the financial resources it has to implement the principles of Environmental, Social, and Governance (ESG). With effective implementation of ESG, companies can increase their firm value by improving their reputation, operational efficiency, and business sustainability. This theory is available from research conducted by (Prayogo et al., 2023) and (Cahyani & Maryanti, 2024).

H4 : Firm size can moderate ESG on the Firm value

3.5.The Influence of Firm Size Moderating Cash Holding Ratio on Firm Value

Cash holding can be used for various purposes, such as distributing dividends to shareholders, buying back company shares, investing, or saving for future needs. The larger the Firm, the greater the cash holding. Large companies can more easily take advantage of profitable investment opportunities with increased cash holding. When a company makes a profit, it will allocate part of its profits to investors as dividends. This positively impacts investors, which can ultimately increase the firm's value (Cahyani & Maryanti, 2024). This theory is available from research conducted by (Ruth, 2023).

H5 : Firm size can moderate Cash holding on the Firm value

3.6.The Influence of Firm Size Moderating Retention Ratio on Firm Value

Firm size can strengthen the retention ratio's influence on firm value, as it is considered a quasi-moderator (Prayogo et al., 2023). Large companies usually find it easier to obtain funding from the capital market because they have a good reputation. This funding allows the company to pay dividends to investors, allowing it greater flexibility (Lilis & Suryanto, 2017). However, large companies tend to have higher debt levels, so allocating debt payments can reduce the company's ability to distribute dividends. Delays or dividend reductions can decrease investor interest, ultimately negatively impacting the company's value (Qodary and Tambun, 2021). This theory is available from research conducted by (Prayogo et al., 2023) and (Cahyani & Maryanti, 2024).

H6 : Firm size can moderate Retention ratio on the Firm value

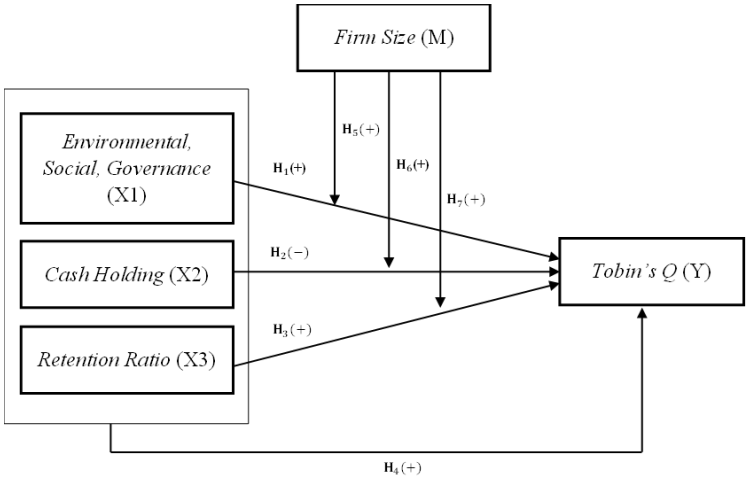

Figure 3. 1 Research Framwork

4. Methodology

This research uses a quantitative descriptive causal approach. The research population comprises 83 energy sector companies listed on the Indonesia Stock Exchange (IDX) from 2019 to 2023. The sample was selected using purposive sampling techniques with criteria of companies that consistently publish annual financial statements, sustainability reports, and GRI reports based on GRI 2016 and GRI 2021 standards during that period, resulting in 12 companies as the sample. Data were actively collected through document analysis of financial statements and the sustainability report. Statistical analysis was conducted with the help of Eviews version 12 software. The data used is panel data, a combination of time series and cross-sectional data.

5. Results and Discussions

5.1.Selection of Analysis Methods

Three models have been obtained using panel data regression: the Chow test, the Hausman test, and the LM test. Below are the results of the estimation for the three panel data regression models:

Table 4. 1 Results of the analysis method selection test

Models	Test Summary	Prob.	Summary
Chow test	Cross-section Chi-square	0,0000 < 0,05	FEM
Hausman test	Cross-section random	0,5521 > 0,05	REM
Lagrange multiplier test	Breusch-Pagan	0,0002 < 0,05	REM

Source: Result processing data Eviews 12, 2025

Based on Table 4.1, The selection of the best model in this research is random effect model.

5.2.Test of Classical Assumptions

According to Septianingsih (2022), the heteroskedasticity test is not mandatory in the classical assumption tests because the selected model estimation is the random effect model.

Table 4. 2 Results of the classical assumption test

Test of Classical Assumptions	Method	Criteria	Sig.	Summary
Normality Test	Jarque-Bera	>0,05	0,5076	Normally distributed
Multicollinearity Test	Correlation Between Variables	<0,8	X1_ESG and X2_CH = 0,2712 X1_ESG and X3_RR = 0,0398 X1_ESG and Z_FS = 0,3183 X2_CH and X3_RR = 0,0895 X2_CH and Z_FS = 0,1116 X3_RR and Z_FS = 0,2059	No multicollinearity occurs
Autocorrelation Test	Durbin Watson	-2<D-W<+2	1,0192	No autocorrelation occurs

Source: Result processing data Eviews 12, 2025

Based on Table 4.2, the regression model is known to have passed the classical assumption test.

5.3.Panel Data Regression

Table 4. 3 Results of the panel data regression test

Variable	Coefficient	Std. Error	T-statistic	Prob.
C	0,314858	0,1282587	0,245678	0,8068
X1	0,077140	0,123404	0,625098	0,5345
X2	1,064621	0,246581	4,317521	0,0001
X3	0,108877	0,208667	0,521776	0,6039
Z	0,010713	0,042525	0,251916	0,8020
R-squared	0,314621			
Adj-R-Square	0,264775			
F-statistic	6,311879			
Prob (F-statistic)	0,000297			

Source: Result processing data Eviews 12, 2025

Based on Table 4.3 above, the regression equation of the panel data is as follows:

$$\text{Firm Value} = 0{,}31485 + 0.07714\text{ESG} + 1.06462\text{CH} + 0.10887\text{RR} + 0{,}01071\text{FS} + \varepsilon_{it}$$

Based on the equation model above, it can be interpreted as follows:

1) The constant value of 0.31485 shows the Firm value when all independent variables are zero.
2) The ESG coefficient of 0.07714 means a 1% increase in ESG decreases Firm value by 0.07714.
3) The cash holding coefficient of 1.06462 indicates that a 1% increase in cash holding reduces Firm value by 1.06462.
4) The retention ratio coefficient of 0.10887 signifies that a 1% increase in the retention ratio lowers Firm value by 0.10887, and vice versa.
5) The Firm size coefficient of 0.01071 suggests that a 1% increase in Firm size decreases Firm value by 0.01071.

5.4. Coefficient of Determination

The adjusted R-squared value of 0.26477 indicates that the ESG variables, cash holding, and retention ratio, along with the moderating interaction with firm size, can explain 26.48% of the variation in firm value. In comparison, the remaining 73.52% is influenced by other variables outside the model.

5.5.Hypothesis Testing

1. Partial test (T-test)

Based on Table 4.3, the influence of independent variables on the dependent variable is evident from their p-values. The results of the panel data regression above show that:

1) The p-value of ESG is 0.5345 with a coefficient of 0.077140, which means the p-value (0.5345 > 0.05). Therefore, the environment, social, and governance do not influence Firm value.
2) The p-value of CH is 0.0001 with a coefficient of 1.064621, which means the p-value (0.0001 < 0.05). Therefore, it can be concluded that, partially, cash holding has a positive influence on Firm value.
3) The p-value of RR is 0.6039 with a coefficient of 0.108877, which means the p-value for (0.6039 > 0.05). Therefore, it can be concluded that, partially, the retention ratio does not influence Firm value.

2. Simultaneous test (F-test)

Based on Table 4.3, it can be seen that the prob value (F-statistic) is 0.000297 < 0.05, which means that collectively, environmental, social, governance, cash holding, and retention ratio influence the dependent variable, Firm value.

3. Moderated Regression Analysis (MRA)

Table 4. 4 Moderated regression analysis test results

		Coefficient	Std. Error	t-Statistic	Prob.
ESG					
Equation 2	FS	0,009536	0,046210	0,206357	0,8372
Equation 3	ESG*FS	-0,118408	0,159169	-0,743917	0,4600
Cash Holding					
Equation 2	FS	0,022129	0,039096	0,566000	0,5736
Equation 3	CH*FS	0,078565	0,328014	0,239517	0,8116
Retention Ratio					
Equation 2	FS	0,029756	0,044415	0,669958	0,5056
Equation 3	RR*FS	0,025975	0,291027	0,089253	0,9292

Source: Result processing data Eviews 12, 2025

The results of the tests show that the size of the firm does not have a significant influence on the overall model, both in its interaction with ESG (p = 0.8372), cash holding (p = 0.5736), and retention ratio (p = 0.5056), as all probability values exceed 0.05. The interaction between firm size and each independent variable is also not significant, with p-values of 0.4600, 0.8116, and 0.9292, respectively. Thus, firm size as a moderating homologiser cannot moderate the relationship between ESG, cash holding, and retention ratio on firm value.

The Influence of ESG on Firm Value

The results of the analysis indicate that ESG does not influence Firm value. This suggests that shareholders perceive allocating resources for implementing and disclosing environmental practices as less aligned with efforts to enhance corporate value maximally (Buallay & Al-Ajmi, 2020). Because social practices and disclosures are not the primary priority in increasing Firm value (Tobin's Q), companies rely more on profits, liquidity, and sales as benchmarks for enhancing Firm value (Maama, 2021). This is supported by research conducted by (Christy, 2023), (Jeanice & Kim, 2023), (Kartika et al., 2023), and (Aouadi & & Marsat, 2018).

The Influence of Cash Holding Ratio on Firm Value

The results of the analysis show that cash holding has a positive influence on Firm value. This research finding aligns with agency theory, where the manager's position as an agent must be responsible for maximizing shareholder welfare by producing good performance so that the Firm's value can increase (Halim, 2022). This influence can be explained by the amount of cash, which reflects the Firm's liquidity level and its ability to sustain operational continuity in the face of uncertain economic conditions (Bayu & Septiani, 2015; Halim, 2022). This ability reflects the Firm's positive performance, which can enhance investor confidence. Increased investor interest in the Firm is likely to drive up stock prices, which ultimately reflects an increase in the Firm's value (Ruth, 2023). This is supported by research conducted by (Halim,

2022), (Roza & Mashuri, 2023), (Jaradat et al., 2021), (Emanuel et al., 2022), (Ruth, 2023), and (Anandita & Septiani, 2023).

The Influence of Retention Ratio on Firm Value

The results of the testing analysis indicate that the retention ratio does not influence firm value. This is because in investing, shareholders gain profits not only through dividend payouts but also through capital gains. Even without dividend distribution, investors still believe retained earnings will be used optimally to improve the company's operational performance (Cahyani & Maryanti, 2024). This is supported by research conducted by (Permata Sari & Kadarningsih, 2024).

The Influence of Firm Size Moderating ESG on Firm Value

The results of the MRA test indicate that firm size cannot moderate the influence of ESG on firm value. This occurs because not all large or small companies allocate their assets significantly for ESG , as company assets are also used for other purposes, such as investments, debt payments, and operations (Wulandari & Febriantina, 2024). This is supported by research conducted by (Junardi, 2019) dan (Aurora L et al., 2021).

The Influence of Firm Size Moderating Cash Holding Ratio on Firm Value

The results of the MRA test indicate that Firm size does not moderate the influence of cash holding on Firm value. This shows that the effectiveness of cash holding in creating additional value is determined by its management and allocation, not by the size of the Firm. Large and small companies have the same opportunities to utilize cash for financial flexibility, reduce bankruptcy risk, or seize investment opportunities (Cahyani & Maryanti, 2024). This is supported by research conducted by (Cahyani & Maryanti, 2024).

The Influence of Firm Size Moderating Retention Ratio on Firm Value

The results of the MRA test indicate that firm size cannot moderate the influence of the retention ratio on firm value. This is because the amount of dividends (low retention) distributed to shareholders is not influenced by a firm's size. Therefore, firm size cannot strengthen or weaken the effect of the retention ratio on firm value. Hence, the difference in firm size is not strong enough to affect the relationship between retention ratio and firm value. This is not in line with the research conducted by (Prayogo et al., 2023), which states that firm size can moderate the influence of retention ratio on firm value.

6. Conclusion

Based on the analysis's results, this study concludes that ESG and retention ratio partially do not influence firm value, while cash holding has a positive influence. However, ESG, cash holding, and retention ratio influence firm value simultaneously. Furthermore, firm size cannot moderate the relationship of the three variables to firm value. These results indicate that investors focus more on the firm's liquidity than ESG, retained earnings policies, or firm size.

Due to the data limitations in this study, it is recommended that future research add more relevant independent variables, involve various corporate sectors, and extend the research period to broaden the scope and increase the sample size. For companies, increasing cash holding can be considered a strategy to maintain and sustain the firm's value.

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ANALYSIS OF DIGITAL ADVERTISING AND LOCATION ON BUYING INTERTEST IN ANAMI COFFEE

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Abstract

Changes in the digital era have had a significant impact on marketing strategies, especially through the emergence of digital marketing. Digital marketing, which involves promoting a product or brand through digital media and the internet, allows companies to reach a wider and more specific audience compared to traditional methods. Having a strategic location and easy to reach by consumers so that with this strategic location, it is hoped that business owners can increase consumer buying interest. This study aims to analyze digital advertising and location of Anami Coffee. The research method used is quantitative with an associative type of research. Data was obtained from the distribution of questionnaires to 100 respondents. The number of samples was determined using the slovin formula with the method of drawing non-probability sampling samples based on certain criteria. The data analysis method used is multiple linear regression. The object of this study is digital advertising variables with informative persuasive advertising, persuasive advertising, reminder advertising, and reinforcement advertising indicators. Location variables with indicators of accessibility, visibility, traffic, parking facilities, expansion, and competition. Buying interest variables with indicators of transactional interest, refractory interest, preferential interest, and exploratory interest. The results of the study with multiple linear regression tests showed that digital advertising and location had a positive and significant influence on buying interest.

Keywords: Marteking Mix, Promotions, Digital Advertising, Location, Buying Interest

1. Introduction

Changes in the digital era also affect marketing. With the emergence of digital, digital marketing or digital marketing was created. Digital marketing is a marketing or promotion activity of a brand or product using digital media or the internet (Scott, 2022). Marketing a brand or product on digital media or the internet can be done, one of which is by making digital advertisements. Digital advertising is advertising that is intended to be broadcast digitally over the Internet usually placed on Google, Facebook, Instagram, and other sites (Shiju, 2022). By utilizing internet media, business people can reach consumers more widely. Businesses in every sector are indispensable in taking advantage of technological advances for survival and in competition between other business people. (Halim et al., 2023)

Buying interest is a form of consumer plan to buy a product implemented by a company or MSME (Billa & Wardani, 2023). Buying interest is something related to the visitor's plan to buy or consume a certain product, as well as a coffeeshop in creating a good relationship with its customers so that in addition to being able to create visitor interest is also able to create loyalty for customers and even does not rule out the possibility that customers will be involved in promoting to others to visit the coffeeshop (Setiawan, 2018).

In today's digital era, marketing through online platforms is increasingly becoming the main strategy for various businesses, including coffeeshops. Coffee is one of the leading commodities in Indonesia. According to data from the United States Department of Agriculture

(USDA), Indonesia is listed as the 3rd largest coffee-producing country in the world in 2022/2023 which has produced 11.85 million bags of coffee with details of 1.3 million bags of arabica coffee and 10.5 million bags of robusta coffee. (USDA, 2023).

The high level of coffee consumption in Indonesia has a positive impact on the growth of the coffee industry in Indonesia (Setyokuncoro et al., 2022). The coffee shop business in Indonesia, especially in Bogor City, continues to experience quite rapid development (Setyokuncoro et al., 2022). This is marked by the emergence of new coffee shops with various interesting concepts. According to data from the Tourism and Culture Office, there are 986 restaurants, restaurants, and café businesses in Bogor City in 2022 (DISPARBUD, 2023). This data is a reference that business competition in the coffee beverage industry in Bogor City is getting tighter.

Anami Coffee is one of the coffee shops located in Bogor City, precisely on Jalan Ahmad Yani No. 15, Tanah Sareal. Anami Coffee is one of the coffeeshops that uses Instagram social media as a marketing tool, namely @anamicoffee.

The results of observations and interviews conducted by the researcher to the Head of Marketing of Anami Coffee revealed that Anami uses Instagram as a platform to display its digital ads because it wants to be known as a serious but relaxed coffeeshop. Instagram is the choice because the form of content on Instagram is considered more serious than other social media. This is in line with the segments and target markets of Anami Coffee, namely coffee lovers and children of Generation Z.

Because Anami has a better selling value than its competitors, especially in terms of advertising. Based on the description above, the author wants to research "Analysis of Digital Advertising and Location on Buying Interest in Anami Coffee". As the title of the thesis, it is expected to provide information about the influence of promotional strategies and the author's efforts in helping companies to market their products from the results of this research.

2. Literature review

2.1.Marketing Mix

According to Kotler & Keller (2016) There are 4 elements of marketing or commonly called marketing mix (marketing mix) is a general expression of strategies used in marketing to determine and offer products or services that are often associated with the way of these 4 elements, namely Price, Product, Promotion and Place.

1. Product is everything that is offered to the public to see, hold, buy or consume. Actually, customers do not buy goods or services, but buy the benefits of something offered.
2. Price is the amount of money that consumers pay to buy a product or replace something that belongs to the product. Prices include last price, discount, allowance, payment period, credit terms, and retail price. Price is the main factor determining the position and must be decided according to the target market, product and service mix, and competition.
3. Place is a company's various activities to make the products produced/sold affordable and available to the target market. Places include channels, coverage, assortments, locations, inventory, and transportation.
4. Promotion is a variety of company activities to communicate and introduce products to the target market. Promotional variables include, among others, sales promotion, advertising, sales force, public relations, and direct marketing.

2.2.Promotion

According to Hasan, (2013), promotion is a marketing function that focuses on persuasively communicating marketing programs to target customers or potential customers to encourage the creation of transactions between companies and customers.

According to Saleh & Said (2019), promotion is the most important activity that plays an active role in introducing, informing and reminding the benefits of a product in order to motivate buyers to shop for advertised goods.

According to Kotler & Keller (2016), promotions are elements used to inform the market about new products or services offered by a company through advertising, personal sales, sales promotions, and publications.

In these cases, the promotion is expected to make the market interested in buying, receiving, or remaining loyal to the product offered by the individual, wholesale provider of goods or services. In principle, although this promotion is usually carried out by the seller or manufacturer, the buyer or prospective buyer sometimes also unconsciously also conducts promotions, for example, after buying a product in the form of goods or services and feeling satisfied in using it, the buyer then tells the good or the advantages of the goods or services to others. Promotion involves informing, influencing, and persuading target customers and reminding them of the company and its marketing mix.

2.3. Digital Advertising

According to Shiju (2022), digital advertising is advertising that is meant to be broadcast digitally over the Internet usually placed on Google, Facebook, Instagram, and other sites.

According to Chaffey & Ellis-Chadwick (2019), digital advertising includes various forms such as banner ads, email marketing, video ads, to paid ads on social media with the advantage of personalization and sharper market segmentation.

According to Kotler & Keller (2016), digital advertising is a form of promotion that uses internet-based media to reach customers directly and personally, such as through websites, social media, search engines, emails, and other digital applications.

Based on some of the definitions above, researchers conclude that digital advertising is a form of promotion that is disseminated through internet-based media, such as websites, social media, search engines, emails, and other digital applications, with the aim of reaching consumers directly and personally.

2.4. Location

According to Kotler & Keller (2016), location is everything that indicates various business activities to make products easily available to customers and always available to customers.

According to Tjiptono (2019), a business location is where the company operates or where the company conducts activities to produce goods and services that are important to its economic aspect.

According to Lupiyoadi (2013), location is also said to be a decision made by the company in relation to where its operations and staff will be placed.

Based on some of the definitions above, the researcher concluded that location is a strategic decision of the company that includes the place of operation and business activities to ensure that the product is easily accessible and always available to customers, as well as considering economic aspects.

2.5. Buying Interest

According to Kotler (2016), the consumer's buying interest is something that arises after receiving a stimulus from the product he sees, from there arises an interest in trying the product until finally there is a desire to buy in order to have it.

According to Suyono & Sukmawati (2012)Buying interest is the stage where consumers form their choice among several brands that are included in the device of choice. Then in the end make a purchase on an alternative that he likes the most or the process that the consumer goes through to buy a good or service based on various considerations.

According to Hasan (2013), buying interest is the tendency of consumers to buy a brand or take actions related to purchases that are measured by the level of likelihood of consumers making purchases.

Based on some of the definitions above, researchers conclude that buying interest is the process of consumers wanting to buy a good or service based on their choice among several brands that are their choices.

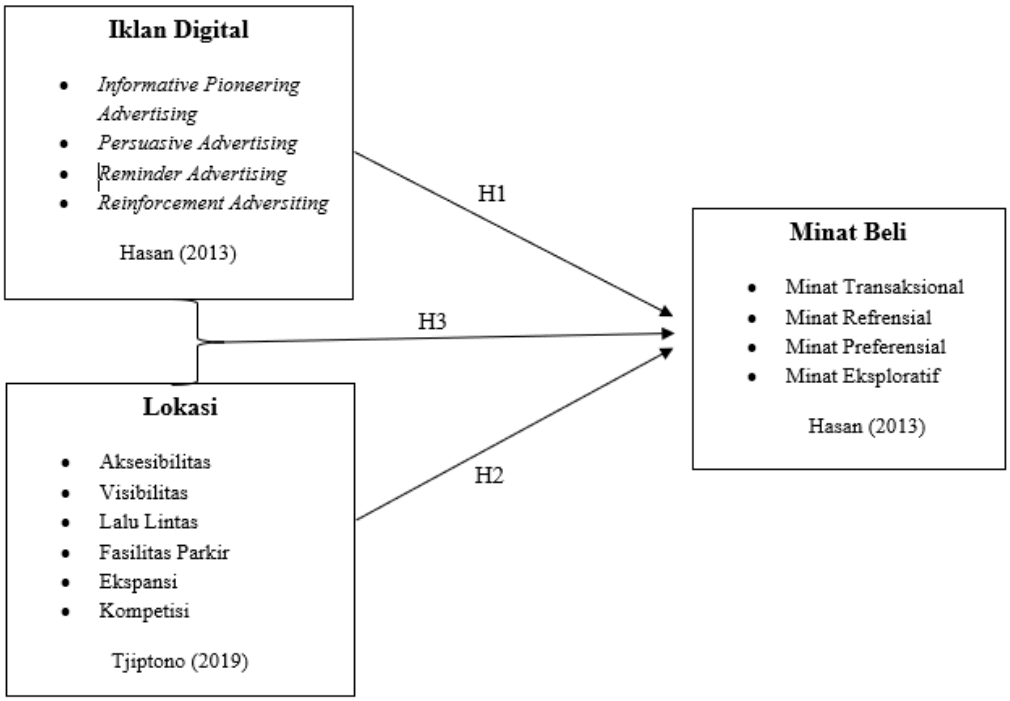


Figure 5. Thinking Frame Images

Based on the theoretical research framework and previous research, a hypothesis can be formulated which is a provisional conjecture in testing a research, namely:

H_1 : Anami Coffee's digital advertising has an effect on consumer buying interest.

H_2: The location of Anami Coffee affects consumers' buying interest.

H_3: Digital advertising and Anami Coffee's location affect consumer buying interest.

3. Methodology

The type of research used in this study is associative research that aims to prove the causal relationship or the relationship of influencing and being influenced by the variables being

studied by testing hypotheses which are generally studies that explain phenomena in the form of relationships between variables.

In this study, the objects used include variable Digital Advertising with indicators of informative advertising, persuasive advertising, reminder advertising, and reinforcement advertising. Location variables include accessibility, visibility, traffic, parking facilities, expansion, and competition. As well as buying interest variables which include transactional interest, reference interest, preferential interest, and exploratory interest.

The unit of analysis used is individual, where the source of research data comes from the responses of each individual/person. The individual in question is a consumer of Anami Coffee. The location of the research was conducted at Anami Coffee which is located on Jalan Ahmad Yani No. 15, Tanah Sareal.

The type of data studied in this study is quantitative data, which is in the form of numbers or numbers, allowing it to be processed numerically. The data sources used in this study use two data sources, namely primary and secondary data. Data processing is carried out in a way that has been collected, processed, and presented in the form of a table with multiple linear regression analysis, hypothesis and determination coefficient tests through research instrument tests such as validity tests and reality tests, classical assumption tests, and descriptive analysis. Meanwhile, the activities in data analysis are grouping data based on variables and types of respondents, tabulating data based on the variables of all respondents, presenting data for each variable studied, and conducting calculations to test the hypotheses that have been proposed.

4. Results and discussions

4.1. Respondent Characteristics

In this study, the author used a questionnaire with the help of Google Form by distributing it to Instagram followers @anamicoffee to get the necessary data by involving 100 respondents as a research sample. The description of the respondents used in this study is age, gender and have followed Anami Coffee's Instagram.

4.2. Descriptive Analysis

Table 22. Descriptive Analysis Results

Variable	Average	Information
Digital Advertising	81,8%	Excellent
Location	81,5%	Excellent
Buying Interest	81,2%	Excellent

Based on these results, it can be concluded that Digital Advertising, Location, and buying interest are very good but need to improve things that are still lacking based on the assessment of respondents.

4.3.Instrument's Validity Test

Table 23. Digital Advertising Validity Test

Yes	R count	R Table (5%) N=30	Information	Conclusion
1	0,552	0,361	R calculates > Rtable	Valid
2	0,571	0,361	R calculates > Rtable	Valid
3	0,618	0,361	R calculates > Rtable	Valid
4	0,657	0,361	R calculates > Rtable	Valid
5	0,612	0,361	R calculates > Rtable	Valid

6	0,681	0,361	R calculates > Rtable	Valid
7	0,592	0,361	R calculates > Rtable	Valid
8	0,575	0,361	R calculates > Rtable	Valid

Based on the results of the table above the statement of Digital Advertising Variables, the results of all statements in the digital advertising totaling 8 statements are said to be Valid, because the r value is calculated > r of the table.

Table 24. Location Validity Test

Yes	R count	R Table (5%) N=30	Information	Conclusion
1	0,617	0,361	R calculates > Rtable	Valid
2	0,586	0,361	R calculates > Rtable	Valid
3	0,368	0,361	R calculates > Rtable	Valid
4	0,575	0,361	R calculates > Rtable	Valid
5	0,537	0,361	R calculates > Rtable	Valid
6	0,519	0,361	R calculates > Rtable	Valid
7	0,482	0,361	R calculates > Rtable	Valid

Based on the results of the table above the Location Variable statement, the results of all statements in the location totaling 7 statements are said to be Valid, because the r value is calculated > r of the table.

Table 25. Buying Interest Validity Test

Yes	R count	R Table (5%) N=30	Information	Conclusion
1	0,766	0,361	R calculates > Rtable	Valid
2	0,785	0,361	R calculates > Rtable	Valid
3	0,746	0,361	R calculates > Rtable	Valid
4	0,718	0,361	R calculates > Rtable	Valid
5	0,774	0,361	R calculates > Rtable	Valid
6	0,720	0,361	R calculates > Rtable	Valid

Based on the results of the table above the Buying Interest Variable statement, the results of all statements in the Purchase Interest totaling 6 statements are said to be Valid, because the r value is calculated > r table.

4.4.Instrument's Reliability Test

Table 26. Reliability Test

Variable	Cronbach's Alpha	Information
Digital Advertising	0,928	Realistic

Location	0,917	Realistic
Buying Interest	0,894	Realistic

The results of the reliability test on the variables of digital advertising, location, and buying interest showed a Cronbach Alpha value of > 0.60 so that it could be declared reliable because it had a Cronbach Alpha value of > 0.60.

4.5.Classic Assumption Test

Table 27. Normality Test

One-Sample Kolmogorov-Smirnov Test		
		Unstandardized Residual
N		100
Normal Parameters[a,b]	Mean	.0000000
	Std. Deviation	1.54101775
Most Extreme Differences	Absolute	.100
	Positive	.058
	Negative	-.100
Test Statistic		.104
Asymp. Sig. (2-tailed)		.010c
a. Test distribution is Normal.		

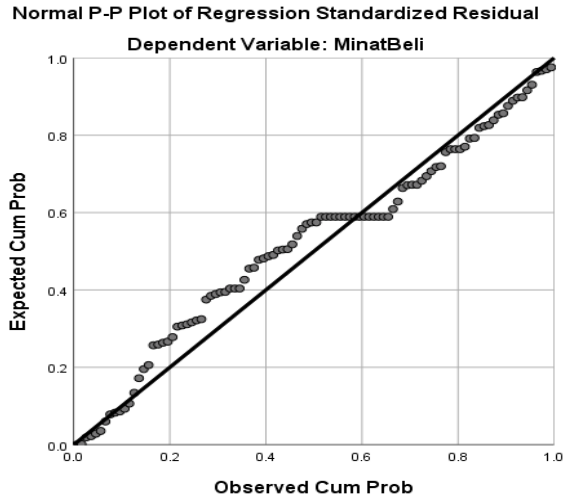
Based on the results of the normality test using the residual standard above, the significance value of Kolmogorof-Smirnov was obtained which was 0.010. Sig Number. The Kolmogorof-Smirnov was higher than the significance level of 5% (0.05) or 0.010>0.05. This gives an idea that the data of the two variables are normally distributed.

Table 28. Multicollinearity Test

Coefficient								
Type	Unstandardized Coefficients		Standardized Coefficients	t		Sig.	Collinearity Statistics	
	B	Std. Error	Beta				Tolerance	VIF
1	(Constant)	2.687	1.366		1.967	.052		
	Digital Advertising	.360	.038	.570	9.499	.000	.789	1.267
	Location	.338	.048	.423	7.058	.000	.789	1.267
a. Dependent Variable: Buying Interest								

Based on the results of the multicollinearity test in table 4.29 above, it can be concluded that there is no multicollinearity between free variables because the tolerance value for digital advertising and location is greater than 0.10 each. Likewise, the VIF value of each is less than 10.

Figure 6. Heteroskedaticity Test



Based on the Normal output of the P-Plot above, it can be seen that the dots are spread out and do not form a definite clear pattern. So it can be concluded that there is no heteroscedasticity problem.

4.6. Multiple Linear Regression Test

Table 29. Multiple Linear Regression Test

Coefficient						
Type		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.687	1.366		1.967	.052
	Digital Advertising	.360	.038	.570	9.499	.000
	Location	.338	.048	.423	7.058	.000
a. Dependent Variable: Buying Interest						

The table above shows that the value of the constant coefficient is 2.687, the digital advertising coefficient is 0.360 and the location coefficient is 0.338. So that the regression equation Y = 2.687 + 0.360X1 + 0.338X2 + e is obtained. Based on the above equation, it is known that the value of the constant is 2.687. Systematically, this constant value states that when the digital ad and location together are valued at 0, then the buying interest has a value of 2.687.

4.7.Hypothesis Test

Table 30. T Test

Coefficient				
Unstandardized Coefficients		Standardized Coefficients		
B	Std. Error	Beta	t	Sig.
2.687	1.366		1.967	.052
.360	.038	.570	9.499	.000
.338	.048	.423	7.058	.000
a. Dependent Variable: Buying Interest				

Based on the Coefficiens table of t-value calculated 9.499 which means t calculates > t table (9.499 > 1.661) with a significant t of 0.000 because the significance t is less than 10% (0.000 < 0.1) so that H1 is accepted, it can be concluded that partially the variable of digital advertising affects buying interest.

Based on the Coefficiens table, the value of t is calculated as 7.058 which means that t calculates > t of the table (7.058 > 1.661) with a significant t of 0.000 because the significance of t is less than 10% (0.000 < 0.1) so that H2 is accepted, then it can be concluded that partially the location variable affects the buying interest.

From the calculated value, the two variables are received or have a significant effect. The digital advertising variable was declared the most related to buying interest, with a calculated t-value of 9.499

Table 31. F Test

ANOVA[a]						
Type		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	601.296	2	300.648	127.714	.000b
	Residual	228.344	97	2.354		
	Total	829.640	99			
a. Dependent Variable: Buying Interest						
b. Predictors: (Constant), Location, Digital Ads						

The results of the hypothesis test show that it is known that the calculated F is 127.714, while the F value of the table for the real level (a) is 5% and df1 = k = 2 while df2 = n-k is 100 – 2 = 98 is 3.09. In other words, F calculates > F table, which is 127.714 > 3.09 so that it can be concluded that the variables of digital advertising and location have a simultaneous effect on buying interest.

Based on the results of the F test, it is also known that the significance value that appears is 0.000 which means F (0.000 < 0.05), which shows that there is a strong significance occurring in the independent variable against the bound variable. Therefore, the conclusion is that digital advertising and location have a simultaneous effect on buying interest.

Table 32. Coefficients Determination

Model Summary[b]				
Type	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.851a	.725	.719	1.53430
a. Predictors: (Constant), Location, Digital Ads				
b. Dependent Variable: Buying Interest				

Based on the table above, the Adjust R Square value is 0.719. This means that 71.9% of the buying interest variables were influenced by digital advertising and location variables, while the remaining 29.1% were influenced by other variables that were not included in the study.

5. Conclusion

Based on the results of the research and discussion that has been explained earlier, it can be concluded that:

Digital advertising has a partial and significant effect on buying interest, in this case it shows that digital advertising is able to increase consumer buying interest from Anami Coffee. Based on the average table of respondents' responses regarding the digital advertising variable , which is 81.8%, the value is on the likert scale (81-100%), so it can be said that digital advertising on Anami Coffee is in the very good category. This condition illustrates that in general, respondents agree that the importance of digital advertising to buying interest in Anami Coffee.

The location has a partial and significant effect on buying interest, in this case it shows that the location is able to increase consumer buying interest from Anami Coffee. Based on the average table of respondents' responses regarding the location variable, which is 81.5%, the value is on the likert scale (81-100%), so it can be said that the location of Anami Coffee is in the very good category. This condition illustrates that in general, respondents agree that location affects buying interest in Anami Coffee.

Digital advertising and location on buying interest in Anami Coffee have a simultaneous effect. From the tests that have been carried out, it is found that the F calculation is 127.714, while the F value of the table for the real level (a) is 5% and df1 = k = 2 while df2 = n-k which is 100 – 2 = 98 is 3.09. In other words, F calculates > F of the table, which is 127.714 > 3.09 with a significance value that appears of 0.000 which means F (0.000 < 0.05) so that it can be concluded that the variables of digital advertising and location have a simultaneous effect on buying interest.

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THE INFLUENCE OF PARASOCIAL RELATIONSHIPS AND INFLUENCER MARKETING ON INCREASING CONSUMER CONSUMPTIVE BEHAVIOR

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Abstract

This study aims to examine the influence of parasocial relationships and influencer marketing on consumer behavior in the digital age. The method used is a Systematic Literature Review (SLR), with 23 full-text articles selected as the main references after an initial selection process based on relevance and availability of full texts. The analysis results indicate that parasocial relationships foster emotional closeness between consumers and influencers, thereby encouraging a tendency to emulate lifestyles and follow product recommendations. Additionally, influencer marketing has been proven to have a significant influence on consumer decision-making. These findings confirm that one-way interactions established through social media can shape public perception and consumption behavior.

Keywords: parasocial, influencer marketing, social media influencers, consumer behavior, purchase intention, impulsive buying, e-commerce

1. Introduction

The emergence of social media platforms such as Instagram, TikTok, and YouTube has changed the way consumers interact with brands and public figures. In today's era, which is dominated by digital marketing through influencers, traditional marketing is beginning to lose its relevance (Weiger et al., 2025). Influencers build a large following (Tyrväinen & Karjaluoto, 2025) and engage with them on a personal level (Al Sulaiti et al., 2024; Cabeza-Ramírez et al., 2022). This phenomenon indirectly leads to an emotional approach through the formation of parasocial relationships (PSR), which are one-sided, non-reciprocal relationships between consumers and influencer marketers (Horton & and Richard Wohl, 1956). This creates the perception that influencers are trustworthy individuals capable of promoting a brand or service.

Several studies indicate that PSR can significantly influence consumer behavior, particularly in terms of increased trust, emotional attachment, and the desire to emulate influencers. At the same time, influencer marketing has emerged as one of the most effective digital marketing strategies due to its ability to build authenticity, credibility, and intimacy in communication with consumers (Tyrväinen & Karjaluoto, 2025; Weiger et al., 2025).

Despite the growing interest in these areas, there remains a lack of comprehensive synthesis on how PSR and influencer marketing collectively shape consumer behavior. This study aims to address this gap by conducting a systematic literature review (SLR) of 23 academic articles that examine how both influence purchasing behavior, consumer loyalty, and impulsive purchasing tendencies.

The purpose of this literature review is to identify dominant themes, consistent findings, and theoretical contributions, as well as to uncover gaps and propose directions for future research.

2. Literature Review

2.1. Parasosocial Relationships

Parasosocial relationships refer to one-sided emotional relationships formed by individuals with media figures or public figures. Horton & and Richard Wohl, (1956) were the first to conceptualize this phenomenon, explaining that audiences can feel personally connected (Conde & Casais, 2023; Jin & Ryu, 2020) to media figures even without two-way interaction (S. Yuan & Lou, 2020). In the context of social media, PSR is strengthened through continuous exposure and the perception of authenticity from influencers (S. Yuan & Lou, 2020).

Some researchers emphasize the impact of PSR on consumer trust and purchase intent. Sokolova & Kefi, (2020) and C. L. Yuan et al., (2016) found that the emotional bonds developed through PSR enhance consumers' acceptance of influencer recommendations. This relationship enhances psychological closeness, which acts as a persuasive tool in marketing communication.

2.2 Influencer Marketing

Influencer marketing is a marketing strategy that uses social media figures with significant influence over their followers to promote products or services. Influencer credibility (Cheah et al., 2024; Weinlich & Semerádová, 2022), comprising trust, expertise, and appeal, is a critical factor in the success of this strategy (Gundová & Cvoligová, 2019; R.A.S.D.Rathnayake & V.G.P. Lakshika, 2023; Syed et al., 2023). Influencers use an emotional approach so that their audience or followers feel they have a close relationship with the influencer (Nadroo et al., 2024). This allows followers to follow the influencer's daily life in real time without an actual relationship.

2.3. Consumer Consumption Behavior

Consumer consumption behavior is an individual's tendency to make purchases that are often influenced by emotional and social factors. In the digital age, the emergence of influencers and the formation of PSR can reinforce this consumer consumption behavior. Consumers do not only buy goods because of necessity but also because of recommendations from public figures or influencers they trust.

Nabirasool et al., (2024) and Spörl-Wang et al., (2025) show that consistent engagement with influencers through social media can form repetitive consumption habits and impulsive behavior (Barta et al., 2023; Xiang et al., 2016). This can be interpreted as PSR and influencer marketing being a combination that can significantly shape consumers' lifestyles and shopping habits.

3. Methodology

A systematic literature review (SLR) was chosen as the research method in this study by reviewing specific topics that had been identified, classified in a structured manner, assessed, summarized, and selected using PRISMA (Preferred Reporting Items for Systematic Reviews) based on predetermined criteria. Data sources were derived from journals with ISSN or E-ISSN, serving as primary data for this study, ensuring that the information used has a traceable and academically recognized basis through valid and verified sources.

The review method used in this study involved searching the literature from the Elsevier, Sciendirect, and Research Gate databases, using a combination of keywords such as parasocial, influencer marketing, social media influencers, consumer behavior, purchase intention, impulsive buying, and e-commerce. The stages of searching the literature are as follows:

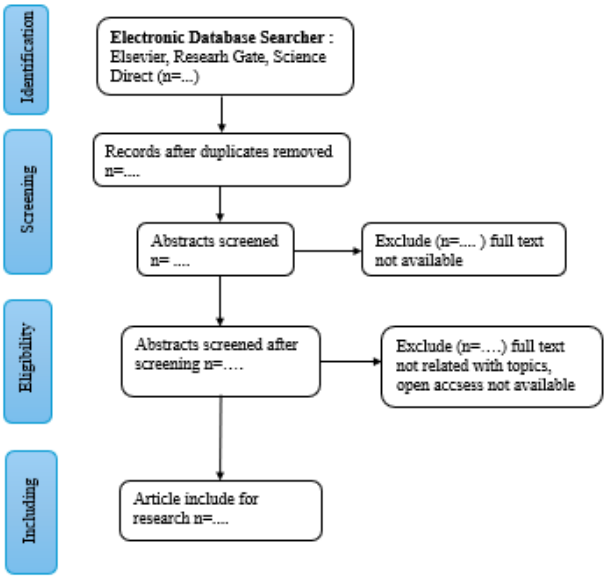

Figure 1: Prism (Recommended Reporting Items for Systematic Reviews) before screening method

Research using the SLR method is guided by research questions. Research questions are formulated to ensure that the systematic review remains focused on the topic. To make the research questions more systematic, the author uses the PICOC approach introduced by Sackett et al. (1996), which has been widely used in research.

Table 1: PICOC

Population	Social media consumers targeted by PSR and influencer marketing
Intervention	Parasocial relationships and influencer marketing
Comparison	n/a
Outcome	Consumer consumption behavior and loyalty
Context	The digital age and social media

Table 2: Research Question

RQ 1	How does parasocial relationships influence consumer behavior?
RQ 2	How does influencer credibility shape consumer desire?
RQ 3	Can parasocial relationships and influencer marketing simultaneously increase consumer behavior?
RQ 4	How do influencer marketing and parasocial relationships influence consumer loyalty?

4. Results and Discussion

4.1 Research Results

The article search and selection process was conducted following the PRISMA flow. Literature search was conducted using a combination of keywords in the publication year range of 2016 to 2025. From the search results, a total of 327 articles were obtained. After an initial screening based on the title, 296 articles were deemed relevant to the topic. A second screening

was then conducted based on the abstract, resulting in 108 articles that met the criteria. However, only 23 articles were available in full paper format and were used for further analysis.

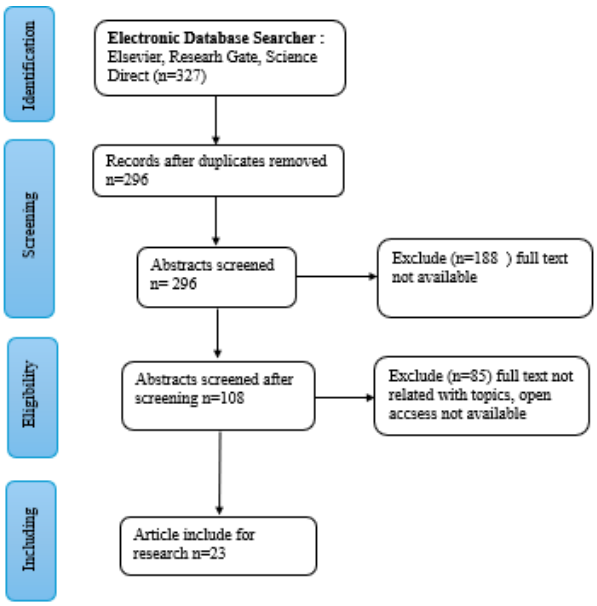

Figure *2: Prism (Recommended Reporting Items for Systematic Reviews) after screening method*

The final results of 23 articles can be seen in the search results table, to facilitate the review of the journals obtained.

Table 1: Year of Publication of Reviewed Articles

No.	Year of publication	Number
1.	2016	2
2.	2017	0
3.	2018	0
4.	2019	1
5.	2020	3
6.	2021	0
7.	2022	5
8.	2023	4
9.	2024	5
10.	2025	3

It can be concluded that research on this topic has increased significantly in recent years, particularly from 2022 to 2025. This shows that issues related to influencer marketing and parasocial relationships are increasingly becoming the subject of contemporary research.

4.2 Discussion

a. Discussion of RQ1: How does parasocial relationships influence consumer behavior?

Parasocial relationships (PSR) play an important role in forming emotional closeness between influencers and consumers. PSR is formed through continuous exposure to content and the audience's perception of authenticity (S. Yuan & Lou, 2020). Research by Sokolova & Kefi, (2020) and C. L. Yuan et al., (2016) show that PSR can increase trust and acceptance of influencer recommendations. This closeness encourages purchase intent and impulsive buying, as consumers feel a personal connection with influencers even without reciprocal interaction.

Not only does it encourage impulsive purchasing decisions, but parasocial relationships also create long-term bonds between consumers and brands.

b. Discussion of RQ2: How does the credibility of influencers shape consumer consumption desires?

The credibility of influencers is key to the effectiveness of digital marketing. This credibility encompasses the dimensions of expertise, trustworthiness, and attractiveness (Gundová & Cvoligová, 2019; R.A.S.D.Rathnayake & V.G.P. Lakshika, 2023). When influencers are perceived as authentic and possess relevant knowledge, consumers are more likely to accept the information conveyed. Cartwright et al., (2022) even noted the impact of influencer credibility in a B2B context, indicating that the impact is not limited to individual consumers but also extends to organizations. The credibility possessed by influencers, whether in terms of expertise, honesty, or appeal, further strengthens this influence. In line with Leite et al., (2024), who found that perceptions of influencer competence also strengthen their credibility in building consumer loyalty through emotional closeness. When these emotional and cognitive elements work together, the effect is not limited to encouraging a one-time purchase but also forms a pattern of repeated consumption and interest in the brand.

c. Discussion of RQ3: Can parasocial relationships and influencer marketing simultaneously increase consumer consumption behavior?

A review of 23 articles shows that the combination of PSR and influencer marketing has a stronger impact on consumer consumption behavior than either one alone. PSR builds emotional trust, while influencer marketing targets the cognitive aspects of decision-making (Nabirasool et al., 2024; Spörl-Wang et al., 2025)). When combined, consumption drives increase not only in the form of impulsive purchases but also in long-term brand loyalty.

However, some studies also reveal risks such as over-endorsement, which can reduce the authenticity of influencers (Cheah et al., 2024). In addition, content that evokes positive emotions, such as rumors and attractive visuals, has been proven to strengthen the effectiveness of this combination in attracting consumers (Barta et al., 2023).

d. Discussion of RQ4: How do influencer marketing and parasocial relationships affect consumer loyalty?

Based on the analyzed literature, emotional engagement resulting from continuous exposure to influencer content not only impacts immediate purchases but also shapes consumer loyalty toward a brand. Consumers who are emotionally connected are more likely to repeatedly recommend a brand ((Spörl-Wang et al., 2025; Tyrväinen & Karjaluoto, 2025) which in turn strengthens the relationship between consumers and a brand (Nabirasool et al., 2024; Spörl-Wang et al., 2025). This implies that influencer marketing is not merely a fleeting trend or a temporary promotional tool, but a strategy that can foster sustainable relationships between consumers and brands.

5. Conclusion

The results of the literature review indicate that in an increasingly digital era, the role of parasocial relationships and influencer marketing has a significant impact on consumer behavior and loyalty. The trust that grows through parasocial relationships makes consumers more open to marketing messages conveyed by influencers. Furthermore, continuous emotional engagement has the potential to foster consumer loyalty, where consumers are not merely passive users but also voluntarily participate in promoting products.

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GREEN ENTREPRENEURSHIP IN COASTAL ECOTOURISM: STRATEGIC INNOVATIONS FOR SUSTAINABLE LOCAL DEVELOPMENT IN INDONESIA

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Abstract

This study examines the integration of green entrepreneurship and coastal mangrove ecotourism as an innovative strategy for sustainable local economic development in Gresik, Indonesia. Using a qualitative descriptive approach, data were collected from key informants, including ecotourism managers, local micro, small, and medium enterprises (MSMEs), village authorities, and visitors in the Banyuurip mangrove area, Ujungpangkah. Findings indicate that green entrepreneurship initiatives increase community income, enhance environmental awareness, and drive innovation through locally sourced products such as mangrove crafts, seafood cuisine, and ecotourism services. The success of these initiatives is driven by multi-stakeholder collaboration involving communities, local governments, academics, and the private sector. This collaborative ecosystem supports transforming the mangrove area into an education- and conservation-based tourism destination. This study contributes to the discourse on sustainable development by demonstrating how coastal ecotourism can serve as a platform for an inclusive, resilient, and environmentally conscious local economy.

Keywords: Coastal Ecotourism, Community Empowerment, Green Entrepreneurship, Sustainable Local Development

1. Introduction

Indonesia, as an archipelagic country with the second longest coastline in the world, has great potential in developing coastal ecotourism. Coastal areas not only contain high biodiversity, but also serve as a source of livelihood for millions of local communities. However, pressures from environmentally unfriendly development, exploitation of natural resources, and climate change pose major challenges to the sustainability of coastal ecosystems. In this context, the emergence of green entrepreneurship offers a strategic approach that integrates environmental sustainability values with local economic development. Green entrepreneurship in coastal ecotourism emphasizes the principles of environmentally conscious, innovative, and local potential-based businesses. One example can be found in the Banyuurip mangrove area, Ujungpangkah, Gresik, East Java. This area has high ecological potential but has previously been underutilized. Through a green entrepreneurship approach, the area began to be developed as an educational and conservative tourist destination, involving the local community as the main actors.

This study aims to explore the integration of green entrepreneurship and coastal ecotourism as an innovative strategy for sustainable local economic development. Using a qualitative descriptive approach, this study involved various stakeholders such as tourism managers, MSMEs, village governments, and visitors. The results show that green entrepreneurship initiatives not only increase community income but also encourage environmental awareness and innovation of local natural resource-based products, such as mangrove crafts, seafood-based cuisine, and ecotourism tour services.

2. Literature review

2.1 Environmental Issues and Green Entrepreneurship

This literature review stems from concerns about environmental damage caused by exploitative and unsustainable conventional economic practices (Suparmoko, 2018). Economic activities that are solely profit-oriented often neglect social and ecological impacts, leading to the degradation of natural resources, particularly in coastal areas vulnerable to ecological changes. This situation calls for the emergence of a new entrepreneurial approach that is more responsible toward the environment and society.

2.2 Coastal Ecotourism as a Space for Implementation

Coastal ecotourism is viewed as a concrete space for the implementation of green entrepreneurship. Environmental conservation practices in ecotourism are integrated with local economic activities that are educational and recreational in nature. Beyond being a tourist destination, coastal ecotourism empowers local communities through the utilization of natural resources such as mangrove forests, coral reefs, and marine products (Handayani & Rudiarto, 2017). This demonstrates the synergy between environmental protection and the strengthening of the local economy.

2.3 Collaboration and Social Innovation in Community Empowerment

The success of green entrepreneurship implementation in ecotourism heavily depends on multi-stakeholder collaboration. Governments, academics, businesses, and local communities must work together to build a participatory and inclusive green entrepreneurship ecosystem (Kemenparekraf, 2021; Wibowo & Nugroho, 2020). In this context, social innovation plays a crucial role as an empowerment approach, encompassing training, market access, and strengthening local capacity. Social innovation acts as a catalyst in bridging the concept of green entrepreneurship with the realities of coastal communities.

2.4 Interrelationship Between Concepts and Research Relevance

There is a functional relationship between the three main concepts: green entrepreneurship, coastal ecotourism, and social innovation. Green entrepreneurship serves as the foundation of values, coastal ecotourism as the implementation space, and social innovation as the strategy for implementation and empowerment. Together, they form a mutually supportive system to create inclusive and sustainable local development.

3. Methodology

This study uses a qualitative descriptive approach to explore the integration of green entrepreneurship and coastal ecotourism as an innovative strategy in developing a sustainable local economy in the Banyuurip mangrove area, Ujungpangkah, Gresik, Indonesia. This approach was chosen because it allows researchers to deeply understand the social, economic, and environmental phenomena that occur at the research location.

3.1 Research Approach and Type

This study uses a descriptive qualitative approach, with the aim of gaining an in-depth understanding of green entrepreneurship practices in community-based coastal ecotourism in the Gresik Regency. A qualitative approach was chosen because it is able to describe social phenomena in a contextual manner, particularly in exploring the perspectives and experiences of business actors, local governments, and tourists regarding environmentally-based ecotourism activities.

3.2 Research Location

The research was conducted in coastal villages in Gresik Regency, East Java, which have potential and activities in mangrove-based ecotourism. This location was chosen purposively because it has local initiatives in developing ecotourism based on green entrepreneurship principles.

3.3 Research Informants

Informants were selected using purposive sampling techniques, with the following criteria:

- Local business operators involved in ecotourism activities,
- Representatives from the village government or tourism office who understand coastal tourism development programs,
- Tourists who have visited the ecotourism destination.

The number of informants in this study was 9 people, consisting of:

- 4 local business operators,
- 3 representatives from the village government and related agencies,
- 2 tourists.

3.4 Data Collection Techniques

Data was collected using the following techniques:

- In-depth interviews with key informants to obtain comprehensive qualitative data,
- Participatory observation, conducted during field visits to tourism activities and conservation efforts,
- Documentary study, involving the review of policy documents, activity reports, or relevant local media.

3.5 Data Analysis Techniques

Data analysis was conducted using interactive analysis techniques (Miles & Huberman), which included three main stages:

- Data reduction – selecting, simplifying, and focusing on data relevant to the research objectives;
- Data presentation – organizing data in the form of narratives, tables, or thematic visualizations;
- Drawing conclusions and verification – identifying patterns, relationships, and meanings from the analyzed data.

3.6 Data Validation Techniques

To ensure data validity, the triangulation method is used, which includes:

- Source triangulation, by comparing information from business operators, government, and tourists;
- Technique triangulation, which is comparing the results of interviews, observations, and documentation.

4. Result and Discussions

Field findings show that green entrepreneurship practices in coastal ecotourism in Gresik not only promote environmental conservation but also have a positive impact on strengthening the local economy. This is in line with the findings of Fauzi & Anna (2020), who state that green entrepreneurship is able to internalize sustainability values in community-based business activities.

Furthermore, a collaborative approach between the community, village government, and tourism stakeholders is a key factor in the success of sustainable ecotourism. This cross-sector collaboration is also mentioned in the study by Wibowo & Nugroho (2020), which emphasizes the importance of synergies among actors in developing social innovations to drive participatory local economic transformation.

The practices identified also demonstrate social innovation, ranging from skill training, community-based tourism management, to the diversification of marine and mangrove-based processed products. These findings reinforce the theory that green entrepreneurship requires mentoring and social innovation to sustain itself economically and socially. This also supports the study by Handayani & Rudiarto (2017) on the importance of a community-based approach in managing conservation-based ecotourism.

From a sustainability perspective, the application of green entrepreneurship principles in coastal tourism activities in Gresik reflects local good governance practices. By involving the community as the main actors, there is a process of collective learning and capacity building among residents in the sustainable management of natural resources. This aligns with the participatory development approach discussed by Huda & Santosa (2019), where development is no longer top-down but community-based.

Thus, this discussion reinforces the argument that the success of green ecotourism is not only determined by the uniqueness of the environment but also by the presence of adaptive social institutional structures, market networks, and local innovation capacity. This is the essence of the integration between green entrepreneurship, social innovation, and coastal community empowerment.

4.1 Challenges in Implementing Green Entrepreneurship

a) Limited infrastructure and facilities

Although the community feels the economic benefits, limitations in supporting facilities—such as access to boardwalks in mangrove areas, sanitation, and product processing facilities—remain significant obstacles. This is similar to the challenges faced by mangrove ecotourism in other coastal areas of Indonesia, such as Bali, Sulawesi, and Kalimantan, where a lack of facilities and promotion also reduces the potential for sustainable ecotourism.

b) Stakeholder conflicts

The success of this collaborative narrative could be threatened by role conflicts and the distribution of benefits at the local level. A study in Kulon Progo revealed differing interests among tourism managers, village governments, and residents regarding infrastructure management, economic income, and profit sharing.

c) Limited access to funding and technology

Local SME actors often face challenges in accessing capital, training, and digital marketing—as found in Sei Nagalawan, North Sumatra, where weak government support and low digital technology adoption are major barriers.

4.2 Comparison with Similar Studies

Location	Positive Findings	Similar Challenges

Kulon Progo, Yogyakarta	Intergroup conflict and distribution of benefits	Local conflicts and competition over management are similar to those in Banyuurip.
Sei Nagalawan, North Sumatra	Positive: economic growth and improved welfare	Negative: technological limitations and government support are also felt
Cengkrong, Trenggalek (East Java)	Mangrove conservation is actively underway	Limited infrastructure and limited participation of the entire community
Makassar, South Sulawesi	Ecopreneurship strategies through training and productive innovation	Capital and human resources are obstacles to expanding the scale of the business.

4.3 Lessons Learned and Strategic Recommendations

a) Improvement of integrated infrastructure

There is a need to develop access roads, seafood/craft processing centers, and environmentally friendly sanitation—similar to the recommendations in Nusantara.

b) Implementation of local conflict resolution mechanisms

Learning from Kulon Progo, organize multi-stakeholder forums and joint governance to avoid domination by certain groups.

c) Strengthening access to financing and technology

Facilitate access to micro-SME loans and digital marketing, in line with findings from Sei Nagalawan.

d) Monetizing ecosystems through conservation-driven tourism

Develop educational mangrove tourism packages plus processed products while preserving biodiversity, in line with strategies in Cengkrong and Makassar.

e) Adaptive monitoring and evaluation systems

Implement continuous monitoring so that mitigation conflicts and conservation needs can be monitored (similar to the system in Yogyakarta).

5. Conclusion

This study reveals that the integration of green entrepreneurship in the development of mangrove ecotourism in Banyuurip, Ujungpangkah, Gresik, contributes significantly to sustainable local economic development. By applying principles of environmentally friendly entrepreneurship, local communities have not only successfully increased their income but also experienced heightened awareness and concern for the conservation of mangrove ecosystems as the primary resource in ecotourism development.

Innovative products based on local resources, such as handicrafts made from mangrove materials, seafood cuisine, and educational tour guide services, have become key instruments in driving economic value while maintaining environmental sustainability.

The success of this initiative is attributed to the multi-stakeholder collaboration between local communities, SMEs, village governments, academics, and the private sector. This collaboration promotes inclusive training, financing, marketing, and knowledge transfer. Active community participation in conservation and utilization of coastal resources demonstrates that green ecotourism can strengthen socio-economic resilience while fostering sustainable environmental awareness (Santoso & Rahayu, 2019; Kurniawan et al., 2020).

5.1. Research Implications

1. Theoretical Implications

This study reinforces the theory that the integration of green entrepreneurship and social innovation is an effective mechanism for achieving community-based sustainable development. These findings expand the literature's understanding of the role of green entrepreneurship in the context of participatory and inclusive natural resource management (Huda & Santosa, 2019).

2. Practical Implications

These findings can serve as a reference for SMEs and ecotourism managers in developing sustainable business models based on local potential. Practices such as training in environmentally friendly production, strengthening marketing networks, and involving communities in environmental conservation need to be replicated to strengthen coastal economic empowerment (Wibowo & Nugroho, 2020).

3. Policy Implications

From a policy perspective, this study recommends the need for policies based on local ecosystems that support green entrepreneurship incentives and community-based ecotourism development. Local governments and relevant ministries are advised to facilitate funding, training, and legal recognition of local products within the sustainable tourism supply chain (Kemenparekraf, 2021).

4. Suggestions for Further Research

Further research is recommended to examine the long-term impacts of green entrepreneurship integration on household economic resilience, ecosystem conservation, and socio-cultural balance in coastal areas. Comparative studies between regions will also enrich these findings, particularly in other coastal areas such as Marunda or Sebangau National Park.

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COMPARISON OF THE INFLUENCE OF MARKETING MIX ON ONLINE PURCHASE DECISIONS IN MARKETPLACES AND SOCIAL COMMERCE AMONG MILLENNIALS

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Abstract

This study aimed to analyze the influence of the 7P marketing mix on online purchase decisions among the millennial generation and to compare online purchase decisions between marketplace and social commerce platforms. The research was based on the rapid growth of e-commerce, in which millennials were the most dominant group engaging in online shopping activities. A quantitative research method was used, employing purposive sampling with a total of 243 respondents. Data were collected through a questionnaire distributed via Google Forms, which had been tested for validity and reliability. The data analysis included descriptive statistics, instrument testing validity and reliability test, classical assumption tests normality, linearity, heteroscedasticity, and multicollinearity, multiple linear regression analysis, hypothesis testing t-test, F-test, and independent sample t-test, and the coefficient of determination. The results show that, partially, the marketing mix variables product, promotion, people, process, and physical evidence had a positive and significant effect on online purchase decisions. However, the variables price and place had a negative effect. Simultaneously, all elements of the 7P marketing mix product, price, place, promotion, people, process, and physical evidence had a positive and significant influence on online purchase decisions. Furthermore, the study found no significant difference in online purchase decisions between marketplace and social commerce platforms. Future studies may further examine other factors that influence online purchase decisions.

Keywords: *marketing mix, online purchase decision, marketplace, s-commerce*

1. Introduction

Technological and informational advancements have significantly transformed social, economic, and cultural domains (Shoimah, 2020). The internet has facilitated broad and easy access for individuals and businesses to connect, evolving from a communication tool into a platform for commercial transactions (Nasution et al., 2020). This shift has led to increasingly complex consumer behavior in the digital era. According to Ramesh (2022), digitalization has profoundly altered how individuals engage in commercial activities, shaping consumption patterns, product preferences, and purchasing decisions. Businesses have adapted by leveraging technology to operate online, introducing global e-commerce systems (Vera Maria et al., 2024).

Consumers now enjoy the convenience of selecting, comparing, and purchasing products online (Salma et al., 2022). Online purchase decisions involve a series of behaviors, including information seeking and product selection via digital platforms (Zhao & Tarndamrong, 2023). Purchasing decisions represent the stage where consumers choose among alternatives and proceed with transactions (Harahap et al., 2024). The shift from physical to digital marketing has redefined consumer habits, with online shopping becoming the norm (Rahmadi & Malik, 2016).

According to Indonesia's Ministry of Trade, e-commerce penetration rose from 2020 to 2023 by 21.56% and is projected to reach 34.83% by 2029 (satudaata.kemendag.go.id, 2024). E-commerce, a subset of e-business, refers specifically to buying and selling goods and services online (Turban et al., 2017). Marketplaces such as Tokopedia, Shopee, and Bukalapak play a vital role in Indonesia's digital economy, offering diverse products and services (Aisha & Kurnia, 2023). In 2023, Shopee led with 2.3 billion visits, followed by Tokopedia (1.2 billion) and Lazada (762.4 million) (Ahdiat, 2024).

Social media has evolved from personal communication tools into strategic platforms for business and marketing. In January 2022, Indonesia had 191.4 million social media users, representing 68.9% of the population (Kemp, 2022). A survey revealed that 95.17% of businesses used messaging apps like WhatsApp for sales, 41.30% used social media platforms, and 19.75% used marketplaces (Kusumatrisna et al., 2023). This highlights the growing use of both e-commerce and social commerce (s-commerce).

S-commerce, defined as commerce via social media platforms, is gaining traction. A Populix survey found that 52% of Indonesians were aware of s-commerce, with TikTok Shop (46%) and WhatsApp (21%) being the most used platforms (info.populix.co, 2022). In 2022, Shopee and Tokopedia contributed 36% and 35% respectively to Indonesia's GMV, followed by Lazada and Bukalapak (10% each), TikTok Shop (5%), and Blibli (4%) (trade.gov, 2024).

To remain competitive, businesses must adopt effective marketing strategies. The marketing mix (4P: product, price, place, promotion) has evolved into 7P by adding people, process, and physical evidence (Chaffey & Smith, 2017). Studies show mixed results on how each element influences purchase decisions across platforms like Shopee and TikTok Shop (Khotimah & Jalari, 2021; Zhao & Tarndamrong, 2023; Verina et al., 2024). Millennials, the dominant online consumer group, are tech-savvy and influenced by convenience, reviews, and digital promotions (Lesmana, 2022; kredivocorp.com, 2023).

2. Literature review

5.6.E-Business

E-business integrates digital technologies into all aspects of business operations, enabling efficiency, global reach, and customer-centric strategies. It encompasses more than e-commerce by including digital marketing, CRM, fintech, and data analytics. Key benefits include operational automation, personalized services, and strategic scalability (Nasution et al., 2024). An effectively designed e-business strategy that aligns with business characteristics can significantly enhance company performance (Brzozowska & Bubel, 2015).

5.7. Marketplace and S-commerce

A marketplace, as conceptualized by Apriadia and Saputra (2017), refers to a digital platform that enables electronic transactions between multiple vendors and consumers. In Indonesia, marketplaces constitute a dominant segment of the e-commerce industry, with platforms such as Tokopedia, Bukalapak, Shopee, Blibli, and Elevenia acting as intermediaries that facilitate transactions, manage payments, and coordinate logistics (Rachmat et al., 2023). Meanwhile, social commerce (s-commerce) is a distinct subset of e-commerce conducted via social media platforms. It integrates digital marketing strategies, technological infrastructure, and user-generated content to enhance consumer engagement and drive commercial activity (Turban et al., 2016).

5.8.Marketing Mix 7P

Chaffey and Smith (2017) describe the marketing mix as a strategic framework that aids in formulating marketing plans and optimizing resource allocation. Kotler et al. (2018) further

define it as a set of tactical tools used by firms to generate desired responses from target markets. To enhance its applicability, particularly in service-based industries, Chaffey and Chadwick (2016) emphasize the evolution of the traditional 4P model product, price, place, and promotion into the 7P model by incorporating people, process, and physical evidence, thereby offering a more holistic approach to marketing strategy.

5.9. Online Purchase Decision

Zhao and Tarndamrong (2023) define online purchase decision as a sequence of consumer behaviors involving information search and evaluation of alternatives when selecting products or services via e-commerce platforms. This process includes comparing product attributes across brands before making a final choice (Muslimah et al., 2020). Harahap et al. (2024) further describe purchasing decisions as a problem-solving activity, where consumers assess available options, form brand preferences, and develop purchase intentions prior to committing to a transaction.

5.10. Framework and Hypothesis Development

Based on the theoretical framework, prior research, and formulated hypotheses concerning the marketing mix (7Ps) and online purchase decisions, this section outlines the research framework adopted in this study.

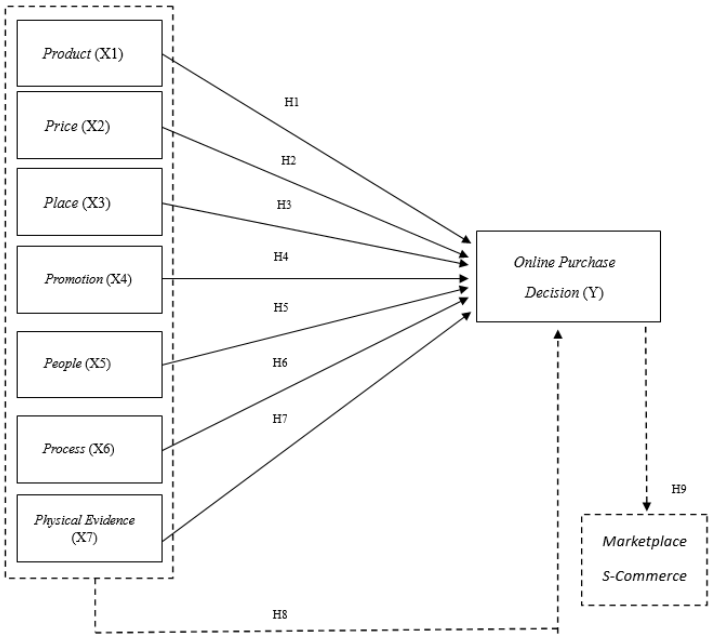

Figure 1. Research Framework

The hypothesis development in this study is based on prior empirical findings that examine the influence of the 7P components of the marketing mix on online purchase decisions within both marketplace and social commerce (s-commerce) platforms.

First, product quality is consistently found to have a positive and significant impact on purchase decisions (Khotimah & Jalari, 2021; Nabila et al., 2022; Widyowati & Slamet, 2021), leading to the formulation of H1. Price also demonstrates a significant positive effect (Dewi et al., 2023; Pelengkahu et al., 2023; Anto et al., 2022), supporting H2. The place variable, which refers to distribution and accessibility, is shown to influence consumer decisions positively (Wardani & Manalu, 2021; Indraswari & Prabantoro, 2025; Sari & Kusdiyanto, 2024), forming H3. Promotion strategies, including digital campaigns and loyalty programs, are found to significantly affect purchase behavior (Indraswari & Prabantoro, 2025; Siahaan & Christiani,

2021; Khotimah & Jalari, 2021; Harahap et al., 2024; Ramadhan & Jumhur, 2018), supporting H4.

The people element, referring to service personnel and influencers, also shows a significant impact (Muliyana & Suyanto, 2019; Verina et al., 2024; Zhao & Tarndamrong, 2023), leading to H5. Process, which includes service delivery and transaction flow, is positively associated with purchase decisions (Khotimah & Jalari, 2021; Hamidah & Suhardiyah, 2020; Yudho & Agustin, 2022), forming H6. Physical evidence, such as website design and product presentation, also contributes positively (Pelengkahu et al., 2023; Hamidah & Suhardiyah, 2020; Khotimah & Jalari, 2021), supporting H7.

The overall marketing mix (7P) is found to have a simultaneous and significant effect on purchase decisions (Nabila et al., 2022; Khotimah & Jalari, 2021; Kusumawati et al., 2021), leading to H8. Lastly, H9 is proposed based on studies showing that millennials exhibit different purchasing behaviors on marketplaces versus s-commerce platforms, influenced by factors such as service quality, price, promotion, and content marketing (Aryanto et al., 2023; Putri & Handayani, 2021; Ferdianto et al., 2023).

H1: Product has a positive effect on online purchase decisions in marketplace and s-commerce

H2: Price has a positive effect on online purchase decisions in marketplace and s-commerce

H3: Place has a positive effect on online purchase decisions in marketplace and s-commerce

H4: Promotion has a positive effect on online purchase decisions in marketplace and s-commerce

H5: People has a positive effect on online purchase decisions in marketplace and s-commerce

H6: Process has a positive effect on online purchase decisions in marketplace and s-commerce

H7: Physical evidence has a positive effect on online purchase decisions in marketplace and s-commerce

H8: The 7P marketing mix has a significant effect on online purchase decisions in marketplace and s-commerce platforms.

H9: There is a difference in online purchase decisions between marketplace and s-commerce platforms among millennial consumers.

8. Methodology

This study employs a quantitative methodology to examine the impact of the 7P marketing mix on online purchase decisions among Indonesian millennials, defined as individuals born between 1981 and 1996 (sensus.bps.go.id, 2020), targeting those with prior experience purchasing via marketplace or social commerce platforms (Sugiyono, 2019; Hartono, 2017). The independent variables include product, price, place, promotion, people, process, and physical evidence, while the dependent variable is online purchase decision. Each variable is operationalized using indicators adapted from Charastrakool (2020) and Pogolerova (in Ghiffarin et al., 2019). Data were collected via a structured online questionnaire using a five-point Likert scale (Sugiyono, 2022).

Data analysis was conducted using SPSS version 25, including descriptive statistics, validity and reliability testing (Ghozali, 2021), and classical assumption tests. Regression analysis and hypothesis testing were used to assess the relationships between variables. Classical assumption tests included normality (using the One-Sample Kolmogorov-Smirnov Test), linearity, heteroscedasticity (Park test), and multicollinearity (using tolerance and VIF values). Multiple linear regression analysis was employed to examine the influence of the independent variables on the dependent variable. The regression model is expressed as:

$$Y = \alpha + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_5 + \beta_6X_6 + \beta_7X_7 + e$$

where Y is the online purchase decision, α is the constant, β_1–β_7 are regression coefficients, and X_1–X_7 represent the seven independent variables.

Hypothesis testing included partial t-tests and simultaneous F-tests. Additionally, an independent sample t-test was conducted to compare online purchase decisions between marketplace and s-commerce platforms. The coefficient of determination (R^2) was used to assess the explanatory power of the model.

9. Results and discussions

9.1.Descriptive statistics

Data collection was conducted via a structured online questionnaire distributed through Google Forms and gathering 243 respondents. The demographic profile of respondents reveals that the majority were female (75.7%), aged between 28 and 31 years (50.6%), employed in the private sector (36.2%), and earning a monthly income of up to Rp 5,000,000 (56.4%). Most participants resided on the island of Java (82.3%), reported a low frequency of online shopping (44%), and predominantly favored marketplace platforms for their online purchases (93.8%).

Table 1 Descriptive Statistics

No	Respondents	Characteristis	Total	Percentage
1.	Gender	Male	59	24,3%
		Female	184	75,7%
2.	Age	> 28 tahun – ≤31 tahun	123	50,6%
		> 31 tahun – ≤ 34 tahun	51	21,0%
		> 34 tahun – ≤ 37 tahun	29	11,9%
		> 37 tahun – ≤ 40 tahun	17	7,0%
		> 40 tahun – ≤ 43 tahun	14	5,8%
		> 43 tahun	9	3,7%
3.	Employment Status	Student	11	4,5%
		Employee	88	36,2%
		Entrepreneur	68	28,0%
		Teacher	13	5,3%
		Civil Servant	6	2,5%
		Unemployed	51	21,0%
		Freelancer	2	0,8%
		Driver	2	0,8%
		Ride-hailing motorbike service	2	0,8%
4.	Monthly income	≤ Rp 5.000.000	137	56,4
		> Rp. 5.000.000 - ≤ Rp. 10.000.000	91	37,4
		> Rp. 10.000.000 - ≤ Rp. 30.000.000	12	4,9
		> Rp 30.000.000 - ≤ Rp 50.000.000	1	0,4
		>Rp.50.000.000 - ≤ Rp 100.000.000	0	0
		>Rp.100.000.000	2	0,8
5.	Island of Residence	Sumatra	14	5,8
		Kalimantan	4	1,6
		Java	200	82,3
		Sulawesi	2	0,8
		Papua	1	0,4
		Bali	1	0,4
		Maluku	0	0

No	Respondents	Characteristis	Total	Percentage
		West Nusa Tenggara	6	2,5
		East Nusa Tenggara	0	0
		Others	15	6,2
6.	Online Shopping Frequency	Very Often	35	14,4
		Often	101	41,6
		Rarely	107	44,0
		Never	0	0
7.	Favourite Platform	Marketplace	228	93,8
		S-commerce	15	6,2

Source: Data Processing

9.2. Classic Assumption Test

The classical assumption tests conducted in this study affirm the statistical adequacy of the regression model used to analyze the influence of the 7P marketing mix on online purchase decisions. The normality test, performed using the Kolmogorov-Smirnov method, yielded a Monte-Carlo significance value of 0.154, which exceeds the 0.05 threshold. This result in Table 2 indicates that the residuals are normally distributed, satisfying the assumption of normality (Ghozali, 2021).

Table 2 Normality Test

One-Sample Kolmogorov-Smirnov Test	
	Unstandardized Residual
N	243
Monte-carlo sig (2-tailed)	0,154

Source: Data Processing

Linearity was assessed through deviation-from-linearity analysis. All independent variables product, price, place, promotion, people, process, and physical evidence produced significance values greater than 0.05 and F-values below the critical threshold of 2.047 as shown in Table 3. These findings confirm that the relationships between the independent variables and the dependent variable (online purchase decision) are linear (Ghozali, 2021).

Table 3 Linearity Test

Variabel	Deviation from linearity	
	F	Sig
Product	0,723	0,607
Price	0,502	0,734
Place	0,377	0,893
Promotion	0,457	0,808
People	1,721	0,117
Process	0,402	0,878
Physical Evidence	0,284	0,922

Source: Data Processing

Heteroskedasticity was tested using the Park test. The significance value of 0.154 indicates homoskedasticity, meaning the variance of residuals is consistent across observations. Thus, the model does not exhibit heteroskedasticity based on Table 4.

Table 4 Heteroscedasticity Test

Coeffcients[a]					
Model		Unstandardized Coeffcients	Standardized Coeffcients		

		B	Std. Error	Beta	t	Sig
1	(Constant)	1,771	0,871		2,034	0,044
	TotalX	-0,013	0,009	-0,121	-1,433	0,154

Source: Data Processing

Multicollinearity was evaluated using tolerance and Variance Inflation Factor (VIF) values. All tolerance values exceeded 0.1 and all VIF values were below 10, indicating no multicollinearity among the independent variables. These results confirm the model's robustness and suitability for regression analysis.

Table 5 Multicolinearity Test

1	Model	Unstandardized Coeffcients		Standardized Coeffcients	Collinearity Diagnostic	
		B	Std. Error	Beta	Tollerance	VIF
	(Constant)	4,264	3,078			
	Product	1,479	0,315	0,258	0,341	2,931
	Price	0,295	0,315	0,258	0,371	2,697
	Place	0,075	0,296	0,014	0,353	2,830
	Promotion	0,638	0,251	0,128	0,410	2,440
	People	0,460	0,209	0,109	0,416	2,406
	Process	1,050	0,223	0,237	0,408	2,450
	Physical Evidence	1,050	0,223	0,238	0,408	2,450

Source: Data Processing

9.3.Multiple Regression Analysis and Hypothesis Testing

The multiple linear regression analysis reveals that all seven components of the 7P marketing mix product, price, place, promotion, people, process, and physical evidence positively influence online purchase decisions. Product, process, and physical evidence show the strongest effects, indicating that product quality, transaction efficiency, and digital presentation significantly drive consumer behavior. Each coefficient reflects the extent to which improvements in these strategies enhance purchasing decisions. The error term accounts for other unmeasured factors influencing consumer choices.

Based on the results presented in Table 6, the following multiple linear regression equation can be derived:

$Y= \alpha + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_5 + \beta_6X_6 + \beta_7X_7 + e$

OPD (Y)= 4,264 + 1,479 X1 + 0,295 X2+ 0,075 X3 + 0,638 X4+ 0,460 X5+ 1,050 X6+ 1,269 X7+ e

Table 6 Result of Multiple Linear Regression Test

Coefficient[a]						
Model		Unstandardized Coeffcients		Standardized Coeffcients	t	Sig
		B	Std. Error	Beta		
1	(Constant)	4,264	3,078		1,385	0,167
	Product	1,479	0,315	0,258	4,691	0,000
	Price	0,295	0,349	0,045	0,846	0,398
	Place	0,075	0,296	0,014	0,252	0,801
	Promoton	0,638	0,251	0,128	2,543	0,012
	People	0,460	0,209	0,109	2,194	0,029
	Process	1,050	0,223	0,237	4,710	0,000
	Physical Evidence	1,269	0,283	0,238	4,744	0,000
a. Dependent Variable: Online purchase decision						

Source: Data Processing

Referring to Table 6, the variables product, promotion, people, process, and physical evidence exhibit t-calculated values exceeding the critical t-table value of 1.970, indicating a statistically significant and positive influence on online purchase decisions. Conversely, the variables price and place yield t-calculated values below the threshold, suggesting their effects are not statistically significant. Accordingly, hypotheses H1, H4, H5, H6, and H7 are supported, while H2 and H3 are not substantiated.

Table 7 Simultaneous Significance Test (F Test)

Anova[a]						
Model		Sum pof Squares	df	Mean Square	F	Sig
1	Regression	11958,731	7	1708,390	105,007	0,000
	Residual	3823,269	235	16,269		
	Total	15782,000	242			
a. Dependent Variable:Online purchase decision						
b. Predictors: (Constant), physical evidence, people, price, process, promotion, price, product						

Source: Data Processing

According to the data presented in Table 7, the results of the F-test indicate that the computed F-value (105.007) exceeds the critical F-value from the table (2.047), while the associated significance level (0.000) is below the threshold of 0.05. These findings suggest that the variables product, price, place, promotion, people, process, and physical evidence collectively exert a statistically significant and positive influence on online purchase decisions. Consequently, hypothesis H8 is supported.

Table 8 Group Descriptive Statistics

	Platforms Category	N	Mean	Std. Deviation	Std. Error Mean
Online Purchase Decision	Marketplace	228	75,5877	8,13196	0,53855
	S-commerce	15	75,0667	7,40142	1,91104

Source: Data Processing

As shown in Table 8, a total of 228 millennial respondents reported making online purchase decisions via marketplace platforms, whereas only 15 did so through social commerce platforms. The results of the independent sample t-test are detailed in Table 9.

Table 9 Independent sample t-test Result

		Levene's Test for Equality of Variances		t-test for Equality of Means		
		F	Sig	t	df	Sig (2-tailed)
Online Purchase Decision	Equal variances assumed	0,144	0,705	0,242	0,241	0,809
	Equal Variances not assumed			0,262	16,306	0,796

Source: Data Processing

Table 9 presents the results of Levene's Test, which yielded an F-value of 0.144 and a p-value of 0.075, indicating that the assumption of homogeneity of variances is met. Furthermore, the Sig. (2-tailed) value of 0.809 suggests that there is no statistically significant difference in online purchase decisions between millennial users of marketplace platforms and those of social commerce platforms.

9.4.Coefficient of Determination

Table 10 Coefficient of Determination

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0,870	0,758	0,751	4,03351
a. Predictors: (Constant), Physical evidence, people, price, process, promotion, place, product				

Source: Data Processing

As indicated in Table 10, the Adjusted R Square value of 0.751 demonstrates that the variables product, price, place, promotion, people, process, and physical evidence account for 75.1% of the variance in online purchase decisions. The remaining 24.9% is attributable to other factors not included in the scope of this research model.

9.5. Discussion

This study investigates the influence of the marketing mix on online purchase decisions among Indonesian millennials. The research involved 243 respondents and employed purposive sampling through online questionnaires.

The findings indicate that product attributes significantly shape millennials' online purchasing behavior. Ease of accessing product information, discovering new or trending items, and the availability of after-sales services contribute to increased consumer confidence and purchasing intent. Lesmana (2024) highlights that millennials value platforms that allow them to explore trends and express personal identity. Nartea et al. (2019) emphasize the role of online reviews and feedback in guiding trustworthy product and store selection. Ferraz et al. (2023) and Kotler & Keller (2016) underscore the importance of after-sales service in enhancing consumer satisfaction and loyalty.

In contrast, price does not appear to be a decisive factor. Kotler & Keller (2016) suggest the existence of a "price indifference band," where price changes do not significantly affect demand. Supporting this, Putri et al. (2023) and Mulyana (2021) argue that consumers often prioritize product quality over low prices, especially when cheaper options compromise quality. Patel (2024) adds that millennials are more motivated by variety, style, and product trends than by price alone.

Similarly, place or distribution channels do not significantly influence purchase decisions. Millennials tend to trust the reliability of online logistics systems and are less concerned with the seller's location. Ramadhanis (2024), Muliyana & Suyanto (2019), and Pratama (2019) affirm that efficient delivery systems reduce the relevance of distribution-related concerns in online shopping.

Promotion plays a meaningful role in encouraging purchases. Discounts, effective promotional strategies, and frequent engagement with platforms increase millennials' likelihood to buy. Indraswari & Prabantoro (2025) note that strategic and innovative promotional approaches can substantially influence consumer decisions. Siahaan & Christiani (2021) emphasize the impact of visually appealing and well-targeted promotions. These findings align with studies by Khotimah & Jalari (2021), Wardani & Manalu (2021), and Putri et al. (2023).

The people aspect particularly seller responsiveness and communication also affects purchasing behavior. Quick responses, clear communication, and seller understanding of customer needs enhance service quality and consumer satisfaction. Chaffey & Chadwick (2016) highlight that prompt service improves customer experience. This is supported by Muliyana & Suyanto (2019), Verina et al. (2024), and Zhao & Tarndamrong (2023), who found that consumers consider seller reliability when making purchase decisions.

Process factors, such as simple transactions, easy claims, and accessible customer support, are highly valued. Fatihudin & Firmansyah (2019) argue that service delivery systems are integral to customer experience. These findings are consistent with research by Khotimah & Jalari (2021), Hamidah & Suhardiyah (2020), and Yudho & Agustin (2022).

Physical evidence, including website design, mobile app usability, and social interaction features, also influences consumer behavior. Visual and functional elements shape trust and engagement. Khotimah & Jalari (2021), Hamidah & Suhardiyah (2020), and Pelengkahu et al. (2023) affirm that physical cues contribute to consumer perceptions and decisions.

Collectively, all seven marketing mix elements product, price, place, promotion, people, process, and physical evidence demonstrate a positive influence on online purchase decisions. This supports the principles of flexibility, personalization, and virtual presence in digital marketing (Pogorelova et al., 2016; Kusumawati et al., 2021; Ramadhanis, 2024).

Finally, the study finds no significant difference in purchasing behavior between marketplace and social commerce platforms among millennials. Dharmesti et al. (2021) explain that millennials' digital lifestyles and familiarity with online shopping procedures shape consistent behavior across platforms. Salim et al. (2019) and Lesmana (2024) further note that millennials seek not only convenience but also emotionally satisfying and personalized shopping experiences.

10. Conclusion, Limitations, and Suggestions

The study concludes that product, promotion, people, process, and physical evidence significantly influence online purchase decisions among millennials on both marketplace and social commerce platforms. However, price and place do not show a significant impact. Additionally, there is no notable difference in purchasing behavior between the two platform types, indicating that millennials prioritize marketing strategy over platform choice.

This research is limited by its sample size and focus solely on the millennial generation. It also excludes other potentially influential variables such as trust, perceived risk, and prior online shopping experience, which may affect consumer behavior.

Future studies should consider expanding the sample size and including broader demographic groups to enhance generalizability. Incorporating additional variables like trust, security, and digital experience could provide deeper insights into online consumer behavior across different generations and platforms.

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THE RELATIONSHIP BETWEEN ELECTRONIC SERVICE QUALITY AND CUSTOMER SATISFACTION FOR PLN MOBILE UP3 BOGOR APPLICATION USERS

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Abstrak

Penelitian ini bertujuan untuk menganalisis hubungan antara kualitas pelayanan elektronik terhadap kepuasan pelanggan pada pengguna aplikasi PLN *Mobile* di UP3 Bogor. Dimensi kualitas pelayanan elektronik yang diteliti meliputi efisiensi, pemenuhan, ketersediaan sistem, dan privasi. Sementara itu, dimensi kepuasan pelanggan terdiri dari kesesuaian harapan, minat menggunakan kembali, dan kesediaan merekomendasikan.Metode penelitian menggunakan pendekatan kuantitatif deskriptif, dengan teknik pengumpulan data melalui kuesioner kepada 100 responden. Teknik analisis data yang digunakan adalah *Customer Satisfaction Index* (CSI) dan *Importance Performance Analysis* (IPA). Hasil penelitian menunjukkan bahwa kualitas pelayanan elektronik berada pada kategori baik (76,90%) dan tingkat kepuasan pelanggan juga berada pada kategori puas dengan nilai CSI sebesar 77,95%. Dimensi efisiensi memiliki nilai tertinggi dalam kualitas pelayanan elektronik, sementara kesesuaian harapan menempati nilai tertinggi pada dimensi kepuasan pelanggan. Analisis IPA mengidentifikasi beberapa indikator layanan yang penting namun kinerjanya masih perlu ditingkatkan.

Kata Kunci**:** Kualitas Pelayanan Elektronik, Kepuasan Pelanggan, PLN *Mobile*

Abstract

This study aims to analyze the relationship between electronic service quality and customer satisfaction of PLN Mobile application users at UP3 Bogor. The dimensions of electronic service quality investigated include efficiency, availability, system availability, and privacy. Meanwhile, the dimensions of customer satisfaction consist of similarity of expectations, intention to reuse, and willingness to recommend. The research method uses a quantitative descriptive approach, with data collection techniques through questionnaires to 100 respondents. The data analysis techniques used are Customer Satisfaction Index (CSI) and Importance Performance Analysis (IPA). The results of the study indicate that the quality of electronic service is in the good category (76.90%) and the level of customer satisfaction is also in the satisfied category with a CSI value of 77.95%. The efficiency dimension has the highest value in electronic service quality, while consistency of expectations meets the highest value in the customer satisfaction dimension. IPA analysis identifies several important service indicators but their performance still needs to be improved.

Keywords: Electronic Service Quality, Customer Satisfaction, PLN Mobile

1. Introduction

The development of digital technology has encouraged companies to provide application-based services to improve efficiency and service quality. PT PLN (Persero) developed the PLN Mobile application as a digital tool in meeting customer needs, especially in electricity services. PLN continues to build foundations and carry out digitalization (Anshar & Ros Bangun, 2023). One of PLN's efforts in responding to this challenge is by developing the PLN Mobile application. The PLN Mobile application was officially launched by the PLN Board of Directors on October 31, 2016, coinciding with the commemoration of National Electricity Day.

E-service quality includes various dimensions that affect the user's experience in interacting with digital services. According to Wilson et al. (2020) electronic service quality is defined as the extent to which a website facilitates efficient and effective shopping, purchasing, delivery. The dimensions of electronic service quality are Efficiency, Fulfillment, System availability, Privacy. The things that customers need include convenience, and a satisfying experience in electronic media that matches expectations so that customers can feel new experiences and feel satisfied.

Based on a comparison of various views of experts, this becomes customer needs, convenience, and a satisfying experience in electronic media, such as the internet. According to Kotler & Keller (2021) customer satisfaction is a feeling of happiness or disappointment that arises when a product or service meets or does not meet expectations. Dissatisfaction occurs when performance does not match expectations, while satisfaction occurs when performance matches expectations. Purchase evaluation is carried out by consumers to assess the level of tension experienced when buying goods or services.

PLN Mobile as a digital-based electricity service application, is PLN's solution in providing services that are more efficient and easily accessible to the public. This application offers various features that allow customers to access services such as electricity bill payments, reporting disturbances, purchasing tokens, and other information services through only one application.

The research location chosen was PLN UP3 Bogor, with the consideration that this region includes a large number of active customers who use the PLN Mobile application. The region also has diverse geographic and demographic characteristics, such as residential areas, offices, and public facilities that make PLN Mobile an important and needed service tool for the community. Therefore, it is important to know the extent to which the quality of electronic services provided through the application is able to provide satisfaction to customers.

According to Wilson et al. (2020), electronic service quality includes dimensions of efficiency, fulfillment, system availability, and privacy. Meanwhile, Indrasari (2019) states that indicators of customer satisfaction include conformity to expectations, interest in reuse, and willingness to recommend.

This research discusses the quality of electronic services and the level of customer satisfaction of PLN Mobile application users in the UP3 Bogor area as a whole, in order to provide a clear picture of the strengths and weaknesses of digital services provided by PLN. This research aims to evaluate how the quality of electronic services contributes to customer satisfaction using the PLN Mobile application in the UP3 Bogor area.

2. Methodology

2.1. Research Time and Location

This research was conducted from February to May 2025. The research location was carried out in the work area of PT PLN (Persero) Managing Unit Customer Service (UP3) Bogor,

which includes various Customer Service Units (ULPs) such as Bogor City, West Bogor, Leuwiliang, and others. The selection of this location is based on the high use of the PLN Mobile application in the region and the ease of reaching customers who are research respondents.

2.2.Data Collection Methods

The data sources in this study come from primary and secondary data. Primary data was obtained directly from the results of distributing questionnaires to active users of the PLN Mobile application. Meanwhile, secondary data was obtained from PLN internal reports, journals, and other relevant literature. The methods used in this study include: a. Questionnaire Primary data collection was carried out through distributing questionnaires to 100 respondents. This questionnaire was designed to measure customer perceptions of electronic service quality and their level of satisfaction in using the PLN Mobile application. The questionnaire is divided into two parts, namely questions related to service quality dimensions (efficiency, fulfillment, system availability, and privacy) and questions related to customer satisfaction (expectations, reuse, and recommendations). b. Documentation and Literature Study c. Researchers also document relevant secondary data such as statistics on the use of the PLN Mobile application, internal company reports, and references from journals and books that support the theory in this study. Data collection was carried out through a questionnaire with a Likert scale of 1-5.

2.3.Sampling Technique

This research uses purposive sampling technique, which is a sampling technique carried out with certain considerations in accordance with the research objectives.

Respondents in this study are active customers of the PLN Mobile application in the UP3 Bogor area who have used the application at least twice. Other criteria are respondents aged at least 17 years and over and willing to fill out the questionnaire completely.

The number of respondents sampled in this study was 100 people. Determination of this number refers to the number of research indicators consisting of 4 indicators for electronic service quality variables and 3 indicators for customer satisfaction variables. Based on Sugiyono (2017), in quantitative research, determining the number of samples can be done using the Slovin formula if the population is known, taking into account the error tolerance of 10% (0.1), in accordance with the general standards used in social research to obtain results that are representative enough but still efficient in terms of sample size. Here is the Slovin formula, namely:

$$n = \frac{N}{1 + N(e)^2}$$

Description:
n : Number of Samples.
N : Total Population
e^2 : Limits error tolerance, errors that can be tolerated within a certain level of confidence.

$$n = \frac{314782}{1+(314782)(0,1)^2}$$

$$n = \frac{31478200}{314782} = 100$$

However, due to time constraints and research effectiveness the sample size was adjusted

to 100 respondents.

2.4.Data Analysis Methods

1. Validity TestThevalidity

Test is carried out to measure the extent to which each item in the questionnaireable to measure the variable in question. This test is carried out by calculating the correlation value between the score of each item and the total score. In this study, all statement items from each variable were declared valid because the calculated r value was greater than the r table (r count> 0.197 for n = 100 at the 5% significance level). Thus, all items in the questionnaire are suitable for further analysis.

2. Reliability Test

The reliability test aims to measure the consistency of the research instrument. This study uses Cronbach's Alpha coefficient to test reliability. The test results show that all instruments are declared reliable if the Cronbach's Alpha value is> 0.6. The following is the formula used to test reliability:

$$\mathrm{r11} = \left[\frac{k}{(k-1)}\right]\left[1 - \frac{\Sigma\sigma^2 b}{\sigma^2 t}\right]$$

ri: Reliability value

k : Number of items

$\sum S\ i\ 2$: Total variance of each score

sx 2: Total variance has an Alpha Cronbach value> 0.6, which means that all instruments in this study are reliable.

3. Customer Satisfaction Index (CSI)

CSI is used to determine the overall level of customer satisfaction. The CSI method is used to determine the level of customer satisfaction by paying attention to the importance of service and product attributes. CSI is a form of quantitative analysis in the form of a percentage of satisfied users in a user satisfaction analysis survey (Setiawan et al., 2022). In the CSI analysis, the Weighting Factor (WF), Weight Score (WS), Weight Total (WT), and Satisfaction Index values are calculated (Sihotang & Oktarina, 2022), as follows: Calculating the Weighting Factor (WF), which is to convert the average value of importance into a percentage figure of the total average level of importance of all tested attributes, so that a total WF of 100% is obtained.

1. Calculating Weight Score (WS), which assesses the multiplication between the average value of the satisfaction level of each attribute with the WF of each attribute.
2. Calculating Weight Total (WT), which is the sum of the WS of all attributes.
3. Calculating the Satisfaction Index (ST), namely WT divided by the maximum scale used, then multiplied by 100%. The overall level of respondent satisfaction can be seen from the satisfaction level criteria.

2.5.Importance Performance Analysis (IPA)

Penggunaan metode pengolahan IPA *(Importance and Performance Analisis*) used to determine an effective strategy in measuring satisfaction based on the level of importance of an attribute and performance.

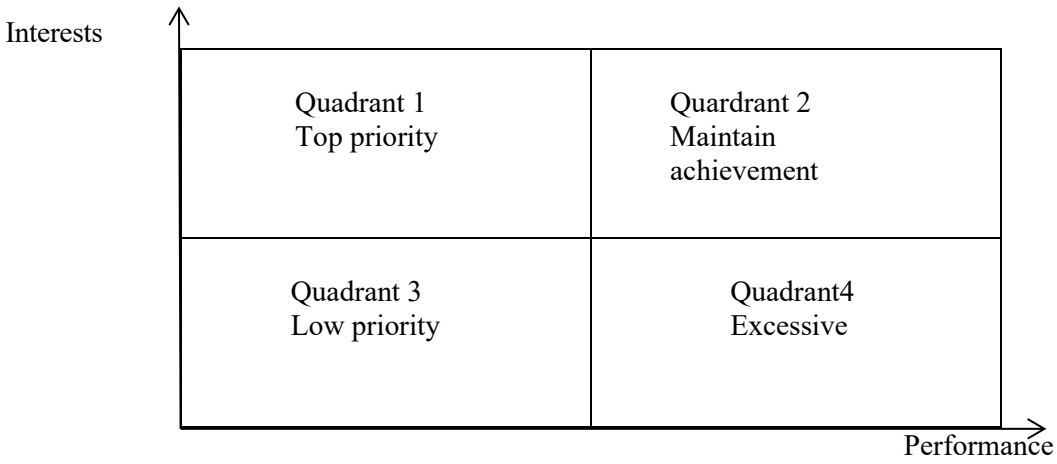
The following is the formula used: Description:

$$\overline{Y} = \frac{\sum_{i=1}^{n} Y_i}{n} \quad \overline{X} = \frac{\sum_{i=1}^{n} X_i}{n}$$

X = average score of performance level

Y = average score of importance level n = Total consumer data

This analysis uses a cartecius diagram which is divided into 4 parts and bounded by two lines. The following is a division of the diagram based on the level of importance:



picture Bagan Diagram Kartesius

1. Quadrant I (Top Priority)

This quadrant contains attributes that are considered important by consumers but in reality these attributes are not in accordance with customer expectations. The performance level of the attribute is lower than the level of customer expectations. The attributes contained in this quadrant must be further improved in order to satisfy customers.

2. Quadrant II (Maintain Achievement) statements in this quadrant have a high level of expectation and performance. This shows that these attributes are important and have high performance. Attributes in this quadrant must be maintained in the future because they are considered important and the results are very satisfying.

3. Quadrant III (Low Priority)

Attributes in this quadrant are considered less important by customers but in fact their performance is not too special / ordinary. Attributes in this quadrant have a low level of expectation and performance is also considered poor.by customers. Improvements in this quadrant need to be reconsidered by looking at their small effect on customers.

4. Quadrant IV (Excessive)

According to customers, this quadrant has a low level of expectation but has good performance, so it is considered excessive by customers. This shows that the attributes / statements that affect customer satisfaction are considered excessive in their implementation.

4. Results and Discussion

4.1.Respondent Characteristics

Table 1 Profile of respondents based on gender and age

Gender	Frequency	Persentase (%)	Age	Frequency	Persentase (%)
Male	39	39	17	5	5
Female	61	61	17 -25	29	29
Total	100	100	26- 35	45	45
			36- 45	17	17
			> 45	4	4
			Total	100	100

Source: Primary data processed by researchers, 2025

Table 2 Profile of respondents based on employment and income

Work	Frequency	Persentase (%)	Revenue	Frequency	Persentase (%)
Student	17	17	< Rp.3.000.000	18	18
Private Employee	35	35	Rp. 3.000.000- Rp 5.000.000	34	34
Public Servant	25	25	Rp.5.000.000- Rp7.000.0000	30	30
Entrepreneur	22	22	> Rp 7.000.000	18	18
Housewife	1	1	Total	100	100
Total	100	100	Revenue	Frequency	Persentase (%)

Source: Primary data processed by researchers, 2025

4.2. Validity Test Analysis

Table 3 Electronic Service Quality Validity Test Results

	Electonoic service quality			
No	Question	R hitung	R tabel	conclusion
	Efisiensi *(Efficiency)*			
1.	The features in the PLN Mobile application are clearly organized and easy to access.	0,861	0,463	Valid
2.	The transaction process (electricity token purchase/bill payment) through the app is fast and efficient.	0,888	0,463	Valid
3.	The PLN Mobile application has a fast response time when accessed.	0,871	0,463	Valid
	Pemenuhan *(Fulfillment)*			
1.	PLN mobile application has complete features	0,866	0,463	Valid
2.	PLN mobile application always provides information that	0,916	0,463	Valid

	accuracy regarding electricity bills and transactions.			
3.	Purchasing electricity tokens through the PLN Mobile application is always successful without any problems.	0,723	0,463	Valid
	Ketersediaan sistem *(System availability)*			
1.	The PLN mobile application can be accessed at any time without technical problems.	0,910	0,463	Valid
2.	PLN mobile applications rarely experience interruptions or down systems.	0,894	0,463	Valid
3.	The features in the PLN mobile app always work well.	0,865	0,463	Valid
	Privasi *(Privacy*)			
1.	PLN mobile application protects customers' personal and transaction information.	0,878	0,463	Valid
2.	PLN mobile applications have strong security systems to protect user data.	0,855	0,463	Valid
3.	Feel comfortable using PLN mobile because of security features such as OTP or password verification.	0,896	0,463	Valid

Source: Primary data processed by researchers, 2025

The results of the validity test of 12 statement items on the electronic service quality variable show that all items are declared valid, because the rcount value is more than the rcountvalue. is greater than rtable (0.463). Thus, the research can proceed ti the next stage.

Table 4 Customer Satisfaction Validity Test Results

	customer decisions			
No	Question	R hitung	R tabel	Conclusion
1.	The quality features provided are in line with expectations.	0,911	0,463	Valid
2.	The PLN mobile application provides solutions in overcoming electricity problems.	0,887	0,463	Valid
3.	Experience using PLN Mobile application in accordance with expectations	0,937	0,463	Valid
4.	Services provided meet expectations	0,866	0,463	Valid
1.	Interest in reusing because of the service satisfactory.	0,932	0,463	Valid

2.	Interest in reusing because account security is guaranteed.	0,734	0,463	Valid
3.	I prefer PLN mobile over other services.	0,889	0,463	Valid
4.	I recommed this app because i will continue to use it.	0,723	0,463	Valid
Kesediaan Merekomendasikan				
1.	Willing to recommend because the service is satisfactory.	0,924	0,463	Valid
2.	Willing to recommend because of the quality features provided.	0,887	0,463	Valid
3.	The PLN mobile app is useful and therefore worth recommending.	0,869	0,463	Valid
4.	Willing to suggest because account security is maintained	0,916	0,463	Valid

Source: Primary data processed by researchers 2025

Based on the results of the validity test calculation on nine statements on the customer satisfaction variable, all items are valid.

4.3.Reliability Test Analysis

declared valid because the rcount value exceeds the rtable of 0.463. Therefore, the research can be continued to the next stage.

Table 5 Reability Test

Variabel	***Cronbach's Alpha***	***N of Items***
Electronic Service Quality	0,938	*Reliabel*
Customer Satisfaction	0,940	*Reliabel*

Source: Primary data processed by researchers, 2025

4.4. Descriptive Analysis Test

Table 6 Research Results of Descriptive Analysis of Electronic Service Quality

Dimensi	**Rata-Rata Perindikator (%)**
Efficiency	82.00
Fulfillment	78.20
System Availability	73.00
Privacy	74.30
Rata-rata Total	**76.90**

Source: Primary data processed by researchers, 2025

With an overall average value of 76.90%, user perceptions of the quality of PLN Mobile electronic services are at category is quite satisfied to satisfied, according to the rating scale from Tjiptono & Chandra (2019) which states that the range of 70-85%.

However, the aspects of system stability and service speed are two areas that can be the focus of improvement for categorized as good service improve the overall quality of the app.

Table 7 Research Results Descriptive Analysis of Customer Satisfaction

Dimensi	**Rata-Rata Perindikator (%)**
Kesesuaian Harapan	81.20%
Minat Menggunakan Kembali	74,87%
Kesediaan Merekomendasikan	77,93%
Rata-rata CSI	**78,00**

Source: Primary data processed by researchers, 2025

With an average value of 78.00%, with the highest indicator in the "Expectation Match" dimension of 81.20%. These results are in line with the study by Hidayat et al. (2021), which shows that perceived expectations of the PLN mobile application affect consumers' decisions to recommend the application to others.

4.5.Customer Satisfaction Index (CSI)

Table 8 CSI Calculation Result Data

P	**MISS**	**H**	**MSS**	**Peryataan**	**WF**	**WS**
P1	4,21	H1	4,26	1	9,16	39,04
P2	3,74	H2	3,97	2	8,14	32,32
P3	3,79	H3	3,97	3	8,25	32,75
P4	3,92	H4	3,92	4	8,53	33,45
P5	3,87	H5	3,97	5	8,42	33,44
P6	3,74	H6	3,64	6	8,14	29,63
P7	3,74	H7	3,69	7	8,14	30,04
P8	3,71	H8	3,87	8	8,08	31,25
P9	3,65	H9	3,88	9	7,95	30,83
P10	3,83	H10	3,88	10	8,34	32,35
P11	3,9	H11	3,93	11	8,49	33,36
P12	3,84	H12	3,74	12	8,36	31,26
Jumlah	45,94	**Jumlah**	46,72	**WT**		389,77
				CSI	77,95	

Source: Primary data processed by researchers, 2025

shows the Customer Satisfaction Index (CSI) rating scale based on Widodo & Sutopo (2018) which is used to interpret the level of customer satisfaction based on the percentage value. Based on the table, the CSI value is 77.95% is in the range of 66% - 80.99%, so it is included in the "Satisfied" category. This means that customers of the PLN Mobile UP3 Bogor application are satisfied with electronic services". This value reflects that most of the features and services in the application have been able to satisfy customers. meet user expectations, such as ease of access, data security, and transaction efficiency.

However, despite being in the satisfied category, there are still several aspects that need to be improved so that customer satisfaction can rise to the "Very Satisfied" category, especially in indicators that are included in the priority of improvement in the IPA analysis results.

Thus, the results of the CSI table provide an overview that PLN Mobile electronic services have been running quite well, but still need to focus on improving quality in priority indicators in order to increase overall and sustainable customer satisfaction.

4.6.Importance Performance Analysis (IPA)

Table 9 Calculation of Importance Performance Analysis

Indicator	Performance Level (X)	Level of Importance (Y)
1	4,2	4,3
2	3,7	4,0
3	3,8	4,0
4	3,9	3,9
5	3,9	4,0
6	3,7	3,6
7	3,7	3,7
8	3,7	3,7
9	3,7	3,9
10	3,8	3,9
11	3,9	3,9
12	3,8	3,9
Total	45,9	46,7
Rata - rata	3,8	3,9

Source: Primary data processed by researchers, 2025

Next is the calculation using IPA, here is the formula used:

IPA = $\frac{Xi}{_}x$ 100% IPA = $\frac{Xi}{_}x$ 100% =

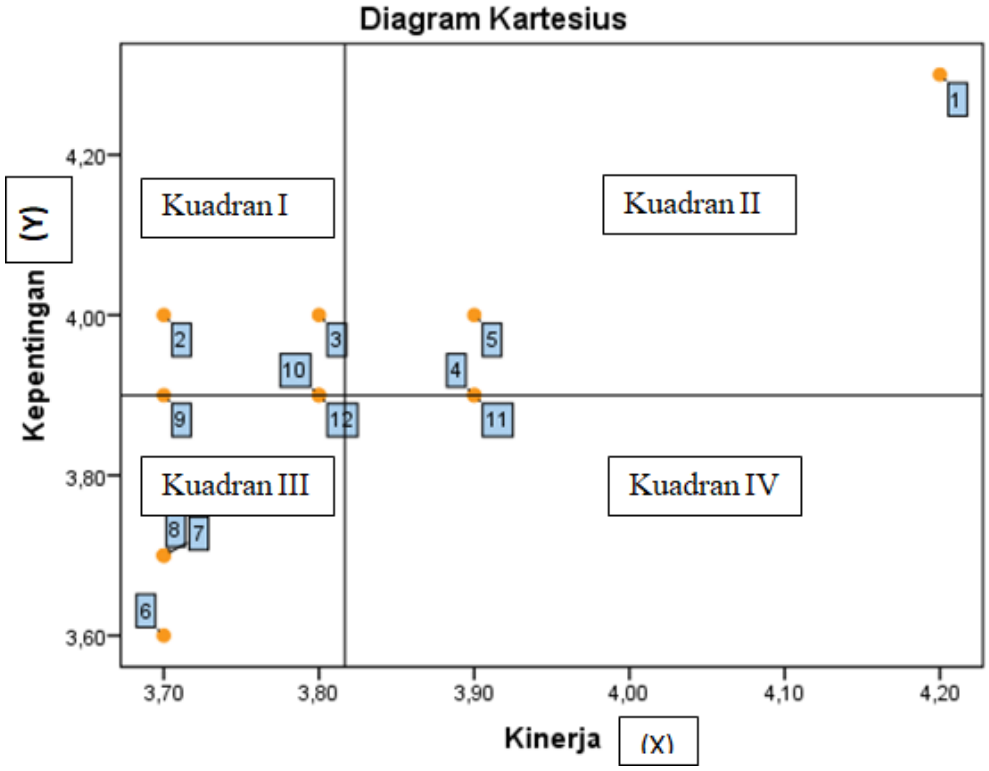
After calculating the value of the level of importance and performance of each indicator using the Importance Performance Analysis (IPA) method, the next step *Importance Performance Analysis* (IPA), is to map the results into the Importance Performance Analysis (IPA) method.

$Yi \quad x$

IPA = $\frac{45,9}{46,7}x$ 100% $\frac{45,9}{12}x$ 100% = 3,82`

IPA = 98,33% IPA = $\frac{Yi}{y}x$ 100% =

$\frac{45,9}{12}x$ 100% = 3,89



Quadrant I - Top Priority

Quadrant I is the most crucial area in IPA analysis. Indicators in this quadrant have a high level of importance, but their performance level is still below average. This means that customers feel this aspect is important, but are not satisfied with the performance shown. Therefore, the indicators in this quadrant must be the main focus of improvement in order to increase customer satisfaction. Indicators in Quadrant I are: Indicators 2, 3, 10 and 12.

Indicators in this quadrant are related to speed, efficiency and accuracy of service. Customers really expect transactions to run efficiently and the application to be responsive, but the realization is still inadequate.

This finding is reinforced by the results of research (Theresa et al., 2025) which analyzed e-banking services. The results state that attributes such as speed and ease of service in Quadrant I indicate the need for improvement. Indicators in Quadrant I must be the top priority to be improved, because if they are not improved, then the attributes in Quadrant I must be improved. will have an impact on decreasing customer satisfaction.

Quadrant II - Maintain Achievements

Indicators in this quadrant have a high level of importance and high performance, which means that customers feel this aspect is important and are satisfied with the performance provided. This position is an ideal area in IPA analysis. Therefore, indicators in this quadrant must continue to be maintained and maintain their quality so that they do not experience a decline that can affect overall customer satisfaction. Indicators in Quadrant II are 1 and 5.

Indicators in this quadrant are related to ease of access and accuracy. Research from (Theresa et al., 2025) states that indicators in Quadrant II reflect the strength of the service and must be used as service standards for other indicators. PLN Mobile has successfully compiled features with a user-friendly and informative display. This needs to be maintained through system maintenance, improving the user interface, as well as improving the user interface.

Continuous information updates so that there is no decline in quality in the future.

1. Quadrant III - Low Priority

This quadrant reflects indicators with

The level of importance and performance are both low. This means that customers do not pay much attention to this aspect, and the performance is also not optimal. Although not a top priority at the moment, indicators in this quadrant still need to be improved gradually, especially if their importance increases in the future. If it is not improved, and in the future customers begin to pay attention to this aspect, it can affect the overall level of satisfaction. Indicators in Quadrant III are 6, 7, and 8.

Indicators in this quadrant are related to ease of access, and system stability. Although aspects such as system stability and 24-hour accessibility are considered less important by respondents at this time, improvements are still needed to maintain customer trust and prevent potential complaints in the future.

According to research (Sihotang & Oktarina (2022), indicators in Quadrant III generally have little effect on current customer satisfaction, but can be crucial in the future, especially if there are changes in user behavior or expectations.

Quadrant IV – Excessive

Indicators in this quadrant show a high level of performance but are considered less important by customers. In other words, the resources used to maintain performance in this aspect are potentially excessive or inefficient, because they are not proportional to the perceived importance of customers. These indicators still need to be maintained, but do not need to be the main focus of improvement. If possible, the resources used can be diverted to improve indicators in

Quadrant I. Indicators in Quadrant IV are 4,,9 and 11.

Indicators in this quadrant are related to feature completeness, and security. Although the security features and system completeness have functioned very well, it turns out that not all customers consider this aspect to be very important. Therefore, the company can balance the allocation of resources, and consider shifting the focus to indicators that fall into

Quadrant I.according to (Sihotang & Oktarina, 2022) indicators in Quadrant IV should be monitored regularly, and if there are changes in customer perceptions of the importance of these indicators, adjustments to the strategy can be made. Thus, indicators 4, 9, and 11 should be maintained but do not need to get a large improvement allocation, unless their level of importance changes in the future.

5. Conclusion

Based on the results of the research that has been conducted, it can be concluded that there is a positive relationship between electronic service quality and customer satisfaction of PLN Mobile application users in UP3 Bogor. The CSI value of 77.95% indicates that the level of customer satisfaction is in the satisfied category. The dimensions of efficiency and conformity to expectations are the most dominant factors in shaping positive perceptions of PLN Mobile services.

IPA analysis shows that indicators in Quadrant I are the most important priorities to immediately improve service quality because they are considered very important by customers but their performance is still not optimal. On the other hand, there are seven indicators that are in line with customer expectations and need to be maintained.

Overall, good electronic service quality will contribute directly to increasing customer loyalty and satisfaction. Therefore, PT PLN (Persero) is expected to continue to improve the quality of the PLN Mobile application to make it more responsive, secure, and informative according to user expectations.

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THE EFFECTIVENESS OF SKINTIFIC PRODUCT ADVERTISING THROUGH TIKTOK SOCIAL MEDIA USING THE EPIC METHOD (CASE STUDY IN BOGOR CITY)

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Abstract

Social media has changed the way we interact, communicate, and even do business. The increasing number of social media users every year, especially TikTok in Indonesia, business competitors need to optimize their performance with various special strategies to increase advertising effectiveness. The purpose of this study is to analyze the effectiveness of skintific product advertising through TikTok social media. This study is an exploratory descriptive study, with qualitative data types and data sources derived from primary and secondary data. The sampling method in this study is non-probability sampling with a purposive sampling technique. The sample in this study was 100 respondents. The data analysis method used is descriptive analysis by conducting validity and reliability tests using SPSS 25 and calculating the results for the EPIC rate. The results showed that the level of effectiveness of skintific product advertising through TikTok social media using the EPIC method had an overall EPIC model value of 3.50. So based on the decision position, the value of 3.50 is in the range of 3.40 - 4.20 which means that the level of effectiveness of skintific product advertising falls into the effective criteria. The most dominant indicator is communication which has a score of 3.65.

Keywords: Advertising effectiveness, Tiktok social media, EPIC Model

1. Introduction

The development of information technology is increasingly rapid and affects almost all aspects of life today, the internet is no longer something foreign to society. The presence of the internet seems to eliminate the limits of distance and time to obtain information, everyone can also communicate with other people in any country. Social media has become an inseparable part of the daily lives of Indonesians. From TikTok, Instagram and other platforms, it has changed the way we interact, communicate and even do business. In recent years, Indonesia has become one of the biggest markets for platforms like Facebook, Twitter and YouTube. In fact, local platforms such as Tiktok and Gojek have become very popular among Indonesian users. Social media has changed the way we communicate and interact with each other. From small moments in daily life to expressing political opinions, social media has become the main platform for self-expression and information dissemination (Noor, 2024).

Indonesia ranks third in the largest number of internet users in Asia with more than 200 million users, which shows that the number is significant in the Asian region. TikTok has experienced rapid growth in Indonesia. In January 2024, the number of TikTok users in

Indonesia reached 126.83 million. Indonesia is the country with the second largest TikTok users after the United States. TikTok's popularity in Indonesia is also supported by the integration of TikTok Shop which is getting stronger, especially after establishing a strategic partnership with Tokopedia. With a growing number of users and a strong *e-commerce* strategy, TikTok continues to be one of the most influential platforms in Indonesia, not only as social media but also as a key tool for business.

TikTok as a *social media platform* is very beneficial and makes it easier for Skintific to disseminate information. The rapid and wide spread of information can be described as a virus that quickly spreads from one person to another. Similarly, videos or content from Skintific quickly spread from one *audience* to another. Skintific has been present in Indonesia since late 2021 and is now growing rapidly. Since last year, it has been highly sought after by *skincare* lovers and has gone viral on social media. As such, beauty brand Skintific offers products that help strengthen the skin barrier and address various skin concerns. In a competitive *skincare* market, businesses like Skintific must implement effective marketing communication strategies.

In December 2023 Skintific achieved the highest sales value of 400 million in the *double date* period, Skintific's sales experienced a significant increase compared to *normal day* with a percentage increase of 53.5%. But in January-March 2024, Skintific's sales value fluctuated compared to 2023. This makes Skintific products have to optimize their performance with various special strategies to increase the effectiveness of advertising on Skintific products.

Based on the pre-survey data regarding the effectiveness of Skintific product advertisements through TikTok social media using the EPIC method, it is found that overall the Skintific content displayed gets a very good response from respondents. In the *Empathy* indicator question, all respondents (100%) agreed that the promotion of Skintific content on TikTok attracts attention, which shows that the appearance and creativity of the content has succeeded in attracting attention. In the *Persuasion* indicator question, the majority of respondents (11 out of 15 people) felt encouraged to buy the product after seeing the advertisement, although there were still a small number of respondents (11 out of 15 people) who felt encouraged to buy the product. content, although there are still a small number (4 people) who disagree. This indicates that the content has the potential to influence purchasing decisions, but needs to be improved to reach more potential consumers. Meanwhile, in the *Impact* indicator question, all respondents agreed that Skintific content provides knowledge about product benefits, which means that the educational message has been conveyed well. Similarly, in the *Communication* indicator question, all respondents considered that the messages conveyed in the content were clear and easy to understand. Overall, Skintific promotion through TikTok is considered effective in attracting attention, providing information, and influencing purchasing decisions, but there is still room for improvement in terms of persuasion of audiences related to content has the potential to influence purchasing decisions.

Based on the results of the pre-survey related to the reasons why respondents like content on TikTok social media, it is known that the majority of respondents (9 out of 15 people) like content on TikTok because it is short and not boring. This indicates that short videos are one of the main factors that attract users' attention. In addition, 4 respondents stated that they like TikTok because there is a lot of informative and educational content. Meanwhile, 2 other respondents considered that the content on TikTok was funny and entertaining. From these results, it can be concluded that the effectiveness in delivering

information through short videos is the main factor that makes users interested in watching content on TikTok social media.

2. Literature Review

2.1.Social Media

Social media is an online *platform* that allows users to communicate, share information, and interact with each other. Social media takes many forms, including social media such as Facebook, Instagram, Twitter, and LinkedIn, as well as online forums, blogs, and location-based applications according to Jamaludin, et al., 2022 in Hasniaty et al., (2023).

2.2.Advertising

According to Firmansyah (2020) Advertising is one of the most common tools used by companies to direct persuasive communication to target buyers and the public. Advertising is basically part of modern industrial life. The life of the modern world today is highly dependent on advertising.

The purpose of advertising in the book Durianto et al (2003) explains that in general, advertising is in the form of a presentation of non-personal information about a product, brand, company, or store that is run with compensation for these costs. Thus, advertising is a communication process that aims to persuade or lead people to take actions that are profitable for the ad maker.

2.3.Advertising Effectiveness

According to Durianto et al (2003), advertisements that are delivered should be mixed in such a way that the message to be conveyed is easy to digest and understand by the public, and contains correct information. If the message of an advertisement can be deeply imprinted in the minds of consumers, and consumers look at it from the right perspective, then it means the work of market mechanisms. This phenomenon in marketing is known as "effective advertising".

2.4.EPIC Model

According to Durianto et al (2003), the effectiveness of advertising can be measured using the EPIC Model, which includes four dimensions, namely: *Empathy*, *Persuasion*, Impact and *Communication* (*EPIC).*

3. Research Method

This research is *exploratory* descriptive research, with qualitative data types and data sources derived from primary data and secondary data. The sampling method in this study was *non-probability sampling* with *purposive sampling* technique. The sample in this study were 100 respondents. The data analysis method used is descriptive analysis by conducting validity tests and reliability tests using SPSS 25 and calculating the results for the EPIC rate.

4. Results And Discussion

Table 3. Results of the EPIC Model Value of *Empathy* Indicators

No	Statement	Score Value
1	Skintific ads are easy to understand	3,69

2	Skintific ads are able to attract attention	3,53
3	Skintific ads manage to make you happy about the ad	3,40
4	Skintific ads are able to attract interest in re-viewing the ad	3,32
5	give a positive assessment of Skintific's advertisements on social media Tiktok	3,47
6	Skintific ads understand needs better than other ads	3,08
Total Average Score		**3,41**

The table above is a table of EPIC value scores for the *empathy* indicator model, it can be concluded that overall Skintific advertisements on Tiktok social media are in the Effective category with an average score of 3.41. This shows that Skintific advertisements are able to build a fairly good emotional connection with the audience.

The table shows each statement item and the score value obtained. However, of the six statements, there is one statement that gets the lowest score, namely the statement that "Skintific ads understand needs better than other ads" with a score of 3.08. with a score of 3.08. The score shows that although the ads are considered attractive and acceptable to the audience, there is still a gap in terms of conveying more empathy towards the audience's needs. Therefore, Skintific needs to improve the aspect of understanding consumer needs.

Table 4. Results of EPIC Model Score for *Persuasion* Indicator

No	Statement	Score Value
1	Skintific's advertisements succeeded in attracting my interest to know more about the product	3,37
2	Skintific's advertisement successfully conveys a trustworthy message	3,62
3	The Skintific ad succeeded in appealing to my feelings	3,20
4	Skintific's advertisement succeeded in attracting interest in buying its products	3,42
5	The suitability of Skintific advertisements with reality/reality	3,65
6	Skintific advertisements on Tiktok are able to provide an explanation that the products offered have advantages products offered have advantages	3,63
Total Average Score		**3,48**

The table above is a table of EPIC value scores for the *persuasion* indicator model, it can be concluded that overall Skintific advertisements on Tiktok social media are in the Effective category with an average score of 3.48. Of the six statements, there is a statement that gets the lowest score, namely the statement that "Skintific ads managed to captivate my feelings" with a score of 3.20, the lowest among the other six statements, which shows that the emotional aspect of attracting audience feelings is still not very strong.

There are five other statements that show higher scores, indicating that the ad is considered quite capable of strengthening product character, building trust, and delivering messages well. Thus, although the overall *persuasion* aspect is effective, Skintific still has room to further improve the appeal to make the ad more capable of appealing to the audience's feelings more deeply.

Table 5. Results of EPIC Model Value of *Impact* Indicator

No	Statement	Score Value
1	Knowing the Skintific advertising brand on Tiktok social media	3,79
2	Skintific ads help you know how to use the product	3,82
3	Skintific advertisements help to know the various benefits of its products	3,80
4	Skintific advertisement is the first choice to buy Skincare/makeup	3,03
5	Skintific ads present creative and easy-to-understand messages	3,59
6	Remember the creativity of Skintific ads more than other product ads other products	2,91
Total Average Score		**3,49**

The table above is a table of EPIC model value scores for *impact* indicators, it can be concluded that overall Skintific advertising on Tiktok social media is in the Effective category with an average score of 3.49. It is known from the six existing statements, there is a statement with the lowest score, namely the statement "More remember the creativity of Skintific advertisements than other product advertisements" with a value score of 2.91. This score shows that the creativity aspect in Skintific advertisements is still less prominent in the eyes of the audience, so the memory of the uniqueness of the advertisement is not strong.

The overall *impact* indicator remains in the effective category, this result indicates that there is a need for improvement in terms of creativity so that Skintific advertisements not only provide information, but can also be more memorable by the audience.

Table 6. Results of the EPIC Model Value of *Communication* Indicators

No	Statement	Score Value
1	Skintific ads are easy to remember	3,54
2	Skintific ads use language that is easy to understand	3,74
3	Skintific ads contain clear information	3,73
4	Skintific ads provide a clear image display	3,76
5	The visuals and narration in the ad are interesting to watch until the finished	3,44
6	Music, sound, or effects in the ad help convey the message better message better	3,70
Total Average Score		**3,65**

The table above is a table of EPIC model scores for *communication* indicators, it can be concluded that overall Skintific advertisements on Tiktok social media are in the Effective category with an average score of 3.65. Of the six statements, there is one statement that gets the lowest score, namely the statement that "Visuals and narratives in advertisements are interesting to watch until completion" with a value score of 3.44. This indicates that although the message conveyed by the Skintific advertisement is quite clear and understandable, the visual and narrative appeal aspects have not been fully able to maintain audience attention until the end of the video.

From the explanation above, it can be concluded that Skintific's advertisements on Tiktok are overall classified as effective, with indicators of *empathy*, *persuasion*, *impact*, *communication* showing an average value in the effective category. However, there are still several statements that have low value scores.

Table 7. EPIC Score

No.	**EPIC Model**	**Score**	**Description**
1	*Empathy*	3,41	Effective
2	*Persuasion*	3,48	Effective
3	*Impact*	3,49	Effective
4	*Communication*	3,65	Effective

Source: Data processed by researchers, 2025

Table 8. Rating Scale

Rate	**Description**
1,00 - 1,80	VIE (Very Ineffective)
1,81 - 2,60	NE (Not Effective)

2,61 - 3,40	ME (Moderately Effective)
3,41 - 4,20	E (Effective)
4,21 - 5,00	SE (Very Effective)

Source: (Ahmad & Megayani, 2020)

$$EPIC\ Rate = \frac{X\ Empathy + X\ Persuasion + X\ Impact + X\ Communication}{4}$$

$$EPIC\ Rate = \frac{3{,}41 + 3{,}38 + 3{,}49 + 3{,}65}{4} =$$

$$= 3{,}50$$

The final result of the EPIC rate is 3.50 which if entered into the rating scale is-included in the effective category.

The results of this study are the same as previous research conducted by Kembang et al (2024) which examined the analysis of the effectiveness of Shopee advertisements using the EPIC Model and obtained research results showing that the EPIC model value of 4.14 is in the range of 3.41-4.20 with the effective category. Further research was conducted by Wulandari (2019) which examined the effectiveness of el's coffee advertisements using the EPIC Model and obtained research results which showed that the EPIC model value of 3.75 which means that it falls into the scale range with the effective category.

5. Conclusion

Based on the results of the research conducted and the discussion that has been obtained, it can be concluded that the level of effectiveness of Skintific product advertising through Tiktok social media using the EPIC method as a whole is 3.50, which means that the level of effectiveness of Skintific product advertising through Tiktok social media using the EPIC Method (Case study in Bogor city) falls into effective criteria. Then**, the** most dominant indicator is the *communication* indicator which gets a score of 3.65, which means it falls into the effective criteria.

The level of effectiveness in this study falls into the effective criteria, but there are still indicators that score below the average, namely the *empathy* indicator with a score value of 3.41. Which needs to strengthen understanding of consumer needs and create attractiveness by presenting more personalized and relevant content. The most dominant indicator is the *communication* indicator, but the *impact* indicator w824

ith the measure "More remember Skintific's advertising creativity than other product advertisements" has the lowest value score compared to the measures in other indicators. The suggestion to Skintific is that Skintific can design more creative and different advertising concepts, by combining innovative elements and adjusting to the trends that are currently viral on TikTok.

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THE RELATIONSHIP BETWEEN WORK ENVIRONMENT AND EMPLOYEE JOB SATISFACTION AT THE TIRTA PAKUAN REGIONAL PUBLIC COMPANY IN BOGOR CITY

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Abstract

This research was conducted at the Regional Public Company Tirta Pakuan, Bogor City, which consists of independent variables, namely the Work Environment and dependent variables, namely Employee Job Satisfaction, this study aims to determine the state of the work environment with employee job satisfaction at the Regional Public Company Tirta Pakuan, Bogor City. The research was conducted using quantitative methods. The research sample was 32 employees of the Regional Public Company Tirta Pakuan, Bogor City. The type of research used a quantitative approach through distributing questionnaires. Using primary and secondary data, the data analysis method used descriptive analysis, and the data analysis method used correlation coefficient analysis and determination coefficient analysis, validity test analysis and reliability test using IBM SPSS Statistics 25. The results of the analysis show that the data from the descriptive analysis at the Regional Public Company Tirta Pakuan, Bogor City regarding the Work Environment obtained that the results of the Spearman rank correlation coefficient test, obtained an r value or correlation value of = 0.451. Which shows that the level of relationship between the work environment and employee job satisfaction is in the moderate category. So it can be concluded that there is a positive relationship between the work environment and employee job satisfaction at the Regional Public Company Tirta Pakuan, Bogor City.

Keywords: Work Environment, Job Satisfaction

1. Introduction

Amidst increasingly fierce global competition, companies are required to operate more efficiently and effectively. To survive, companies need to continuously improve their competitiveness. As organizations, companies recruit individuals known as employees to carry out the company's production activities. Without proper human resource management within an organization or company, established goals will be difficult to achieve consistently. Human resources are a crucial element in any organization or company. For effective management, companies need employees who understand and master their field of knowledge and possess high skills. Furthermore, companies must strive to optimally manage their operations to improve employee performance. In today's business era, organizations no longer view employees merely as a means to an end. They are also beginning to pay attention to their employees' needs, desires, and expectations. Every organization needs employees who are able to increase their own job satisfaction in carrying out their duties. Employees who are satisfied with their work will view work as something enjoyable.

Job satisfaction in an organization indicates the extent to which employees enjoy their work. An employee's attitude toward their work can be seen from their emotional responses and reactions to it. According to (Afandi, 2021), job satisfaction is an emotional response to various work factors and an employee's feelings about whether or not a job is enjoyable. Generally, regarding a person's work, it shows the difference between the amount of rewards received by workers and the amount they believe they should receive. Feelings related to a person's self-worth, such as age, health, abilities, and education, will influence job satisfaction. Employees will feel satisfied if These factors support their work, but conversely, if these factors do not support them, employees tend to feel dissatisfied.

Previous research conducted by Prayogo (2019) states that job satisfaction is an emotional attitude that is pleasant and loves one's job. Employee job satisfaction must be created as well as possible so that employee morale, dedication, and discipline can increase. According to Hanum et al. (2021), job satisfaction indicates that the expectations and benefits received after completing the job are aligned. "It is often associated with the number of likes and dislikes of workers." Work enthusiasm, discipline, and performance all reflect this approach. Furthermore, "job satisfaction is an emotional attitude towards the tasks performed.

Employee job satisfaction level in 2024. Based on the table, it can be seen that the level of employee job satisfaction for one year, obtained from the results of the questionnaire that has been carried out at PERUMDA Tirta Pakuan, Bogor City is still not good, Some employees feel not completely satisfied with the salary given by the company, coupled with some employees who feel that the relationship with coworkers is not completely good, so they feel less satisfied in their work. PERUMDA Tirta Pakuan, Bogor City employees need to have the right abilities and competencies to carry out their duties well. Improving individual performance will have a positive impact on the overall performance of human resources. HR competencies play an important role in helping individuals adapt to work effectively.

Creating a productive environment is no easy feat; it requires the active participation of every team member to naturally foster a comfortable and enjoyable work environment. A conducive work environment, where employees can collaborate, is crucial for improving their performance. The work environment is a crucial factor in determining employee performance, as it directly influences how employees complete their work, ultimately improving the agency's performance. Careful attention must be paid to the work environment to ensure optimal, healthy, safe, and comfortable work. Conversely, neglecting the work environment can reduce employee motivation and enthusiasm, impacting their performance.

According to Budiasa (2021;39), the work environment is everything surrounding employees while they are working, whether physical or non-physical, directly or indirectly, that can affect them and their work. Companies need to pay attention to the importance of a good work environment because it significantly impacts employee satisfaction. A comfortable and safe environment makes employees feel at home and focused on their work. The condition of the work environment also plays a crucial role in determining the quality of work results. A supportive work environment and smooth communication between employees will result in optimal performance.

Every employee needs a comfortable and clean work environment to support their job satisfaction. An unconducive work environment can lead to various negative impacts,

such as decreased work morale, high absenteeism, and increased work errors. Organizations must avoid such situations as they can be detrimental to the continuity of their operations. Therefore, organizations need to create a safe, comfortable, and enjoyable work environment. Employee job satisfaction is greatly influenced by the conditions of the work environment within the organization. This is reflected in employees' attitudes and feelings, whether they feel comfortable or not. The attitudes that emerge, whether positive or negative, will depend on their experiences in the workplace.

Perumda Tirta Pakuan Bogor is a drinking water company owned by the Bogor city government, which serves the daily drinking water and toilet needs of Bogor residents. Every agency requires a good and comfortable environment. They believe that a clean and comfortable environment can indirectly encourage increased performance, motivation, and loyalty, leading to job satisfaction. Therefore, it is crucial for companies to pay attention to the welfare of their employees, one way of doing this is by paying attention to the condition of their workplace environment. The work environment for employees at the Perumda Tirta Pakuan Bogor City plant is still not optimal and does not fully support employee job satisfaction. Some employees appear dissatisfied with the room layout, which tends to appear untidy and unorganized. Furthermore, some employees feel uncomfortable with the hot temperature, and some sometimes choose to leave the room. This is due to the uncomfortable work environment, particularly the excessively hot room temperature, which disrupts their comfort while working.

In general, a person will feel comfortable and have high loyalty to the organization if their work provides satisfaction according to their expectations. This job satisfaction will encourage increased employee performance. This is in accordance with the opinion of Budiasa (2021), the work environment is everything around employees while working, whether physical or non-physical, directly or indirectly, which can affect the employee's self and work while working. According to Afandi (2021:66), the work environment is everything in the workers' surroundings that can influence them in carrying out their tasks, such as temperature, humidity, ventilation, lighting, noise, cleanliness of the workplace, and the adequacy of work equipment. The work environment can be defined as all the tools encountered, the surrounding environment where a worker is, his work methods, as influences on his work both as an individual and as a group.

2. Literature review

2.1.Job Satisfaction

Job satisfaction is a crucial aspect that every individual needs to have at work. This satisfaction is a personal one, meaning it isn't always constant and can be influenced by various factors, both internal and external to the work environment. Job satisfaction can wane just as quickly as it begins, so leaders need to pay closer attention to this.

According to Edy Sutrisno (2019, P.74) Job Satisfaction is an employee's attitude towards work related to work situations, cooperation between employees, rewards received at work, and matters relating to physical and psychological factors.

According to Prayogo (2019), job satisfaction is an emotional state characterized by a sense of enjoyment and love for one's work. Employee job satisfaction must be fostered to improve morale, dedication, and discipline.

According to (M. Afuan, 2021) job satisfaction is not only a part of work but can be described as life satisfaction, where if work is able to provide satisfaction then it is also able to provide satisfaction in life.

According to Weihric, Koontz (2019)*"Job satisfaction refers to experience the pleasure or liking felt by someone when they want something achieved"* (Job satisfaction refers to the experience of pleasure or enjoyment that a person feels when what he or she desires is achieved).

Menurut Robbins and Judge (2017:48) *"Job satisfaction is a feeling positive about work, that is resulting from an evaluation of its characteristics"* (Job satisfaction is a positive feeling towards work that arises after assessing various characteristics of the job).

From the various opinions of experts that have been explained, it can be concluded that job satisfaction is an attitude, view, or feeling that a person or employee has towards their work.

2.2.Work environment

The work environment is a crucial factor that organizations pay close attention to, as it directly impacts employee performance in carrying out their responsibilities within the company. A comfortable and supportive work environment will motivate employees to perform better and help achieve company goals. Conversely, a less than ideal work environment can impact employee satisfaction. Several experts defines the work environment as follows:

According to (Prasetyo, 2021), the work environment is all the equipment, materials, and work methods that a person encounters when working, both individually and in groups, along with their work arrangements.

According to (Ekawati, 2022) the work environment is the conditions around workers when workers carry out their duties, where these conditions have an influence on workers when carrying out their work in the context of carrying out company operations, because the work environment has an important role for workers so that they can complete their tasks effectively and efficiently.

According to (Latif et al., 2022), the work environment is the environment in which employees carry out their daily work. A conducive work environment will provide a sense of security and encourage employees to perform optimally.

According to Edward (2020)*"The work environment is a place where employees carry out their duties and is a working condition of employees who live and work together and continue continuously and produce memorable actions in carrying out each task and work"* (The work environment is a place where employees carry out their duties and is a working condition where employees live and work together continuously and produce impressive actions in carrying out each task and job).

According to McSherry and Pearce (2018) *"The work environment is used to designate the nearby conditions in which an employee work. The work environment could be composed of physical conditions, including office temperature, or equipment, such as personal computers. It could also be related to factors such as work procedures"* (The work environment is used to refer to the immediate conditions in which an employee works. The work environment can consist of physical conditions, including office temperature, or equipment, such as a personal computer. It can also relate to factors such as work procedures).

Based on the responses from the experts above, it can be concluded that the work environment includes everything in the environment around the organization that can influence employees when carrying out their duties, both visible and invisible things.

3. Research Methods

3.1 Types of research

This research uses a quantitative method by distributing questionnaires to respondents.

3.2 Research Objec

This study uses two variables as research objects, namely the Work Environment which acts as a variable *Independent* (X), and Job Satisfaction which is a variable *Dependent* (AND).

3.3 Unit of Analysis

The unit of analysis in this study is the individual, meaning the data obtained comes from individual respondents. The individuals in question are employees of the Tirta Pakuan Regional Public Company in Bogor City who work in the Customer Service and Public Relations Department, a total of 32 employees.

3.4 Research Location

The Tirta Pakuan Regional Public Company of Bogor City is located at Jl. Siliwangi No. 121, Sukasari, Kec. East Bogor, Bogor City, West Java 16142.

4. Research results

Table 4.1 Results of Respondents' Responses to Work Environment Variables

No	Indicator	Response Respondent	Rate-rate Indicators
	Description		
1	Requires sufficient lighting in the environment work	78 %	74%
2	getting enough light will make the environment be comfortable in the work environment	74%	
3	lighting levels increase work accuracy	68%	
	Air temperature		
4	a room with good air circulation will provide a positive effect for employees	74%	74%
5	a room with little air circulation can causing the officer to experience suffocation	75%	
	Noise Level		

6	Noise in the work environment must be minimized in such a way as not to disturb employees when working. Work	74%	74%
7	noise in the work space can be minimized accordingly what the company wants so that no errors occur in work	74%	
	Security		
8	comfort is a driving force in a activities in the work environment	75%	75%
9	Comfort in the work environment is necessary for an employee to achieve results. the maximum	73%	
10	Having good relations with other employees and superiors is one of the comforts of working	76%	
	Layout		
11	the layout looks neat and tidy	77%	73%
12	an area with a good layout will create work efficiency in increasing productivity high officials	70%	
	Rate-Rata	74%	

Based on respondents' responses regarding the work environment, an average score of 74% was obtained. This indicates that the work environment at PERUMDA Tirta Pakuan, Bogor City is in the good category. The indicator with the highest average value based on respondents' responses is the security indicator with a percentage of 75% while the indicator with the lowest average value is the layout indicator with a percentage of 73%. For the sub-indicator with the highest average value of respondents' responses, namely Requires adequate lighting in the work environment with a percentage of 78%. Meanwhile, for the sub-indicator with the lowest average response of respondents, namely the level of lighting increases work accuracy with a percentage of 68%.

Table 4.2 Average Results of Respondents' Responses to Job Satisfaction Variables

No	Indicator	Response Respondent	Rate-rate Indicators
	The Job Itself		
1	able to complete the work assigned to me	76%	74%

2	satisfaction with one's own work results	73%	
	Salary		
3	the level of fairness in salary distribution is good	74%	74%
4	salary according to workload	75%	
5	the provision of incentives	73%	
	Supervision		
6	employees feel that supervision in the workplace is carried out effectively	78%	75%
7	employees feel that supervision in the workplace done fairly and objectively	74%	
8	Employees feel that the current monitoring system helps in achieving organizational goals.	73%	
	Work colleague		
9	harmonious relationship between one officer and one officer other	78%	74%
10	the level of communication with colleagues is good	74%	
11	friendly attitude towards fellow employees	72%	
	Rate-rate	74,25%	

Source: primary data, processed 2024

Based on respondents' responses regarding job satisfaction, an average score of 74.25% was obtained. This indicates that employee job satisfaction at PERUMDA Tirta Pakuan, Bogor City is in the good category, the indicator with the highest average respondent response is the Supervision indicator with a percentage of 75%. Meanwhile, the indicator with the lowest average value is the Work Itself with a percentage of 74%. For the sub-indicator with the highest average respondent response value, namely employees feel that supervision in the workplace is carried out effectively and harmonious relationships between one employee and another with a percentage of 78% while for the sub-indicator with the lowest average respondent response is a friendly attitude towards fellow employees with a percentage of 72%.

4.1.Spearman Rank Correlation

The research used two variables, namely Work Environment (X) and Job Satisfaction (Y), calculated using the Spearman rank method using SPSS software. This can be seen in the following table:

Table 4.3 Spearman Rank Correlation

Correlations

			Lingkungan	Kepuasan
Spearman's rho	Lingkungan	Correlation Coefficient	1.000	.451**
		Sig. (2-tailed)	.	.010
		N	32	32
	Kepuasan	Correlation Coefficient	.451**	1.000
		Sig. (2-tailed)	.010	.
		N	32	32

Table 4.4 Guidelines for Interpretation of Spearman's Rank Correlation Coefficient

Correlation Coefficient and interpretation of the coefficient interval	Level Connection
0,00-0,199	Very Low
0,20-0,399	Low
0,40-0,599	Currently
0,60-0,799	Strong
0,80-1,000 (0,959)	Very strong

Source: Sugiyono, 2017

Based on the results of table 4.31 regarding the results of the Spearman rank correlation coefficient analysis test, the r value or correlation value was obtained as = 0.451, which indicates that the level of relationship between the Work Environment and Employee Job Satisfaction is in the moderate category.

4.2.Coefficient of Determination

The determination coefficient test aims to determine how much the independent variable is able to explain the dependent variable as seen through Adjusted R. The larger the r number, the better the model used to explain the relationship between the independent variable and the dependent variable.

Table 4.5 Results of the Determination Coefficient

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.963[a]	.927	.924	1.264

a. Predictors: (Constant), Lingkungan

Source: *Results of processing questionnaire data using SPSS 25*

Based on table 4.32, the R Square value is 0.927. This means that 92.7% of the job satisfaction variable is influenced by the work environment variable (X), while the remaining 8.3% is influenced by other factors not included in this study.

4.3.Discussion

4.3.1. Employee Work Environment at Perumda Tirta Pakuan Bogor

The work environment is an important factor that is a major concern for organizations, because it directly influences employee performance in carrying out their responsibilities.

Research conducted at the Bogor City Regional Public Company (PERUMDA) Tirta Pakuan showed that some employees were still dissatisfied with the layout of their offices, which tended to appear untidy and unorganized. This was due to the uncomfortable environment.

These results indicate that most respondents' responses are in the 61%-80% interval, meaning the work environment at PERUMDA Tirta Pakuan, Bogor City, is considered good. This is evident from the many positive responses related to indicators such as lighting, air temperature, noise level, security, and layout. The highest responses were found in the lighting and layout indicator for the statement "adequate lighting in the work environment is needed" at 78% and the statement "the layout looks neat and orderly" at 77%. Meanwhile, the lowest responses were found in the lighting and layout indicator for the statement "the level of lighting increases work accuracy" at 68% and the statement "the layout looks neat and orderly" at 70%. This indicates that the indicators with the lowest scores need attention and improvement, so that work can run smoothly according to the company's expectations. A comfortable work environment creates a sense of security and allows employees to work optimally. When employees feel happy with the environment in which they work, they will feel at home, carry out their duties well, and utilize work time efficiently. Conversely, if the work environment If the environment is not supportive, it can negatively impact employee performance. A good work environment will positively influence employee performance. Therefore, improving the work environment can encourage increased performance. Therefore, weaknesses in work environment indicators need to be addressed immediately to create a comfortable work environment that meets employee expectations.

4.3.2. Job Satisfaction of Perumda Employees

Job satisfaction is an important aspect of work. Job satisfaction is individual in nature, meaning that it is not a fixed state, as it can be influenced and changed both inside and outside the work environment. Based on the descriptive analysis of respondents' responses regarding the job satisfaction variable, the score was 74.25%.

This result indicates that most respondents' responses were in the 61%-80% range, indicating that job satisfaction at PERUMDA Tirta Pakuan, Bogor City, is considered good. This is evident from the numerous positive responses related to indicators such as the work itself, salary, supervision, and coworkers.

The highest response was found for the supervision indicator, which stated, "Employees feel that supervision in the workplace is carried out effectively," at 78%. Meanwhile, the lowest response was found for the coworkers indicator, which stated, "Friendly attitude towards fellow employees," at 72%.

This indicates that the indicator with the lowest score needs attention and improvement so that work can run smoothly according to company expectations. Job satisfaction reflects an employee's attitude toward their work, which is influenced by the work environment, relationships between coworkers, rewards received, and physical and psychological factors.

who joined him.

To improve employee job satisfaction, sub-districts must evaluate their work. They must identify the causes of declining employee job satisfaction and the factors that contribute to its improvement.

4.3.3. The Relationship between Work Environment and Job Satisfaction of Employees at PERUMDA Tirta Pakuan, Bogor City

The results of research at PERUMDA Tirta Pakuan, Bogor City regarding the work environment showed that the results of the Spearman rank correlation coefficient analysis test obtained an r value or correlation value of = 0.451. This indicates that the level of relationship between the work environment and employee job satisfaction is in the moderate category.

Based on table 4.32, the R Square value is 0.927. This means that 92.7% of the job satisfaction variable is influenced by the work environment variable (X), while the remaining 8.3% is influenced by other factors not included in this study.

The results of the descriptive analysis of the two variables from the total average score on several indicators have been calculated for the average result on the work environment variable of 74% and for the job satisfaction variable the average result value of the indicator is 74.25%. In the work environment variable, the indicator that has the highest value is in the lighting and layout indicator in the statement "requires sufficient lighting in the work environment". by 78% and the statement "the layout looks neat and orderly" by 77%. While the lowest average value of respondents' responses is in the lighting and layout indicator in the statement "the level of lighting increases work accuracy" by 68% and in the statement "the layout looks neat and orderly" by 70%. In the job satisfaction variable, the indicator that has the highest value is in the supervision indicator in the statement "employees feel that supervision in the workplace is carried out effectively" by 78%. While the indicator that has the lowest value is in the co-worker indicator in the statement "friendly attitude towards fellow employees" by 72%.

It can be concluded that in this study, there is a relationship between the work environment and employee job satisfaction, which is in the moderate category. This indicates that when PERUMDA Tirta Pakuan employees have a good work environment, this includes: supervision and layout so that it can improve the employee work environment, but when employees have a low level of work environment, the level of job satisfaction will not be optimal.

The results of this study are supported by previous research conducted by Afifah Amalia Daulay (2023) & The Relationship Between Work Environment and Job Satisfaction in Employees of the National Narcotics Agency of North Sumatra Province and the results of the study show that there is a positive relationship between the work environment and job satisfaction.

5. Conclusion

Based on the discussion in chapter IV, it can be concluded that the work environment is related to employee job satisfaction, which was analyzed using SPSS (*Statistical Package for Social Science*) version 25, with the following conclusion:

1. Based on the results of descriptive analysis in the work environment research, an average value of 74% was obtained with the highest average value obtained by the security indicator at 75%, and the lowest value obtained by the layout indicator at 73%. For values that get a percentage below the average, the indicator and sub-indicator need to be improved, while for values that get a percentage above the average, the indicator or

sub-indicator needs to be maintained. Based on the results of the average respondent responses above, it can be concluded that the work environment of PERUMDA Tirta Pakuan Kota Bogor employees is good.

2. Based on the results of descriptive analysis in the Job Satisfaction study, an average value of 74.25% was obtained with the highest average value by the supervision indicator of 75%, and the lowest value obtained by the co-worker indicator of 74%. If the value of an indicator or sub-indicator is below average, then there needs to be an improvement in the indicator or sub-indicator. Meanwhile, if the value of an indicator or sub-indicator is above average, then the indicator or sub-indicator needs to be maintained. Based on the results of the average respondent responses mentioned, it can be concluded that job satisfaction at PERUMDA Tirta Pakuan, Bogor City has a good assessment.
3. The results of a descriptive analysis of the work environment at PERUMDA Tirta Pakuan show that the Spearman rank correlation coefficient test yielded an r value or correlation value of = 0.451. This indicates that the relationship between the work environment and employee job satisfaction is in the moderate category.

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THE EFFECT OF WORK MOTIVATION ON EMPLOYEE PERFORMANCE IN THE NETWORK DIVISION AND THE SUBSTATION OF PT. PLN (PERSERO) ULTG BOGOR

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Abstract

Human resources are the main element in the implementation of all company operational activities. Without the role of humans in it, the company will not be able to operate properly. The successful execution of this task is highly dependent on the optimal performance of the employees in volved in its various operational processes. One of the factors that affect this performance is work motivation. This study aims to determine the influence of work motivation on employee performance in the network division and substation of PT. PLN (Persero) ULTG Bogor. This study uses a type of verifiable research with an explanatory survey research method, and uses primary and secondary data. The sampling technique used is saturation sampling. Then the data analysis methods used were quantitative descriptive analysis, normality test, simple linear regression analysis, R square determination coefficient and (t) test. The analysis tool used using the IMB SPSS 26 tool. The results of the data research show that work motivation has a positive and significant effect on employee performance in the network division and substation of PT. PLN (Persero) ULTG Bogor is 39.6% and 51.4% is influenced by other variables that are not included in this study.

Keyword: Work Motivation, Employee Performance

1. Intoduction

Every company is highly dependent on the existence of human resources (HR) as the most important element in achieving the vision, mission, and goals that have been set. Human resources have an essential role because they are the core of the implementation of all company activities. Without reliable human resources have an essential role because they are the core of the implementation of all company activities. Without reliable human resource support, the company's entire operations will not be able to run optimally. Therefore, effective and efficient human resource management is an important thing to do so that organizational performance can be improved. HR also plays a role as the main driver in the process of achieving success, strategizing, and long-term planning of the company.

Companies are required to be able to handle human resource management properly and correctly in an effort to achieve good performance so that the company's expected results can be realized in accordance with the goal to be achieved. According to Moeherino (2020), performance describes the extent to which the implementation of an activity program, policy, or activity has succeeded in achieving the goals, vision, mission, and objectives of the organization that have been designed in an organization's planning strategy. An employee is considered to have good or optimal performance if his work results are in accordance with the set targets or meet the company's standards.

PT. PLN (Persero) is a state-Owned Enterprise (BUMN) engaged in the fulfilment and provision of national logistics needs. The research will be conducted at PT. PLN (Persero) ULTG Bogor which is part of the service unit of the Bogor Transmission Implementation Unit. This unit has a great responsibility in managing and maintaining installation assets to maintain

the continuity of electricity distribution in an efficient, reliable and environmentally friendly manner for the people of Bogor and its surroundings. The successful execution of this task is highly dependent on the optimal performance of the employees involved in its various operational process. The following is data on the results of employee performance achievements at PT. PLN (Persero) ULTG Bogor:

Table 1.1 Employee Performance of PT. PLN (Persero) ULTG Bogor

NO	PERFORMANCE INDICATORS	2022 SEMESTER 1					2022 SEMESTER 2				
		WEIGHT	TARGET	REALIZATION	%	SCORE	BOBOT	TARGET	REALIZATION	%	SCORE
1	TLODD	15	0,6855	0,0814	110,00	22,00	20	1.3709	0,2479	110,00	22,00
2	TROD	15	0,1058	0,0000	110,00	22,00	20	0,2116	0,0155	110,00	22,00
3	TLOF	10	0,2482	0,1628	110,00	13,20	12	0,4964	0,4885	101,57	12,18
4	TROF	10	0,0540	0,000	110,00	13,20	12	0,1080	0,0227	110,00	13,20
5	Transmission Availability Factor (TROIF = CCAF)	10	99,88	99,89	100,00	7,00	7	99,88	99,92	100,03	7,00
6	Maturity Level Enterprise Risk	10	3,38	3,46	102,36	5,11	5	3,43	3,67	106,99	5,34
7	Supporter HR Management	6	100,00	100,00	100,00	4,00	4	100,00	100,00	100,00	4,00
8	Protection Performance	3	100,00	103,11	103,10	4,12	4	100,00	102,96	102,95	4,11
	a. Security Index		98,00	99,54	101,57			98,00	99,54	101,57	
	b. Dependability Index		98,00	100,00	102,04			98,00	100,00	102,04	
	c. Auto Reclose Index		95,00	100,00	105,26			95,00	100,00	105,26	
9	CBM Power Plant and Timeliness of Report Submission	3	100,00	100,00	100,00	4,00	4	100,00	100,00	100,00	4,00
10	CBM Network and ROW Sampling	2	100,00	100,00	100,00	4,00	4	100,00	100,00	100,00	4,00
11	Follow-up Recommendations for Interference Handling	2	100,00	100,00	100,00	4,00	4	100,00	100,00	100,00	4,00
12	Problem Solving of Big Tree Work Program Interference	3	100,00	95,62	95,62	4,00	4	100,00	100,00	100,00	4,00
13	Compliance					0,00					(-0,20)
	a. OHS, Security, and Environmental Management	Max-8				0,00	Max-8				0,00
	b. Compliance Maturity Level	Max-2				0,00	Max-2				0,00
	c. Control of Major Material Damage, APPJ Issues, and Tree Interference	Max-2				0,00	Max-2				(-0,20)
	TOTAL					106,45	100				105,63

NO	PERFORMANCE INDICATORS	2022 SEMESTER 1					2022 SEMESTER 2				
		WEIGHT	TARGET	REALIZATION	%	SCORE	WEIGHT	TARGET	REALIZATION	%	SCORE
1	TLODD	10	0,0265	0,0000	110,00	11,00	10	0,0530	0,0299	110,00	11,00
2	TROD	10	0,0050	0,0000	110,00	11,00	10	0,0100	0,0052	110,00	11,00
3	TLOF	10	0,1555	0,0000	110,00	11,00	10	0,3109	0,1628	110,00	11,00
4	TROF	10	0,02590	0,0000	110,00	11,00	10	0,05190	0,0476	108,24	10,82
5	Emergency Response Time	9	0,22	0,00	110,00	9,90	9	0,22	1,64	(-557,49)	0,00
6	Transformer and Transmission Factor	10					10				
	Transformator Availability Factor (TRAF)		97,-6	99,84	102,86	5,14		97,06	99,89	102,91	5,14
	Transmission Availibility Factor (Circuit Availibility Factor = CCAF)		99,88	99,88	100,00	5,00		99,88	99,93	100,05	5,00
7	Protection Control Security	9	1,00	2	0,00	0,00	9	2,00	3	50,00	4,50
8	Data Completeness for Vertical and Horizontal Integration Digitalization (End to End System Planning Based on Single Geospatial Map)	8	100,00	100,00	100,00	8,00	8	100,00	100,00	100,00	8,00
9	Validation of PLN Land Asset Objects	8	100,00	100,00	100,00	8,00	8	100,00	100,00	100,00	8,00
10	Fulfillment of Risk Maturity Index (MRI)	8	3,73	3,90	104,55	8,36	8	3,79	4,10	108,17	8,65
11	HR Management Support	8	100,00	100,00	100,00	8,00	8	100,00	100,00	100,00	8,00
12	Compliance		0,00	(-0.20)	0,00	(-0.20)		0,00	(-0.23)	0,00	(-0.23)
	a. Management of OHS, Security, and Environment	Max-8				0,00	Max-8				0,00
	b. Compliance Maturity Level	Max-4				0,00	Max-4				0,00
	c. Maintenance Implementation	Max-10				0,00	Max-10				(-0,03)
	d. Control of Main Material Damage, Disturbances from APPL, and Tree-related Disturbances	Max-10				(-0.20)	Max-10				(-0,20)
	e. Completion of Document Requirements for Transmission System SLO	Max-10				0,00	Max-10				0,00
	TOTAL	100				96,20	100				90,89

Source: PT. PLN (Persero) ULTG Bogor, 2024

Based on Table 1.1 above, it is known that the performance achievement of employees at PT. PLN (Persero) ULTG Bogor experienced a decline. From the data, in the first semester of 2022, the performance reached 106.45%, and in the second semester of 2022, employee

performance was 105.63%. However, in the first semester of 2023, it decreased to 96.20%, and further dropped in the second semester of 2023 to 90.89%.

From the employee performance data, it can be seen that there were issues regarding employee performance due to this decline in 2023. Good performance is of course a key goal in every organization, as optimal performance will bring positive impact to the overall achievement of organizational goals. The following is the employee performance standard data at PT. PLN (Persero) ULTG Bogor:

Table 1.2 Employee Performance Assessment Standard of PT. PLN (Persero) ULTG Bogor

No	Score (%)	Category
1	Performance ≥ 100	Achieved
2	95 ≤ Performance ≤ 100	Almost Achieved / Caution
3	Performance < 95	Needs Improvement / Problematic

Source: PT. PLN (Persero) ULTG Bogor

It can be seen from table 1.2 that the company has established a standard performance outcome for all employees, assumed to be the same. The performance evaluation results from previous data indicate that employee performance at PT. PLN (Persero) ULTG Bogor has experienced a decline. In 2022, performance was categorized as "achieved", while in 2023 it feel into the categories of "almost achieved/caution" and "needs improvement." The author also conducted a pre-survey of 30 employees of the network division and substation to see the problems that existed in the performance of their employees. The indicators used according to Robbins (2023) are quality, quantity, timeliness, effectiveness, and independence. The following are the results of a pre-survey regarding the performance of employees of the network division and substation of PT. PLN (Persero) ULTG Bogor:

Table 1.3 Pre-survey Employee Performance

No	Question	Yes	%	No	%
1.	Carry out work in accordance with standard operating procedures	30	100%	0	0%
2.	Always able to achieve the targets set by the company	23	76,7%	7	23,3%
3.	Getting the job done on time	18	60%	12	40%
4.	Leveraging resources in the workplace effectively and efficiently	26	86,7%	4	13,3%
5.	Have the initiative in carrying out work without having to wait for orders from superiors	14	46,7%	16	53,3%

Source: Primary Data, processed 2024

Based on the results of the pre-survey in table 1.3, it is known that the performance of employee in the network and substation division of PT. PLN (Persero) ULTG Bogor is still not fully optimal. This can be seen from the answers of 18 employees who stated that they did not have the initiative to complete the work without having to wait for orders from their superiors. The success or failure of an organization depends heavily on the quality of its employees' performance. Therefore, in order for employee performance to be maintained and improved, companies need to pay attention to the various factors that affect that performance and create an environment that supports productivity. Mangkunegara (2020) stated that performance is influenced by 2 main factors, namely ability, and motivation. One of the important factors that can affect employee performance is work motivation.

High work motivation is indispensable to encourage employees to be enthusiastic and focused on the company's goals. Therefore, it is important for companies to understand the factors that affect work motivation and design the right policies to increase employee motivation. According to Mangkunegara (2020), employee work motivation includes physiological needs, security needs, social needs, the need for appreciation and the need for self-actualization. The following are the results of the pre-survey conducted by the author the work motivation of 30 employees of the network division and substation PT. PLN (Persero) ULTG Bogor:

Table 1.4 Results of the Work Motivation Pre-survey

No	Statement	Yes	%	No	%
1.	The salary received is enough to meet the needs of life	28	93,3%	2	6,7%
2.	The conditions of the workspace used are quite safe and comfortable	20	66,7%	10	33,3%
3.	Relationships between people and bosses are well established and not rigid	15	50%	15	50%
4.	Earn compliments/awards for satisfactory work	13	43,3%	17	56,7%
5.	Receive training to improve skills and career development	14	46,7%	16	53,3%

Source: Primary Data, processed 2024

Based on the table 1.4 regarding work motivation, there are some employees who are still less motivated at work. It can be seen that 17 employees answered no to the question "Getting praise/appreciation for satisfactory work results". Some employees still feel that giving praise/appreciation in the form of bonusses for satisfactory work results has not been able to provided encouragement or enthusiasm in work.

In addition to the phenomena and problems described above, there are several relevant results of previous research. Research by Suprapti and Muliate (2019) shows that work motivation has a positive and significant effect on the performance of employees of PT. PLN (Persero) Rayon Prigen. Similar research was also put forward by Ningsih, et al. (2020), which stated that work motivation has a significant influence on employee performance at PT. PLN (Persero) UPDK Mahakam. However, different results are shown by Wiryang's (2019) research which states that work motivation does not affect employee performance at PT. PLN (Persero) Manado Area. The same thing was also found by Setiawan, et al (2022) who stated that work motivation did not have a significant effect on the performance of employees of PT PLN (Persero) UPT Gresik.

Based on the above background, the purpose of this study is to find out and analyze the influence of work motivation on employee performance in the network division and substation of PT. PLN (Persero) ULTG Bogor.

2. Literature Review

2.1.Human Resource Management

Human resources are a very valuable asset and need to be managed optimally through human resource management, because human resources play a key role in carrying out various organizational activities. HR management encompasses a series of activities within an organization that aim to recruit, develop, and retain a competent workforce to support the achievement of organizational goals. In general, human resource management can be

interpreted as a form of a company's efforts to organize and manage its workforce systematically.

Mangkunegara (2020) stated that human resource management involves the stages of designing, organizing, implementing, and controlling activities such as recruitment, training, compensation, alignment, maintenance, and termination of employment, in order to support the achievement of company goals.

The functions of human resource management according to Afandi (2021) include:

1. Planning is an initial process that includes organizational goals as well as the selection of strategies, policies, projects, programs, procedures, methods, budget systems and benchmarks to achieve goals.
2. Organizing or organizing includes:
    1. Identify resource needs and design activities to support the achievement of organizational goals.
    2. Design an organizational structure or form a work team that is able to direct these processes and resources to a goal.
    3. Assign specific responsibilities according to their field of duties.
    4. Giving appropriate authority to each party so that they can complete the work optimally.
3. Staffing or personnel preparation is the process of recruitment, training and development, placement, and providing orientation that supports the creation of a healthy, productive, and mutually beneficial work environment.
4. Leading or directing function is how to make or influence employees to do what they have to do.
5. Controlling or supervision is a process to ensure that all activities have been carried out according to the plan, through the use of appropriate methods and evaluations so that they are in accordance with what has been set.

2.2.Work Motivation

Motivation is an attitude or action that encourages, arouses, and directs individual behavior towards meeting needs, satisfaction, and achieving goals, so that a person is encouraged to act optimally.

According to Afandi (2021), motivation is a desire that arises from within a person or individual because they are inspired, encouraged, and encouraged to carry out activities with sincerity, joy, and sincerity so that the results of the activities carried out get good and quality results.

Sutrisno (2019) stated that work motivation is influenced by 2 factors, namely internal factors and external factors. The explanation is as follows:

1. Internal Factors, are factors from within a person that can affect their motivation at work.
    a. The desire to be able to live is a need of every human being. To survive, one will be willing to do a variety of jobs.
    b. The desire to be able to have, is often a strong motivation for a person to work. For example, a person's desire to buy a car can be the main reason for the individual to work hard to make it happen.
    c. The desire to earn awards is also a factor that drives a person to work, because there is a desire for himself to be respected and appreciated by others.
    d. The desire to gain recognition, is also a driver for a person to do a job. In the world of work, the recognition includes appreciation for performance, the

existence of good and solid working relationships, fair and wise leadership and a positive image of the company in the eyes of the public.

e. The desire to be in power can be a reason for a person to work. In the work environment, power can be obtained through various means, including non-positive ones. However, individuals can also achieve positions or power in a healthy way through high ability and dedication, which can later attract the attention of superiors to give them trust in a position of power.

2. **External Factors,** are factors from outside a person that can affect the motivation of the person at work.
    a. The overall condition of the work environment, including the facilities and infrastructure available, can affect the way a person completes his or her tasks. Aspects such as work location, supporting facilities, cleanliness, lighting, tranquility, and relationships between fellow workers at work also determine comfort at work.
    b. Decent compensation, compensation is the main source of income for employees to meet their living needs. Providing appropriate compensation is one of the effective tools and strategies for companies to encourage employee morale and performance, because the amount of compensation is directly proportional to the level of employee motivation.
    c. Effective supervision, supervision aims to provide direction and support to employees so that they can complete their work well without making mistakes.
    d. Clear career certainty can increase a person's seriousness at work. When individuals feel that they have promising job prospects, such as promotion opportunities, promotions, or opportunities to develop self-competence, it will encourage them to work more optimally.
    e. Status and responsibility, not only expecting compensation but every employee certainly wants a certain status and position in their job.
    f. Flexible regulations, applicable regulations in the company have an important role and have the nature of regulating as well as protecting the rights and obligations of employees which include the employment relationship between employees and the company, including in terms of providing compensation, promotions, mutations, and so on.

According to Abraham Maslow, in Mangkunegara (2020), it is stated that the indicators of work motivation as in the theory of the hierarchy of human needs are as follows:

1. Physiological needs, namely the need to eat, drink, physical, breathe, and sexual.
2. The need for a sense of security, namely the need for protection from threats, dangers, conflicts, and the environment.
3. Social needs, namely the need to feel belonging, the need to be accepted by the group, to be affiliated, to interact, and the need to love and be loved.
4. The need for appreciation, i.e. the need to be respected, and appreciated by others.
5. The need to self-actualize, namely the need to use abilities, skills, and potential. The need to argue by putting forward ideas gives judgment and criticism of something.

2.3.Employee Performance

The company can achieve the goals that have been set with the efforts of its employees. Employee performance is critical to the survival of the organization. Performance is not just a

matter of quantity, but includes how individuals or groups in a company can achieve the goals that have been set, by paying attention to the efficiency, quality, and impact of the work.

According to Mangkunegara (2020), performance is the achievement of work results, both in terms of quantity and quality, which are completed by an employee based on the responsibilities given to him.

According to Mangkunegara (2020), the factors that affect employee performance are:

1. Ability factor Psychologically, an employee's ability consists of potential ability (IQ) and reality ability (knowledge skill). This means that employees who have an above-average IQ (IQ 110–120) with adequate education for their position and are skilled in doing daily work, then they will more easily achieve the expected achievements. Therefore, employees need to be placed in jobs that are in accordance with their skills.
2. Motivation factor Motivation is formed from an employee's attitude in dealing with work situations. Motivation is a condition of moving employees who are directed to achieve organizational goals (work goals).

According to Robbins in Glorinasmus (2023), performance indicators are tools to measure the extent of employee performance achievements. The employee performance indicators include:

1. Work Quality, Can be measured from employees' perception of the quality of work produced and the perfection of the task to the employee's skills and abilities. The quality of work can be described from the level of good and bad results of employees in completing the work as well as the ability and skills of employees in doing the tasks assigned to them.
2. Quantity is the amount achieved and expressed in terms of the number of units, the number of activity cycles completed. Quantity is a measure of the total work output of the unit as well as the number of activity cycles completed by employees so that employee performance can be measured through the number (units/cycles).
3. Punctuality is the level of activity completed at the beginning of the stated time, seen from the point of view of coordination with the output results and maximizing the time available for other activities. Employee performance can also be measured from the employee's punctuality in completing the work assigned to him.
4. Effectiveness is the level of use of organizational resources such as manpower, money, technology and raw materials maximized with the intention of increasing the results of each unit in the use of resources. That the use of human resources themselves as well as the technological resources, capital, information, and raw materials in the organization can be used as much as possible by employees.
5. Independence is the level of a person who will later be able to carry out his work functions without receiving help, guidance from or supervisors. This means that employees who are independent, namely employees who want to do their work, do not need to be supervised and can carry out their work functions without asking for help, guidance from other people or supervisors.

Based on the theories stated above, as well as some previous research that has been conducted. Work motivation is one of the factors that can affect employee performance. As per a study conducted by Azhari, et al. (2022) which states that work motivation affects the performance of employees of PT. PLN (Persero) Main Unit of the SULSELARBAR Region. Research conducted by Hasanah & Sa'diah (2022) states that work motivation affects the performance of employees of PT. PLN (Persero) ULP Daha. Another study conducted by Sinaga (2022) also states that work motivation affects the performance of employees of PT. PLN (Persero) UP3 Medan.

Based on the framework of thought that has been described above, a research constellation can be made, which is as follows:

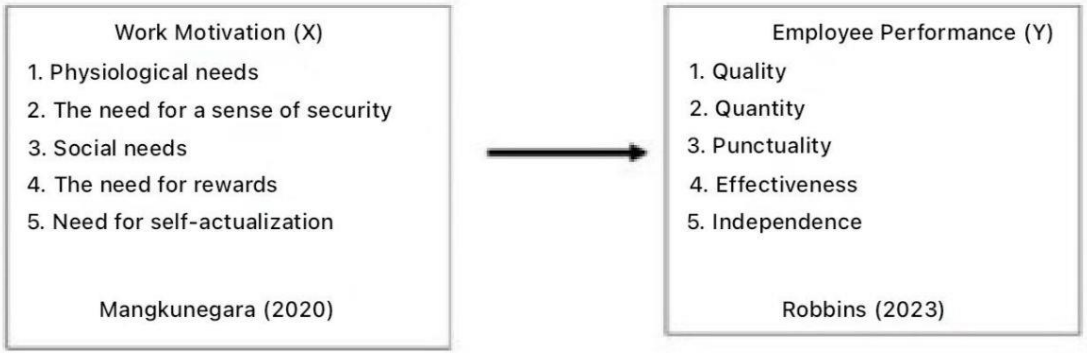

Figure 2.1 Research Constellation

Based on the formulation of the problem, the framework of thought, and the previous research that has been stated above, the author formulates the following hypothesis:

H1: It is suspected that work motivation has a positive effect on employee performance in the network and substation division of PT. PLN (Persero) ULTG Bogor.

3. Research Methods

The type of research used in this study is verifiable research. The method used in this study is an explanatory survey. The analysis techniques applied include descriptive statistics and inferential statistics. In its implementation, this study uses a regression method to determine the influence of independent and dependent variables. The main focus of this study is to analyze the extent of the influence of work motivation (X) on employee performance (Y).

The unit of analysis in this study is individual, where data is generated from each person/individual in a company. The individual in question is an employee at PT. PLN (Persero) ULTG Bogor network and substation division totaling 40 people.

The data collection method in this study is primary data obtained directly by the researcher from the respondents, namely employees of the network division and substation of PT. PLN (Persero) ULTG Bogor. This data was collected through the distribution of questionnaires containing questions related to work motivation and employee performance. Secondary data derived from books, journals, previous research and data obtained from PT. PLN (Persero) ULTG Bogor.

The data analysis method in this study is descriptive analysis. Next, the Classical Assumption Test consisting of the Normality Test, the Multicollinearity Test, and the Heteroscedasticity Test. Simple linear regression analysis, according to Sugiyono (2020), to find out how much independent variables influence the dependent variable is by looking at the form of the regression equation. Furthermore, the Determination Test according to Sugiyono (2020) measures how much variation of bound variables can be explained by independent variables in a regression model. The t-test according to Sugiyono (2020) is to analyze the average difference between two groups or samples taken randomly from the population, assuming that the data has a normal distribution as well as the same or unknown population variant.

4. Results And Discussion

Based on the table of overall results, the responses from 40 respondents regarding the work motivation variable showed an average of 87.6%. The value is in the range of 81%-100%, so it can be concluded that the level of employee work motivation in the network division and substation of PT. PLN (Persero) ULTG Bogor is very good. This is shown by the number of respondents who gave "Strongly Agree" responses to various indicators on the work motivation variable. The indicator with the highest score was in the aspect of physiological needs, with a percentage of 92%. The sub-indicator that obtained the highest score was the statement "The basic salary I received was enough to meet the needs of life," with a percentage of 94%. Meanwhile, the indicator with the lowest score is the need for awards, which gets a percentage of 81%. The lowest sub-indicator is the statement "I get praise or appreciation for satisfactory work," with a percentage of 78%.

Based on table 4.32 above, the total results of responses from 40 respondents regarding employee performance variables were obtained an overall average score of 90.6%. Where the total responses of the respondents were at intervals (81%-100%), so it can be concluded that the work motivation of employees of the network division and substation of PT. PLN (Persero) ULTG Bogor is very good. This is shown by the presence of respondents who give many responses "Always" regarding indicators on employee performance variables.

The indicator with the highest score is in the quality aspect, with a percentage of 95.7%. The sub-indicator that obtained the highest score was the statement "I carried out the work in accordance with standard operating procedures," with a percentage of 96%. Meanwhile, the lowest indicator is independence, with a percentage of 84%. The lowest sub-indicator is the statement "I have initiative at work without having to wait for orders from my superiors" with a percentage of 81.5%.

4.1.Simple Linear Analysis

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	33.119	6.996		4.734	.000
	Motivasi Kerja	.530	.106	.629	4.992	.000

a. Dependent Variable: Employee Performance

Based on the table above, it can be seen that the value of the constant is 33.119 and the regression coefficient is 0.530. based on these results, a simple linear regression equation model can be formulated in this study as follows:

Y=a+bX

Y=33.119+0.530X

In the table above, it is noted that the constant value obtained is 33.119, so it means that if the work motivation variable (X) is assumed to be 0, then the employee performance value (Y) is 33.119. The value of the regression coefficient with a positive value of 0.530 with a significance of 0.000 where the value is less than 0.05. this means that if there is an increase of 1%, then employee performance (Y) will increase by 0.530 units assuming another variable, namely constant work motivation (X).

4.2.Determinant Test

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.629[a]	.396	.380	3.63367

a. Predictors: (Constant), Work Motivation
b. Dependent Variable: Employee Performance

Based on the table above, an R Square value of 0.396 = 39.6% was obtained, this means that the independent variable of work motivation contributed to the dependent variable of employee performance by 39.6% and the remaining 60.4% was influenced by other variables that were not included in this study.

4.3.T Test

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	33.119	6.996		4.734	.000
	Motivasi Kerja	.530	.106	.629	4.992	.000

a. Dependent Variable: Employee Performance

Based on Table 4.4- above, the t-count value is 4.992 which means t-calcul > t-table (4.992>2.024) and can also be seen from the significance value of 0.000<0.05. so that H0 is rejected and Ha is accepted, it can be concluded that the work motivation variable (X) has a significant effect on employee performance (Y).

4.4.Discussion

Based on the management of questionnaire data in the descriptive analysis of the work motivation variable (X), the average overall response regarding work motivation was 87.6% with the highest value found in the physiological needs indicator with a percentage of 92%, meaning that the company has succeeded in meeting the basic needs of employees regarding salary, reasonable working hours and adequate work facilities. Meanwhile, the response with the lowest score was found in the indicator of the need for an award with a percentage of 81%, meaning that even though the score was still in the very good category, it showed that some employees felt that they did not get recognition/praise, awards/appreciation for their contributions. If left unchecked, it can have an impact on decreasing employee motivation in the long run.

Based on the management of questionnaire data in a descriptive analysis on the employee performance variable (Y), the average overall response to employee performance was 90.6% with the highest score found in the quality indicator with a percentage of 96.7%, meaning that the performance of employees of the network division and substation at PT. PLN (Persero) ULTG Bogor meets the standards expected by the company. This is shown by the number of employees who always respond to quality indicators. While the response with the lowest score was found in the indicator of the need for an award with a percentage of 84%, even though the score was still in the very good category but showed that some employees still depended on the direction of their superiors to complete the work or were not fully confident in making decisions.

4.5.Interpretation of Research Results

Based on the results of the classical assumption test, the normality test shows a significance value of 0.200 where the value is greater than 0.05. This indicates that the data in this study is normally distributed and meets the requirements of the normality test. Meanwhile, the results of the heteroscedasticity test showed a significance value of 0.657 where the value was greater than 0.05. Thus, it can be concluded that there are no symptoms of heteroscedasticity, so the data are suitable for use in simple linear regression analysis.

Based on simple linear regression analysis, it is known that work motivation (X) has a positive and significant effect on employee performance (Y), with the regression equation model Y = 33.119 + 0.530X. This means that every one unit increase in the work motivation variable will increase employee performance by 0.530 units. Furthermore, from the results of the analysis of the determination coefficient (R^2), a value of 0.396 was obtained. This means that work motivation contributes 39.6% to employee performance, while the remaining 60.4% is influenced by other factors outside of this study.

Based on the t-value of 4.992, it is located in a positive area or the t-value of the calculation is greater than the t-table of 2.026 and the significance value is 0.000 < 0.05. So it can be concluded that work motivation (X) has a positive and significant effect on employee performance (Y).

From the results of this study, it can be compared in accordance with previous research, namely in a study conducted by Azhari, et al (2022) with the title "The Effect of Work Motivation on Employee Performance at PT. PLN (Persero) SULSELRABAR Main Unit". That work motivation (X) has a positive and significant influence on employee performance (Y) at PT. PLN (Persero) SULSELRABAR Main Unit. Similarly, Hasanah & Sa'diah (2022) in their research titled "The Influence of Work Motivation on Employee Performance at PT. PLN (Persero) ULP Daha". That Work Motivation (X) has a positive and significant influence on employee performance (Y) at PT. PLN (Persero) ULP Daha.

Thus, it can be concluded that work motivation has a positive effect on employee performance. In other words, the higher the work motivation that employees feel, the better their performance will be. On the other hand, if employee work motivation decreases, then employee performance will also decrease. Therefore, providing the right motivation is one of the important factors in encouraging employees to achieve optimal performance to achieve company goals.

5. Conclusion

Based on the results of the research conducted to determine the level of work motivation, employee performance and the influence of work motivation on employee performance in the network and substation divisions at PT. PLN (Persero) ULTG Bogor, the following conclusions were obtained:

1. The results of the descriptive analysis on the work motivation variable (X) show that the work motivation of employees in the network and substation division of PT. PLN (Persero) ULTG Bogor is in the very good category, with an average total score of 87.5%. The highest average score is on the physiological needs indicator with a percentage value of 92%, which shows that basic aspects such as salary, work facilities, and the fulfillment of daily living needs have been well met by the company. Meanwhile, the smallest average score was in the indicator of the need for appreciation with a percentage value of 81%, which indicates that although most employees feel

motivated, there is still room for improvement in terms of giving appreciation, praise/appreciation and recognition for satisfactory employee work.

2. The results of descriptive analysis on the employee performance variable (Y) also show that employee performance at PT. PLN (Persero) ULTG Bogor is included in the category of very good, with an average total score of 90.6%. The highest average score is on the quality indicator with a percentage value of 95.7%, which shows that most employees have carried out their work in accordance with standard operating procedures (SOPs). Meanwhile, the smallest average score is on the independence indicator with a percentage value of 84%, indicating that there are still some employees who do not fully have the initiative to complete work without direct direction from their superiors.

3. Based on the results of the t-test regarding the effect of work motivation on the performance of employees of the network division and substation at PT. PLN (Persero) ULTG Bogor is known that work motivation has a positive and significant effect on employee performance. These results can be known from the results of the t-test, where the significance value is 0.000<0.05 with a tcalcu>ttable (4.992>2.024) so it can be concluded that Ho was rejected and Ha was accepted, meaning that work motivation has a significant effect on employee performance. Based on the results of the determination coefficient analysis, an R Square value of 0.396 or 39.6% was obtained, which means that work motivation contributed to employee performance by 39.6% and by 60.4% was influenced by other factors or variables that were not included in this study.

6. Suggestion

Based on the results of the research and the conclusions that have been presented in this study, the author will provide suggestions in the hope of providing benefits and input, as follows:

1. The company must continue to maintain the fulfillment of physiological needs as the main foundation of work motivation. The work motivation of employees of the network division and substation at PT. PLN (Persero) ULTG Bogor has weaknesses in the indicator of the need for awards. So the author's suggestion is to strengthen appreciation programs such as awarding the best employees, promotions or recognition of individual and team achievements in an informal but meaningful form by giving sincere praise more often for the work that has been done. By giving this appreciation, employees will feel appreciated for the work they have been doing so far so that they can provide more motivation for the work to be done.

2. The company must continue to maintain and even improve employee performance. The performance of employees of the network and substation division at PT. PLN (Persero) ULTG Bogor has weaknesses in the independence indicator. So the author's suggestion is to provide greater support in the development of employee competence and confidence. This can be done through regular training, evaluating employees and encouraging employees when facing failures or problems, as well as assigning tasks that are challenging but still tailored to individual abilities and potential. If employees feel safe and supported in taking the initiative, then they will be more motivated to complete the work in innovative and responsible ways, and can prove that the human

resources that are owned by the company has met the criteria in understanding the job description well in accordance with the goals that the company wants to achieve.

3. As the results of the determination analysis, it can be seen that the value of R square = 0.396 is that the variation in the performance of the employees of the network division and substation at PT. PLN (Persero) ULTG Bogor is influenced by work motivation by 39.6% and the remaining 60.4% is influenced by other factors that are not included in this model. Therefore, it is hoped that the next researcher can pay attention to adding variables or other factors besides the variables in this study to find out and analyze it.

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IMPROVING THE QUALITY OF SERVICES OF THE TIRTA PAKUAN REGIONAL DRINKING WATER COMPANY IN BOGOR CITY: A PRINCIPAL COMPONENT ANALYSIS

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Abstract

This study aims to improve the quality of service at the Regional Drinking Water Company (PDAM) Tirta Pakuan in Bogor City using the Principal Component Analysis (PCA) method as a quantitative method. As a vital public service provider, PDAM is heavily responsible for ensuring customer satisfaction with its clean water supply. Therefore, assessing service aspects is crucial to ensure operational effectiveness and efficiency. This study uses the relevant ES-QUAL framework to assess electronic-based services and digital systems, particularly considering that PDAM Tirta Pakuan has developed an online customer service system.
Information was obtained from a questionnaire distributed to active customers of PDAM Tirta Pakuan. The questionnaire was structured based on four key aspects of ES-QUAL: Efficiency, Fulfillment, System Availability, Privacy, Responsiveness, Compensation, and Contact. The collected data was then analyzed using PCA to reduce dimensionality and identify the key components that most influence customers' perceptions of digital service quality.
The analysis results show several key components that significantly influence service quality, namely ease of accessing information and making online payments, system reliability in handling customer requests, and assurance of personal data security. These components explain most of the variation in customer perception data. These findings suggest that PDAM Tirta Pakuan needs to prioritize improving digital system efficiency, strengthening online service infrastructure, and enhancing user privacy security. This study concludes that PCA can be an effective analytical tool for simplifying multivariate data and providing appropriate recommendations for improving digital service quality.

Keywords: Service quality, PCA, key factors, ES-QUAL, customer satisfaction.

1. Introduction

Clean water is a basic human need that is crucial for public health, economic productivity, and overall well-being. According to WHO data,(2022)Approximately 2.2 billion people worldwide lack access to safe drinking water, and 3.6 billion have inadequate sanitation facilities. This situation contributes to the spread of diseases such as diarrhea, cholera, and dysentery. Efforts to increase access to clean water and safe sanitation are essential to reduce mortality, especially among children under five, as well as to increase productivity and reduce health costs.

Indonesia also faces similar challenges, as it commits to the Sustainable Development Goals (SDGs), particularly Targets 6.1 and 6.2, which aim to achieve universal access to safe and affordable drinking water and sanitation by 2030. At the local level, Bogor City is experiencing steady population growth, resulting in increased demand for clean water. According to the Bogor City Central Statistics Agency(2023)The total population is projected

to reach approximately 1,070,000 by 2023, up from 1,063,000 the previous year. This growth requires water service providers to increase the reach and quality of their services.

The Regional Drinking Water Company (Perumda) Tirta Pakuan in Bogor City plays a crucial role in supplying clean water to local residents. The number of customers continues to grow, reaching 179,461 in 2024. This trend reflects a healthy level of public trust, but also presents challenges in maintaining consistent service quality amidst increasing demand. Customer surveys indicate persistent complaints regarding water quality, service affordability, and speed of response. This underscores the need for in-depth evaluation and improvement of service quality to maintain customer satisfaction and trust.

Service quality is recognized as a critical element in building customer satisfaction and loyalty. The SERVQUAL model highlights five key dimensions: tangibles, reliability, responsiveness, assurance, and empathy, that influence customer perceptions.(Edward & Sahadev, 2011)However, in today's digital era, this model needs to be adapted to the characteristics of electronic-based services. The ES-QUAL model was developed to measure the quality of electronic services through dimensions such as efficiency, system availability, compliance, and privacy.(Parasuraman et al., 2005).

Perumda Tirta Pakuan has begun using a digital platform for bill payment processing, complaint management, and service monitoring, with the aim of improving the customer experience. However, an evaluation of this digital system implementation is needed to ensure it effectively meets customer expectations. Initial survey results indicate a gap between service expectations and actual customer experiences, particularly in terms of responsiveness and assurance. Previous research conducted byFithriyyah(2024)also noted issues such as delays in responding to complaints, inconsistent communication, and the use of digital channels that need to be further optimized.

In facing these challenges, a systematic and data-driven analytical approach is needed to determine priorities for service improvement. Principal Component Analysis (PCA) is a statistical method that can simplify the complexity of service quality data by identifying the main components that most influence customer perceptions. This study aims to apply PCA in the context of ES-QUAL to identify important factors that influence the service quality of PDAM Tirta Pakuan in Bogor City. It is hoped that the results of this study can serve as a basis for strategic decision-making in improving services, both conventional and digital, so that customer satisfaction can increase and support sustainable development in Bogor City.

2. Literature review

2.1 Service Quality and Customer Satisfaction

Service quality is the customer's perception of the extent to which the service received meets or exceeds their expectations.(Zeithaml et al., 2013)Good service quality contributes to customer satisfaction and loyalty, as well as enhancing a company's reputation. In the context of public services such as clean water, customer satisfaction is a key indicator of a service provider's success. Kotler(2000)states that consumer satisfaction arises from a comparison between expectations and actual service performance, where satisfied consumers tend to be loyal and recommend the service to others.

2.2 SERVQUAL and ES-QUAL Models

The SERVQUAL model measures service quality using five key aspects: physical, reliability, responsiveness, assurance, and empathy. This model is widely applied in various fields to assess the difference between customer expectations and experiences of a service.

However, with the increasing use of technology-based services, this model needs to be adapted to remain relevant to the digital context.

With this aim, Parasuraman et al.(2005)created the ES-QUAL model aimed at evaluating the quality of electronic services. ES-QUAL consists of four main dimensions, namely:

a) *Efficiency*: ease and speed in accessing online services.
b) *Fulfillment*: the ability of the service to fulfill commitments accurately and quickly.
c) *System Availability*: consistency and reliability of the system used.
d) *Privacy*: protection of personal information and security of transactions carried out.

Additionally, additional aspects such as Responsiveness, Compensation, and Contact are also important within a digital-based public service framework. These dimensions help organizations understand priority areas for improvement to meet customer expectations.

2.3 Implementation of ES-QUAL in PDAM Services

Bogor City's Tirta Pakuan Water Company (PDAM) has begun using digital services for payment processing, problem reporting, and water usage monitoring. However, a survey revealed a gap between service expectations and reality, particularly in terms of responsiveness and assurance. This aligns with previous research by Anisa et al.(2024)which noted that customer assurance scores were still relatively low. Meanwhile, a survey conducted by Fithriyyah(2024)revealed that although the level of customer satisfaction is considered very good, the responsiveness aspect still needs to be improved with a score of 69.52%.

These findings underscore the need for strategies to improve service quality, both in traditional and digital services. Amidst the digital transformation, PDAM's ability to provide fast, transparent, and secure services is crucial to increasing customer satisfaction and loyalty.

2.4 Principal Component Analysis

Principal Component Analysis (PCA) is a statistical method used to reduce the dimensionality of data by converting several interrelated variables into a smaller number of unrelated principal components.(Jolliffe, 2002). PCA attempts to retain the maximum variation of the original data, making it easier to understand and interpret patterns in complex data.

In service quality research, PCA is used to identify the key factors that most influence customer perceptions. By reducing data complexity, PCA helps service providers focus improvement efforts on aspects that have the greatest impact on customer satisfaction. Several previous studies have successfully applied PCA to analyze public services (Masanja et al., 2015), demonstrating the method's effectiveness in uncovering the factor structure underlying customer perceptions.

2.5 Previous Research

Several studies on service quality at drinking water providers in Indonesia show that dimensions such as physical appearance, reliability, responsiveness, assurance, and empathy are very important. Sintia and her colleagues(2020)This study highlights the lack of empathy in the Dampit District Water Company (PDAM). Research by Rheannisa Priyanka and colleagues(2022)found that responsiveness and empathy are the main factors influencing customer satisfaction at PDAM Tirta Taman Kota Bontang. Ihsan Rafi Muta'ali and Lena Satlita(2024)stated that although the clean water service at PERUMDAM Tangerang Regency was considered good, there were still complaints regarding the way complaints were answered and water distribution.

These results underscore the need for planned evaluations to improve service quality. For PDAM Tirta Pakuan in Bogor City, this includes the use of digital technology, increased responsiveness, and improved system reliability to meet today's customer expectations.

3. Methodology

3.1 Theoretical Framework

This study focuses on the ES-QUAL model designed by Parasuraman et al. in 2005 to assess service quality in cyberspace. The ES-QUAL model evaluates service quality using the dimensions of efficiency, fulfillment, system availability, and privacy, all of which are relevant to PDAM digital services. Furthermore, this study is also based on the concept of service quality from SERVQUAL, which outlines five key dimensions: physical appearance, reliability, responsiveness, assurance, and empathy.

In this study, the ES-QUAL model was chosen because PDAM Tirta Pakuan, Bogor City, has launched technology-based services such as applications for payments, complaints about water problems, and water usage monitoring. Therefore, service quality assessments must be able to accommodate more complex digital dimensions.

To analyze complex, multivariate data, this study used Principal Component Analysis (PCA). According to Jolliffe(2002)PCA is a statistical technique that can simplify data dimensions by finding the principal components that best explain data variation. PCA is particularly useful in public sector research because it can help group service indicators into key factors that influence customer perceptions, making it easier to prioritize service improvements.

3.2 Conceptual Framework

This study connects the theory of service quality based on the ES-QUAL model with the PCA method to determine the key elements that influence service quality at PDAM Tirta Pakuan in Bogor City. The conceptual framework of this study is explained below:

a) Input: Customer perception data regarding service quality measured by seven ES-QUAL aspects (efficiency, fulfillment, system availability, privacy, responsiveness, compensation, and contact).
b) Process: Data processing from the survey was carried out using PCA to reduce the number of dimensions and find important components.
c) Output: Key elements that need to be prioritized to improve service quality.

This framework is designed to assist PDAM Tirta Pakuan in developing evidence-based service improvement strategies for both traditional and digital services.

3.3 Instrumentation

This study used a quantitative method with a survey approach. Initial data were obtained through a questionnaire distributed to active household customers of PDAM Tirta Pakuan in Bogor City. The questionnaire was structured based on the ES-QUAL model, which consists of seven dimensions with various specific indicators within each dimension, including:

a) Efficiency: page loading speed, ease of browsing, efficient search system.
b) Fulfillment: accuracy of service information, timeliness, and reliability of delivery.
c) System Availability: system stability, access to key features.
d) Privacy: protection of personal data, security of transactions.
e) Responsiveness: speed in responding, ability to offer solutions.
f) Compensation: return, replacement and discount policies.
g) Contact: ease of access to communication channels, quality of interaction.

The research instrument was tested for validity and reliability. Validity testing was conducted using confirmatory factor analysis and construct validity using SPSS, where all indicators showed values >0.444. The reliability test yielded Cronbach's Alpha values above 0.7 for each dimension, indicating good internal consistency.

3.4 Research Design, Objects, and Locations

This research falls into the quantitative category with a descriptive approach. The focus of this study is customer perceptions regarding the service quality of PDAM Tirta Pakuan in Bogor City. The units analyzed are household customers who actively utilize PDAM services. The research location is the area served by PDAM Tirta Pakuan in Bogor City, West Java.

3.5 Population, Sample, and Sampling Techniques

The population of focus in this study is all household customers of PDAM Tirta Pakuan in Bogor City. The sample for the study was taken using the Simple Random Sampling method, where every individual in the population has an equal chance of being selected. This approach was applied to obtain a more accurate representation and minimize bias in sample selection. The respondents were active customers who were willing to complete a questionnaire regarding their views on the quality of service provided by PDAM Tirta Pakuan.

3.6 Data Collection and Processing Techniques

Data was obtained by distributing questionnaires both online and offline. After data collection was complete, the next step was data cleaning to remove incomplete or invalid entries. The verified data was then analyzed using PCA to reduce dimensionality and identify the principal components that explain the greatest variation in customer perceptions.

3.7 Data analysis

The data analysis phase was conducted using Principal Component Analysis (PCA) using SPSS and RStudio software. PCA functions to group service quality indicators into several main, mutually independent components, thus facilitating the determination of important factors for service improvement. The PCA results were interpreted to provide strategic recommendations for improving the service quality of PDAM Tirta Pakuan, Bogor City.

4. Results and Discussion

4.1 Principal Component Analysis (PCA) Results

After analyzing 37 digital service quality indicators using PCA with Varimax rotation, six principal components (RC1 to RC6) were generated, which collectively explain 74.04% of the total data variation. Table 1 below summarizes the PCA component results based on the resulting variance:

Table 1. Summary of Principal Component Analysis Components

Main Components	Standard Deviation	Proportion of Variance (%)	Cumulative Proportion (%)
RC2(Component 1)	17,215	**27.44%**	27.44%
RC4(Component 2)	5,371	**11.99%**	39.43%
RC3(Component 3)	1,391	**11.75%**	51.18%
RC6(Component 4)	1,317	**10.88%**	62.06%

RC5(Component 5)	1,074	**6.72%**	68.78%
RC1(Component 6)	1,025	**5.26%**	74.04%

Source: Primary Data 2025, processed

Indicators with a minimum loading value of 0.5 were used to determine the indicators that make up each component. Table 2 below presents a summary of the indicators included in the six components.

Table 2. Loading Indicator ≥ 0.5 per PCA Component

Component	Code	Question	Loading
RC2	P29	How quickly do you respond to technical issues?	0.869
	P5–P8	The speed and smoothness of the SIMOTIP application and the ease of digital payments	0.837–0.857
	P20–P21	Minimal interference & application system speed	0.827
	P14–P15	Accuracy and up-to-dateness of billing and schedule information	0.777–0.779
	P25–P26	Security in digital payment transactions	0.764
RC4	P11	Website appearance and design	0.792
	P10	Ease of finding service information	0.659
	P12	Payment and billing information	0.630
	P28	Trust in digital data	0.614
	P9, P18	Website speed, informative Instagram content	0.537–0.614
RC3	P31	Instagram admin's speed in responding	0.748
	P37	Experience of interaction with officers	0.743
	P36	Ease of finding service contact information	0.667
	P30	Response speed of digital service channels	0.643
RC6	P24–P23	Consistency and activity of service information on Instagram and the official website	0.528–0.765
	P22, P19	Update service information & reliability of social media information	0.528–0.765
RC5	P1–P4	Ease and consistency of access to digital services across multiple platforms	0.558–0.698
RC1	P33	How easy is it to get service disruption information?	0.535
	P27	How secure are you when accessing your customer data?	0.517
	P34	How often does Perumda Tirta Pakuan provide information on digital disruptions?	0.508

Source: Primary Data 2025, processed

4.2 Principal Component Interpretation

1. RC2 – Digital System Speed and Reliability (27.44%)

These aspects include application speed, minimal disruption, accurate billing information, and security in digital transactions. Customers want efficient, reliable, and secure digital systems for various services.

2. RC4 – Ease of Navigation and Readability of Digital Content (11.99%)
   This section underlines the importance of the appearance and readability of digital information on a website, as well as the ease of finding service information visually.
3. RC3 – Digital Officer Rapid Response (11.75%)
   Demonstrates customer expectations for human interaction through digital channels. Responding quickly via Instagram or other digital channels significantly impacts perceptions of service quality.
4. RC6 – Regularity and Activity of Official Information (10.88%)
   Customers appreciate consistency in the delivery of active and scheduled official information, especially on websites and social media platforms.
5. RC5 – Easy Access and Cross-Channel Integration (6.72%)
   Demonstrates customer desire for a connected service experience across multiple digital platforms, such as apps, social media, and websites.
6. RC1 – Information Protection and Clarity (5.26%)
   This dimension includes the need for clarity in service disruption announcements as well as customer data protection when using digital services.

4.3 Discussion

These findings indicate that the quality of digital services from Perumda Tirta Pakuan, Bogor City, is not only influenced by the technical performance of the application or website, but also by views on security, relationships between service channels, and the quality of digital interactions.

PCA successfully grouped interrelated indicators into six key aspects. This demonstrates the effectiveness of this method in simplifying data and establishing fact-based strategic priorities.

These results also support the ES-QUAL theory.(Parasuraman et al., 2005)which identifies aspects such as efficiency, system availability, compliance, and privacy as central to digital service perceptions. In the local context of PDAM, this is evident in customers' high emphasis on service speed, information consistency, and digital security.

5. Conclusions

5.1 Conclusion

This study aims to identify key elements influencing the quality of digital services at Perumda Tirta Pakuan, Bogor City, using principal component analysis (PCA) based on the ES-QUAL framework. The analysis resulted in the classification of 37 indicators into six main components, which together explain 74.04% of the variation in the data.

The six main elements include:

1. Smoothness and Reliability of Digital Systems – includes application speed, minimal disruption, information accuracy, and security in transactions.
2. Navigation and Readability of Digital Information – emphasizes ease of finding service information through informative websites and user-friendly designs.
3. Digital Officer Responsiveness – highlights the importance of officer response speed through digital channels.
4. Consistency and Activeness of Official Information – indicates the need for consistent and active information updates on official channels.

5. Ease of Access and Cross-Channel Integration – relates to the connected service experience across digital platforms.
6. Information Security and Transparency – includes customer data protection and transparency in service disruption notifications.

The results of this study show that the quality of PDAM services in the digital era does not only depend on the technology used, but also on the method of delivery, access, and protection of information.

5.2 Strategic Implications

The results of this study provide significant suggestions for Perumda Tirta Pakuan, Bogor City, in formulating data-driven service improvement strategies. Some proposed strategies are as follows:

1. Improving digital infrastructure to accelerate and strengthen applications.
2. Develop website and application designs that are more accessible and understandable to customers.
3. Strengthening data protection systems to maintain customer trust.
4. Establish responsive service standards for digital channels, including social media.
5. Establish a regular schedule for updating service information across all official channels.
6. Integrate communication and transaction channels to make the customer experience smoother and more coordinated.

By implementing the strategy based on the PCA results, it is hoped that PDAM Tirta Pakuan can increase customer satisfaction and support sustainable development goals in the clean water services sector in Bogor City.

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HEDONIC SHOPPING AND IMPULSE BUYING: UNDERSTANDING CUSTOMER MOTIVATION IN THE E-COMMERCE ERA

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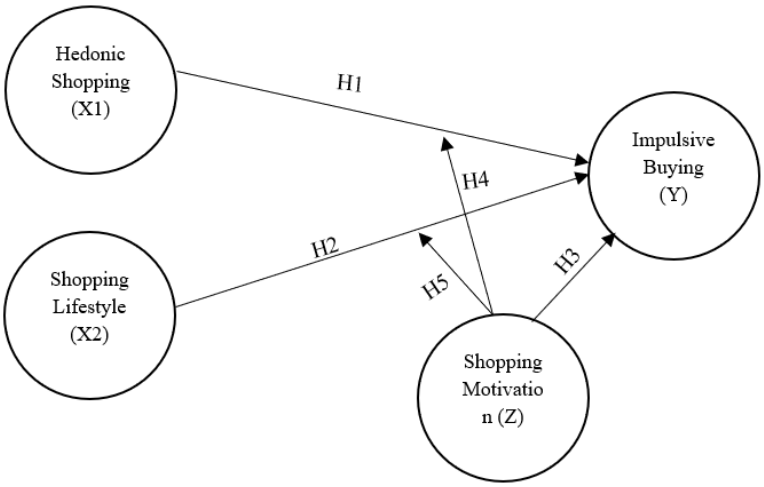
Abstract

This study examines the influence of hedonic shopping, shopping lifestyle, and shopping motivation on impulse purchases among e-commerce consumers in Indonesia. With the rapid growth of Indonesia's e-commerce market, it is important to understand the psychological factors that drive consumer behaviour. This study uses a descriptive quantitative approach by distributing questionnaires to 112 respondents who are e-commerce users. Independent variables include hedonic shopping and shopping lifestyle; the dependent variable is impulse buying, and the moderating variable is shopping motivation. The results show that hedonic shopping and shopping motivation have a significant positive effect on impulse purchases, while shopping lifestyle does not. Furthermore, shopping motivation cannot moderate the relationship between hedonic shopping and shopping lifestyle on impulse purchases. These findings underscore the importance of emotional experience and internal motivation in driving impulse purchases in e-commerce environments.

Keyword: hedonic shopping, shopping lifestyle, shopping motivation, impulse buying


Hedonic Shopping (X1)
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H4
H2
H5
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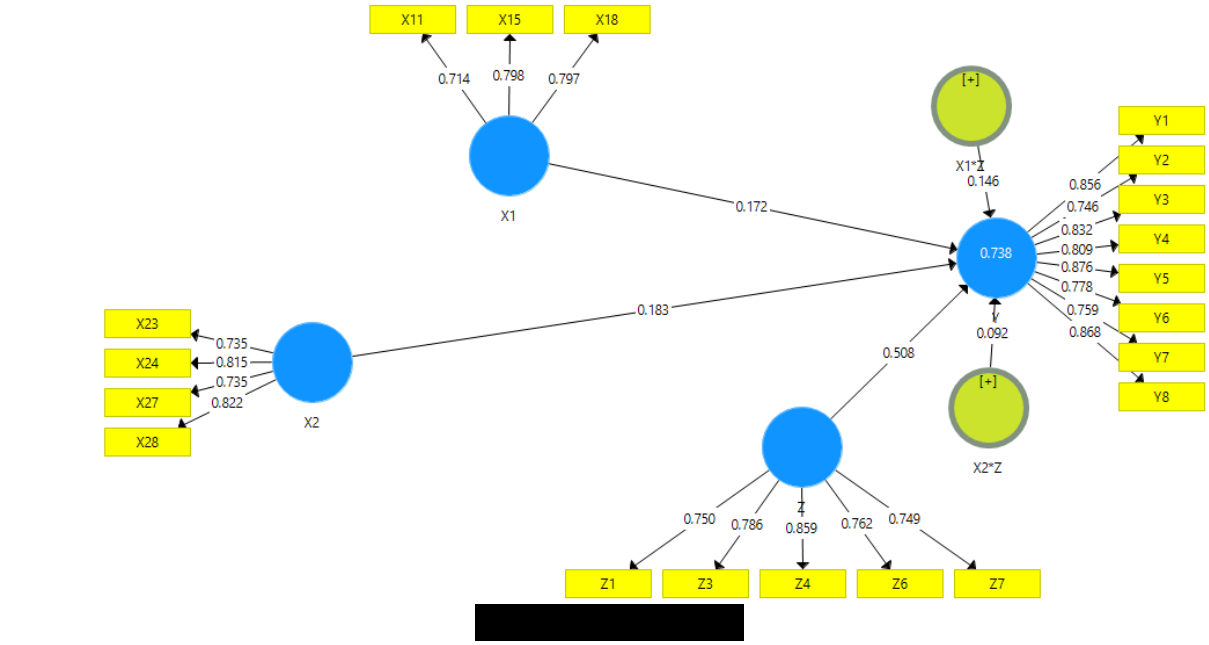
Shopping Motivatio n (Z)



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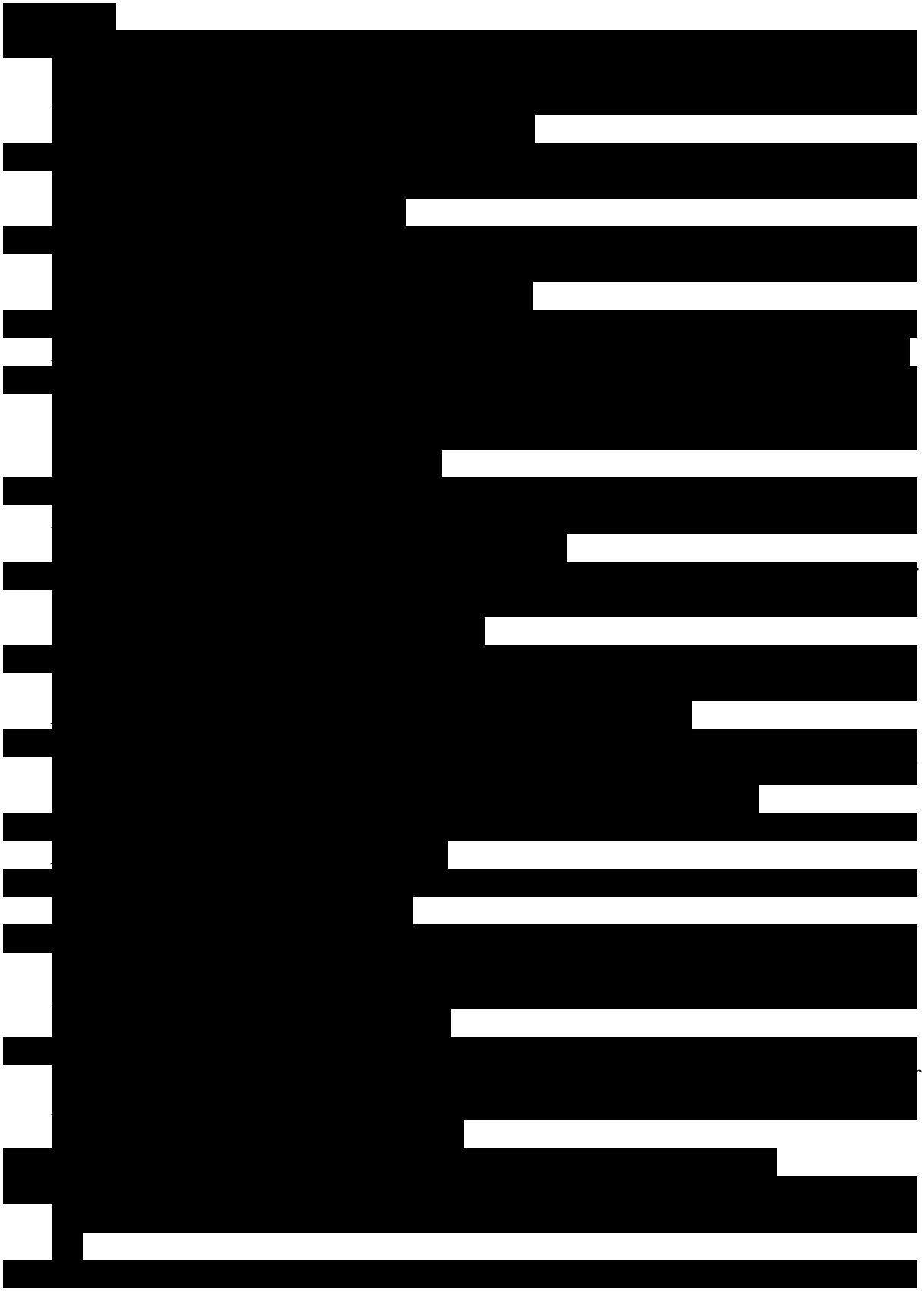

EMPLOYEE WELL-BEING AND EMPLOYEE RETENTION: AN EMPIRICAL STUDY IN INDONESIAN COMPANIES

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Abstract

The high rate of employee turnover remains one of the most pressing challenges faced by modern organizations. This phenomenon is driven not only by salary-related concerns but also by limited career development opportunities, unsupportive workplace cultures, and misalignment between personal and corporate values. Employee resignations are frequently motivated by dissatisfaction in the workplace and the pursuit of better career prospects or a more compatible organizational environment. This study aims to examine the influence of employee well-being on employee retention. Employing a quantitative survey method, data were collected from 154 employees out of a total population of 250 in an agricultural product processing company. A five-point Likert-scale questionnaire, validated and tested for reliability, served as the primary instrument for data collection. The data were analysed using descriptive and inferential statistics, including simple linear regression at a 0.05 significance level via SPSS version 24.0. The results revealed a significant and positive relationship between employee well-being and retention. Employees who experience a higher sense of well-being are more likely to remain with the company. Furthermore, longer tenure is associated with more stable levels of well-being and retention. These findings underscore the critical importance of prioritizing employee well-being as a strategic approach to fostering loyalty and minimizing turnover. Targeted managerial interventions particularly during critical tenure periods are essential for cultivating a sustainable and healthy work environment.

Keywords: employee well-being, employee retention, workplace well-being, turnover, fidelity.

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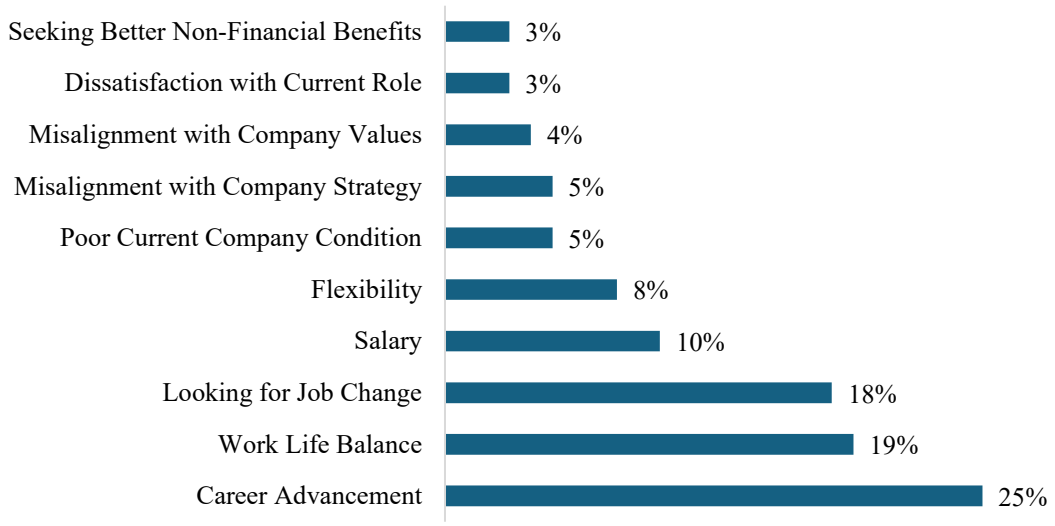
Diagram 1. Underlying Factors Contributing to Employee Resignation



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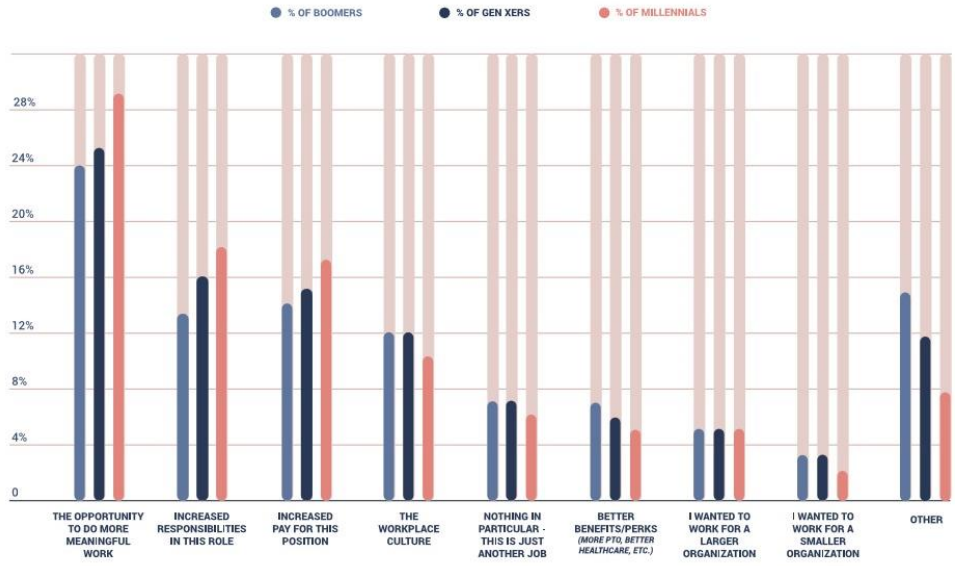

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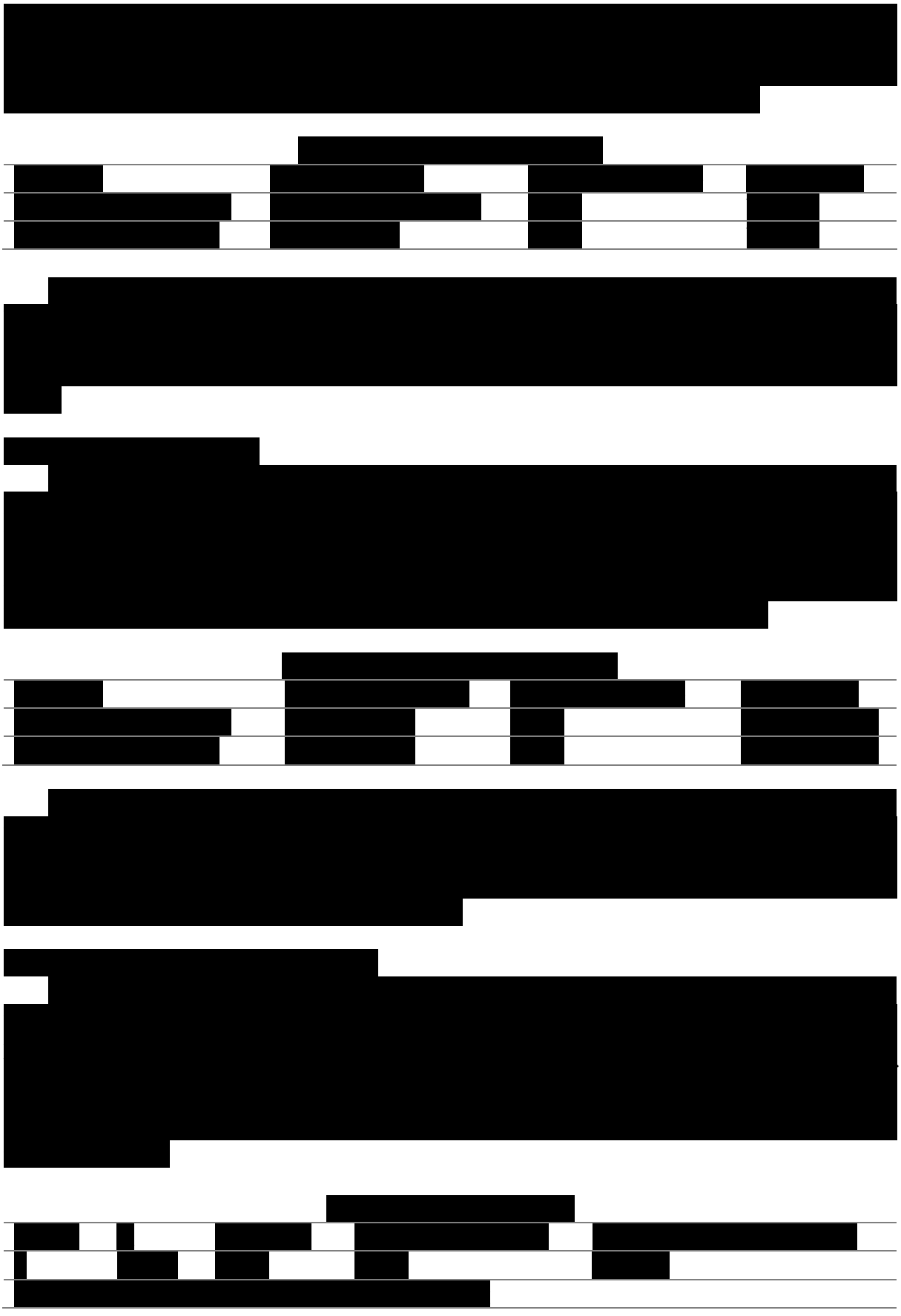

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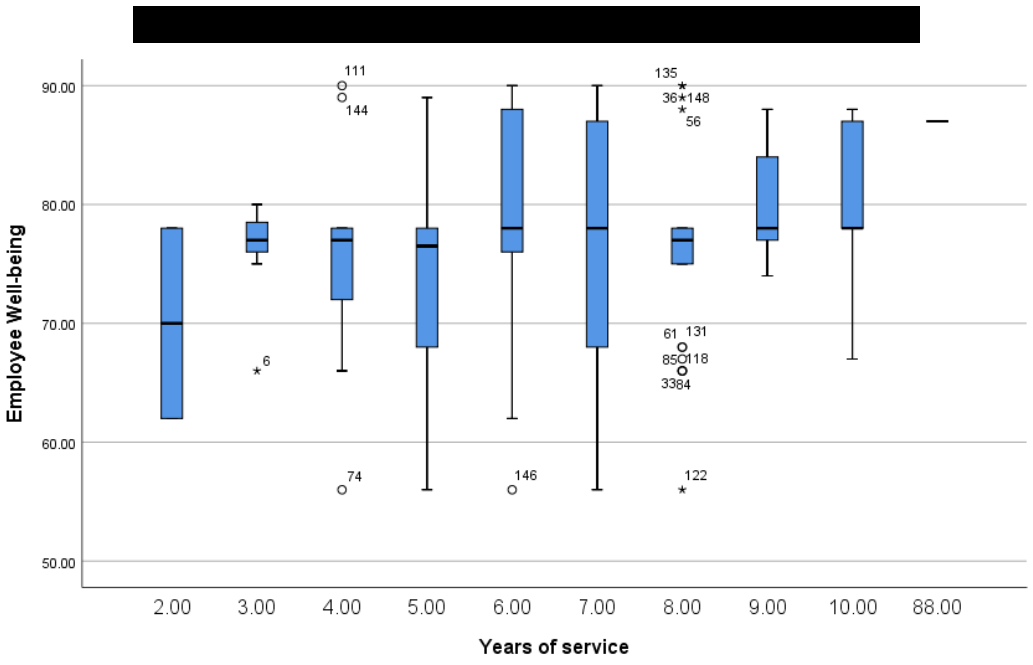

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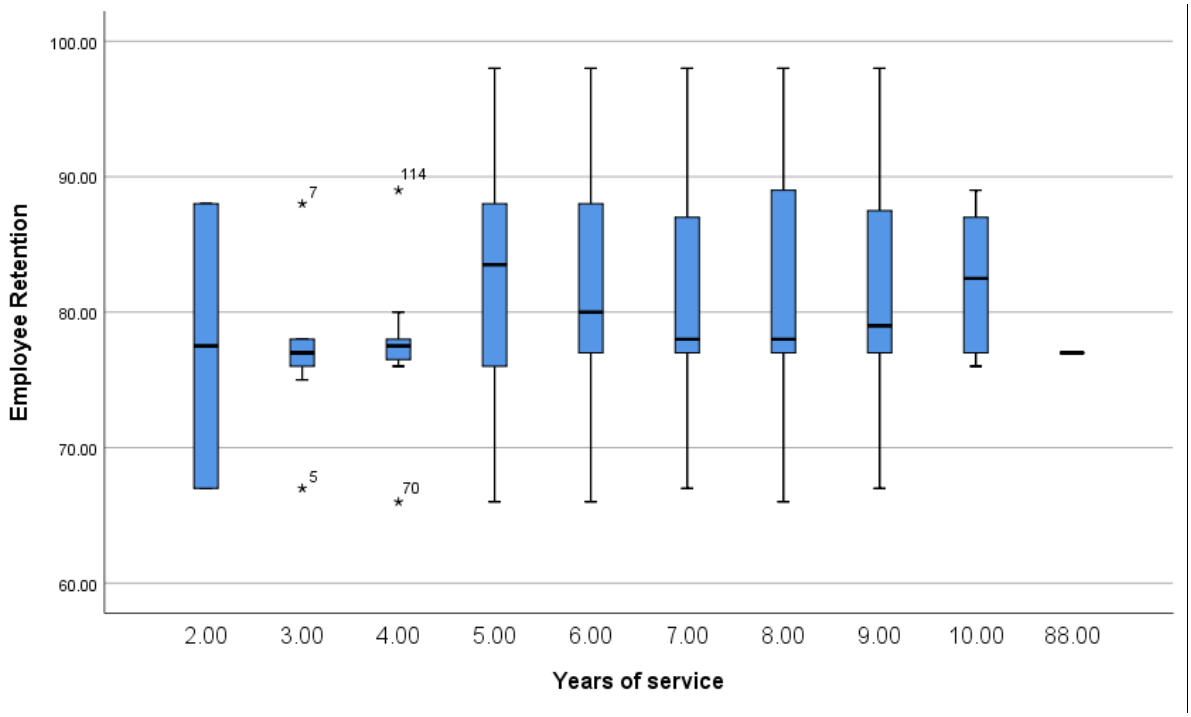

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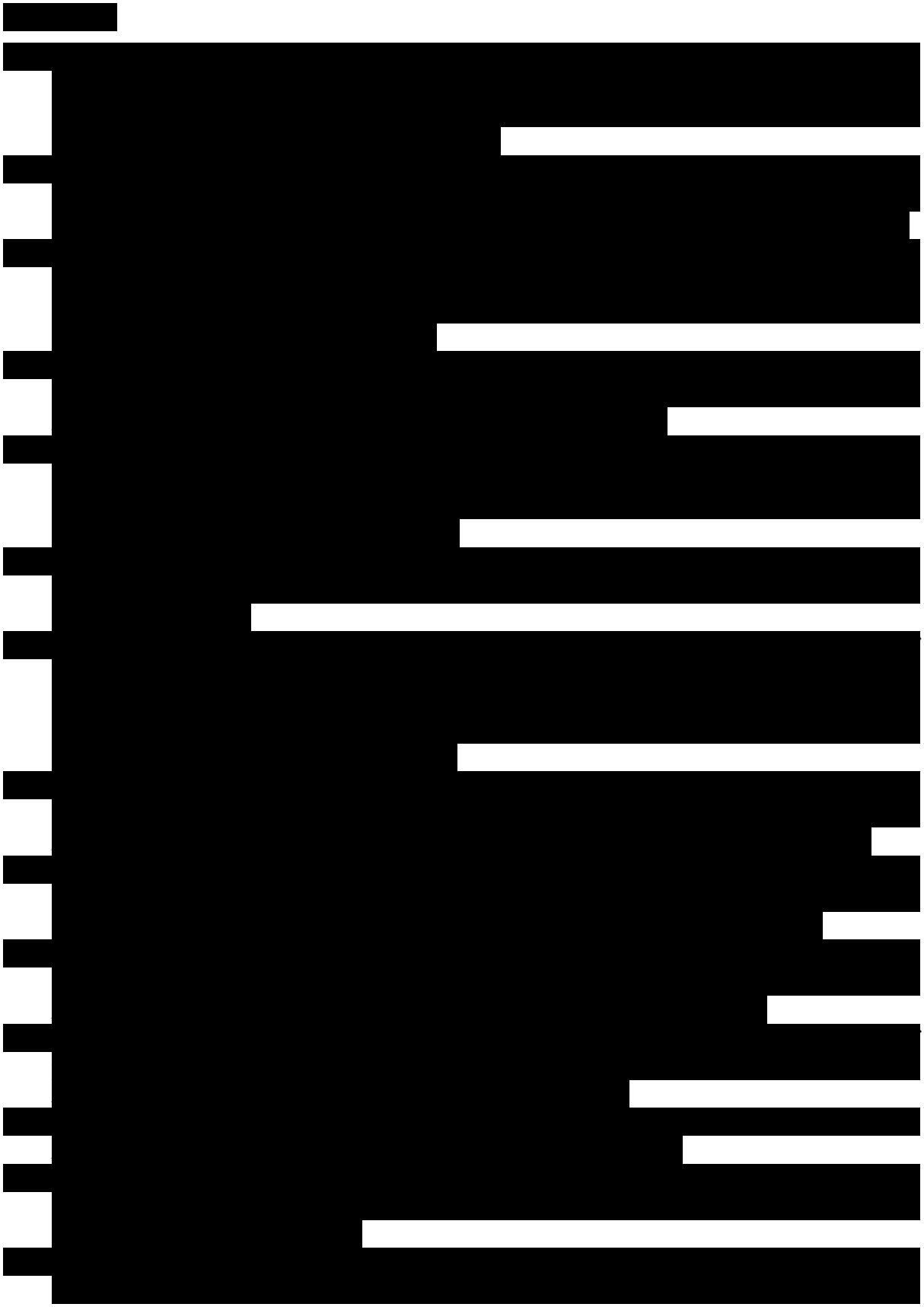

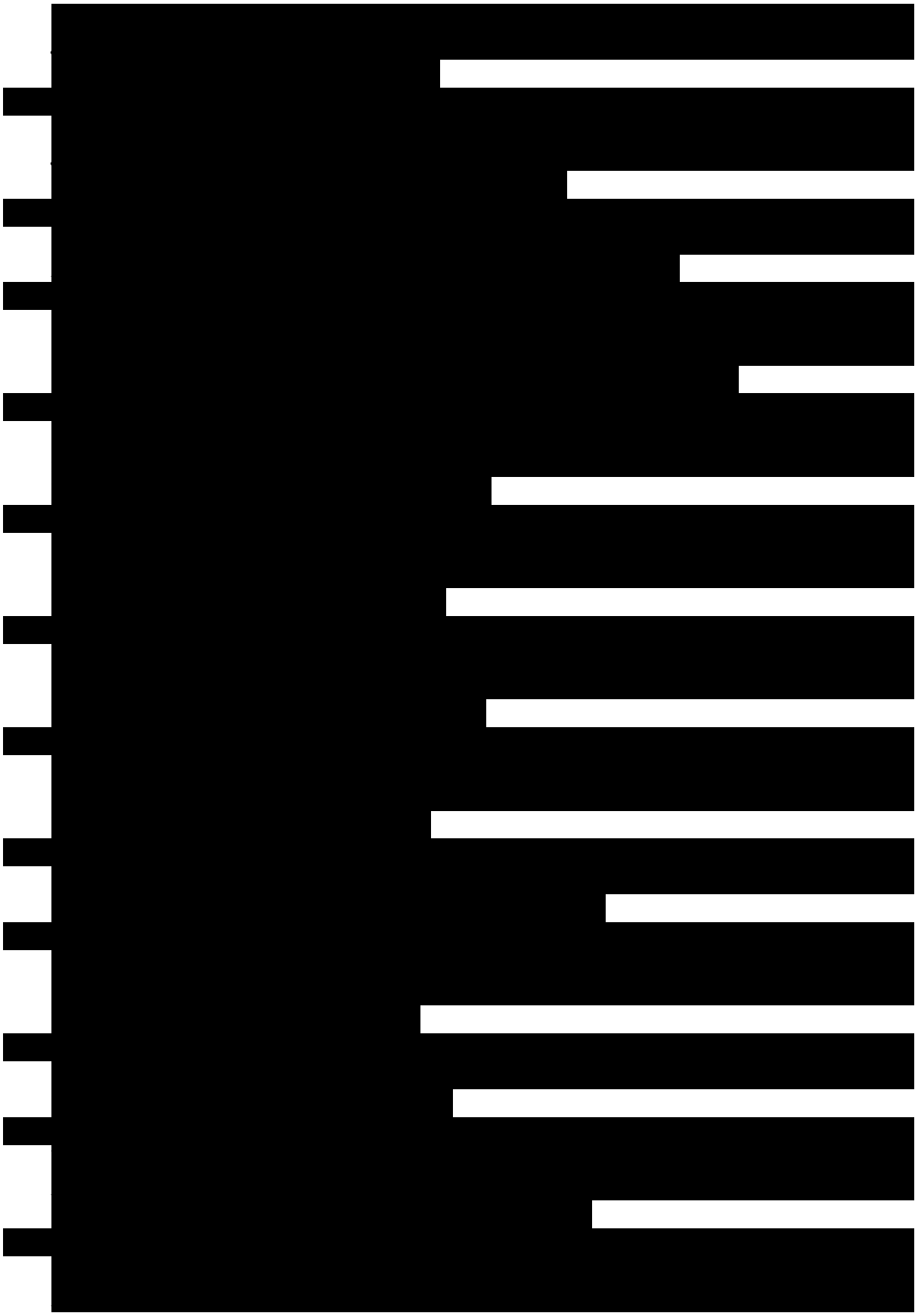

REWARD SYSTEMS AND EMPLOYEE PERFORMANCE: EXAMINING THE IMPACT IN ORGANIZATIONAL SETTINGS

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Abstract

The increasing demands for productivity in the food industry require companies to optimally manage their human resources. One key factor believed to drive employee performance is the reward system. This study aims to analyse the impact of the reward system on employee performance in companies operating within the food sector. The methodology employed is a quantitative survey involving 85 employees, selected through total sampling techniques. Data were collected using a five-point Likert scale questionnaire and analysed using descriptive and inferential statistics through simple linear regression with the assistance of SPSS version 24 at a significance level of 0.05. The results indicate that the reward system has a positive and significant effect on employee performance. The better the reward system implemented, the higher the level of performance exhibited by employees. These findings underscore the importance of a fair and structured reward system as a managerial strategy to enhance work productivity within the food industry.

Keywords: reward system, employee performance, food industry, human resource management

1. Introduction

The increasing competitiveness of the job market encourages organizations to manage human resources effectively to achieve their goals optimally. One crucial aspect of human resource management is the provision of rewards or recognition for employees (Meirinhos et al., 2023). A reward system not only serves as a form of appreciation for performance but also acts as a motivational tool that encourages employees to work more productively and with higher quality (Førland & Roxå, 2024).

Rewards can take the form of financial incentives such as bonuses and commissions, as well as non-financial rewards like recognition, promotions, or a comfortable work environment (Alkandi et al., 2023; Siregar et al., 2023). When employees feel valued for their contributions, they are more likely to exhibit higher work commitment, loyalty to the organization, and motivation to enhance their performance (Rizaie et al., 2023). Conversely, the absence of an effective reward system can diminish work enthusiasm and lead to job dissatisfaction.

Companies inherently have high expectations for each employee to demonstrate good, consistent performance and to make tangible contributions to the achievement of organizational goals. The ideal employee, from the company's perspective, is one who not only meets targets but also possesses initiative, responsibility, and a strong work ethic (Nayem & Uddin, 2024). Additionally, employees who are disciplined, results-oriented, capable of teamwork, and continuously developing their competencies are highly sought after in a dynamic and competitive work environment (Islam & Periaiah, 2023). However, in reality, not all employees can meet these standards. Various internal and external factors, such as lack of motivation, inadequate reward systems, disproportionate workloads, or unsupportive work environments, can negatively impact employee performance (Afrin et al., 2023). Therefore, it is essential for companies to understand the factors influencing employee performance, including the implementation of an effective and fair reward system.

According to a survey conducted by the National Administrative Agency (LAN) in 2023, it was found that 52% of civil servants feel that the reward system in their institutions does not effectively motivate performance improvement. Additionally, around 48% of respondents indicated that the lack of clarity in reward distribution negatively affects work enthusiasm and loyalty to the organization. This data highlights the critical role of the reward system in creating a productive and competitive work environment. However, many organizations have yet to implement this system optimally, whether in terms of the types of rewards, achievement indicators, or transparency in the distribution process.

Data from the National Civil Service Agency (BKN) indicates that approximately 35% of Civil Servants (ASN) in Indonesia are classified as "deadwood," meaning they exhibit low performance, while only 19.82% fall into the "star" category, indicating high performance. In the private sector, a survey conducted by Jobstreet.com involving 17,623 respondents in October 2022 revealed that 73% of employees are dissatisfied with their jobs. This dissatisfaction is driven by several factors, including 54% of employees working in roles that do not align with their educational backgrounds, 60% feeling they lack clear career advancement opportunities, and 85% experiencing an imbalance between work and personal life (work-life balance). Furthermore, a report from Gallup revealed that employee engagement levels in Indonesia are relatively low, with only 8% of managers actively engaged, 23% not engaged, and 36% highly disengaged in managerial activities and team development. These data points underscore the need for a comprehensive evaluation of performance management systems across various sectors, as well as the importance of implementing an effective reward system as a strategy to enhance motivation, job satisfaction, and employee productivity sustainably.

Although various organizations have implemented reward systems as part of their performance enhancement strategies, the effectiveness of these implementations remains an unresolved issue. Some organizations provide rewards routinely but do not base them on objectively measurable performance indicators, thus failing to drive significant changes in employee work behavior. Conversely, there are organizations that lack a clear reward system, resulting in low employee motivation and loyalty. This gap indicates a misalignment between the implementation of the reward system and the expected performance outcomes. Additionally, the limited quantitative research directly measuring the impact of reward systems on employee performance, particularly within specific contexts, makes this topic important for further investigation.

From the discussion above, there is a need for further research to quantitatively assess the impact of reward systems on employee performance. This research is essential to provide empirical evidence regarding the extent to which the implemented reward systems can enhance productivity, responsibility, and the quality of employee work. The results of this study are expected to serve as a reference for institutions or organizations in designing more effective and targeted reward policies.

2. Literature review

2.1. Employee Performance

Employee performance is one of the key indicators of an organization's success in achieving its objectives. Employee performance is not only related to an individual's ability to complete tasks but also to the extent of the employee's contribution to the company's strategic goals (Udin et al., 2023). According to Ardianto et al., (2020); Kundan et al., (2024), employee performance is influenced by various factors, such as motivation, ability, and the opportunities provided by the organization. These factors work simultaneously to determine how well employees execute their tasks and responsibilities.

Research conducted by (Rivaldo & Nabella, 2023), emphasizes that employee performance is significantly affected by external factors, such as organizational support, effective leadership, and a positive work culture. An organization that can create a supportive environment is likely to have high-performing employees. Furthermore, research by Mustaqim et al., (2024), reveals that employee engagement is a key factor contributing to performance improvement. Employees who feel valued and actively involved in the decision-making process are more likely to demonstrate better performance.

Studies by Abdelwahed et al., (2023); Al-Kharabsheh et al., (2023), show that job satisfaction and organizational commitment are closely related to employee performance. When employees are satisfied with their jobs and have a high commitment to the organization, they tend to work harder and deliver more optimal results.

2.2.Reward System

The reward system is one of the most commonly used strategies by organizations to enhance employee performance. According to Chi et al., (2023), an effective reward system can serve as a strong motivational driver. A fair and transparent reward system can motivate employees to improve their performance, as they feel appreciated for their contributions. A well-designed reward system also plays a role in fostering loyalty and high job satisfaction.

A study by Chen, (2023) indicates that performance-based rewards have a significant impact on increasing employee productivity. Rewards given based on clear and measurable performance achievements will enhance employees' work enthusiasm, encouraging them to reach higher targets. Research by Adaora Chinelo Uzochukwu et al., (2023) also found that a reward system that includes financial incentives, social recognition, and career development opportunities can improve overall employee performance.

However, on the other hand, research by Sulistiasih & Widodo, (2022) reveals that an unfair reward system can have negative consequences on employee motivation and performance. When employees feel that the rewards they receive do not correspond to the effort they have put in, it can lead to dissatisfaction, decreased morale, and ultimately poor performance. Therefore, it is crucial for organizations to design a reward system that is fair, transparent, and aligned with the needs and expectations of employees.

3. Methodology

The research method employed in this study is a survey method with a quantitative approach. The sample consists of 85 employees working in a company operating in the food sector. The entire population was used as the research sample, thus the sampling technique applied is total sampling. This approach was chosen to obtain a comprehensive and accurate depiction of the relationship between the reward system and employee performance within the company.

Data collection was conducted through the distribution of a questionnaire designed to measure respondents' perceptions of two main variables: the reward system as the independent variable (X) and employee performance as the dependent variable (Y). The research instrument utilized a five-point Likert scale, ranging from "strongly disagree" to "strongly agree," to ensure that the data collected is structured, objective, and amenable to statistical analysis.

Data analysis in this study was conducted using two approaches: descriptive statistics and inferential statistics. Descriptive statistics were used to describe the characteristics of the respondents and the distribution of data for each variable, while inferential statistics were employed to test the impact of the reward system on employee performance. Prior to conducting further analysis, validity and reliability tests were performed on the questionnaire instrument to ensure that the measurement tool used is appropriate and consistent. Hypothesis testing was carried out using a significance level of 0.05, and data processing was conducted

with the assistance of SPSS version 24 statistical software. This research is expected to provide empirical contributions to the understanding of human resource management, particularly regarding the role of the reward system in enhancing employee performance in the food industry sector.

4. Results and discussions

4.1. The Validity Test

The validity test was conducted to determine the extent to which the question items in the questionnaire were able to measure the intended variables. The validity criteria are determined based on the r-count> r-table value (in this case, the r-table at N = 85 and α = 0.05 is 0.213). All items on the instrument show an r-count value greater than r-table, so all items are declared valid and suitable for use in this study.

4.2.The Reliability Test

Reliability test is used to measure the internal consistency of the research instrument. This test was carried out using Cronbach's Alpha with the criteria that the value of α> 0.6 was considered reliable.

Table 1. Instrument Reliability Test Results

Variable	Cronbach's Alpha	Description
Reward System	0,811	Reliable
Employee Performance	0,832	Reliable

The Cronbach's Alpha value for both variables is above 0.8 which indicates that the instrument has a very good level of reliability.

4.3.The Normality Test

The normality test is carried out to determine whether the data is normally distributed, as a condition of inferential analysis. This test uses the Kolmogorov-Smirnov method with sig criteria. > 0.05 indicates that the data is normally distributed.

Table 2. Normality Output Test (Kolmogorov-Smirnov)

Variable	Sig. (Asymp. Sig. 2-tailed)	Description
Reward System	0,200	Normal
Employee Performance	0,135	Normal

The significance value for both variables is greater than 0.05, so the data is declared normally distributed and fulfils the assumptions of the parametric test.

4.4.Statistical Descriptions

Statistical descriptions are used to provide an overview of the data on each variable. The statistics displayed include the number of respondents (N), minimum, maximum, average (mean), and standard deviation values of each variable.

Table 3. Variable Statistical Descriptions

Variable	N	Minimum	Maximum	Mean	Std. Deviation
Reward System (X)	85	15	25	20,84	2,317
Employee Performance (Y)	85	18	30	24,73	2,814

The average respondent's perception of the reward system is at 20.84 from a maximum scale of 25, indicating that the reward system in the company is perceived well by employees. Meanwhile, the average employee performance value of 24.73 out of a maximum of 30 indicates that in general employee performance is in the high category. The relatively small standard deviation value indicates that respondents' perceptions of the two variables tend to be homogeneous.

Table 4. Respondent Distribution

Respondent Distribution by Gender		
Gender	**Frequency**	**Percentage**
Male	48	56,5%
Female	37	43,5%
Total	85	100%
Distribution of Respondents Based on Age		
< 25 years	20	23,5%
25–35 years	42	49,4%
> 35 years	23	27,1%
Total	85	100%
Distribution of Respondents based of Length of Service	**Frequency Percentage**	
2–5 years	33	38,8%
6–10 years	29	34,1%
> 10 years	23	27,1%
Total	85	100%

The majority of respondents in this study were male (56.5%), indicating that the workforce in this food company is slightly dominated by men. Based on age, the 25-35 age group was the largest (49.4%), indicating that the majority of employees are in the productive and professionally mature age phase. Meanwhile, in terms of tenure, 38.8% of respondents have worked for 2-5 years, indicating that most employees have sufficient work experience to understand the reward and performance appraisal system in place at the company. This composition supports the validity of the data, as the respondents are considered to have had adequate exposure to the work dynamics and managerial systems applied.

4.5.Hypothesis Test

Hypothesis testing was conducted to determine whether there is a significant influence between the reward system (X) on employee performance (Y). Simple linear regression analysis was used in this test.

Table 5. Simple Linear Regression Analysis Results

Model	**Unstandardized Coefficients (B)**	**t**	**Sig.**
(Constant)	12,415	4,822	0,000
Reward (X)	0,634	6,738	0,000

Tabel 6. Model Summary

R	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**
0,615	0,378	0,371	3,467

The analysis shows that the reward system has a positive and significant effect on employee performance with a significance value of 0.000 <0.05. The regression coefficient of 0.634 means that every one unit increase in the reward system will increase employee performance by 0.634 units. The R square value of 0.378 indicates that 37.8% of the variation

in employee performance can be explained by the reward system, while the rest is influenced by other factors. Based on the results of simple linear regression analysis, the regression equation is obtained as follows: Y = 12,415 + 0,634X

- Y = Employee Performance
- X = Reward System
- 12,415 is a constant (intercept), which means that if there is no reward system (value X = 0), then the base value of employee performance is predicted to be 12.415 units.
- 0,634 is the regression coefficient, which shows that every one unit increase in the reward system will increase employee performance by 0.634 units.

The reward system has a positive impact on employee performance. This means that the better the reward system implemented by the company, the higher the performance exhibited by the employees. This positive coefficient underscores that the reward system variable is a significant predictor in explaining variations in employee performance. Therefore, companies aiming to enhance employee performance need to pay special attention to the reward systems in place, both in financial and non-financial forms. The findings of this study indicate that the reward system positively and significantly affects employee performance. This aligns with the assertion by Di Ponzio et al., (2023) that individuals are motivated to work optimally when they believe that their efforts will yield good performance, which will subsequently be followed by rewards that hold value for them. In the context of the food company that is the subject of this research, employees demonstrate higher performance when they perceive the implemented reward system as fair, transparent, and relevant to their contributions.

These results are in line with the research conducted by which found that reward systems, whether in financial or non-financial forms, play a significant role in enhancing employee motivation and productivity in the food and beverage industry. Rewards are not only viewed as a form of compensation but also as a form of recognition that motivates employees to perform better.

Additionally, these findings are supported by research by Hu et al., (2024) which states that a well-structured reward system has a direct impact on individual performance improvement, particularly in labor-intensive companies. In the food industry, which demands teamwork and consistency in production quality, rewards can serve as an effective driving tool to ensure that employees not only meet standards but also focus on results and quality (Correia et al., 2023).

From a descriptive data perspective, the average score for the reward system is 20.84 out of a maximum of 25, indicating that employees' perceptions of the reward system are relatively high. Similarly, the average employee performance score reaches 24.73 out of a maximum of 30, signifying that their performance is also very good. This demonstrates a direct correlation between perceptions of the reward system and performance outcomes, as confirmed by the regression analysis results.

Thus, it can be concluded that the existence of an effective reward system is a strategic factor in efforts to enhance employee performance. Food companies that wish to maintain and improve employee productivity need to develop a reward system that is not only financially competitive but also considers intrinsic factors such as recognition, career development opportunities, and a supportive work environment.

5. Conclusion

Based on the results of the data analysis and the discussions conducted, it can be concluded that the reward system has a positive and significant impact on employee performance in companies operating within the food sector. This is evidenced by the results of the simple linear regression analysis, which indicates that each increase in the reward system is proportionally followed by an improvement in employee performance. The high average values for both the

reward system and employee performance further reinforce the finding that, in general, employees have a positive perception of the reward policies implemented by the company, and this directly affects their performance. Thus, it can be concluded that the implementation of a fair, transparent reward system that aligns with employee contributions is a crucial strategy for enhancing productivity and work effectiveness in the food industry sector. This research provides empirical contributions to the development of human resource management policies, particularly in designing reward systems that can drive optimal employee performance.

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EMPLOYEE ENGAGEMENT AND TURNOVER INTENTION: A QUANTITATIVE ANALYSIS OF WORKFORCE DYNAMICS

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Abstract

This study investigates the impact of employee engagement on turnover intentions among employees in the pharmaceutical industry. The objective of this research is to examine the influence of employee engagement on turnover intentions, focusing on how employee engagement affects the desire to leave the organization. The method employed is a quantitative cross-sectional survey design, with data collected from 100 employees. Employee engagement is measured using the Utrecht Work Engagement Scale (UWES), while turnover intentions are assessed using a standardized Turnover Intention Scale. Data analysis is conducted using simple linear regression through SPSS 26. The results indicate a significant negative relationship between employee engagement and turnover intentions ($B = -0.452$, $p < 0.001$), with employee engagement explaining 37.5% of the variance in turnover intentions ($R^2 = 0.375$). These findings suggest that higher levels of employee engagement are associated with lower turnover intentions. Theoretically, this research contributes to the existing literature by confirming the inverse relationship between engagement and the desire to leave. Practically, it highlights the importance for organizations to invest in strategies that enhance employee engagement to reduce turnover rates and retain talent.

Keywords: Employee Engagement, Turnover Intentions, Employee Retention, Pharmaceutical Companies

1. Introduction

Employee engagement is a crucial concept in human resource management studies that describes the extent to which employees are emotionally, cognitively, and physically involved in their work and the organization they work for. Engaged employees typically exhibit high enthusiasm, loyalty, and a strong internal drive to contribute maximally to the achievement of organizational goals (Park & Kim, 2024; Zhong et al., 2024). Conversely, turnover intention reflects an employee's tendency or desire to leave their job in the near future, often serving as an early indicator of employee turnover (BowenXue et al., 2024). In a global context, employee retention has become a primary concern for organizations, as losing competent employees not only impacts recruitment and retraining costs but also leads to serious consequences such as the loss of institutional knowledge, decreased productivity, lowered team morale, and disrupted operational continuity. A study by Dwidienawati et al., (2024), shows that companies with high levels of employee engagement experience 21% higher productivity and 59% lower turnover rates compared to companies with low engagement.

In the context of Indonesia, the issue of employee turnover has become increasingly complex due to various external and internal factors (Wang et al., 2024). Intense labor competition, especially in rapidly growing industries such as information technology, finance, and manufacturing, has led to active workforce mobility, where workers have more career options and incentives from other companies (Galanis, Moisoglou, Papathanasiou, et al., 2024). Additionally, there is a shortage of skilled labor in certain sectors, further exacerbating the situation (Zambrano-Chumo & Guevara, 2024). Other factors, such as generational value and expectation differences (e.g., between Generation Z and Millennials versus Generation X),

economic instability, and suboptimal human resource management systems, also contribute to the intention to leave. A JobStreet Indonesia survey (2023) revealed that approximately 45% of employees in Indonesia expressed a desire to change jobs within the next year, primarily due to feeling undervalued, lacking clear career prospects, or feeling emotionally disengaged from their work (Jobstreet, 2022). Meanwhile, according to Work Institute, (2020), each employee who leaves an organization can incur a loss of up to 33% of their annual salary, including recruitment, training costs, and indirect impacts on productivity. This underscores the importance of understanding and enhancing employee engagement as a primary strategy for reducing turnover intentions and maintaining organizational stability.

Although the relationship between employee engagement and turnover intention has been extensively studied in various countries, there are several gaps in the literature that need to be addressed, particularly in the context of pharmaceutical companies. First, most previous studies were conducted in Western countries with different organizational culture characteristics, making their relevance and applicability in the Indonesian context still needing validation. Second, the limited research focusing on specific industries or employee groups in Indonesia has resulted in a lack of in-depth understanding of the factors influencing turnover intentions in sectors with high turnover rates. Third, specific dimensions of employee engagement such as vigor, dedication, and absorption have not been extensively studied separately to determine which dimensions contribute most to turnover intentions. Additionally, approaches that consider mediating variables such as job satisfaction or moderating variables like perceptions of organizational support are still very limited, even though they could provide a more comprehensive and accurate picture of the mechanisms underlying the relationship between engagement and turnover intentions (Dwidienawati et al., 2024; Kida & Takemura, 2024). Furthermore, most previous studies utilized cross-sectional designs with limited sample sizes, which do not adequately explain causal relationships in depth. Therefore, this research aims to fill these gaps by empirically examining the relationship between employee engagement and turnover intentions in the context of the [specific industry] in Indonesia, using an approach that considers the dimensions of engagement in detail as well as the potential influence of mediating and moderating variables.

Based on this background, this study formulates the main research question as follows: To what extent does employee engagement influence turnover intentions in the context of pharmaceutical companies? Based on this problem formulation, the objectives of this study are to (1) analyze the impact of employee engagement on turnover intentions in pharmaceutical companies.

This research is expected to provide significant theoretical and practical contributions. Theoretically, this study enriches the literature on employee engagement and turnover intentions by adding empirical evidence from pharmaceutical companies, which have received limited academic attention to date. By examining specific dimensions of employee engagement, this research also offers a deeper and more complex understanding of the factors influencing turnover intentions. From a practical perspective, the findings of this study can provide valuable guidance for managers and HR practitioners in designing more targeted and effective employee engagement strategies to reduce turnover and enhance workforce retention and loyalty. Thus, this study not only addresses gaps in the literature but also offers concrete solutions for organizations facing workforce sustainability challenges in today's competitive era.

2. Literature review

2.1. Employee Engagement: Conceptualization and Dimensions

Employee engagement refers to the level of enthusiasm and emotional involvement that employees have towards their work and their organization. Alshaabani & Rudnák, (2023),

define employee engagement as a psychological condition in which individuals utilize themselves physically, cognitively, and emotionally in the execution of their job tasks. Meanwhile, Canavesi & Minelli, (2022), interpret employee engagement as a positive and satisfying state related to work, characterized by three main dimensions: vigor, dedication, and absorption. Nguyen & Nguyen, (2023), define engagement as the extent to which employees feel emotionally and cognitively connected to their work, which is assessed through the Q12 survey that evaluates aspects such as role clarity, recognition, and opportunities for growth.

The theoretical model commonly used to understand employee engagement is the Job Demands-Resources (JD-R) model, which explains that employee engagement arises when there is a balance between job demands and job resources. Additionally, the Utrecht Work Engagement Scale (UWES) was developed to measure engagement through three dimensions: vigor, which refers to the level of energy and mental resilience while working; dedication, which reflects a sense of significance, inspiration, and pride in one's work; and absorption, which refers to full involvement in work to the point of losing track of time. Furthermore, various studies have shown that employee engagement is influenced by several factors such as job characteristics (task variety, autonomy, feedback), transformational leadership styles, an inclusive organizational culture, and employees' perceptions of organizational support.

2.2.Turnover Intention: Conceptualization and Measurement

Turnover intention refers to the tendency or desire of employees to voluntarily leave their jobs in the near future. According to Sypniewska et al., (2023), turnover intention is an early stage in the resignation process that reflects the mental consideration of seeking other employment. Although turnover intention does not always result in actual resignation, many studies indicate that this intention is the strongest predictor of actual turnover behavior. Therefore, understanding turnover intention is crucial in organizational research as it can provide early signals for management to implement interventions.

Factors influencing turnover intention include job satisfaction, organizational commitment, perceptions of alternative job opportunities outside the organization, and work-life balance (Singh et al., 2024; Zambrano-Chumo & Guevara, 2024). Additionally, negative work experiences, role ambiguity, and work pressure can also increase the intention to leave. Turnover intention is typically measured using multi-item scales, such as the instrument developed by Gautam & Gautam, (2024), which includes questions like: "I often think about leaving this organization" or "I will look for another job in the near future."

2.3. The Relationship Between Employee Engagement and Turnover Intention

Various studies have explored the relationship between employee engagement and turnover intention, with most indicating a significant negative relationship between the two. Theoretically, employees with high levels of engagement tend to experience job satisfaction, exhibit greater loyalty to the organization, and possess high intrinsic motivation, which ultimately reduces their desire to change jobs. The JD-R model suggests that when job resources such as peer support, recognition, and development opportunities are available, employee engagement increases, and turnover intentions decrease.

Empirically, a study conducted by Maharani & Tamara, (2024), shows that high work engagement is negatively correlated with turnover intention. Other research by Abet et al., (2024); Winoto Tj et al., (2024) also supports the finding that vigor, dedication, and absorption can significantly reduce the intention to quit. However, some studies have found varying results depending on the context, industry type, or individual factors. Additionally, several studies indicate that the relationship between engagement and turnover intention can be mediated by variables such as job satisfaction or affective commitment, and influenced by moderating factors such as organizational support, leadership style, or employee personality. This highlights the importance of a more complex approach to understanding this relationship.

3. Methodology

This study employs a quantitative approach with a cross-sectional survey design to analyze the impact of employee engagement on turnover intention among employees in pharmaceutical companies in Indonesia. The sampling technique used is purposive sampling, with criteria including permanent employees who have a minimum tenure of six months, resulting in a total of 100 respondents. Data collection was conducted through an online questionnaire using Google Forms, which was distributed voluntarily, ensuring anonymity and confidentiality of the data, and including informed consent. The instruments used consist of the Utrecht Work Engagement Scale (UWES) to measure employee engagement and the turnover intention scale from Cammann et al. (1979), both utilizing a 5-point Likert scale. Data analysis was performed using SPSS version 26 through simple linear regression, following a data cleaning process and testing of basic assumptions such as normality and linearity. The reliability test results indicate that the instruments have a Cronbach's alpha value of 0.88 for employee engagement and 0.79 for turnover intention, demonstrating good internal consistency, while content validity is supported by the use of instruments that have been validated in previous studies.

4. Results and Discussions

4.1. Sample Size and Response Rate

A total of 100 questionnaires were distributed to permanent employees in pharmaceutical companies. Of these, 89 questionnaires were returned and could be analysed. Thus, the response rate obtained was 89%, which indicates that the participation of respondents in this study is high and reflects adequate representation of the population.

4.2. Demographic Characteristics of Respondents

Demographic characteristics include gender, age, education level, and length of service. The data is presented in Table 1 below:

Table 1. Demographic Characteristics of Respondents

Demographic Variable	Category/Value	Frequency (n)	Percentage (%)
Gender	Male	78	59.1%
	Female	54	40.9%
Age	Average	32.8 years	
	Standard Deviation	6.2	
Last Education	SHS	20	15.2%
	Bachelor Degree	89	67.4%
	Master Degree	23	17.4%
Length of Service	Average	5.7years	
	Standard Deviation	3.4	

Respondents were predominantly undergraduate graduates, and the majority were male. Age and length of service show high variability, as shown by the standard deviation of the respondents.

4.3. Validity Test

The type of validity used is construct validity through exploratory factor analysis (EFA). The KMO test result of 0.843 indicates that the data is adequate to be analysed using EFA.

Bartlett's Test of Sphericity is significant ($p < 0.001$), indicating a correlation between components.

Table 2. KMO dan Bartlett's Test

KMO Measure of Sampling Adequacy	**0.843**
Bartlett's Test of Sphericity	Sig. = .000

All items had factor loadings > 0.5, with two main factors extracted: Employee Engagement and Turnover Intention, explaining 67.8% of the total variance.

4.4. Reliability Test

Reliability was tested using Cronbach's Alpha and Composite Reliability. The results are shown in Table 3.

Table 3. Reliability Test Output

Construct	Cronbach's Alpha	Composite Reliability
Employee Engagement	0.892	0.901
Turnover Intention	0.864	0.880

The value of $\alpha > 0.7$ indicates that both constructs have high reliability and good internal consistency.

4.5. Normality Test

The normality test was conducted using the Shapiro-Wilk Test. The results show that the data is normally distributed:

Table 4. Normality Test (Shapiro-Wilk)

Variable	Statistic	Sig. (p)
Employee Engagement	0.978	0.072
Turnover Intention	0.975	0.056

Because the p value> 0.05, it can be concluded that the data is normally distributed.

4.6. Variance Homogeneity Test

Levene's test was used to test the homogeneity of variance between groups. The results are as follows:

Table 5. Levene's Test for Equality of Variances

Variable	Levene Statistic	df1	df2	Sig. (p)
Turnover Intention	1.172	1	130	0.284

Since $p > 0.05$, the variance between groups is considered homogeneous.

4.7. Hypothesis Testing

4.7.1. Correlation Analysis

The relationship between Employee Engagement and Turnover Intention was tested using Pearson correlation. The results of the analysis are shown in Table 6.

Table 6. Pearson Correlation between Employee Engagement and Turnover Intention

Variable 1	Variable 2	Pearson Correlation	Sig. (p)
Employee Engagement	Turnover Intention	-0.612**	< 0.001

There is a significant negative correlation between Employee Engagement and Turnover Intention. This means that the higher the employee engagement, the lower their intention to leave the company.

4.7.2. Simple Linear Regression Analysis

Hypothesis: *"Employee engagement is negatively related to turnover intention."*

Table 7. Results of Simple Linear Regression Analysis

Model	B	Std. Error	Beta	t	Sig. (p)
(Constant)	4.875	0.379	—	12.86	<0.001
Employee Engagement	-0.452	0.065	-0.612	-6.95	<0.001

Tabel 8. Model Summary

R	R^2	Adjusted R^2	F	Sig. F
0.612	0.375	0.370	48.30	<0.001

The negative regression coefficient indicates that every one unit increase in Employee Engagement will decrease Turnover Intention by 0.452 units. The R^2 value of 0.375 indicates that Employee Engagement explains 37.5% of the variance in Turnover Intention. The regression model is statistically significant ($p < 0.001$), thus the research hypothesis is accepted.

4.8. Discussion

The results of the simple linear regression analysis in this study indicate a significant negative relationship between employee engagement and turnover intention. This means that the higher the level of employee engagement, the lower their tendency to leave the organization. The regression coefficient (β) of -0.452 indicates that for every one-unit increase in employee engagement, the turnover intention score decreases by 0.452 units. This relationship is supported by a significance value (p-value) < 0.05.

These findings align with theory and previous studies that state employee engagement is a protective factor against the intention to leave a job. As noted by Husniati et al., (2024); Rizky, (2022), employees who are emotionally, cognitively, and physically engaged in their work tend to have higher organizational commitment and do not seek alternative employment.

This research also supports the findings of Galanis, Moisoglou, Malliarou, et al., (2024), which show that employee engagement has a direct effect on turnover intentions, where high engagement influences employees' perceptions of job meaning, loyalty, and job satisfaction. From a theoretical implication perspective, these results emphasize the importance of engagement theory in explaining employee work behavior, particularly regarding the intention to change jobs. Engagement is not only a reaction to the work environment but also an indicator that can significantly predict employee retention. Practically, these results provide important insights for human resource management, especially in designing employee retention strategies (Ardianto et al., 2020; Kundan et al., 2024). HR managers can enhance employee engagement through career development programs, involvement in decision-making, and creating a supportive work environment. By increasing engagement, companies can reduce turnover rates, which can incur high costs both financially and culturally.

The R-squared value of 0.385 indicates that 38.5% of the variation in turnover intention can be explained by the employee engagement variable. This suggests that while the relationship is significant, there are other factors that also influence turnover intention (e.g.,

work stress, salary satisfaction, or relationships with supervisors) that need to be further investigated.

5. Conclusion

This study aims to examine the effect of employee engagement on turnover intention among employees in pharmaceutical companies. Based on the statistical analysis conducted using SPSS software, it was found that employee engagement has a significant negative effect on turnover intention. This means that the higher the level of employee engagement with their work, the lower their intention to leave the organization. These findings are supported by the results of the Pearson correlation test, which shows a strong negative relationship ($r = -0.612$, $p < 0.001$), as well as the simple linear regression analysis indicating that employee engagement explains 37.5% of the variance in turnover intention ($R^2 = 0.375$). The negative and significant regression coefficient value ($B = -0.452$, $p < 0.001$) further emphasizes that employee engagement is an important factor in reducing employees' intention to leave.

Regarding the validity and reliability of the instruments, the results of the construct and reliability tests indicate that the measurement tools used have met scientific standards, with Cronbach's Alpha and composite reliability values above 0.7. Statistical assumption tests such as normality and homogeneity of variance were also satisfied, which strengthens the validity of the analysis conducted. Practically, the results of this study provide important implications for human resource management, particularly in formulating employee retention strategies. Enhancing employee engagement through emotional involvement, commitment to work, and effective communication can be a strategic step to reduce turnover intention. However, this study also has limitations, such as the limitation of generalizability since it was conducted in only one company and did not consider other factors that may influence turnover intention, such as work stress or salary satisfaction.

Therefore, future research is recommended to include additional variables and to use longitudinal methods to observe the dynamics of the relationships between variables over a certain period. The results of this study are not only statistically significant but also practically relevant in the context of human resource management. The measurement of effect size and the proportion of variance explained reinforce the importance of building employee engagement as an effort to reduce the desire to change jobs among employees.

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FLEXIBLE WORK ARRANGEMENTS AND WORK EFFECTIVENESS: INSIGHTS FROM EMPLOYEE EXPERIENCES

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Abstract

Technological advancements and shifts in social dynamics have transformed the way organizations manage their workforce, prompting many to adopt Flexible Work Arrangements (FWAs) as a means of enhancing employee work effectiveness. This study aims to explore the influence of FWAs on employee work effectiveness, taking into account individual factors, organizational culture, and the readiness of supporting infrastructure. The research methodology employed is quantitative, utilizing a survey of 135 respondents who are directly involved in the implementation of FWAs. Data analysis was conducted using simple linear regression with the aid of SPSS version 27. The research findings demonstrate that FWAs have a positive and significant impact on work effectiveness, contributing 27.1% to overall effectiveness. This discovery underscores that flexibility in work arrangements, including time and location, can enhance employee performance and work-life balance. However, work effectiveness is also influenced by other factors such as motivation, leadership, and organizational culture. This study provides practical implications for management in designing adaptive and sustainable work policies to increase employee productivity and well-being.

Keywords: Flexible work arrangements, flexible policy, work effectiveness, work productivity

1. Introduction

Technological developments and changing social dynamics have shifted the way organizations manage their workforce (Rotatori, Lee, & Sleeva, 2021). The post-COVID-19 pandemic has brought significant transformations in organizational management, especially in terms of work system arrangements (Vahdat, 2022). One form of innovation that is growing rapidly is the implementation of Flexible Work Arrangements, a work system that provides flexibility to employees in determining the time and place of work (Akkaş, 2023). . Flexible Work Arrangements include various schemes such as remote working, hybrid working, flextime, job sharing (Anik & Habib, 2025). This phenomenon has received widespread attention among practitioners and academics because it is considered capable of increasing productivity, efficiency, and balance between work life and personal life of employees (Cavaliere et al., 2021). However, the implementation of Flexible Work Arrangements does not always run smoothly and often raises various issues, especially those related to the effectiveness of employees in carrying out their duties and responsibilities.

The emergence of flexible work schemes is triggered by the need for organizations to remain productive in conditions that limit direct physical interaction. However, the work effectiveness expected from the implementation of Flexible Work Arrangements is not always achieved (Soga, Bolade-Ogunfodun, Mariani, Nasr, & Laker, 2022). In practice, many organizations face challenges such as difficulties in supervision, weak communication between teams, and lack of work synergy due to physical distance (Neirotti, Raguseo, & Gastaldi, 2019). This creates a gap between management's expectation of work efficiency through flexibility, and the reality on the ground, which shows barriers to productivity and decreased employee engagement with tasks and organizations (Urrila, Siiriäinen, Mäkelä, & Kangas, 2025). This

mismatch indicates a fundamental problem in human resource management, especially in building an effective and sustainable work system.

One of the common challenges arising from the implementation of Flexible Work Arrangements (FWAs) is the blurring of boundaries between personal life and work. Many employees struggle to manage their time effectively as their workspace and personal space merge into one (Kossek, Perrigino, & Lautsch, 2023). This situation can potentially lead to stress, emotional exhaustion, and reduced work focus, ultimately negatively impacting work effectiveness. On the other hand, employees with strong self-discipline and time management skills often feel more productive and motivated due to the flexibility offered by FWAs. This suggests that the impact of Flexible Work Arrangements on work effectiveness is contextual and heavily influenced by individual characteristics, organizational culture, and the readiness of supporting infrastructure (Weideman, 2018).

This suggests that there is an urgent need to better understand how employees' subjective experiences of flexible working contribute to work effectiveness. In this case, work effectiveness is not only understood as achieving targets or work results, but also includes efficient, collaborative, and sustainable work processes (Cabarcos et al., 2022). For this reason, an approach that is able to comprehensively explore the views and experiences of employees is important. This approach can open new insights into the factors that support and hinder the success of Flexible Work Arrangements in improving work effectiveness.

Based on this description, it is important to conduct this research to fill the knowledge gap regarding the relationship between Flexible Work Arrangements and work effectiveness from the perspective of employees in more depth. By understanding the dynamics that occur behind the implementation of flexible work systems, organizations can design human resource management strategies that are more adaptive, responsive, and sustainability-oriented. Therefore, this study aims to comprehensively explore how the implementation of Flexible Work Arrangements affects work effectiveness, by considering individual factors, organizational culture, as well as the readiness of relevant support systems.

2. Literature Review

2.1. Work Effectiveness

Work effectiveness is a key indicator in assessing an individual's success in carrying out the tasks and responsibilities assigned by the organization. This concept not only refers to the achievement of targets or work outputs, but also encompasses process efficiency, the quality of results, and contributions to organizational goals (Gazi, Yusof, Islam, Amin, & Senathirajah, 2024). It covers the extent to which employees are able to achieve set objectives, utilize resources efficiently, and contribute to the organization's overall outcomes (Qalati, Zafar, Fan, Sánchez Limón, & Khaskheli, 2022). Work effectiveness is influenced by various internal and external factors, such as individual motivation, leadership, organizational culture, as well as technological and workplace support. Work effectiveness can be described as the extent to which a person performs tasks according to established standards and contributes to the achievement of organizational objectives (Nirwana, Sriyanti, & Nurdyanti, 2025). The importance of competence, effort, and consistency in work behavior is emphasized as the foundation for achieving optimal effectiveness (Modise, 2023).

Work effectiveness results from the interaction between an organization's formal systems and the dynamics of individual behavior within the work environment (Nnah Ugoani, 2020). Work effectiveness not only measures final outcomes, but also takes into account work processes, the quality of decision-making, and the ability to adapt to organizational dynamics. Within this framework, effectiveness serves as an important measure of both operational and strategic success (Korhonen, Jääskeläinen, Laine, & Saukkonen, 2023). An individual's work effectiveness depends on the expectation that their efforts will lead to good performance

(expectancy), that performance will yield certain outcomes (instrumentality), and that these outcomes are valued by the individual (valence). When all three are high, individuals are more motivated to work effectively (Fang, 2023). Work effectiveness also depends on the balance between job demands (such as workload and time pressure) and job resources (such as social support, autonomy, and feedback) (Demerouti & Bakker, 2023). When resources are sufficient, effectiveness can be maintained even under high demands.

2.2. Flexible Work Arrangements

Flexible work arrangements are an organizational response to the changing dynamics of modern work, influenced by technological advancements, globalization demands, and shifting workforce values (Stella, 2020). Flexible work arrangements encompass various forms of flexibility in the workplace, such as remote working, telecommuting, flextime, compressed workweeks, job sharing, and hybrid working, which allow employees greater freedom in determining when, where, and how they work (Austin-egole & Iheanacho, 2022). The aim of flexible work arrangements is to improve work-life balance, increase job satisfaction, and help organizations attract and retain top talent (Indradewa & Prasetio, 2023; Yildizhan et al., 2023). Flexible work arrangements can have a positive impact on productivity and work effectiveness (Wei & Li, 2024).

The implementation of flexible work arrangements is also associated with increased employee retention and loyalty, as it provides a sense of autonomy and trust in performing their work (Astriani, 2023). Therefore, the success of flexible work arrangements heavily depends on organizational readiness, including technological infrastructure, digital leadership, and a work culture that supports flexibility and collaboration (AlNuaimi, Kumar Singh, Ren, Budhwar, & Vorobyev, 2022). In this context, employees' subjective experiences become a crucial element that needs deeper understanding to assess the effectiveness of flexible work arrangements in a contextual and humane manner (Lauring & Jonasson, 2024). Furthermore, the implementation of flexible work arrangements is supported by various management and organizational behavior theories that explain how work flexibility can influence individual and organizational effectiveness.

The work-life balance theory states that when employees are able to balance job demands and personal life, stress levels decrease, job satisfaction increases, and performance becomes more optimal (Susanto et al., 2022). This theory emphasizes the importance of flexible policies as an organizational effort to create a healthy and productive work environment (Hyder, 2024). The implementation of flexible work arrangements provides space for such autonomy, allowing employees to manage their own work rhythms and methods (Alifyanti et al., 2021). Assessing employees' subjective experiences is crucial to understanding the barriers, opportunities, and effectiveness of these policies in enhancing job performance, productivity, and emotional attachment to the organization. This experience-based approach can offer deep insights to refine workforce management strategies in an increasingly dynamic and technology-driven modern work era.

3. Methodology

This study uses a quantitative approach with a survey method to measure the effect of flexible work arrangements on work effectiveness in employees. The population in this study were all 203 employees, with a sample size of 135 respondents determined using the Slovin formula with an error rate of 5%. The sampling technique used purposive sampling, with the criteria of employees who have worked for at least one year and are directly involved in the implementation of flexible work arrangements at work. Data collection was conducted through the distribution of a closed questionnaire designed using a five-point Likert scale, ranging from

"strongly disagree" to "strongly agree", to measure respondents' perceptions of flexible work arrangements and work effectiveness variables. Prior to analysis, the research instruments were tested for validity and reliability to ensure measurement accuracy and consistency. Furthermore, the data were analyzed using SPSS version 27 software, with descriptive statistical techniques to describe the characteristics of respondents and data distribution, and simple linear regression analysis to test the effect of flexible work arrangements on work effectiveness. This research aims to provide empirical evidence on how the implementation of work flexibility contributes to employee effectiveness in completing their tasks and responsibilities.

4. Results and Discussions

4.1. Classical Assumption Tests

4.1.1. Normality Test

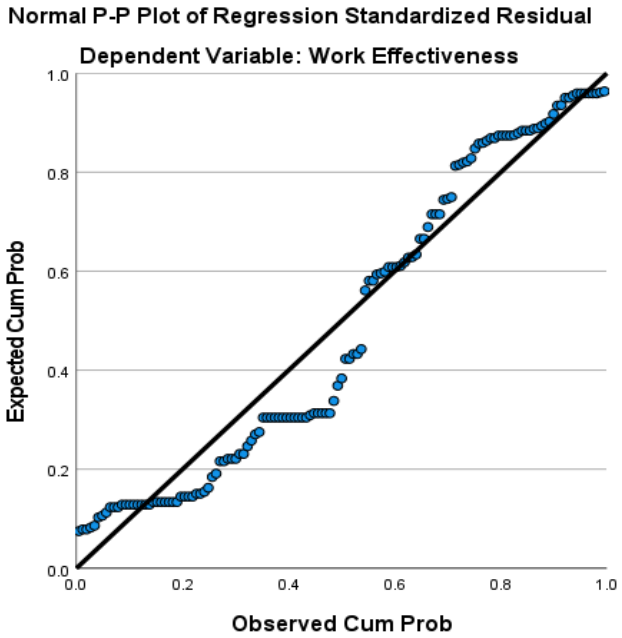

Figure 1.1 Normal P-P Plot of Regression Standardized Residua

In this graph, there is a straight diagonal line that represents a perfectly normal distribution. The blue dots represent the standardized residual values of the regression results. If the points spread and follow the diagonal line with a pattern that is relatively close to the line, it can be concluded that the residuals are normally distributed. Based on observations of the graph, most of the points appear to follow a pattern close to the diagonal line, although there are slight deviations at the beginning (bottom left) and the center. However, these deviations are not very significant and are still within reasonable limits. Therefore, it can be concluded that the residuals in this regression model generally fulfill the assumption of normality. This shows that the regression model used has good enough validity in terms of the assumption of normal distribution of residuals, so that the results of the analysis can be considered reliable to be used in making decisions or drawing conclusions.

4.1.2. Multicollinearity Test

Table 1.1 Multicollinearity Test

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	39.946	5.570		7.171	.000		
	Flexible Work Arrangements	.265	.083	.266	3.178	.002	.392	2.544
a. Dependent Variable: Work Effectiveness								

Based on Table 1.1 regarding the multicollinearity test results, it is known that the Flexible Work Arrangements independent variable has a Tolerance value of 0.392 and a VIF value of 2.544. Both values are still within acceptable limits, where the tolerance value is greater than 0.10 and the VIF value is less than 10. This indicates that there are no multicollinearity symptoms in the regression model, so the Flexible Work Arrangements variable does not show a high correlation relationship with other independent variables and can still be used in the regression analysis model appropriately..

Furthermore, the regression coefficient value of 0.265 with a significance level of 0.002 (smaller than 0.05) indicates that the Flexible Work Arrangements variable has a positive and significant influence on Work Effectiveness. In other words, in addition to proving to be free from multicollinearity problems, this variable also makes a meaningful contribution in improving work effectiveness.

4.1.3. Multicollinearity Test

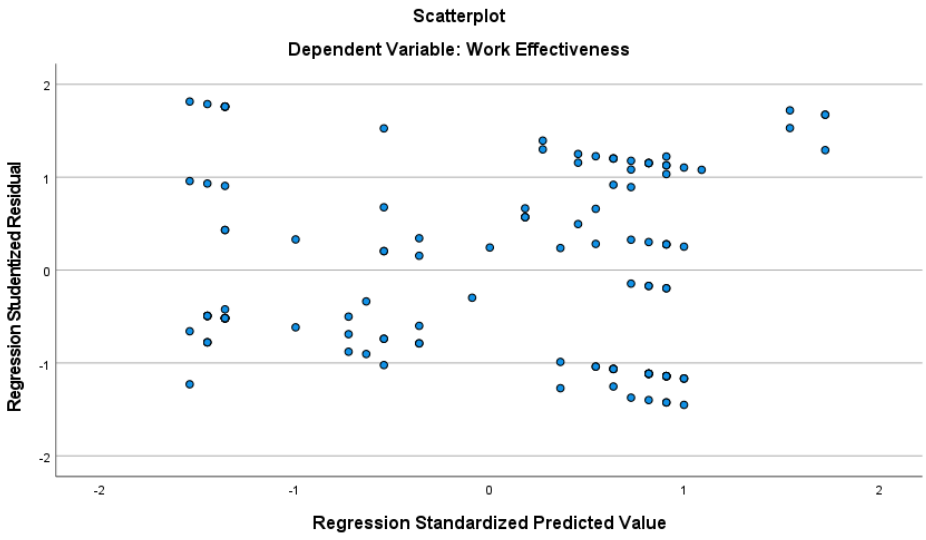

Figure 1.2. Scatterplot Dependent Variabel: Work Efffectiveness

Based on Graph 1.2 scatterplot displayed above, which shows the relationship between Regression Standardized Predicted Value and Regression Standardized Residual, it can be concluded that the distribution of residual points does not form a certain clear pattern, either curved, U-patterned, or linear. Instead, the points spread randomly around the zero horizontal line. This indicates that the assumption of homoscedasticity is fulfilled, i.e. the residual variance is constant across the entire range of predicted values.

This random distribution pattern also indicates that there is no heteroscedasticity problem in the regression model used. Thus, the regression model is considered to fulfill one of the classical assumptions of multiple linear regression, namely the assumption of normality and homogeneous distribution of residuals. This aspect is important to ensure the validity of the

results of the regression analysis conducted on the effect of Flexible Work Arrangements variables on Work Effectiveness.

4.2. Simplified Linear Regression Test

Table 1.2 Anova Model

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1144.878	1	1144.878	10.099	.002[b]
	Residual	15077.715	133	113.366		
	Total	16222.593	134			
a. Dependent Variable: Work Effectiveness						
b. Predictors: (Constant), Flexible Work Arrangements						

Based on Table 1.2 ANOVA above, it can be seen that the significance value (Sig.) is 0.002, which is smaller than the 0.05 significance level. This shows that the regression model used is statistically significant, which means that the independent variable Flexible Work Arrangements together have a significant influence on the dependent variable Work Effectiveness. The calculated F value of 10.099 also indicates that the regression model constructed is good enough to explain the variation in the observed data. This value is obtained from dividing the regression Mean Square (1144.878) by the residual Mean Square (113.366), which reflects the strength of the relationship between the predictor variable and the predicted variable. Thus, the effect of flexible work arrangements on work effectiveness is significant, which means that the better the implementation of a flexible work system in an organization, the higher the work effectiveness achieved by employees. This result supports the hypothesis that Flexible Work Arrangements play an important role in improving work performance, which in turn can be used as a basis for managerial policy making in the workplace.

Table 1.3 Summary Model

Model Summary[b]				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.466[a]	.271	.064	10.647
a. Predictors: (Constant), Flexible Work Arrangements				
b. Dependent Variable: Work Effectiveness				

Table 1.3 shows that the R Square value is 0.271, which indicates that the Flexible Work Arrangements variable has an influence on Work Effectiveness of 27.1%. This means that 27.1% of variations or changes in employee work effectiveness can be explained by the existence of flexible work arrangements. Meanwhile, the remaining 72.9% is influenced by other factors outside this model, such as work motivation, leadership, work environment, organizational culture, or other individual factors. The R Square value, which is in the medium range, shows that work flexibility does have an important role in shaping work effectiveness, but it is not dominant enough. This indicates that flexible work arrangements do not fully determine the success of work effectiveness, but can be one of the significant supporting elements. Therefore, to get a more comprehensive picture, further studies are needed by including other variables that also have the potential to influence work effectiveness.

4.3. The Effect Flexible Work Arrangements to Work Effectiveness

The main problem in this research is the low work effectiveness faced by some organizations, especially in the context of work flexibility that has not been regulated

optimally. In the midst of changes in the modern work environment and the increasing need for a balance between work and personal life, the question arises whether flexible work arrangements have a significant influence on employee work effectiveness. To answer this, a simple linear regression analysis was conducted to test how much work flexibility contributes to work effectiveness. The results of the analysis show that flexible work arrangements have a positive and significant influence on work effectiveness. This can be seen from the regression coefficient value of 0.265 with a significance level of 0.002 which is smaller than 0.05. Thus, it can be concluded that the higher the application of work flexibility in an organization, the higher the work effectiveness achieved by employees. This shows that more flexible work time and place arrangements can have a positive impact on individual performance.

The analysis shows that the R Square value of 0.271 indicates that flexible work arrangements are able to explain about 27.1% of the variation in employee work effectiveness. Although the contribution is not yet dominant, this value indicates a significant influence, considering that work effectiveness is the result of a combination of various complex factors. This finding is in line with Shammout's view, which states that work effectiveness is influenced by work environment factors, organizational behavior, and individual characteristics. Therefore, work flexibility can be considered as one of the important components in supporting employee performance, although it is not the only determinant (Shammout, 2021). The remaining 72.9% variation is most likely caused by other factors not included in this model, such as intrinsic motivation, leadership, organizational culture, and personal factors such as personality and individual abilities. This is reinforced by the opinion of Alkaf et al who emphasize that work effectiveness is the result of the interaction of internal and external factors that influence each other (Alkaf, Yusliza, Saputra, Muhammad, & Bon, 2021). Therefore, further research development is strongly recommended by adding other variables in order to be able to explain variations in work effectiveness more comprehensively.

Meanwhile, the ANOVA test results show that the regression model is statistically significant with a significance value of 0.002 ($p < 0.05$). This indicates that overall, the model built has a good ability to explain the relationship between work flexibility and work effectiveness. Thus, it can be concluded that the independent variable, namely flexible work arrangements, simultaneously exerts a real and significant influence on the dependent variable, namely work effectiveness. This result is consistent with Geoffrey's findings that work flexibility has a positive impact on employee productivity and job satisfaction. The feasibility of the regression model indicates that the results of the analysis can be used as a basis for managerial decision-making, especially in the preparation of flexible work policies in organizations. (Geoffrey, 2025). Work arrangements that allow employees to customize their work time and location are proven to increase work comfort, reduce stress, and ultimately improve work effectiveness. (Sultan, Fachmi, & Klimko, 2024). Therefore, these results provide important practical implications for management in an effort to create an adaptive work environment that supports optimal performance.

Furthermore, the results of this study support the concept of work-life balance, where work flexibility is considered an important instrument in helping employees balance the demands of work and personal life. Work flexibility can increase employee commitment and retention, and reduce burnout. Thus, organizations that implement flexible work policies can gain long-term benefits in the form of increased human resource loyalty and effectiveness (Boccoli, Tims, Gastaldi, & Corso, 2024). However, it is important to realize that work flexibility also requires effective management, as not all types of work are suitable for flexible work systems. The implementation of work flexibility must be adjusted to the type of work, organizational culture, and individual needs so that the benefits can be optimized. Therefore, this policy needs to be

supported by a good performance monitoring system and effective communication between managers and employees (Sekhar & Patwardhan, 2023).

Theoretically, this study contributes to strengthening the literature on the relationship between work flexibility and work effectiveness in the context of modern organizations. The findings support the two-factor theory of motivation which states that favorable working conditions are one of the factors that increase employee satisfaction and performance. (Nickerson, 2025). Work flexibility, in this case, acts as a motivating factor that can increase employee enthusiasm and responsibility for their duties. Taking the results and analysis into consideration, it is concluded that flexible work arrangements make a noticeable contribution to employee effectiveness. Although there are still other factors that influence overall effectiveness, work flexibility has proven to be one of the viable approaches to be implemented in improving productivity and job satisfaction in today's organizational environment. Therefore, the implementation of flexible work systems deserves management attention as part of a strategy to improve human resource performance.

5. Conclusion

Based on the results of this study, it can be concluded that flexible work arrangements have a positive and significant influence on employee work effectiveness. Although the contribution is not fully dominant, work flexibility is proven to have a significant impact in improving individual performance in the organizational environment. This shows that the higher the application of flexibility in work time and location, the higher the level of work effectiveness achieved by employees. Work flexibility allows employees to organize their work schedules according to their personal and professional needs, which ultimately results in increased motivation, comfort, and productivity. Flexible working conditions also help reduce stress due to time and travel pressures, and support work-life balance.

The findings strengthen the argument that work flexibility is one of the strategic approaches that can be applied in improving the quality of human resources. In a managerial context, the results of this study provide a foundation for policy making that supports the implementation of flexible work systems in a sustainable manner. Therefore, the implementation of work flexibility should be accompanied by a good performance monitoring system and effective communication between leaders and employees to ensure that organizational goals are still optimally achieved.

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EMPLOYEE BRANDING AND RETENTION: INVESTIGATING STRATEGIC IMPLICATIONS IN THE WORKPLACE

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Abstract

This study aims to determine the effect of Employee Branding on Employee Retention. The background of this research is based on the importance of building a positive company image not only for external interests but also in efforts to retain employees in a competitive work environment. The research method used is quantitative with a simple linear regression approach. The number of respondents in this study is 128 employees selected through purposive sampling techniques. Data analysis was conducted using two approaches: descriptive statistics and inferential statistics. Before further analysis, the instruments were tested for validity and reliability to ensure the feasibility and consistency of the measurements. Hypothesis testing was conducted at a significance level of 0.05 using statistical software such as SPSS 24.0. The analysis results show that Employee Branding has a positive and significant effect on Employee Retention. The better the Employee Branding strategy implemented by the company, the greater the tendency for employees to stay and remain loyal to the organization. These findings emphasize that Employee Branding is one of the strategic factors in human resource management that can enhance workforce stability in the long term.

Keywords: Employee Branding, Employee Retention, Loyalty, Human Resources.

1. Introduction

In the era of globalization and increasingly strict business competition, organizations are required not only to attract the best talent but also to ensure that employees who have joined remain engaged and contribute optimally (Judeh & Khader, 2023). Employee retention has become one of the important indicators of successful human resource management, as high turnover rates can lead to operational instability, increased recruitment and training costs, and the loss of knowledge and experience that have been built within the organization (AlQudah et al., 2023). The phenomenon of high employee turnover is still prevalent across various industrial sectors, particularly in organizations that have not adopted a strategic approach to building employee loyalty (Paigude et al., 2023). One strategy that has gained attention is employee branding, which is the process of shaping and strengthening the organization's image as a positive workplace by conveying values, work culture, and meaningful work experiences for employees (Elsafty & Oraby, 2022). Employee branding is believed to enhance pride, emotional attachment, and a sense of belonging to the company, which ultimately impacts employees' desire to stay longer within the organization (Alzaid & Dukhaykh, 2023). Therefore, this research is important to understand the extent to which employee branding influences employee retention, particularly in the context of organizations in Indonesia.

Employee branding was first introduced by Sutanto & Kurniawan, (2016) as an internal marketing approach aimed at attracting and retaining employees. Alhmoud & Rjoub, (2019); Hassan, (2022), later developed this concept by emphasizing employer value proposition (EVP) and internal branding, both of which play a role in creating an attractive company identity for employees. Various previous studies have shown that employee branding has a positive relationship with work engagement (Ikram et al., 2021), kepuasan kerja (Khalid & Nawab, 2018), and intention to stay within the organization (Wassem et al., 2019). Zayed et

al., (2022) also emphasize the importance of consistent internal communication in shaping employees' understanding and commitment to the company's values. However, most of these studies were conducted in developed countries and focused more on specific industrial sectors. Research on the direct impact of employee branding on employee retention is still limited, especially in the context of organizations in Indonesia. Therefore, this study is novel in empirically testing the relationship between employee branding and employee retention in a work environment characterized by different cultural traits and work values.

Although previous literature has extensively researched the impact of employer branding on organizational attractiveness from an external perspective, there remains a gap in understanding how employees' perceptions of the company brand as an employer can influence their behavior, particularly regarding their decision to stay with the organization. Existing research tends to highlight the external aspects of employer branding, while its internal contributions to employee retention have not been explored in depth. Additionally, a social exchange theory-based approach provides a strong theoretical foundation for understanding the reciprocal relationship between employees and the organization (Bibi et al., 2018). In this context, when organizations provide positive work experiences and meet employees' expectations through various employer branding initiatives, employees are likely to reciprocate by increasing their loyalty and desire to remain employed in the long term (Tian et al., 2020). Considering the importance of employer branding in shaping employee loyalty and retention, this study aims to examine the direct effect of employer branding on employee retention. This study is also expected to enrich the literature on human resource management, particularly in the context of internal branding as a strategy for workforce sustainability in the current era of global competition.

Based on the above description, the research problem formulated in this study is: Does employee branding significantly affect employee retention? This study aims to analyze the effect of employee branding on employee retention in an organization. Specifically, this research is expected to provide theoretical contributions to the development of human resource management knowledge, as well as practical recommendations for organizations in designing effective employee branding strategies to enhance loyalty and workforce sustainability amid the challenges of global competition.

2. Literature Review

2.1. Employee Branding

Employee branding is a strategic concept in human resource management that relates to an organization's efforts to build a positive company image as an ideal workplace, both in the eyes of internal employees and potential external candidates. According to Juariyah et al., (2023), employee branding is the process by which a company consistently communicates its values and organizational culture to employees so that they can authentically represent the company's identity. Employee branding not only serves to attract new talent but also plays a crucial role in enhancing the engagement and loyalty of employees who have already joined the organization. Research conducted by Fatih Fuadi & Destin Fitria Anjayani, (2023) shows that employee branding significantly affects employee engagement and commitment. When a company is able to build a strong employer brand, employees feel prouder to be part of that organization, which encourages them to contribute more and stay longer. In this context, employee branding becomes a strategic tool that bridges the relationship between the company's values and the behaviors and perceptions of employees. Furthermore, Khairy et al., (2023) emphasize that effective employee branding can strengthen positive perceptions of the company, increase job satisfaction, and reduce the intention to leave the organization.

Näppä et al., (2023), state that the success of employee branding heavily depends on the consistency between the promises made in the employer brand and the actual experiences felt

by employees. Discrepancies between expectations and reality can diminish trust and lead to decreased retention. Meanwhile, Santiago, (2023), highlights the importance of strong internal communication and an inclusive organizational culture in shaping internal brand awareness, allowing employees to internalize the company's values more effectively. Overall, employee branding is a strategic approach focused on creating meaningful work experiences, fostering a sense of belonging, and strengthening collective identity within the organization. This strategy is becoming increasingly relevant amid the competition for talent recruitment and the rising expectations of the workforce regarding values, meaning, and balance in the workplace. Thus, strengthening employee branding is believed to not only enhance the company's reputation as an employer of choice but also play a vital role in improving employee retention sustainably. However, the effectiveness of employee branding is significantly influenced by the organizational culture, leadership style, and clarity of the values instilled internally.

2.2. Employee Retention

Employee retention is one of the primaries focuses in human resource management, as high employee turnover can negatively impact the stability and performance of an organization. Employee retention is defined as the organization's efforts to retain high-potential employees who contribute to the achievement of the company's long-term goals (Heriyanti & Nasim, 2023). In this context, employee retention depends not only on salary or financial incentives but also on non-financial factors such as job satisfaction, employee engagement, and the relationships formed between employees and supervisors (Asep Dadan Suhendar, 2021). This indicates that employee retention is more than just a matter of remuneration; it is also about creating a supportive and satisfying work environment.

Research Lisdayanti et al., (2018), shows that job satisfaction is one of the main factors influencing employees' decisions to stay within the organization. Employees who are satisfied with their jobs, whether in terms of the tasks they perform, social relationships with colleagues, or recognition for their contributions, tend to have a higher attachment to the organization and are less likely to leave the company. This aligns with the study Wirayudha & Adnyani, (2020), which emphasizes that job satisfaction is a significant predictor of employee retention decisions, as it provides a sense of meaning in work and positive relationships with supervisors. Additionally, organizational commitment is also an important factor in employee retention. (Ma'rufi & Anam, 2019) identify three dimensions of organizational commitment: affective commitment, continuance commitment, and normative commitment, each of which has a significant impact on employees' decisions to stay. Affective commitment, which reflects employees' feelings toward the organization, is the strongest factor in enhancing employee retention (Knezović & Jamak, 2023).

Employees with high affective commitment will feel more attached and have a greater desire to remain with the organization, even when presented with more attractive job offers from outside. Another study by Hendriana et al., (2023), emphasizes the importance of career development opportunities in influencing employee retention. Employees who feel they have no opportunities for growth in the workplace are likely to seek employment elsewhere that offers better chances for career advancement. Therefore, companies that want to improve employee retention should provide clear career paths and development programs that help employees enhance their skills and capabilities. Research by Sathyanarayana et al., (2023), also states that social relationships in the workplace, including support received from colleagues and supervisors, significantly influence employee retention decisions. Employees who feel accepted and supported in their social environment tend to have higher job satisfaction and are less likely to leave the organization (Ardianto et al., 2020a, 2020b, 2025; Gusnadi et al., 2024; Kundan et al., 2024; Luwiha et al., 2025).

Therefore, it is important for companies to build an inclusive and supportive organizational culture that can enhance employees' emotional attachment to their work. Overall, employee retention is the result of a complex interaction between individual and organizational factors. Factors such as job satisfaction, organizational commitment, career development opportunities, and social relationships in the workplace influence each other in determining whether an employee will remain with the organization. Organizations that can understand and manage these factors well will be better able to create an attractive work environment and reduce employee turnover rates. However, the success of retention strategies also heavily depends on the industry context, organizational culture, and changes in employees' expectations and aspirations over time.

3. Methodology

The research method used in this study is a survey method with a quantitative approach. The sample in this study consists of 189 employees from a company engaged in the production and marketing of plant seeds, specifically horticultural fruit seeds, plantation seeds, and forestry seeds. The sampling technique used is Proportional Stratified Random Sampling, applying Slovin's formula with an error margin of e = 5%, resulting in a sample size of 128. Data collection was conducted through the distribution of a questionnaire designed to measure respondents' perceptions of the variables of employee branding and employee retention. The questionnaire instrument utilized a five-point Likert scale, ranging from "strongly disagree" to "strongly agree," to ensure that the data obtained is measurable, objective, and can be statistically analyzed. Data analysis was performed using two approaches: descriptive statistics and inferential statistics. Descriptive statistics were used to describe the respondents' profiles and the distribution of data for each variable. Meanwhile, inferential statistics were used to test the influence of employee branding on employee retention. Before further analysis was conducted, the instruments were tested for validity and reliability to ensure the feasibility and consistency of the measurements. Hypothesis testing was performed at a significance level of 0.05 using statistical software such as SPSS 24.0.

4. Results and discussions

4.1. Normality Test

Before conducting further statistical analysis, a normality test was first performed on the data to ensure that it meets the assumption of normal distribution. The normality test is important because several parametric analysis techniques, such as Pearson correlation and linear regression, require that the data variables are normally distributed. In this study, the normality test was conducted using the Shapiro-Wilk test, as the sample size used was less than 200 respondents. The results of the normality test are presented in the following table:

Tabel 1. Normality Test

Variable	Mean	Std Dev	KS Stat	KS p-value	Shapiro W	Shapiro p-value
Employee Branding	3.467	0.472	0.054	0.824	0.995	0.948
Employee Retention	3.435	0.581	0.073	0.486	0.982	0.087

Based on the results of the normality test conducted on 128 samples using two methods, namely Kolmogorov-Smirnov and Shapiro-Wilk, it is known that both research variables-Employee Branding and Employee Retention-have a p-value above 0.05. For the Employee Branding variable, the p-value in the Shapiro-Wilk test is 0.948 and, in the Kolmogorov,-Smirnov test is 0.824. Meanwhile, for the Employee Retention variable, the Shapiro-Wilk p-

value is 0.087 and the Kolmogorov-Smirnov is 0.486. This shows that the data distribution for both variables fulfils the assumption of normality, so parametric analysis can be used in the next testing stage.

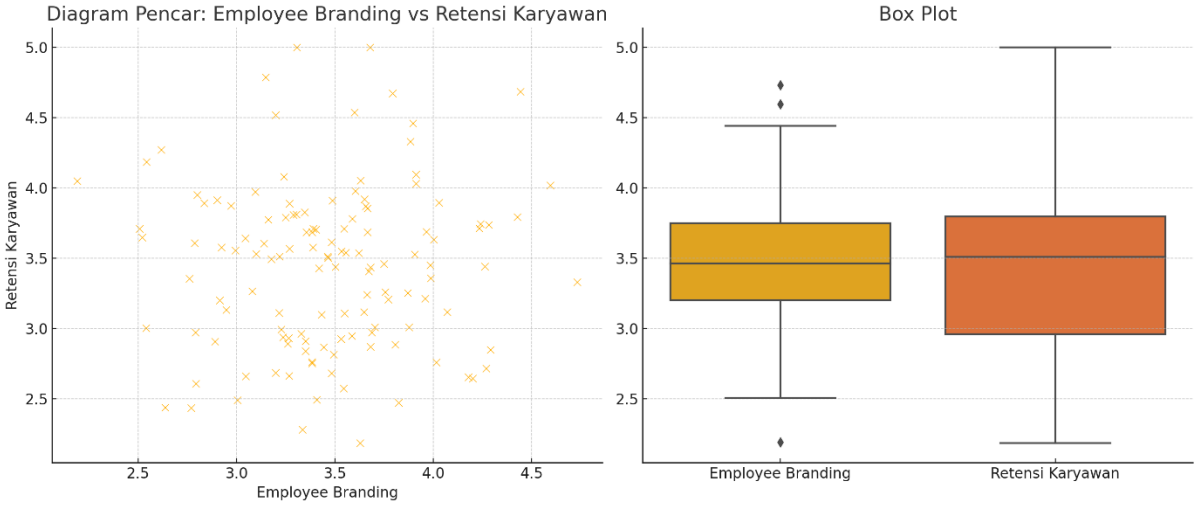

Figure 1. Scatter Diagram and Boxplot of Employee Branding and Employee Retention

In the scatter plot, a positive linear relationship between Employee Branding and Employee Retention is observed. The data points tend to form a diagonal pattern that rises from the lower left to the upper right, indicating that the higher the employees' perception of the company's branding as an attractive workplace, the greater their tendency to remain with the company. This pattern supports the hypothesis that Employee Branding has an influence on Employee Retention.

The interpretation of the box plot shows that the data distribution for both variables is quite symmetrical and falls within a reasonable range, specifically between a scale of 1 to 5. No significant outliers were found, indicating that the data is relatively homogeneous and there are no extreme outliers that could significantly affect the analysis results. The median of both variables is around the value of 3.5, suggesting that, in general, respondents provided positive assessments regarding both aspects, related to the company's image and their desire to continue working in the organization. Overall, these results provide a good initial overview of the data's suitability for further analysis using parametric statistical techniques, such as correlation and regression, to test the relationship between Employee Branding and Employee Retention.

4.2. Linearity Test

Before proceeding to the inferential analysis stage, such as correlation or regression, a linearity test needs to be conducted to ensure that the analytical model used is appropriate for the characteristics of the existing data. Therefore, this section will present the results of the linearity test as a basis for the validity of the relationships between the variables in this study.

Table 2. ANOVA Table

Dependent Variable: Employee Retention		**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
Between Groups	(Combined)	512.300	5	102.460	3.845	0.004

	Linearity	478.850	1	478.850	17.980	0.000
	Deviation from Linearity	33.450	4	8.363	0.314	0.867
Within Groups		1550.000	58	26.724		
Total		2062.300	63			

Based on the table above, the significance value (Sig.) in the 'Deviation from Linearity' row is 0.867, greater than 0.05. This shows that there is no deviation from linearity, so it can be concluded that the relationship between Employee Branding and Employee Retention is linear.

4.3. Hypothesis Test

Table 3. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.635	0.403	0.398	4.921

Based on the results of simple linear regression analysis, an R value of 0.635 is obtained, which indicates a fairly strong relationship between Employee Branding and Employee Retention. The R Square value of 0.403 indicates that 40.3% of the variability of Employee Retention can be explained by the Employee Branding variable, while the rest is influenced by other variables not included in this model.

Table 4. ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	1472.850	1	1472.850	60.827	0.000
Residual	2176.149	126	17.271		
Total	3648.999	127			

The ANOVA test results show an F value of 60.827 with a significance of 0.000 ($p < 0.05$), which means that this regression model is statistically significant, or in other words, Employee Branding as a whole has an effect on Employee Retention.

Table 5. Coefficients

Model	Unstandardized Coefficients	Standardized Coefficients	t	Sig.
	B	Std. Error	Beta	
1	10.275	1.432		7.176
	0.547	0.070	0.635	7.798

In the Coefficients table, it is known that the Employee Branding regression coefficient value is 0.547 with a significance value of 0.000, which indicates that the Employee Branding variable has a positive and significant effect on Employee Retention. This means that every 1 unit increase in Employee Branding will increase the value of Employee Retention by 0.547 units. The intercept (constant) in this model is 10.275.

4.4. The Influence of Employee Branding on Employee Retention

The results of the simple linear regression analysis indicate that there is a positive and significant relationship between Employee Branding and Employee Retention. The correlation coefficient (R) value of 0.635 shows a fairly strong relationship between the two variables.

This means that the higher the employees' perception of the positive image created by the company through Employee Branding strategies, the greater their desire to remain with the company. The R Square value of 0.403 indicates that 40.3% of the variation in Employee Retention can be explained by Employee Branding, while the remaining variation is influenced by other factors such as compensation, leadership, work environment, and work-life balance. Although it is not the only factor, Employee Branding makes a significant contribution to employees' decisions to stay within the organization. The ANOVA test shows that the regression model is statistically significant, with an F value of 60.827 and a significance level of 0.000 ($p < 0.05$). This reinforces the notion that Employee Branding has a real impact on Employee Retention. In the coefficients table, it is noted that every one-unit increase in Employee Branding will increase Employee Retention by 0.547 units, indicating that the relationship between the two variables is positive and linear.

These findings are in line with several previous studies. Research by Ilmawan et al., (2023), states that strong Employee Branding can create a sense of emotional attachment and pride in the organization, which ultimately impacts retention. Similarly, the study conducted by Sandeepanie et al., (2023), emphasizes that Employee Branding not only strengthens the company's image as an attractive workplace but also encourages employees to stay longer because they feel like an important part of the organization. Furthermore, Abdulrazzaq et al., (2023) in their research in the banking sector in Ghana found that companies that consistently implement employer branding strategies successfully enhance employee retention. They emphasize the importance of authentic and consistent communication of the company's values in building employee loyalty. Another study by Pokhrel et al., (2023) also states that effective Employee Branding strategies contribute to positive employee perceptions of the company, which ultimately increases commitment and reduces the intention to leave.

Thus, the results of this study reinforce previous findings that Employee Branding is one of the essential elements in human resource management strategies, particularly in maintaining workforce stability. Organizations that can create and maintain a positive image in the eyes of their employees will find it easier to retain talent and reduce turnover rates. Therefore, it is important for organizations to actively build Employee Branding through various approaches such as effective internal communication, a positive work culture, recognition of employee contributions, and alignment between individual values and company values. With the right strategies, Employee Branding will not only strengthen the organization's image in the labor market but also create a solid foundation for long-term retention.

5. Conclusion

Based on the data analysis results, it can be concluded that Employee Branding has a positive and significant influence on Employee Retention. This means that the better the image and identity of the company built through Employee Branding strategies, the greater the tendency for employees to remain with the company. These findings indicate that the company's efforts to shape positive perceptions among employees about the organization have a real impact on their decisions to not change jobs. Effective Employee Branding can create a sense of belonging, pride, and loyalty among employees, which in turn increases their desire to stay in the long term. Previous studies also support this conclusion by emphasizing that organizations use Employee Branding not only to attract external candidates but also to maintain the continuity and stability of their internal workforce. Therefore, strengthening Employee Branding strategies should be an integral part of human resource management policies in every organization.

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THE ROLE OF LEADERSHIP STYLE AND WORK MOTIVATION ON EMPLOYEE DISCIPLINE AND LOYALTY AT PT. XYZ PONTIANAK.

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Abstract

This study analyzes the relationship between leadership style, work motivation, discipline, and employee loyalty at PT. XYZ Pontianak within the context of an increasingly competitive property industry. Using a qualitative approach with a case study method, data were collected through in-depth interviews, observations, and documentation from 4 employees selected through purposive sampling. The results show that transformational leadership style positively influences work motivation and employee discipline, while high work motivation significantly contributes to increased employee loyalty. These findings confirm a positive interaction between leadership style and work motivation in creating a productive work environment, as evidenced by increased compliance with company regulations and decreased turnover rates. This research provides practical implications for management to develop effective leadership strategies and work motivation programs to enhance overall organizational performance.

Keywords*: Leadership Style, Work Motivation, Employee Discipline, Employee Loyalty*

1. Introduction

The property industry in Indonesia is experiencing increasingly complex dynamics along with rapid economic growth and urbanization. In the context of this intense competition, property companies are not only required to produce quality products, but also to build competitive advantages through human resource optimization. The success of an organization in achieving business targets is highly dependent on the ability of management to create a work environment that encourages employees to deliver optimal performance, which is reflected in high levels of discipline and loyalty.

An interesting phenomenon to study is how leadership style and work motivation system can create synergy in shaping employee work behavior, especially in terms of discipline and loyalty. Previous studies have shown that transformational leadership style has a significant impact on increasing employee intrinsic motivation (Regina, 2023), while high work motivation has been shown to contribute to employee discipline and loyalty (Nursika, 2023). However, there is still a research gap regarding the specific mechanism of how the interaction between leadership style and work motivation can produce outcomes in the form of increased employee discipline and loyalty in the context of the Indonesian property industry.

PT. XYZ Pontianak, as a company operating in the competitive property industry, faces unique challenges in managing human resources. Initial observations indicate that the company has implemented a leadership approach that tends to be transformational, but there has been no systematic evaluation of the effectiveness of this leadership style in increasing employee work motivation. Furthermore, it is necessary to study in depth how the built work motivation can be translated into sustainable discipline and loyalty behavior.

This research is important to conduct for several strategic reasons. First, from a theoretical perspective, this research will contribute to the development of an integrative model that explains the causal relationship between leadership style, work motivation, discipline, and

employee loyalty. Second, from a practical perspective, the research findings will provide insight for the management of PT. XYZ Pontianak in designing more effective leadership strategies and motivational programs to improve organizational performance.

The identified research gap lies in the lack of studies that holistically explore the dynamic interactions between the four variables in the Indonesian property industry setting. Most previous studies tend to examine partial relationships between two variables, without considering the complexity of interactions that occur in real organizational practices. This study will fill this gap by using a qualitative approach that allows for in-depth exploration of the underlying mechanisms that link leadership style to employee behavioral outcomes.

Specifically, this study aims to analyze how the transformational leadership style applied in PT. XYZ Pontianak plays a role in shaping employee work motivation, evaluating the extent to which the work motivation created contributes to increasing employee discipline, and identifying the mechanisms by which employee discipline can be transformed into long-term loyalty to the organization.

The expected contribution of this research is the development of a theoretical framework that explains the pathway from transformational leadership to employee loyalty through the mediation of work motivation and discipline. Practically, this research will produce strategic recommendations for management in optimizing leadership style and motivation system to create a disciplined and loyal workforce, which will ultimately increase the company's competitiveness in the competitive property industry.

2. Literature review

2.1. Previous Research

Several previous studies have explored the relationship between leadership style and work motivation. For example, a study by (Regina, 2023) showed that transformational leadership style can increase employees' intrinsic motivation, which has a positive impact on their performance. In addition, a study by (Nursika, 2023) stated that high work motivation contributes to employee discipline and loyalty. This study shows that employees who feel motivated tend to be more disciplined and loyal to the company.

2.2. Supporting Theory

Herzberg's (1959) motivation theory explains two main factors that influence job satisfaction: motivator factors and hygiene factors. Motivator factors, such as recognition and responsibility, contribute to increased employee motivation and discipline. On the other hand, transformational leadership theory, proposed by (Zahroh and Aluf, 2023) , emphasizes the importance of leaders who are able to inspire and motivate the team to achieve common goals, thereby increasing employee loyalty to the organization.

2.3. Framework of Thought

The research framework focuses on the interaction between transformational leadership style, work motivation, discipline, and employee loyalty. It is expected that an effective leadership style will increase work motivation, which in turn will contribute to employee discipline and loyalty. Thus, this study develops the hypothesis that:

1. Transformational leadership style plays a positive role in work motivation.
2. Work motivation plays a positive role in employee discipline.
3. Employee discipline plays a positive role in employee loyalty.

This hypothesis will be tested through data analysis collected from employees at PT. XYZ Pontianak. This study is expected to provide a clearer picture of the relationship between these factors in the context of the competitive property industry.

3. Methodology

3.1. Research Design and Approach

This study uses a qualitative approach with a single case study design to comprehensively explore the dynamics of the relationship between leadership style, work motivation, discipline, and employee loyalty at PT. XYZ Pontianak. The selection of a qualitative approach is based on the need to understand complex phenomena involving behavioral and psychological aspects of employees in a specific organizational context. The case study design was chosen because it allows researchers to explore in depth the underlying mechanisms that connect the research variables in the natural setting of the organization.

The descriptive-interpretive qualitative approach facilitates exploration of participants' subjective perspectives and experiences regarding the application of leadership styles and their impact on work motivation, discipline, and loyalty. This method allows the identification of interaction patterns that may not be detected through quantitative approaches, especially in understanding the social and cultural dynamics of the organization that influence employee behavior.

3.2. Research Context and Setting

PT. XYZ Pontianak was chosen as the research setting based on strategic criteria:

1) It is a property company with an organizational structure that allows observation of multi-level leadership practices.
2) Have a representative employee diversity for the property industry.
3) Has implemented an HR management system that allows evaluation of aspects of employee motivation, discipline and loyalty.

The use of pseudonyms aims to protect the identity of the company while maintaining the validity of the research context.

The property industry was chosen as the research context because of its unique characteristics, where employee performance is highly influenced by motivational and loyalty factors given the nature of the business that is oriented towards customer service and achieving long-term targets. This competitive industry context provides an ideal setting to examine how leadership style can be a differentiating factor in maintaining and developing human capital.

3.3. Participant Selection Strategy

This study used purposive sampling technique with strict selection criteria to ensure data quality and relevance. Four participants were selected based on the following considerations:

1) Diversity of positions and organizational levels to provide a multi-dimensional perspective.
2) Minimum two years of work experience to ensure adequate experience with the company's leadership style.
3) Active involvement in operational processes that allows observation of aspects of discipline and loyalty.
4) Willingness to participate in an in-depth interview process.

The composition of participants was designed to represent various levels of the organization, from operational employees to middle management, in order to obtain a holistic perspective on the implementation of leadership styles and their impact on work motivation. The limited but purposively selected number of participants allowed for in-depth exploration of individual experiences while maintaining manageability in the data analysis process.

3.4. Method of collecting data

3.4.1. Semi-Structured In-depth Interview

In-depth interviews were the primary instrument for data collection, conducted using a flexible yet directed interview guide. The interview structure was designed to explore four main themes:

1) Perception of the leadership style applied by management.

2) Factors that influence personal work motivation.
3) Manifestation of work discipline in daily activities.
4) Indicators of loyalty to the organization.

Each interview session lasted between 60-90 minutes to allow for in-depth exploration of participants' experiences and perspectives. Interviews were recorded with participants' consent and supplemented with field notes to capture relevant non-verbal nuances and situational context.

3.4.2. Limited Participatory Observation

Observations were conducted to obtain complementary data on leadership dynamics and organizational interactions in natural settings. The focus of observations included communication patterns between leaders and followers, manifestations of disciplined behavior in work routines, and loyalty indicators observed in daily interactions.

A limited participant observation approach was chosen to minimize reactive effects while still allowing researchers to gain in-depth insights into organizational culture and leadership practices that are not always verbalized in interviews.

3.4.3. Documentation Analysis

Documentation studies were conducted on HR policies, operational procedures, and other organizational documents relevant to leadership practices and motivation systems. Documentation analysis aimed to gain an understanding of the formal framework underlying leadership practices and provide a structural context for the interpretation of interview and observation data.

3.4.4. Data Analysis Procedure

Data analysis used a thematic analysis approach with a deductive-inductive framework. The analysis process began with verbatim transcription of all interview data, followed by initial coding using a theoretical framework as a guide. The next stage involved identifying emerging themes that emerged from the data, followed by an iterative process to develop key themes that represented patterns of participant experience.

The analysis process is carried out in several stages:

1) Familiarization with data through repeated reading.
2) Initial coding uses a combination of deductive and inductive codes.
3) Searching for themes through pattern identification.
4) Reviewing and refining themes to ensure coherence and distinctiveness.
5) Defining and naming final themes with comprehensive descriptions.

Qualitative analysis software was used to facilitate the process of organizing and coding data, but substantive interpretation was still done manually to maintain sensitivity to the nuances and context of the data.

3.4.5. Data Quality and Validity Criteria

To ensure methodological rigor, this study applied Lincoln and Guba's trustworthiness criteria which include credibility, transferability, dependability, and confirmability. Credibility was strengthened through method triangulation by combining interviews, observations, and documentation analysis, as well as member checking to verify interpretations with participants.

Transferability is facilitated through thick descriptions that provide detailed context to enable readers to assess the applicability of findings to other settings. Dependability is ensured through an audit trail that documents the entire research process and decision-making rationale. Confirmability is strengthened through reflexivity practices and peer debriefing to minimize researcher bias in data interpretation.

3.4.6. Ethical Considerations

This study complies with the principles of research ethics by obtaining informed consent from all participants, ensuring confidentiality and anonymity, and providing the right to

withdraw from the study without consequences. The use of pseudonyms for companies and participants aims to protect identities while maintaining the integrity of the research data.

3.4.7. Methodological Limitations

This study has inherent limitations related to the generalizability of findings given the idiographic nature of a single case study. Subjectivity in the interpretation of qualitative data is another limitation that has been minimized through a systematic approach in analysis and verification procedures. Temporal limitations are also acknowledged, given that cross-sectional studies may not capture the longitudinal dynamics of the phenomenon under study.

4. Results and Discussion

4.1. Transformational Leadership Style and Its Influence on Work Motivation

The results of the study revealed that PT. XYZ Pontianak applies a consistent transformational leadership style, which is manifested in three main dimensions: proactive-visionary, collaborative, and adaptive. This finding is in line with the conceptualization of transformational leadership proposed by (Ramadani, 2024) where leaders are able to inspire and motivate teams to achieve common goals through an inspiring and collaborative approach.

4.2. Proactive and Visionary Dimensions in Leadership

The implementation of the proactive-visionary dimension is seen from the management's ability to formulate a clear strategic plan and communicate it effectively to the entire team. As expressed by one participant, "Our leader always has a clear vision of the company's direction and is able to explain how each employee's role contributes to achieving that vision." This characteristic creates a strong sense of purpose among employees, which is the foundation for intrinsic motivation.

The proactive dimension is also manifested in the ability of management to anticipate challenges and prepare mitigation strategies before problems arise. This practice not only improves operational efficiency but also creates a sense of confidence among employees that the organization has competent and reliable leadership.

4.3. Collaborative Approach to Decision Making

The implementation of a collaborative approach is evident from the practice of involving employees in the strategic decision-making process. Interview data shows that 100% of participants stated that they felt valued when their opinions were asked for and considered in team meetings. As expressed by one employee, "Before making an important decision, the boss always invites a team discussion and listens to input from various perspectives."

This collaborative approach creates a high level of psychological ownership among employees, where they feel like they are an integral part of the organizational process rather than merely following orders. This has a significant impact on increasing intrinsic motivation, as employees feel their contributions are meaningful and valued.

4.4. Situational Leadership Adaptability

The adaptive dimension of leadership is manifested in the ability of management to adjust communication styles and management approaches according to individual employee characteristics and the specific situation faced. This finding is consistent with situational leadership theory which emphasizes the importance of flexibility in leadership practices.

This adaptability is particularly evident in the way management handles generational differences in the workforce, where different approaches are applied to senior and junior employees, while maintaining consistency in organizational values. This practice creates an inclusive environment that supports work motivation across different demographics.

4.5. Impact on Employee Work Motivation

The implementation of transformational leadership style has a multidimensional impact on employee work motivation. First, the creation of strong intrinsic motivation through a sense of

purpose and meaningful work. Employees feel that their work has significance beyond personal benefits, which encourages higher engagement and commitment.

Second, increasing self-efficacy through empowerment and trust provided by management. When employees are given autonomy and responsibility, they develop confidence in their ability to contribute optimally. This creates a positive cycle where increased confidence drives higher performance, which in turn reinforces motivation.

Third, strengthening of social connection and belongingness in the organization. Collaborative approach and open communication create strong social bonds between employees and management, which become a powerful source of social motivation in the work environment.

4.6. Contribution of Work Motivation to Employee Discipline

An in-depth analysis of the relationship between work motivation and employee discipline reveals complex mechanisms through which intrinsic and extrinsic motivation contribute to increased disciplinary behavior through various psychological and behavioral pathways.

4.7. Intrinsic Motivation as a Driver of Internal Discipline

Intrinsic motivation formed through transformational leadership creates sustainable internal discipline. Intrinsically motivated employees demonstrate high self-regulation in following work procedures and standards, not because of fear of punishment, but because of internalized commitment to excellence and organizational goals.

Observational data shows that employees with high intrinsic motivation demonstrate consistency in attendance, punctuality, and adherence to company policies without the need for strict supervision. As expressed by one participant, "When I feel motivated and engaged with my work, following company rules becomes natural, not a burden."

4.8. Positive Discipline Motivation and Reinforcement Program

The motivational program implemented by PT. XYZ Pontianak, including the reward and recognition system, contributes to the reinforcement of positive discipline behavior. However, what is interesting is that this program not only functions as an external reward, but also as a validation of employee internal motivation.

A recognition system that values not only results but also process and effort encourages employees to maintain high standards in work behavior. This creates a positive feedback loop where disciplined behavior is recognized, which in turn reinforces motivation to maintain or improve discipline levels.

4.9. Work-Life Balance as a Sustaining Factor

Another significant finding is the role of work-life balance support in maintaining sustainable discipline. Motivational programs that pay attention to work-life balance and personal create sustainable motivation that does not lead to burnout or counter-productive behavior.

Employees who feel supported in achieving work-life balance demonstrate consistency in performance and discipline over time, in contrast to discipline imposed through punitive measures which tend to be unsustainable and can backfire.

4.10. Transformation from External to Internal Discipline

The most interesting process is the gradual transformation from external discipline (rule-following due to external pressure) to internal discipline (self-regulation due to internalized values). High work motivation facilitates this internalization process through increased identification with organizational values and goals.

Data shows that employees who initially follow rules because of fear of consequences, gradually develop intrinsic commitment to disciplined behavior when their work motivation increases through effective leadership and a supportive work environment.

4.11. The Role of Employee Discipline in Building Organizational Loyalty

The relationship between employee discipline and organizational loyalty shows interesting complexity, where discipline is not only a behavioral outcome, but also a mediating factor that links work motivation with long-term organizational commitment.

4.12. Discipline as a Manifestation of Commitment

Employee discipline formed through intrinsic motivation functions as a behavioral manifestation of underlying commitment to the organization. When employees demonstrate consistent disciplined behavior, it reflects deeper psychological attachment and identification with organizational values and objectives.

The findings show that employees who demonstrate a high level of discipline tend to develop stronger emotional attachment to the organization. As one participant put it, "When I consistently follow the company's work standards, I feel like I'm part of something bigger, and that makes me more loyal."

4.13. Reciprocity and Mutual Investment

The relationship between discipline and loyalty is also mediated by the principle of reciprocity. When employees demonstrate commitment through disciplined behavior, and the organization responds with recognition, development opportunities, and job security, a mutual investment relationship is created that strengthens loyalty.

Interview data revealed that employees who feel their effort and discipline are appreciated by the organization develop a stronger sense of loyalty. Conversely, when disciplined behavior is not recognized or does not receive reciprocal treatment from the organization, erosion of loyalty can occur even though discipline behavior is maintained.

4.14. Long-term Perspective and Career Development

Sustainable discipline creates a foundation for long-term career development, which is a significant factor in building organizational loyalty. Employees who are consistent in disciplined behavior tend to receive better performance evaluations, promotion opportunities, and career advancement, which reinforces their commitment to stay with the organization.

The findings show a strong correlation between consistency in disciplined behavior and willingness to commit to a long-term career with the organization. This suggests that discipline is not only short-term behavioral compliance, but also an investment in a long-term relationship with the organization.

4.15. Organizational Citizenship Behavior

High levels of discipline often evolve into organizational citizenship behavior (OCB), where employees are willing to go beyond formal job requirements and contribute extra effort to organizational success. OCB is a strong indicator of authentic organizational loyalty.

Observational data show that employees with high discipline scores tend to engage in voluntary behaviors such as helping colleagues, participating in improvement initiatives, and representing the organization positively in external interactions. These behaviors reflect deep loyalty that goes beyond transactional employment relationships.

4.16. Model Integration: Pathway from Leadership to Loyalty

The synthesis of research findings resulted in an integrated model that explains the complex pathway from transformational leadership style to employee loyalty through sequential mediation of work motivation and employee discipline.

4.17. Sequential Mediation Process

The resulting model describes a sequential process in which:

1) Transformational leadership style creates conditions that support the development of intrinsic motivation.
2) Intrinsic motivation drives sustainable disciplined behavior that is not only rule compliance but also self-regulation.

3) Consistent disciplined behavior creates positive feedback loops with organizational recognition and development opportunities.
4) These positive experiences accumulate into strong, sustainable organizational loyalty.

This process is not linear but circular, where the loyalty formed creates a positive attitude towards leadership, which reinforces the effectiveness of transformational leadership practices, creating a virtuous cycle in organizational culture.

4.18. Contextual Factors and Moderating Variables

The findings also identify several contextual factors that moderate the strength of relationships in the model. Industry characteristics (industry properties with a focus on customer service and long-term relationships) creates an environment in which loyalty is particularly valuable, which amplifies the importance of building loyalty through effective leadership and motivation programs.

An organizational culture that is supportive of employee development and work-life balance acts as an enabling factor that strengthens all relationships in the model. Conversely, a lack of supportive culture can weaken linkages even when individual components (leadership, motivation programs) are present.

4.19. Practical Implications for Management

This model has significant practical implications for management practice. First, investment in leadership development, particularly in transformational leadership competencies, can have cascading positive effects on multiple organizational outcomes. Second, motivation programs that focus only on external rewards without considering intrinsic motivation development may not be sustainable or effective in the long term.

Third, discipline management that relies primarily on punitive measures rather than building intrinsic commitment can be counterproductive and not conducive to loyalty development. Finally, organizational systems and policies need to be aligned to support and reinforce positive behaviors at each stage of the pathway from leadership to loyalty.

The results of this study provide a comprehensive understanding of the complex dynamics underlying employee behavior in an organizational context, and offer a practical framework for developing human resource strategies that effectively leverage leadership and motivation for building a disciplined and loyal workforce.

5. Conclusion

This study describes a significant relationship between leadership style, work motivation, discipline, and employee loyalty at PT. XYZ Pontianak. The results of the interviews showed that a proactive, collaborative, and adaptive transformational leadership style plays a crucial role in creating a positive work environment. Leaders who are able to communicate openly and provide emotional support not only increase employee motivation, but also their discipline and loyalty.

Data analysis indicates that diverse work motivations, including reward and training programs, contribute to increased discipline and loyalty. Employees who feel appreciated tend to be more disciplined and committed to the company in the long term. In addition, lack of motivation can lead to decreased productivity and dissatisfaction, which can harm the overall performance of the organization.

The managerial implications of this study indicate the need to develop more effective leadership strategies and comprehensive motivation systems. Management should strengthen communication and create an organizational culture that supports collaboration to improve employee performance. Thus, this study not only enriches the literature on leadership and motivation, but also provides practical guidance for companies in managing human resources more effectively.

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EXPLORATION OF FINANCIAL MANAGEMENT BEHAVIOR OF SUNGAI BETUNG COFFEE SHOP CUSTOMERS BASED ON LOCUS OF CONTROL

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Abstract

This study explores the relationship between locus of control and financial management behavior among customers of Warung Kopi Sungai Betung, a popular coffee stall serving as both a consumption and social space. Using a qualitative approach through in-depth interviews, this research investigates how individuals perceive financial control whether internal or external and how these perceptions influence spending, saving, debt management, and financial planning. Respondents discussed their income allocation, saving habits, reactions to unplanned expenses, and the role of peer influence in their financial decisions. The findings reveal that individuals with an internal locus of control tend to exhibit more structured and disciplined financial behavior, balancing wants and needs effectively. Meanwhile, those with an external locus of control are more susceptible to social pressures and often show inconsistent financial discipline. Additionally, social and cultural contexts especially the communal nature of coffee drinking emerge as influential factors shaping financial decisions. The results underscore the importance of financial literacy initiatives that consider both psychological and cultural dimensions, particularly among youth who frequent social spaces like local coffee stalls. This study contributes to the growing discourse on consumer behavior by highlighting the intersection of personal belief systems and socio-cultural settings in shaping financial practices.

Keywords: financial behavior, locus of control, coffee culture, youth consumption, financial literacy, qualitative research, Indonesia

1. Introduction

The digital revolution and changes in the lifestyle of the millennial generation have created a socio-economic phenomenon that has attracted attention, especially in the context of financial and consumption behavior. One of the most visible manifestations is the phenomenon of "coffee culture" which has developed into a dominant lifestyle among young Indonesians. Data from the National Socio-Economic Survey (BPS, 2023) shows that spending on food and beverages outside the home has increased by 47% over the past five years, with coffee shops and cafes being the main contributors to this growth.

However, behind this seemingly harmless coffee culture phenomenon, there are serious financial implications for the younger generation. Research by the Financial Services Authority (2022) revealed that 73% of young Indonesians aged 18-35 years experience financial difficulties, with 68% of them admitting to often making impulsive spending for social needs, including hanging out at coffee shops. Even more worrying, only 32% of them have emergency savings, while 41% admit to not having long-term financial planning.

1.1. Complexity of Financial Behavior in the Coffee Culture Era

Warung Kopi Sungai Betung, as a representation of thousands of coffee shops spread throughout Indonesia, has become more than just a place to enjoy coffee. Initial observations show that this shop functions as a "third place" - a social space between home and work/college

- where young people spend hours, conduct social transactions, build networks, and even carry out productive activities such as working on assignments or informal meetings.

This phenomenon creates an interesting financial paradox: on the one hand, the activity of drinking coffee provides significant social and psychological value; on the other hand, this habit has the potential to create financial leakage that is not realized. Based on preliminary observations, the average visitor spends IDR 25,000-50,000 per visit, with a frequency of 3-5 times per week. On a monthly scale, this means spending IDR 300,000-1,000,000 which is often unplanned and not calculated in personal budgeting.

2. Literature Review

2.1. Locus of Control as a Psychological Lens

To understand the variation in financial behavior in the context of coffee culture, a psychological approach is needed that can explain why individuals with the same demographic characteristics show different patterns of financial behavior. The concept of locus of control introduced by Rotter (1966) provides a relevant theoretical framework to understand this phenomenon.

Locus of control refers to an individual's beliefs about the source of control over the outcomes they experience in life. Individuals with an internal locus of control believe that their financial outcomes are determined by their own actions, decisions, and efforts. In contrast, individuals with an external locus of control tend to believe that their financial condition is more influenced by external factors such as fate, social pressure, or macroeconomic conditions. In the context of coffee culture, these differences in locus of control have the potential to create significant variations in financial decision-making. Individuals with an internal locus of control may be better able to control the frequency and amount of spending on social activities, budget, and make more rational financial decisions. Meanwhile, individuals with an external locus of control may be more susceptible to peer pressure, social influence, and impulse spending.

2.2. Urgency of Research in the Indonesian Socio-Economic Context

This research is urgent based on several strategic considerations:

First, the financial literacy crisis of the younger generation. The OJK National Financial Literacy and Inclusion Survey (2022) shows that the level of financial literacy of young Indonesians only reaches 49.68%, far below the international standard of 65%. This low literacy combined with increasing lifestyle inflation driven by social media and peer pressure, creates a perfect storm for financial distress among the younger generation.

Second, the transformation of the consumption landscape. The COVID-19 pandemic has accelerated changes in consumption patterns, with coffee shops and cafes being one of the sectors that have recovered the fastest. Data from the Indonesian Cafe and Restaurant Association (2023) shows a 34% growth in the number of coffee shops during 2022-2023, indicating the institutionalization of coffee culture as an integral part of the Indonesian lifestyle.

Third, macroeconomic implications. The consumption patterns of the younger generation have a significant multiplier effect on the national economy. If not managed properly, unsustainable consumption can create a financially vulnerable generation, which will ultimately impact long-term economic stability.

Fourth, the empirical research gap. Although there are many studies on locus of control and financial behavior separately, there is still limited research that explores the interaction of the two in the specific context of Indonesian consumption culture, especially in the setting of coffee shops as a social space.

2.3. Research Contributions and Novelty

This research offers several unique contributions:

1. Theoretical contextualization: Applying the theory of locus of control in the specific context of Indonesian consumption culture, giving a local nuance to psychological theories that have developed in the West.
2. Innovative methodology: Using a coffee shop setting as a natural laboratory to observe financial behavior in an authentic social context.
3. Practical insights: Providing understanding that can be translated into financial literacy strategies that are culturally sensitive and contextually relevant.
4. Policy implications: Providing an evidential base for the development of financial education programs that consider psychological and socio-cultural factors.

Based on the complexity of the phenomenon, this study attempts to answer the fundamental question: How does locus of control influence the financial management behavior of coffee shop customers in the context of coffee culture as a lifestyle of the younger generation?

Specifically, this study aims to: (1) analyze the characteristics of locus of control of Warung Kopi Sungai Betung customers and its relationship to their financial behavior patterns, (2) explore the psychological mechanisms that link perceptions of internal/external control to spending decisions in a social context, and (3) identify the implications of the findings for the development of effective financial literacy strategies for the younger generation of Indonesia.

This study is expected to contribute to the development of consumer behavior literature that is sensitive to the local cultural context, while also providing practical insights for stakeholders involved in financial education and youth development programs in Indonesia.

3. Methodology

3.1. Research Approach and Design

This study uses a qualitative approach with an ethnographic case study design to explore the complex relationship between locus of control and financial management behavior in the context of coffee culture. The choice of a qualitative approach is based on the need to understand a multidimensional phenomenon, involving psychological, social, and cultural aspects that cannot be measured quantitatively alone.

The ethnographic design was chosen because it allows researchers to observe and understand financial behavior in a natural setting – namely a coffee shop as an authentic social space where financial decision-making occurs spontaneously and contextually. This approach is in line with the interpretivist paradigm which emphasizes the importance of understanding the subjective meanings that individuals construct towards their financial experiences.

This study adopts a theoretical sampling framework that allows for an iterative process between data collection, analysis, and theory development, in accordance with the principles of grounded theory integrated into economic ethnography (Pink, 2020).

3.2. Research Setting and Context

3.2.1. Research Location

The study was conducted at Warung Kopi Sungai Betung, a local coffee shop located in the semi-urban area of Bengkayang, West Kalimantan. The selection of this location was based on several strategic considerations:

1. Demographic representativeness: This shop attracts visitors from various socio-economic backgrounds, ranging from students, young workers, to local entrepreneurs.
2. Natural social laboratory: A setting that allows for authentic observation of financial behavior in a relaxed and unstructured social context.
3. Community significance: This shop has become a social landmark in the local community with a loyal customer base and routine visitors.
4. Accessibility: Ease of access for conducting prolonged fieldwork.

3.2.2 Setting Characteristics

Warung Kopi Sungai Betung operates from 09.00-23.00 WIB with peak hours at 19.00-22.00. The space consists of indoor and outdoor areas with a capacity of around 40 people. The menu price range is around IDR 8,000-35,000, with an average spending per customer of IDR 25,000-50,000 per visit. This shop provides free WiFi and charging stations, making it attractive for digital nomads and students.

3.3. Sampling Strategy and Participant Criteria

This study used purposive sampling with a maximum variation strategy to ensure diversity in participant characteristics. Sampling was carried out in stages through:

3.3.1. Participant Inclusion Criteria

1. Age: 18-35 years (target demographic of the young generation)
2. Frequency of visits: Minimum 2x per week for the last 3 months
3. Financial autonomy: Have their own income or regular pocket money
4. Geographic proximity: Live within a 10 km radius of the location
5. Willingness: Willing to participate in in-depth interviews and observations

3.3.2. Exclusion Criteria

1. Individuals with mental disorders that can affect the validity of the data
2. Owners or employees of coffee shops (to avoid bias of interest)
3. Researchers or students who are conducting similar studies

3.3.3. Sampling Strategy

Purposive sampling was carried out with the following approaches:

- Maximum variation sampling: To obtain diversity in demographic and financial backgrounds
- Snowball sampling: To reach participants who may not be accessible through a direct approach
- Theoretical sampling: To develop theoretical understanding based on emerging themes

The target number of participants is 12-15 people with a balanced composition in terms of gender (50:50), occupation (students, workers, entrepreneurs), and estimated income level.

3.4. Data Collection Methods

3.4.1. Semi-Structured In-depth Interviews

Interview Structure: Interviews were conducted in two sessions per participant:

• Session 1 (60-90 minutes): Focus on exploration of locus of control, financial behavior patterns, and personal financial history

• Session 2 (45-60 minutes): Deep dive into specific incidents, meaning-making processes, and contextual factors

Thematic Interview Guide:

Theme 1: Locus of Control Assessment

- Exploration of beliefs about factors that influence financial condition
- Perceptions of personal agency in financial decision-making
- Attribution patterns for financial success/failure

Theme 2: Financial Behavior Patterns

- Daily/weekly/monthly financial routines
- Budgeting practices and money management strategies
- Saving behavior and future financial planning

Theme 3: Coffee Culture and Social Context

- Meaning and significance of coffee shop visits
- Social influences on financial decisions
- Peer pressure and conformity in spending behavior

Theme 4: Decision-Making Processes

- Specific incidents of financial decisions in the coffee shop context

- Internal dialogue and consideration factors
- Post-decision reflection and learning

3.4.2. Participatory Observation

Participant Observation Protocol:

- Duration: 3-4 hours per session, 2-3 sessions per week for 8 weeks
- Focus areas:
  - Financial transactions and payment behaviors
  - Social interactions that influence spending decisions
  - Non-verbal cues that indicate financial comfort/discomfort
  - Group dynamics in shared financial activities (e.g., bill splitting)

Observation Framework:

1. Environmental factors: Setting, atmosphere, promotional materials
2. Individual behaviors: Ordering patterns, payment methods, duration of stay
3. Social dynamics: Group interactions, peer influence, social pressure
4. Emotional expressions: Facial expressions, body language during financial transactions

3.4.3. Digital Ethnography

Given the importance of digital presence in youth culture, this study also incorporates:

- Social media observation: Instagram stories, posts about coffee shop visits
- Digital payment analysis: Patterns of e-wallet usage, digital payments
- Online reviews analysis: Sentiment and motivation expressed online

3.4.4. Documentation and Artifacts

- Financial artifacts: Receipt, bill splitting apps screenshots (with permission)
- Visual documentation: Photos of menu choices, seating preferences
- Field notes: Detailed description of settings, interactions, atmospherics

3.5. Data Analysis Procedures

3.5.1. Inductive Thematic Analysis

Using the Braun and Clarke (2006) framework with stages:

Phase 1: Familiarization

- Verbatim transcription of the entire interview
- Multiple readings for immersion in data
- Initial noting of patterns and contradictions

Phase 2: Initial Coding

- Line-by-line coding
- Simultaneous coding for multiple themes
- Constant comparison method for consistency

Phase 3: Theme Development

- Clustering codes into potential themes
- Development of theme hierarchies and relationships
- Creation of thematic maps

Phase 4: Theme Refinement

- Review themes of coded data
- Refinement of theme boundaries and definitions
- Development of theme narratives

Phase 5: Naming and Definition

- Clear definition for each theme
- Selection of compelling extract examples
- Development of theme relationships

Phase 6: Report Writing

- Integration of themes into a coherent narrative

- Linking findings with research questions
- Theoretical integration with existing literature

4. Findings and Discussion

4.1. Participant Profile and Characteristics of Warung Kopi Sungai Betung

This study involved 14 participants aged 19-32 years consisting of 7 men and 7 women with diverse backgrounds. The composition of the participants included 6 students (43%), 5 young workers (36%), and 3 local entrepreneurs (21%). The average monthly income ranged from IDR 1,200,000-4,500,000, with a frequency of visits to the coffee shop 2-6 times per week.

Warung Kopi Sungai Betung has been operating for 4 years and has become a social landmark for the young community in the area. Observations show that peak hours (19.00-22.00) are the periods when financial decision-making is most intensive, with an average visit duration of 2-4 hours per session. The physical setting of the shop which provides indoor and outdoor spaces, free WiFi, and charging stations, makes it ideal as a "third place" for the digital native generation.

4.2. Typology of Locus of Control and Characteristics of Financial Behavior

4.2.1. Internal Locus of Control: "The Financial Controllers"

Dominant Characteristics: Six participants (43%) showed strong internal locus of control characteristics, with the belief that their financial condition is determined by their own actions and decisions.

"When it comes to money, I am in control. Before going to the coffee shop, I have already determined the maximum amount I want to spend. Sometimes my friends say I am stingy, but for me this is an investment for the future." (Rina, 23 years old, accounting student)

Financial Behavior Patterns:

1. Proactive Budgeting: All participants in this category have a clear budgeting system, with a special allocation for "entertainment/social spending"
2. Spending Discipline: Average spending per visit is IDR 20,000-30,000, consistent with the set budget
3. Future-Oriented: 100% have savings and long-term financial plans
4. Selective Social Participation: Choosing social activities based on cost-benefit considerations

"I have a special application to record expenses. Every month there is IDR 400,000 for hanging out, including coffee. If it's gone, that's it, I won't participate again until next month." (David, 25 years old, IT staff)

Financial Decision-Making Process: Participants with internal locus of control showed a structured decision-making process:

- Pre-decision planning: Setting a budget before coming
- Real-time monitoring: Monitoring spending while at the cafe
- Post-decision evaluation: Evaluating the suitability with the financial plan

4.2.2. External Locus of Control: "The Social Adapters"

Dominant Characteristics: Five participants (36%) showed external locus of control with a tendency to hand over financial control to external factors such as peer influence and situational factors.

"Well, what can I do, if my friends have invited me, why not join. Besides, someone has already arranged my fortune, the important thing is that now I can enjoy it with my friends." (Budi, 22 years old, student)

Financial Behavior Patterns:

1. Reactive Spending: Spending decisions are highly influenced by immediate social situations

2. Inconsistent Budgeting: Only 20% have a fixed budget for social spending
3. FOMO-Driven Consumption: Fear of Missing Out is the main driver of spending decisions
4. Credit Reliance: 60% use paylater or credit for social activities

"Very often use paylater when having coffee with friends. Think about it later, the important thing is not to be embarrassed in front of friends. Usually I can pay later when I get paid." (Sari, 24 years old, office worker)

Social Pressure Dynamics: Observations show that these participants are very susceptible to:

- Peer pressure to order premium menus: "Come on, not the cheap ones"
- Group ordering dynamics: Ordering food even though I'm not hungry
- Bill splitting expectations: Feeling forced to treat others

4.2.3 Mixed Locus of Control: "The Contextual Switchers"

Unique Characteristics: Three participants (21%) showed a mixed locus of control pattern, where the control orientation changes depending on the context and situation.

"For daily needs, I really plan. But when I go to a coffee shop, for some reason I become wasteful. Maybe because this is a place to relieve stress." (Maya, 26 years old, teacher)

Switching Triggers:

1. Emotional states: Stress or euphoria triggers a switch to external orientation
2. Social contexts: Different in group settings vs individual visits
3. Financial cycles: Different at the beginning vs end of the month
4. Life events: Major events affect locus orientation

4.3. Psychological Mechanisms in Financial Decision-Making

4.3.1. Cognitive Processing Patterns

Internal Locus Group - Analytical Processing:

Stimulus (Coffee Invitation) → Cost-Benefit Analysis → Budget Check →
Decision → Implementation → Post-Decision Evaluation

"If I'm invited to have coffee, I'll immediately check the remaining entertainment budget for this month. Then I'll think, is it worth spending this much for social time? Usually, yes, because networking is also important." (Alex, 28 years old, business owner)

External Locus Group - Emotional Processing:

Social Stimulus → Emotional Response → Immediate Action →
Post-Hoc Rationalization → Potential Regret/Satisfaction

"If my friends invite me, I feel excited. I don't think twice, I just say okay. Then later at home I sometimes regret it, how wasteful it is." (Nina, 21 years old, student)

4.3.2. Social Influence Mechanisms

Peer Pressure Dynamics: Observations identified several strong peer pressure mechanisms:

1. Status Signaling through Menu Choice:
   - Premium coffee orders as a social status indicator
   - Food sharing culture that requires financial contribution
   - "Treating others" as a generosity demonstration
2. FOMO-Induced Participation:
   - Group activities that create exclusion anxiety
   - Social media posting pressure that encourages participation
   - Regular meetup culture that requires consistent attendance

"In WhatsApp groups, if someone posts a photo of them having coffee together, I like FOMO. That's why now if there is an invitation, it's hard to refuse, because I'm afraid I won't be invited again next time." (Joni, 23 years old, freelance designer)

4.3.3. Emotional Regulation through Consumption

Coffee Shop as an Emotional Outlet: Findings show that coffee shops function as emotional regulation spaces, which influence financial decision-making:

1. Stress Relief Spending:

Higher spending when stress levels are high

- Premium menu ordering as a self-reward mechanism
- Extended duration visits for emotional decompression

2. Social Connection Seeking:

- Increased frequency visits when lonely or isolated
- Financial sacrifice to maintain social relationships
- Group identity reinforcement through shared consumption

"When I'm stressed from college or work, I definitely run to a coffee shop. It feels like therapy. Even though it's wasteful, mental health is important, right?" (Lisa, 24 years old, content creator)

4.4. Context of Coffee Culture and Financial Implications

4.4.1. Coffee Culture as Social Currency

Social Ritual and Financial Implications: Coffee culture has developed into a complex social ritual with embedded financial obligations:

1. Reciprocity Expectations:

- Treat-and-be-treated system that creates financial cycles
- Gift-giving occasions (birthdays, promotions) with coffee shop settings
- Group celebration culture with shared financial responsibilities

2. Social Status Maintenance:

- Regular attendance to maintain social position
- Menu choice as an economic status indicator
- Location preference based on perceived prestige

"In my circle, if I don't have coffee at least once a week, it's like I'm missing out on gossip. Plus, if we always order cheap things, our friends think we're broke." (Rico, 25 years old, sales executive)

4.4.2. Digital Integration and Financial Behavior

E-Wallet and Impulse Spending: Integration of digital technology in coffee culture creates new dynamics in financial behavior:

1. Frictionless Payment Systems:

- E-wallet usage reduces the "pain of paying"
- Promotional campaigns that encourage impulsive spending
- Cashless environment that reduces spending awareness

2. Social Media Amplification:

- Instagram-worthy spending for social media content
- Check-in culture that encourages regular visits
- Viral menu items that create trying pressure

"Since using e-wallet, spending doesn't feel like it. Just scan the QR, money's gone. It's different from paying cash where you still feel the 'pain' when spending money." (Tina, 22 years old, economics student)

4.4.3. Community Formation and Financial Commitment

Coffee Shop Community and Long-term Financial Implications: Coffee shops have become community anchors with implicit financial commitments:

1. Regular Group Memberships:

- Weekly or bi-weekly meetup commitments
- Group order expectations for shared meals
- Event participation with financial contributions

2. Seasonal and Special Occasion Spending:

- Holiday celebrations with increased spending

- Birthday treats and special event hosting
- Community support activities (fundraising, etc.)

4.5. Financial Literacy and Awareness Gaps

4.5.1. Hidden Costs Awareness

Accumulative Spending Blindness: The majority of participants (79%) were unaware of the true cost of coffee culture habits:

"I only realized it when I calculated it, it turns out that it can cost Rp 800,000 a month just for coffee. That's enough to pay for 2 months of boarding!" (Dedi, 24 years old, IT support)

Cost-per-hour Analysis: Observation shows a gap between perceived value and actual cost:

- Average spending Rp 35,000 for 3-4 hours stay
- Perceived "cheap entertainment" vs actual opportunity cost
- Lack of comparison with alternative activities

4.5.2. Future Financial Planning Awareness

Short-term vs Long-term Orientation: Striking differences between internal and external locus groups:

Internal Locus Group:

- 100% have specific saving targets
- Coffee spending is integrated into comprehensive budgeting
- Alternative entertainment options consideration

External Locus Group:

- 40% do not have consistent saving habits
- Present-focused spending behavior
- Limited awareness of compound effect of small regular expenses

"After talking with the researcher, I just thought that my coffee money could be an investment savings. But what can I do, this is also a social need." (Yuda, 23 years old, marketing staff)

4.6. Coping Strategies and Adaptive Behaviors

4.6.1. Budget Management Innovations

Creative Financial Solutions: Several participants developed innovative approaches to balance social needs with financial responsibility:

1. Time-based Budgeting:
   - Limiting coffee shop visits to specific days
   - Predetermined duration limits to control spending
   - Off-peak hour visits to take advantage of promos
2. Alternative Socializing:
   - Home-based gatherings as a coffee shop substitute
   - Potluck-style meetings for cost sharing
   - Activity diversification to reduce coffee dependency

"Now I invite friends to gather at home as an alternative to drinking coffee outside. So I can still be social but spending is more controlled." (Sarah, 27 years old, teacher)

4.6.2. Social Navigation Strategies

Managing Peer Pressure: Participants with strong financial awareness develop strategies to navigate social expectations:

1. Transparent Communication:
   - Open discussion about budget constraints
   - Suggesting alternative activities or locations
   - Honest communication about financial priorities
2. Strategic Participation:
   - Selective participation in high-cost social activities
   - Alternative contribution methods (bringing homemade snacks, etc.)

- Finding compatible social groups with similar financial values

4.7. Implications for Financial Literacy Development

4.7.1. Contextual Financial Education Needs

Culture-Sensitive Approach: Findings indicate the need for financial literacy programs that consider cultural context:

1. Social Dimension Integration:
- Acknowledge the social value of coffee culture
- Balance individual financial goals with social relationships
- Strategies to maintain social connections without financial stress

2. Psychological Factors Consideration:
- Address locus of control in financial education
- Develop internal control strengthening programs
- Peer support systems for reinforcing positive financial behaviors

4.7.2. Technology-Mediated Solutions

Digital Tools for Financial Awareness: Based on participant feedback, several technology solutions emerge:

1. Spending Tracking Integration:
- E-wallet integration with budgeting apps
- Real-time spending alerts and notifications
- Social spending category tracking specifically

2. Peer Learning Platforms:
- Community-based financial goal setting
- Shared accountability systems
- Social gamification for positive financial behaviors

"If there is an app that can track coffee spending plus give reminders if it's over budget, it seems very helpful. But don't make it scary, just be supportive." (Indra, 26 years old, graphic designer)

4.8. Synthesis of Findings: Integrative Model of Locus of Control and Financial Behavior

Based on comprehensive analysis, this study produces an integrative model that explains the relationship between locus of control, social context, and financial behavior in coffee culture:

Pathway Model:

Locus of Control Orientation → Social Context Processing →
Financial Decision-Making → Behavioral Outcomes →
Social Feedback Loop → Reinforcement/Modification of Locus

Key Findings:

1. Internal locus of control functions as a protective factor against impulsive social spending.
2. External locus of control increases vulnerability to peer pressure and FOMO-driven consumption.
3. The social context of coffee shops creates unique challenges for financial self-control.
4. Indonesian cultural factors (communal values, social harmony) complicate individual financial boundary setting.
5. Digital payment systems reduce the pain of paying and increase impulsive spending across all locus types.

Implications for Practice:

1. Financial literacy programs need to integrate social and psychological dimensions.
2. Intervention strategies must be culturally sensitive and acknowledge the social value of communal activities.

3. Technology solutions can leverage positive peer influence to promote healthy financial behaviors.
4. Community-based approaches are more effective than individual-focused financial educatio.

These findings provide new insights into the complex intersection of psychological factors, social culture, and financial behavior, particularly in the context of the consumption culture of Indonesia's young generation.

5. Conclusion

This study reveals that the financial behavior of young people who are customers of Warung Kopi Sungai Betung is significantly influenced by their locus of control, both internal and external. Individuals with an internal locus of control tend to show more structured financial behavior, such as making a budget, saving regularly, and sorting social activities based on financial considerations. In contrast, individuals with an external locus of control are more susceptible to social pressure, impulsive consumption, and the use of credit such as paylater.

The phenomenon of coffee culture has been proven to be a social space that shapes the dynamics of financial decision-making, where factors such as peer pressure, the desire to maintain social status, and the need for emotional connection contribute to spending that is often unplanned. Digital technology such as e-wallets also exacerbate the tendency for impulsive spending by eliminating the "pain of paying" directly.

This study suggests the need for a contextual and culturally sensitive approach to financial literacy, taking into account psychological dimensions (such as locus of control) and social (such as communal values in coffee culture). Technology-based solutions also need to be directed at creating better financial awareness, for example through spending reminder applications and social category tracking.

Thus, this study not only contributes to the development of consumer behavior theory in the local Indonesian context, but also provides a practical basis for the development of more effective financial education programs for the younger generation.

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ANALYSIS OF WORK MOTIVATION ON EMPLOYEE PERFORMANCE AT THE SAVINGS AND LOAN COOPERATIVE CU KELUARGA KUDUS IN BENGKAYANG SERVICE PLACE

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Abstract

This study aims to analyze the work motivation of employees at the CU Keluarga Kudus Savings and Loans Cooperative in Bengkayang Service Place. This research employs a qualitative approach with an ethnographic design. Data was collected through interviews and field observations. The results of the study indicate that the work motivation of employees at CU Keluarga Kudus is divided into two categories: intrinsic motivation and extrinsic motivation. Intrinsic motivation consists of intention, reward, and responsibility. Meanwhile, extrinsic motivation consists of salary, interpersonal relationships, and work facilities. This employee work motivation is able to enhance their performance, which can be seen from their high work enthusiasm, timely completion of tasks, discipline at work, ability to work independently, effective use of resources, good work discipline, and quality of results.
This research concludes that employee work motivation plays an important role in improving employee performance at CU Keluarga Kudus, Bengkayang Service Center. Therefore, CU Keluarga Kudus needs to continue to maintain and enhance employee work motivation to achieve organizational goals.

Keywords: Work Motivation, Employee Performance, Savings and Loans Cooperative, CU Keluarga Kudus

1. Introduction

Credit Union is a financial institution that operates in the field of savings and loans, known as savings and loan cooperatives. A savings and loan cooperative (KSP) is a financial institution that operates in the area of savings and loans and provides loans to members at low-interest rates. Credit unions are managed by their members and aim to improve the welfare of the members. Savings and loan cooperatives differ from other savings and loan cooperatives in principle. In principle, credit unions adhere to the principles of self-reliance, solidarity, and education. (Aprilia et al., 2024). Credit Union is a financial organization established by members, for members, and from members. Credit Unions are established through education, grow through education, and continue to rely on education. Therefore, every community (prospective members) that wishes to become a member and be part of a Credit Union must undergo education. Prospective members at CU Keluarga Kudus must also learn about the vision and mission of the Credit Union. (Pagiu and Pundissing, 2020). Savings and Loan Cooperatives (KSP) continue to develop in line with the business development of their members. The savings and loan cooperative, also known as a credit cooperative, is a cooperative that allocates its members' savings to those who require capital support for their businesses. Additionally, the savings and loan cooperative also aims to educate its members to save, take pleasure in saving, and protect its members from loan sharks (Hasanah and Hanifah, 2020) One of the financial organizations that provide credit is CU Keluarga Kudus, which aims to improve the economic and social welfare of its members through financial services and sustainable member empowerment.

Saving and loan cooperatives are highly favored by local communities, because through these cooperatives they can easily save or borrow money. Saving and loan cooperatives offer

various loan mechanisms that are quite advantageous, such as low interest rates for MSME actors or decreasing interest rates on loans. The aim is to assist the community, especially its members, in economic improvement and advancement, as well as to promote a frugal lifestyle and wise money usage. (Vuspitasari et al., 2020)

The Holy Family Credit Union (CU KKD) was established for the first time on October 5, 2000. At that time, Father Paskalis Soedirdjo OFM. Cap, the parish priest of the Holy Family in Kota Baru, Pontianak, was responsible for the idea. The background for the establishment of the Holy Family Credit Union was the experience from the establishment of the Stella Maris Credit Union in Siantan, which showed that many people were borrowing from banks to buy houses and cars. Everyone was facing financial difficulties due to the high interest rates of bank loans. Many people are still facing financial problems.

Pastor Sudirjo explained the reason for the establishment of the Credit Union (CU). He stated that CU is always founded in every parish where he serves, but the hope has only materialized in Stella Maris Siantan Parish and Keluarga Kudus Kota Baru Parish. The reason for establishing CU in every parish is to address the need for death funds. By becoming a member of Keluarga Kudus CU, this urgent need can be promptly addressed. The funds will be provided as a benefit or solidarity in the event that a member or a member's family passes away.

Until 2005, services to the members of the Koperasi Simpan Pinjam CU Keluarga Kudus (KSP CU KKD) were managed by the board, mainly the treasurer and the credit committee, along with some volunteers. In February 2005, the board decided to recruit three additional staff members to assist the members of KSP CU Keluarga Kudus. Currently, there are four staff members and one service place head (TP) working at KSP CU Keluarga Kudus Service Place Bengkayang.

Human Resources play a strategic role in determining the future of an organization. Qualitative employees support the achievement of organizational goals. High employee competency indicates the quality of an organization, therefore enhancing employee competency is very necessary to support employee performance in order to achieve organizational goals. Effectiveness of performance in an organization can be driven by good work motivation. High work motivation will encourage employee morale, which will ultimately affect the performance of the employees involved. A conducive work environment will impact the personal lives of employees. Employees who feel comfortable and not stressed will have high work performance (Hutagalung, 2022).

2. Literature Review

According to Rahayu and Dahlia (2023), motivation is very important in the process of achieving a goal. High motivation will encourage someone to work hard to achieve it, thus increasing productivity.

According to Ratna Mirawati et al. (2022), work motivation is the foundation for the development of government and private institutions, as organizations seek to achieve goals and initiatives systematically and collectively. The driving force and motivation that encourage and change people's behavior towards positive directions is referred to as motivation in work. Efforts to encourage or urge employees to work are also known as work motivation. An employee's work motivation can stem from their intrinsic motivation or from extrinsic motivation that comes from external factors.

According to Siregar (2021), the main benefits of motivation are to enhance work enthusiasm and improve work productivity. However, the advantage of working with motivated people is that tasks can be completed accurately. Tasks are completed correctly and within the designated time. A person will feel happy doing something that is driven by

motivation. And individuals will feel recognized or appreciated. This is due to the fact that their work is very beneficial for those who are motivated. People will work hard to achieve the goals they have set.

Performance is a factor in achieving a goal in a company. To complete a task and work, an individual should have high enthusiasm and a certain level of ability. Readiness and skills alone are not effective for performing tasks without a clear understanding of what needs to be done and how to do it. Employee performance is very important in a company's efforts to achieve its goals (Djoko and Yandi, 2022).

Performance is the result of an employee's work demonstrated according to their role in the organization. One of the factors that influence employee performance is work motivation. Good work motivation will result in good performance as well. The organization's goals will be achieved if its human resources have high performance.

Work motivation and employee performance are two different things, although both are distinct, employee performance and work motivation are interconnected within an organization. Work motivation is one of the many factors that can influence employee performance. Motivation helps an individual take actions to achieve performance (Septiadi et al., 2020).

Lia Eriska et al. (2021), in an article titled 'Analysis of Work Motivation and Work Discipline on Employee Performance at PT Eriadi Fatkhur Rokhman Medan Accounting Service Office'. In this article, it was found that work motivation significantly affects the performance of employees at the Eriadi Fatkhur Rokhman Accounting Service Office. The factors that motivate employees to work well include not only wages but also aspects such as relationships among employees and job safety guarantees. It can be concluded that motivation is a very important factor in improving employee performance. By understanding the factors that influence motivation and applying appropriate measures, an organization can create a productive work environment and achieve its business goals.

3. Methods

This research uses a qualitative approach with an ethnographic design. Ethnography is a process and the result of a research study. As a process, ethnography involves a fairly long observation of a group, where during the observation the researcher engages in the daily life of the respondents for four months or through one-on-one interviews with members of the group. The researcher studies the meaning of every behavior, language, and interaction within the group. Qualitative research is usually used in social sciences and humanities under micro research rules. This primarily relates to the patterns and behaviors of humans, or behavior, as well as the mechanisms behind those behaviors, which are often difficult to quantify. Because thoughts and desires do not always correlate with observable symptoms. The inductive mindset is based on objective participatory observations of social symptoms (Harahap, 2020).

The phenomenon under study is Employee Work Motivation, which is the focus of this research. This research was conducted at the CU Keluarga Kudus Credit Saving Cooperative located in Bengkayang, Bengkayang District, which is situated in Bengkayang Regency, West Kalimantan, Indonesia. The aim is to analyze the work motivation of employees at the CU Keluarga Kudus Credit Saving Cooperative in Bengkayang. Interviews and field observations were used to collect data for this study. Interviews were conducted with Administrative and General Staff (Admin Staff) and two Credit Staff members. Field observations were carried out to obtain detailed information about the work motivation of CU Keluarga Kudus employees and to understand the situation and conditions at the CU Keluarga Kudus Credit Saving Cooperative in Bengkayang.

4. Results and Discussion

Work motivation is an internal drive or impulse from within oneself that makes a person feel enthusiastic and eager to work better. Meanwhile, performance improvement is the result of various factors, one of which is work motivation. When employees are motivated, they will strive to give their best in every task assigned.

This discussion refers to the analysis of employee work motivation for improving employee performance. In this section, the researcher discusses employee work motivation for improving employee performance at the Saving and Lending Cooperative CU Keluarga Kudus Bengkayang Service Place. In this discussion, the researcher presents the findings of the collected data. Furthermore, these findings are related to existing theories. The theories referred to are classified into two parts, namely: theories related to employee work motivation and improving employee performance.

Intention is the desire of employees to want to work. Especially in the job currently assigned to one of the employees, which is as a credit staff, where the employee meets new people every day as well as members who are saving at CU Keluarga Kudus to serve them.

Responsibility is an attitude to carry out tasks and obligations seriously and also to bear the risks on one's own. At CU Keluarga Kudus, the employees work with great responsibility, as observed when the researcher interned at CU Keluarga Kudus Bengkayang Service Place. The employees there do and complete their work well; for example, when working on monthly targets and reports, employees finish their tasks late at night and overtime because by working overtime, they can complete the targets and reports on time, allowing them to take on new work in the following month. And at the time of carrying out the duty to bring a sum of money to be deposited in the bank, the employees at CU Keluarga Kudus truly took the money to be saved in the bank for better security than keeping it at the office. With this, the employees have worked and fulfilled their duties and responsibilities as employees at CU Keluarga Kudus.

Salary is a monetary reward paid to employees regularly for the work they have done. Salary is one of the important factors that can influence employee performance. The salary or compensation provided to employees at CU Keluarga Kudus is already in accordance with the performance of each employee. When employees work on reports late into the night, they will receive overtime pay, so when employees work outside of regular hours, they will still receive their salary in the form of overtime pay. CU Keluarga Kudus also offers career progression for employees, which certainly can influence their salary; the higher the career level, the greater the compensation received.

Awards are a form of recognition for the achievements and performance carried out by an individual or group. Awards can be in material or non-material form. The awards given by CU Keluarga Kudus to the staff are very sufficient; one example is that staff who have been working for a long time and have a lot of experience will certainly be valued more, especially when it comes to being consulted about work, whether serving members who come to the office or serving members directly in the field.

Development is a process, or a way to develop something that already exists or something that does not exist yet, with the aim of improving its quality. CU Keluarga Kudus assists its employees in the process of personal development by providing various training to its members, both within the CU Keluarga Kudus environment and outside of it.

Interpersonal relationships are relationships that occur between two or more people. Good relationships with colleagues can enhance the performance among employees in the workplace. At CU Keluarga Kudus, there is a good personal relationship with all employees working at CU Keluarga Kudus, both at the TP Bengkayang and with employees and supervisors at the main office in Pontianak. Their relationship is very good; the staff meet almost every day and

spend a lot of time together in the office, sometimes staying late into the night. Work facilities are the resources and infrastructure used to support employee work.

Work facilities are important for certain companies or organizations because they can improve employee performance. The work facilities at CU Keluarga Kudus are currently sufficient to assist employees in their work. The facilities provided by the office make it easier for employees.

Employee work motivation at CU Keluarga Kudus is divided into two motivations: intrinsic motivation and extrinsic motivation. Intrinsic motivation consists of intention, appreciation, and responsibility. Meanwhile, extrinsic motivation includes salary, interpersonal relationships, and work facilities. Some of these motivational points encourage employees to work at CU Keluarga Kudus Service Location in Bengkayang.

Employee work motivation towards Performance Improvement at CU Keluarga Kudus involves intrinsic and extrinsic motivation that can lead to performance enhancement at CU Keluarga Kudus, Bengkayang Service Center. The performance improvement includes a high work spirit, completing tasks with full responsibility and on time, self-improvement, performance enhancement, discipline in work, being able to work independently, and utilizing resources effectively.

5. Conclusion

The conclusion of the results of this research is the analysis of employees' work motivation for improving employee performance at CU Keluarga Kudus Bengkayang Service Place. The motivation studied here includes intrinsic motivation and extrinsic motivation. The motivation present in the CU Keluarga Kudus staff is able to enhance their performance. Performance improvement can be seen from high work enthusiasm, timely completion of tasks, discipline in work, ability to work independently, effective resource utilization, good work discipline, and high-quality work results.

The following are work motivations for improving employee performance: the first is intention; intention can give rise to the desire to work. The second is responsibility; staff are responsible for completing tasks on time, which can encourage staff performance. The third is salary; having a salary that corresponds to performance can motivate employees to continue working. The fourth is recognition; this recognition can provide encouragement and work spirit for employees to continue working. The fifth is development; development is a process for employees to learn new things and improve quality in working, such as the ability to work independently. The sixth is interpersonal relationships; having good relationships can enhance performance among fellow employees. Lastly, work facilities; sufficient and complete work facilities can enhance work effectiveness for employees.

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STRATEGIES TO IMPROVE THE PRODUCTIVITY OF ENTERPRISE MANAGEMENT PREVENTIVELY IN SOME COMPANIES IN INDONESIA

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Abstract

This study is to explain the analysis of strategies in improving the productivity of company management preventively based on internal and external factors of employees. This study utilizes the literature study method by analyzing various previous studies such as scientific articles.. Further Data processed through descriptive analysis. The results of the analysis reveal about ways to improve employee performance influenced by various factors such as motivation, work experience, discipline, leadership style, work environment, office facilities, incentives, organizational culture, policies, and training in the workplace

Keywords: Productivity, Preventive Management Internal External

1. Introduction

Human Resources (HR) is a very important part and is the greatest wealth owned by the company. If there are no people who need to be used as a source, then the programs in an organization will not be able to do. In addition, simply taking into account the existence of human beings is not enough to carry out programs or achieve the objectives of an institution or organization without adequate abilities and competencies. Individual abilities and competencies can affect performance and productivity levels directly or indirectly. The ability possessed by an employee is not a single factor that can affect the level of his performance and productivity.

However, other factors such as the office environment, regulations and leadership style also influence the working atmosphere apart from the internal factors of the employees. And indirectly, external factors also have a significant impact on the inner condition of employees, such as enthusiasm and drive to work. In this situation, morale and motivation are internal factors of an employee that can be influenced by external factors such as the condition of the work environment, support from superiors, and compensation from the office.

From this explanation, it can be said that internal factors and external factors have an equally important role in determining employee productivity. Thus, it can be concluded that both internal and external factors play a role in influencing the level of employee productivity performance. Thus, the action that needs to be taken is to recognize the methods and tactics in finding solutions to increase the productivity of employees. These actions are important to do in order to increase employee productivity so that work in the office, institution, or organization can run smoothly, effectively, efficiently, and reduce the negative impact due to lack of attention to employee conditions. Thus, it can achieve the goals of the institution or organization.

Necessary steps or methods in improving employee performance through appropriate human resource management. Edison, et al., (2016) revealed that MSDM focuses on improving the ability of employees through motivation so that their performance is optimal and achieves organizational goals. To increase employee productivity, it is important to manage human resources well in order to be able to effectively identify and solve emerging problems according to their root causes.

The implementation of strategies to increase employee work productivity in an office, institution, or organization usually involves establishing policies or regulations that must be

adhered to. Given these rules, the labor discipline of employees is formed indirectly with the help of supervision from the leadership of the office or institution of the organization. According to Kurniasari (2008) work discipline is the ability of employees to control themselves while performing tasks regularly to show their dedication while working in a team. Next, Kurniasari (2008) also suggests that there are two kinds of disciplinary approaches, namely prevention and improvement. The implementation of disciplinary action aims for employees to show good behavior, such as obeying the rules and policies of the institution, so that a relationship of mutual trust and respect is created between subordinates and superiors on an ongoing basis. That way, employees will feel more helped by a conducive work environment, which will ultimately increase their productivity.

In this context, it can be concluded that the strategies implemented use several factors that affect the increase in employee productivity. The strategy implemented is to use policies or regulations as a step to improve employee work discipline, where policies are external factors in increasing employee productivity. The main focus is on employee productivity as it includes the effectiveness and efficiency of work in HR Management, which has an impact on improving the quality of the organization. If the productivity of employees in an organization or institution is low, then directly the development of the institution or organization will be hampered or even threatened not to run.

5. Literature review

5.13. Productivity

Productivity is generally defined as relationship between output (goods or services) with input (labor, materials, money). Productivity is a measure of efficiency productive. A comparison between output and input. Input is often limited by Labor, while the output measured in physical units, forms, and values (Sutrisno, 2023).

5.14. Preventive Management

Preventive management, both internal and external, according to the latest experts 2023, focuses on preventive measures to avoid problems or losses in the future. Internally, it involves internal controls to ensure efficiency, effectiveness, and accountability of operations, as well as minimizing risks. Externally, preventive management is concerned with preventive maintenance, which aims to prevent damage or failure of equipment and assets.

6. Methodology

The method of writing this article is through literature research or literature study. Using literacy / literature studies is a method to retrieve information in solving problems from previous written sources such as books, journals, research case studies on the internet that can be accounted for. The sources are also related to the topic discussed in this article's editorial. The data obtained are then parsed and compared with the results of previous research and scientific theories, so that a more acceptable conclusion is obtained because it shows the dominance of similar data from the same object under study. Here, the author outlines the topic of strategies to increase employee productivity by looking at internal and external factors. This article discusses the factors that affect the level of labor productivity of employees, both in terms of their internal and external. Furthermore, it will also evaluate effective strategies to deal with various issues related to employee productivity. The analysis Data of this article comes from the results of a review of several scientific papers.

7. Results and discussions

The results of research conducted by Nugroho (2007) concluded that discipline supervision and work experience and wages have an influence on employee productivity together. But in other facts, data were obtained that showed that work experience does not affect the productivity of employees. This is due to the fact in the field that employees with longer work experience actually tend to freeze because they feel satisfied to be in a comfort zone so they do not want to develop again the potential that exists in themselves related to work productivity. While supervision, discipline, and wages affect employee productivity. In addition, from the results of research by Nugroho showed that there is an influence of supervision, work discipline, work experience, and salary/wages on employee productivity by 64.6% while the remaining 35.4% is influenced by other factors such as physical and mental, attitude and ethics, and nutrition and Health, which of these factors were not studied by the researchers.

The results of research by Supartha (2007) showed that there are two variables that have an influence on work discipline and employee productivity levels, including: (1) garment company leadership (implementation of management functions properly, behavior and exemplary leadership, transparency in financial management and ability to communicate with consumers) have a positive and significant effect on labor discipline (punctuality of work, adherence to implement systems and procedures, obedience in maintaining the quality of work and compliance in using raw materials). In addition, the leadership of garment companies (implementation of management functions properly, behavior and exemplary leadership, transparency in financial management and the ability to communicate with consumers) also has a positive and significant effect on labor productivity (the number of products produced, product quality produced, efficient use of materials and timeliness in product completion); and (2) manpower policy (supervision of the Manpower office on working hours in the company, the application of MSEs, supervision of Occupational Safety and the implementation of social welfare benefits for Labor) has a positive and significant effect on labor discipline (timeliness of work, adherence to implementing systems and procedures, adherence to maintaining the quality of work and compliance in using raw materials). As well as labor policies (supervision of the Department of Labor on working hours in the company, the application of MSEs, supervision of Occupational Safety and the implementation of social welfare benefits for Labor) have a positive and significant effect on labor productivity of garment companies (the number of products produced in a unit of time, the quality of products produced, the efficiency of the use of materials per unit of output and timeliness in the completion of products). Thus, it can be stated that labor discipline (timeliness of work, adherence to implement systems and procedures, as well as obedience in maintaining the quality of work and labor compliance in using raw materials) has a positive and significant effect on labor productivity (number of products produced in a unit of time, quality of products produced, efficiency of use of materials per unit of results and timeliness in product completion).

The results of research by Potu (2013) concluded that: (1) leadership, motivation, and work environment at the same time have a positive and significant influence on the performance of employees in the Regional Office of the Directorate General of state assets Suluttenggo and North Maluku in Manado; (2) leadership has a partial and significant influence on the performance of employees in the Regional Office; and (3) motivation has a partial and significant influence on the performance of employees in the Regional Office of the Directorate General of state assets Suluttenggo and North Maluku in Manado; and (4) the work environment has a partial and significant positive influence on the performance of employees in the Regional Office of the Directorate General of state assets Suluttenggo and North Maluku in Manado.

The results of research by Munadya (2012) showed that in PT BRI (Persero) Tbk. Kancana Pajajaran Bogor experienced the unattainability of the target in 2011. This is thought to be due

to the influence of internal factors, namely individual factors and organizational factors. Individual factors are the motivation and personality of the employee. While the organizational factor is the vision, mission and goals of the organization itself. Characteristics of respondents in the PT is dominated by male employees (63%), the majority of age 26 s.d. 30 years (30%), the average respondent occupies a position as AAO (37%), the final education of the most employees is S1 graduates (79%) and the average employee has worked for 1 s.d. 5 years (37%).

The results of research conducted by Sanjaya (2007) concluded that organizational culture affects work productivity is seen from the calculation of the results of a simple linear regression analysis shows that if there is an increase in employee productivity, but if there is a decrease in organizational culture automatic work productivity will decrease. This is evidenced by the data that the implementation of organizational culture carried out in the package and Logistics Division of PT Pos Class II Bandung, is still not difficult to implement employee archives, innovation and risk taking. Work productivity in the package and Logistics Division of PT Pos Class II Bandung, less attention and implement the factors that affect work productivity, namely: the amount of time, quality or quality, efficiency and effectiveness.

The results of research conducted by Etomes (2019) concluded that one of the strategies in increasing employee productivity lies in the ability of a leader to communicate effectively with subordinates or employees. In addition, a leader is also encouraged to always motivate employees and always carry out control in the form of supervision and build relationships, culture, and a good office climate.

The results of research by Hidayat and Taufiq (2012) showed that the data from the results of the first hypothesis testing is a significant influence between the work environment and work discipline and work motivation on employee performance PDAM Lumajang. Then in the second hypothesis, it was found that there is a partial influence between the work environment and work discipline and work motivation on the performance of PDAM Lumajang Regency. It is acceptable. Then from the results of the third hypothesis obtained data that work discipline has a dominant influence on employee performance PDAM Lumajang.

The results of a study by Muayyad and Gawi (2016) showed that job satisfaction did not have a significant effect on the productivity of employees of Islamic Bank X Regional Office II. The average level of job satisfaction of employees of Islamic Bank X Regional Office II only reached a level quite satisfied. While the level of work productivity of employees can be categorized as productive employees. This is because the determinants of productivity in this study focused on the ability/competence, responsibility, efficiency, reputation and record of achievement, development and evaluation and personal values, which from the results of data processing shows that the real determinants of employee satisfaction does not affect the productivity of employees of Islamic bank X regional office II. This is in line with the results that show that the effect of job satisfaction on employee productivity is only 7.5%. This value indicates a very weak influence. And on the field results of the determinants of dissatisfaction of employees of Islamic Bank X Regional Office II can be expected because the salary / wages, incentives, and motivation received are less in accordance with the job responsibilities charged from the level of risk owned by the job. Which is another variable that was not included in the research conducted by Muayyad and Gawi.

From the results of research conducted by Menon (2013), it can be concluded that many institutions or large organizations make investments through the promotion of training programs to their employees, which is because training has a positive impact on the effectiveness of their workers or indirectly can be said to have an influence on employee productivity for the better. So that their employees are able to do their jobs more effectively and efficiently after being trained. In addition, they also believe that training is used to provide

knowledge and skills that should be acquired through education. However, there are also factors that hinder the positive impact of training on productivity in the workplace including: lack of motivation of trainees, the quality of the work environment, organizational structures and processes, and lack of incentives.

And finally, from the results of research conducted by Ningrum (2017), it was concluded that office facilities partially have a significant effect on employee performance, meaning that the more complete the availability of office facilities in agencies or institutions, it makes pace Camat office employees increasingly have high performance. This supports and is consistent with the three indicators forming office facilities Faisal theory that supports Arianto's research in Ningrum (2017) which states that office facilities have a positive and significant effect on employee performance, where the more complete availability of office facilities can make employee performance increase. In addition, office facilities, work motivation, and work discipline have a significant effect on the performance of employees of the pace Sub-District Office. This shows that with the complete availability of office facilities, high work motivation and high employee discipline will have an impact on improving employee performance at the Pace District Head Office of Nganjuk Regency.

4.1. Discussion

Employee productivity is influenced by various factors that have been described, can be divided into two important factors, namely internal factors such as motivation, ability, work experience, education, discipline, physical and mental condition, and personality. External factors for employees, such as office environment, training, leadership, policies, wages/incentives, job satisfaction, organizational culture, and facilities.

In a study by Rivanto in Handoko (2015), it is stated that internal motivation, work discipline, skills, attitudes and ethics, as well as nutrition and health are internal factors that affect employee productivity. Factors from outside the employee (external) such as external motivation, work environment, institutional management, insurance/Social Security, achievement opportunities, incentives, technology, and production facilities affect employee productivity. According to Rivanto, motivation can be classified into two types, namely internal and external.

According to Nugroho (2007) states that internal factors that affect employee productivity can be in the form of thoughts or moods, which thoughts and moods have an impact on low productivity that will be produced if the atmosphere is not conducive. Then there is also the motivation that arises from within the employee to complete the job more productively. As well as the presence of a sense of saturation or boredom in employees as a result of doing work in the same field constantly. As for external factors that affect the level of employee productivity, which can be the atmosphere of the employee's work environment and the available facilities.

Supervision by the leadership are also other factors that affect employee productivity. Usually, regular supervision can encourage employees to work within the expectations of the leadership and goals of the organization. If employees work conscientiously, then they will get a promotion. Thus, the leadership style used can help improve employee discipline and optimal productivity results.

Effective communication between a leader and employees can facilitate a good leadership style. If an institution or organization wants to increase employee productivity through leadership, the first step is to select employees who are suitable for leadership based on performance and ability, and provide leadership training to them. Discipline is not only enforced with the supervision of superiors, but also through the rational application of rules to

build a good attitude of employees and encourage them to fulfill their obligations well through the consequences applied.

Salary / wage is also an additional factor that affects employee productivity. Income or honorarium, which is also referred to as reward, plays a significant role in improving the work efficiency of employees. This is because the salary / wage can be considered as a reward for the contributions made by employees to the company/organization. Thus, employees will feel happy because their efforts at work are recognized by the company/organization. Income can encourage employees to work harder and more efficiently, so they can get greater or more compensation. Thus, to increase employee productivity, a company can provide rewards, high wages, or promotions for employees who complete tasks on time and according to set targets. That way, employees and the company will get a balanced benefit. Health benefits for employees is another form of reward and wages are almost similar. Salary, incentives, promotion, and facilities also play an important role in increasing employee job satisfaction which will then affect their productivity.

Work experience, although an important internal factor in increasing employee productivity, does not always have a significant impact. It was caused by the results of research Nugroho (2007), that the length of work experience does not have a big impact on increasing employee productivity. Some institutions or organizations experience a situation where employees with long work experience tend to be less motivated to develop themselves and are quite satisfied with their existing performance. In this situation, the step that the institution or organization needs to take is to use other factors such as motivation and leadership. That is, an alternative is to motivate employees by leadership or implement policies to improve their discipline and productivity at the same time.

The work environment of the institution's office also plays a role in determining the level of productivity of the institution. This is also consistent with the statement of Sofyandi in Ulinnuha (2016) that the human resource management environment is defined as a series of factors that can affect the productivity of human resource activities consisting of internal factors that are sourced from within humans. In addition, the office work environment is classified into two, namely the physical environment and nonphysical environment. The physical environment is what things exist in the office that can be seen with the naked eye, such as office space layout. While the nonphysical environment is what things can not be seen/invisible, for example, related to the social and cultural atmosphere that exists in an institution's office. According to Supartha (2007) states that the physical environment of the office can be security, comfort, lighting, cleanliness, air circulation, and color. While the non-physical environment of the office, according to Supartha, includes the interrelation of labor relations between employees that can affect their performance.

Thus, efforts to increase employee productivity through the office environment can be done by maintaining or improving office conditions such as repainting dirty walls, replacing damaged lights and air conditioners, and installing CCTV for office security. Furthermore, measures to increase productivity from nonphysical aspects are regulated through programs and efforts to strengthen relationships between employees in the workplace through organizational culture that influences work attitudes and behavior, and supports the cultivation of socio-cultural values and discipline. An agency office leader also acts as a liaison, mentor, and creator of good relationships between employees and leaders and fellow employees. But before the action is taken, the leadership must understand the personality of each employee individually. Thus, it can avoid mistakes in the approach or actions taken by a leader to improve social relations between employees in the workplace.

Factors such as office facilities and facilities also have an impact on employee productivity levels. This is due to the fact that office facilities or equipment can help employees get work

done more easily, quickly, and effectively. According to research conducted by Ningrum (2017), there is a relationship between facilities and work discipline and employee motivation. Data shows that several office facilities have a major effect on employee performance at the Pace Sub-District Office of Nganjuk Regency, with complete facilities, motivation, and high work discipline will improve employee performance. With this explanation, an institution or organization also needs to ensure that office facilities are met so that employees can work more efficiently, quickly, and motivated. So it can also form work discipline for employees.

Employee productivity has an important role. This is because employee productivity is a determinant of the success of goals in an office or institution. Productivity is also often associated with employee performance in the running process of an organization. If productivity focuses on the results (output) of work that has been done based on a target, then performance is the ability possessed by an employee in the process of achieving something or in other words performance is the process of employees in producing a product that identifies the value or level of ability (competence) that employees have. This is in line with the opinion of Hidayat and Taufiq (2012) who said that performance is a form of action to complete the tasks assigned to employees taken over a certain period of time and the results can be measured.

Meanwhile, according to Masram and Mu'ah (2017) performance is defined as the actual work performance achieved by an employee by taking into account the number of tasks received and good or bad in the implementation of tasks adjusted to the burden or responsibility of employees. In addition, there is also the term performance appraisal. As stated by Edison, et al., (2016) which says that performance appraisal has an important function for an institution or organization, because at the same time it can provide feedback for employees to improve performance in addition to serving as an improvement for the institution or organization in analyzing existing problems. In this case, performance assessment is carried out through quantitative and qualitative measurements.

The importance of employee productivity cannot be ignored. This is due to the fact that the level of productivity of employees is a key factor in achieving the goals of a particular office or institution. Employee performance is often associated with productivity in an organization. If productivity focuses on work results according to targets, performance is the ability of employees to achieve goals by producing products that reflect their competencies. This is in accordance with the view of Hidayat and Taufiq (2012) that performance is a way to complete the tasks assigned to employees within a certain period of time and the results can be measured.

According to Masram and Mu'ah (2017), performance is the actual achievement of an employee's work, influenced by the number and quality of tasks performed in accordance with the responsibilities held. In addition, there is also the term performance evaluation. According to Edison's research, et al. (2016), performance appraisal has a significant role for an institution or organization, because in addition to providing feedback for employees to improve performance, it also helps in analyzing and correcting existing problems in the institution or organization. In this situation, performance evaluation is done by measuring quantitatively and qualitatively.

For example, it can be seen from the achievements and contributions made by employees to institutions or organizations. Thus it can be said that performance appraisal also serves as an evaluation tool in an institution or organization in order to determine the level of ability possessed by its employees so that it is also possible to supervise or train employees or even make improvements to the implementation strategy of the applicable work program. Productivity and performance of employees in an organization or institution is influenced by many factors, namely:

4.1.1. Motivation

In general, everyone has a motivation in life, which is based on the desires he has. According to Hamalik (2012) revealed that motivation is a personal or personal change of a person that occurs marked by the feelings and reactions that arise in order to achieve a goal. Self-change (personal) can also be interpreted as a psychological change which occurs due to stimuli both from within and from outside a person. In this case, motivation is included as one of the determining factors in the level of employee productivity. Because with motivation can encourage someone to act or do something in accordance with the wishes or feelings that arise from within the person. In relation to work, motivation is needed in order to encourage employees to always participate and be active in achieving the goals of the institution or organization.

4.1.2. Working Environment

As it should be, in carrying out an activity or work a person must not escape the influence of the surrounding environment. According to Potu (2013) states that the work environment is a place or space where every day employees can perform an activity or work. A good working environment should be able to encourage the smooth process / activities of employees while also paying attention to aspects of hygiene, comfort, health, and safety. So that employees in completing their work can run optimally. In addition, the meaning of the work environment is not only in the form of things that can be seen physically but also things that can be felt by using the social instincts of employees in a relationship baim as friends and colleagues who later also gave rise to a culture in the organization. Thus, the work environment cannot be separated from the influence between individuals and individuals with the surrounding nature (physical environment) in carrying out an activity or work. So that the work environment is also considered to affect employee productivity.

4.1.3. Work Discipline

According to Wursanto in Hidayat and Taufiq (2012) states that what is meant by work discipline is a form of compliance by an employee of the provisions or regulations set by an institution/organization based on self-awareness of each and no coercion from any party. Meanwhile, according to Dessler in Supartha (2007) said that work discipline is the attitude of employees who obey and can respect the rules set by the institution/organization, both in the form of written and unwritten rules. Where in this case the employee is considered willing and able to carry out the tasks given by not complaining or complaining and ready to get rewards/sanctions if the employee violates or does not carry out the responsibilities as appropriate. Of the two opinions on labor discipline in general means that labor discipline is a manifestation of employee compliance with policies or regulations set in an office or institution as well as the orders given by the leadership. So that employees work in accordance with the rules or procedures that exist in the office or institution. The level of discipline of an employee can be seen and measured from various parameters. Parameters or indicators in work discipline based on the opinion of Sinungan in Handoko (2015) include: (1) presence, which is a measuring tool that serves to monitor or review how high the level of employee compliance with existing regulations in an office or institution; (2) employee behavior or attitude (affective), is the level of adaptation of an employee in completing any work that has been given by the leadership or boss against him; and (3) responsibility, is a representation of the employee's work on what has been given to him.

4.1.4. Training

According to Sikula in Widianto (2016) suggests that training or training is a form or way in the stages of providing understanding or education with a relatively short period of time in

which the implementation also uses a structured and systematic procedure to achieve a specific goal that is relatively limited/narrow scope. For example, the provision of training to employees by providing material/knowledge as well as practices regarding technical bookkeeping operations that must be taken within a predetermined time (relatively short) with the aim of training employees ' skills in the field of bookkeeping. In this case, training is the provision of lessons to employees in a short time or a practice which aims to increase the potential possessed by employees so that employees can develop skills while improving the quality of their performance. In addition, Widianto (2016) said that effective training can help as well as support employees to always be motivated to increase their work productivity. If the employee can undergo the training program process properly and correctly, then the employee's work productivity will increase in line with the increased understanding, ability, and expertise as feedback from following the training program. Indirectly, Widianto's opinion can be concluded that training also has an influence on increasing employee productivity.

4.1.5. Leadership

According to the team of lecturers of Education Administration, University of Education Indonesia (2011) states that leadership is a form of a person's ability to influence and move a person or group of people to do something in order to achieve goals that have been set quickly and precisely. In an institution / organization where there are many people as members of the group, will not be able to run the organizational process without a leader. Therefore, in accordance with the opinion of Kempa (2015) which states that leadership is one of the vital aspects that have an influence on the results of employee performance in an institution or organization both individually and in groups. This is because every implementation of the tasks that exist in an institution or organization in various fields always involves the role of a leader. Good leadership will have an impact in the form of increasing the quality of employees. A good leader will not arbitrarily or origin in using his power, but carry out duties and responsibilities as they should be by helping subordinates or employees who have difficulty doing the job. Thus leadership has an influence on employee productivity where employee productivity can go up (for the better) or even down (for the worse) depending on the ability of an individual in performing their duties as a leader.

4.1.6. Policy

Labor policy according to Supartha (2016) itself is a Labor rule imposed by an office or institution which in this case can be measured by several indicators obtained from labor policies such as those related to the respondent's statement regarding the supervision of the Labor Office on working hours in the company, the implementation of the District/City Minimum wage (UMK) in each company, supervision of Occupational Safety, and the implementation of social welfare benefits for employees. From this explanation, it can be understood that the employment policy includes office hours, wages, safety supervision, and social welfare benefits, which of these coverage can be its own component as a factor in increasing employee productivity. If the policy is related to time, it can be continuous with employee discipline. While those related to wages and benefits are continuous with external factors in the form of incentives for employees. Because Labor policy has a broad scope and has a big impact, policy makers both from the office or institution itself and government institutions must think carefully before setting the policy. Therefore, analyzes are needed that can create benefits and fairness for both parties, namely office employees and institution owners. According to Supartha (2007) policy analysis is a form of analysis that generates and presents information in such a way that it can provide the foundation of policy makers in making decisions. With the foundation on making a policy based on an analysis can prevent errors in decision-making

and prevent the occurrence of something unexpected such as a conflict or even a strike and demonstrations of employees against the office or institution.

4.1.7. Wages / Salaries

According to Muayyad and Gawi (2016) wages and salaries have an influence on the level of employee satisfaction which also determines the level of employee productivity. However, in the opinion of Muayyad and Gawi (2016) it is also said that wages cannot fully satisfy employees. This is because no matter how much salary will be obtained by employees will not be enough for employees. In other words, in essence, the employee is also a human being who never feels satisfied. Therefore, it must be stressed that it is not too easy to give awards in the form of prizes and high wages without a big struggle, in this case the big struggle is employee productivity. Basically, a review of employee job satisfaction seen from the aspect of Wages/Salaries not only depends on the size or small nominal salaries earned by employees, but how the behavior of the owner of the institution or the organizers who have the authority and duties in the field of finance, especially the provision of salaries/wages to employees can act fairly. Providing a fair salary / wage can an institution or company achieve goals effectively and can prevent conflicts or unwanted problems. In addition, according to Edison, et al., (2016) job satisfaction is a set of feelings or emotional attitudes that employees have about things that are pleasant or not towards a job they are doing. The level of employee performance satisfaction is based on the conformity between expectations and reality regarding the work they do. Some dimensions that have a reciprocal relationship of employee job satisfaction in addition to Wages / Salaries are leadership, competence, policy, appreciation, and environmental atmosphere.

4.1.8. Organizational Culture

According to Edison, et al., (2016) states that organizational culture is the result of the process of fusion between cultural styles and individual behavior, giving rise to new norms and philosophies which have constructive values in influencing how to act and face things in order to achieve a certain goal. Meanwhile, according to Sun in Caruso (2017) states that in general organizational culture is a theoretical collection of important values, beliefs, and understandings shared by members. Culture also provides a way of thinking, feeling, and a better (or the best) way of giving a reaction that can help managers or leaders make decisions and organize the activities of institutions or organizations. In other words, organizational culture is the forerunner of policies in force in institutions which can also affect employee productivity.

4.1.9. Work Experience

According to Nugroho (2007) states that work experience is one aspect that needs to be considered because it is related to increasing employee productivity. Some people and institutions consider that work experience with a long time is needed, because an employee's work experience is in line with the level of ability and performance of employees. In this case, it means that an employee who has a longer work experience, the higher the level of productivity. In this case, it can also be said that work experience is needed none other than to support the achievement of the goals of the institution/organization effectively and efficiently, because employees with long work experience are considered ready and qualified to carry out any tasks given by the organization to them even in some institutions/organizations provide high positions or positions in certain fields for prospective employees who have had long work experience. This is also supported by the opinion of Martoyo in Nugroho (2007) which states that a company will tend to choose applicants who are experienced because those who are

experienced are seen as better able to carry out the tasks they will do. Thus, work experience can also affect employee productivity.

4.1.10. Office Facilities

According to Moenir in Ningrum (2017) states that the facility is a medium that can be utilized by employees in conjunction with work in the institution / organization in order to facilitate the completion of a job. Meanwhile, according to Kurniasari (2008) work facilities have a link with work discipline which with adequate work facilities can improve the work discipline of an employee. This is because by utilizing work facilities, an employee will feel helped because the task can be completed more quickly and easily, thus increasing the employee's work productivity. In this case, it can also be said that work facilities are related to the effectiveness and efficiency of employee work. This is in accordance with the opinion of Husnan in Kurniasari (2008) which states that the work facility is a form of corporate services to employees in order to support performance in meeting the needs of employees, so as to increase employee productivity.

5. Conclusion

Internal and external factors are interconnected and continuously affect employee productivity. Therefore, when implementing an improvement strategy, it is important to take into account all factors, both internal and External, by conducting an evaluation to find solutions in developing an office, institution or organization. Suggested actions can be plans that provide positive benefits for the continuity of activities in the office. Create a more harmonious office environment to encourage effective communication between leaders and employees and create a culture of high discipline in an institution or organization. Supported by adequate office facilities, as well as providing training for leaders and employees so that the leadership of the institution/organization runs smoothly and effectively, as well as increasing employee motivation through income that is in accordance with their performance and also providing health benefits to support the physical and mental well-being of employees for optimal performance. Some things that can affect employee productivity are Motivation, work experience, work discipline, leadership style, work environment, office facilities, Awards, corporate culture, organizational policies, and training for employees and leaders.

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THE INFLUENCE OF NARCISSISM ON E-WOM, SELF-ESTEEM, AND VIRTUE SIGNALING AND ITS IMPACT ON PURCHASE INTENTION OF PREMIUM ELECTRIC CAR PRODUCTS IN INDONESIA

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Abstract

The development of electric vehicles not only reflects technological innovation, but also becomes a symbol of social status and sustainability values in modern society. In Indonesia, interest in premium electric vehicles is increasing along with the encouragement of government policies and changes in consumer behavior that are increasingly connected to social media. This study aims to examine the influence of narcissism personality on purchase intention through the mediation of electronic word of mouth (E-WOM), self-esteem, and virtue signaling. This study uses a causal approach with a LISREL-based Structural Equation Modeling (SEM) model to test the relationship between variables. A total of 200 respondents who are users or potential users of premium electric vehicles in Indonesia participated in this survey. The results of the analysis show that narcissism has a significant positive effect on E-WOM, self-esteem, and virtue signaling, and directly or indirectly increases purchase intention. The three mediating variables are also proven to contribute to the formation of purchase intention. These findings strengthen the relevance of the Theory of Planned Behavior (TPB) and Extended TPB in explaining the dynamics of consumer behavior influenced by psychological and social constructs. The practical implications of this study encourage marketers to utilize consumer personality characteristics in designing communication strategies that emphasize the exclusivity, social validation, and moral values of premium electric vehicle products.

Keywords: narcissism, E-WOM, self-esteem, virtue signaling, purchase intention, premium electric vehicles, TPB, SEM-LISREL

1. Introduction

The development of electric vehicles not only reflects the advancement of automotive technology, but also becomes a symbol of a sustainable lifestyle and a representation of modern social status. In Indonesia, the transition to electric vehicles is increasingly evident with the support of policies such as Presidential Regulation No. 55 of 2019 and various fiscal incentives (Ministry of Industry, 2022). The public is increasingly considering electric vehicles not only from a technical aspect, but also from the accompanying symbolic and psychological values, such as exclusivity, environmental concern, and social image (Cheung *et al*., 2008; Shin *et al*., 2018). In this context, Electronic Word of Mouth (E-WOM) becomes an important element in shaping consumer perceptions and decisions. Platforms such as TikTok and YouTube are now the main references for consumers in seeking authentic reviews regarding the efficiency, features, and user experience of electric vehicles. Purchasing decisions are no longer only rational, but also influenced by self-identity, social influence, and symbolic values (Van de Grint *et al.*, 2021). Personality characteristics such as narcissism also influence consumers' tendency to purchase products that support a superior self-image. Individuals with high levels of narcissism tend to use social media as a space to show off their status, share positive opinions about premium products, and display moral values, a phenomenon known as virtue signaling (Krispenz & Bertrams, 2023). On the other hand, self-esteem acts as an internal mechanism that encourages or restrains individuals from expressing themselves publicly (Baumeister *et al*., 2003). However, the relationship between narcissism, E-WOM, self-esteem, and virtue

signaling in influencing purchase intention towards premium electric vehicle products in Indonesia has not been comprehensively explored. Therefore, this study attempts to fill this gap by examining the relationships between these variables in a single framework.

2. Literature Review

2.1. Theoretical Framework

To understand the formation of purchase intention in the context of premium electric vehicles, this study uses the Theory of Planned Behavior (Ajzen, 1991) as the main theory. TPB explains that a person's intention to perform an action is influenced by attitudes towards the behavior, subjective norms, and perceived control over the behavior. In this context, positive attitudes towards electric vehicles, social influences from the environment, and beliefs about personal ability to purchase vehicles are the main drivers of the formation of purchase intention (Yau et al., 2024; Liang et al., 2024). This theory was then developed into the Extended Theory of Planned Behavior (ETPB), which includes additional factors such as moral values, cultural influences, and the use of digital technology (Abebe et al., 2024; Pradana et al., 2024). ETPB becomes relevant in the context of Indonesian consumers, who are increasingly active on social media and are starting to pay attention to sustainability aspects in their consumption.

2.2. Narcissism

Narcissism defined as a personality tendency characterized by feelings of superiority, need for validation, and the pursuit of an ideal self-image (Raskin & Terry, 1988; Morf & Rhodewalt, 2001). In the context of consumption, individuals with narcissistic traits tend to purchase products that reflect social status and self-identity, including premium electric vehicles (Cheung et al., 2008; Miller et al., 2009). They also actively share their experiences on social media as a form of image building (Buffardi & Campbell, 2008).

2.3. Electronic Word of Mouth (E-WOM)

E-WOM refers to the online dissemination of information, reviews, and product recommendations from fellow consumers (Hennig-Thurau et al., 2004). Compared to traditional advertising, E-WOM is considered more credible and influential in influencing purchasing decisions, especially for technology and premium products (Senecal & Nantel, 2004; Kotler et al., 2018). Research also shows that narcissistic individuals tend to be more active in spreading E-WOM to strengthen their self-image (Luarn et al., 2016).

2.4. Self-Esteem

Self-esteem is an individual's evaluation of his or her own worth and competence (Rosenberg, 1965; Baumeister et al., 2003). Individuals with high self-esteem are more confident and tend to share opinions openly, while those with low self-esteem tend to be more influenced by social opinion and need validation from their surroundings (Jordan et al., 2003). In the context of purchasing a premium vehicle, self-esteem influences symbolic and social motivation in decision making (Kim & Lennon, 2013).

2.5 Virtue Signaling

Virtue signaling is the behavior of publicly expressing moral values or pro-social attitudes to gain social recognition (Tosi & Warmke, 2016; Levy, 2019). In the consumer context, this is reflected in the choice of products associated with sustainability and ethics, such as electric vehicles. Narcissistic individuals tend to use virtue signaling to strengthen their moral image and social identity (Krispenz & Bertrams, 2023; Ok et al., 2021).

2.6 Purchase Intention

Purchase intention is the consumer's intention to purchase a product, which is influenced by perceived value, brand reputation, personal beliefs, and social influence (Ajzen, 1991; Hsu & Lin, 2016). In the context of premium electric vehicles, purchase intentions are driven not only by functional needs, but also by the desire to demonstrate status, personal values, and environmental concerns (Grewal et al., 1998; Kim & Gupta, 2012).

2.7. Literature Synthesis

Conceptually, the literature shows that narcissism has a direct influence on E-WOM, self-esteem, and virtue signaling. These three variables, in turn, influence purchase intention. Although several studies have examined these variables separately, there are not many studies that examine the relationship between these four factors simultaneously in the context of premium sustainability-based products, especially electric vehicles in Indonesia.

3. Research Methodology

3.1. Research Paradigm

This study uses a holistic approach to understand the relationship between variables in the context of premium electric vehicle purchase decisions in Indonesia. This approach not only emphasizes the linear relationship between constructs, but also explores the complex interactions between psychological factors (such as narcissism and self-esteem), social (virtue signaling), and digital (E-WOM). This approach is relevant to fill theoretical gaps and provide strategic insights in the context of modern consumer marketing that is increasingly multidimensional. Researchers position consumers as individuals with layered motivations: in addition to considering technological features, consumers of premium products also pursue status symbols, moral values, and social contributions. For example, narcissistic consumers tend to respond to exclusive images, while socially oriented consumers are more interested in the sustainability and ethical aspects of the product (Krispenz & Bertrams, 2023). Thus, this study integrates psychological, social, and digital aspects to explain the formation of purchase intention.

3.2. Unit of Analysis and Unit of Observation

The unit of analysis in this study is individual users or potential users of premium electric vehicles in Indonesia. Respondents consist of two categories:

- Prospective: individuals who have the intention of purchasing a premium electric vehicle.
- Existing: individuals who have used a premium electric vehicle for at least one year.

The observation unit is the behavior and attitude of individuals in the purchasing process, which is observed through questionnaire data. Data collection is scheduled for January 2025, with respondent criteria including:

- experience or interest in premium electric vehicles,
- actively using social media,
- and have an orientation towards value-based products and social image.

3.3. Research Methods

This study is causal, aiming to identify the causal influence between independent variables (narcissism, self-esteem, E-WOM, and virtue signaling) on the dependent variable (purchase intention). The causal method allows analysis that goes beyond simple correlation, emphasizing the potential for logical and significant causal relationships between variables (Malhotra, 2013; Hair et al., 2018).

3.4. Sampling Techniques

The method used is quota sampling, targeting a minimum of 105 respondents in accordance with the SEM-LISREL principle, which is 5 times the number of indicators (Hair et al., 2018). There are 21 statements in the questionnaire, so the recommended minimum number has been met. The sample selection criteria focused on involvement with premium electric vehicles and activeness in digital platforms.

3.5. Data Collection Instruments and Procedures

Data collection was conducted through a closed questionnaire compiled using a 7-point Likert scale (1 = strongly disagree, 7 = strongly agree). The implementation stages include:

a. Preparation Stage:
- The questionnaire was prepared based on validated constructs from previous studies.
- Trial on 30 respondents for initial validity and internal reliability testing.
- Editorial adjustments based on trial results.

b. Distribution Stage:
- The questionnaire was distributed online and directly to respondents according to the criteria.
- An explanation is provided regarding the purpose, confidentiality, and benefits of participation.
- A time limit for filling is set to maintain data responsiveness.

c. Evaluation Stage:
- Revalidation of the instrument after initial trials.
- Revise indicators if necessary before final deployment.

d. Final Stage:
- Final data collection from a minimum of 105 respondents.
- All data is used for model and hypothesis testing.

3.6. Data Analysis Methods

a. Validity and Reliability Test of Questionnaires
- Carried out through exploratory factor analysis using SPSS.
- Validity test using Kaiser-Meyer-Olkin (KMO) and Measure of Sampling Adequacy (MSA); a value ≥ 0.5 is considered feasible.
- Reliability test using Cronbach's Alpha; values > 0.7 indicate good consistency (Hair et al., 2018).

b. Hypothesis Testing: SEM-LISREL
- Testing was carried out using the Structural Equation Modeling approach with LISREL, in accordance with the confirmatory nature of the research.
- Statistical tests include:
  - t-value > 1.96 (95% significance level),
  - p-value < 0.05 for the significance of the relationship between constructs,
  - R^2 (coefficient of determination) as a measure of the strength of the model in explaining the dependent variable.

This approach provides strong model validity and allows for testing of paths between variables within a complex theoretical framework. SEM-LISREL is suitable for use in social research involving psychological variables, as was done in this study (Kline, 2015; Hair et al., 2018).

4. Research Results

4.1. Respondent Characteristics

A total of 200 respondents were successfully collected through the distribution of online questionnaires. Respondents are users or prospective users of premium electric vehicles spread across various regions in Indonesia.

a. Respondent Gender

Of the total respondents, the composition based on gender is as follows:

Gender	Number of people)	Percentage (%)
Man	106	53.0%
Woman	94	47.0%

This distribution shows that participation between men and women is relatively balanced, although slightly dominated by male respondents.

b. Respondent Age

The age range of respondents is categorized into five age groups. The distribution is as follows:

Age Group	Number of people)	Percentage (%)
Less than 20	12	6.0%
21–30 years	56	28.0%
31–40 years	74	37.0%
41–50 years	38	19.0%
More than 51	20	10.0%

The largest age group comes from the 31–40 year range (37%), followed by 21–30 years (28%), which reflects the characteristics of the productive and potential segment of premium electric vehicle consumers in Indonesia.

4.2. Results of Instrument Validity and Reliability Tests

a. Construct Validity

Validity test shows that all construct indicators have loading factor values above 0.50, meeting the criteria for construct validity eligibility (Hair et al., 2018). This shows that each indicator is able to represent the measured latent variables accurately.

b. Construct Reliability

All variables have construct reliability and variance extracted values.which is very good, indicating the level of consistency and stability of the measurement. The details are as follows:

Variables	Construct Reliability	Variance Extraction
Narcissism (NAR)	0.94	0.80
E-WOM	0.95	0.81
Self-Esteem (SE)	0.96	0.82
Virtue Signaling (VS)	0.96	0.86
Purchase Intention (PI)	0.97	0.92

4.3. SEM-LISREL Structural Test Results

a. Coefficient of Determination (R^2)

The structural model produces an R^2 value that reflects the proportion of variance of the dependent variable explained by the independent variables. The results are as follows:

Dependent Variable	Independent Variables	R^2	Interpretation
E-WOM	Narcissism (NAR)	0.42	42% of E-WOM variation is explained by NAR
Self-Esteem (SE)	Narcissism (NAR)	0.23	23% of SE variation is explained by NAR

Virtue Signaling (VS)	Narcissism (NAR)	0.23	23% of the variation in VS is explained by NAR
Purchase Intention (PI)	EWOM, SE, VS, NAR	0.78	78% of the variation in PI is explained by the four independent variables

b. Goodness of Fit Model

This model shows goodness of fit based on various statistical indicators. The Degree of Freedom (df) value of 158 accompanied by Chi-Square of 195.18 and Non-Centrality Parameter (NCP) of 37.18 with a confidence interval between 5.76 to 76.77 indicates that the model has a good fit. Furthermore, the RMSEA of 0.034 is included in the good fit category, with a confidence interval of 0.014 to 0.049, and a P Value of 0.96 indicating a very good model fit.

The ECVI model indicator of 1.71 also indicates good fit because its value is lower than the ECVI for the saturated model (2.32) and the independence model (70.38), with a confidence interval between 1.56 and 1.91. Likewise, the AIC value for the model of 341.18 is smaller than the AIC for the saturated model (462.00) and independence (14,006.44). The CAIC model value of 654.95 is also lower than the CAIC saturated (1,454.91) and CAIC independence (14,096.70), which strengthens the indication of good model fit.

Several other fit indicators also showed very good results, such as NFI (0.98), CFI (1.00), NNFI (0.99), IFI (1.00), RFI (0.98), and PNFI (0.74), all of which are in the good fit category. The Critical N of 187.50 also indicates that the model is suitable for use. However, the GFI value of 0.91 is included in the marginal fit category, although it is still within acceptable limits. Other indicators such as Standardized RMR (0.054), AGFI (0.88), and PGFI (0.63) provide additional support for the general suitability of the model.

Overall, this model shows a very good fit to the data, based on the combination of the various fit indicators used.

4.4. Hypothesis Testing Results

The following table presents the results of hypothesis testing using T-Value. All hypotheses are declared accepted, because they have T-Value values above the threshold of 1.96 (95% significance). The detailed description can be seen below:

Hypothesis	**Statement**	**T-Value**	**Information**
H1	Narcissism → E-WOM	9.22	Accepted
H2	Narcissism → Self-Esteem	6.98	Accepted
H3	Narcissism → Virtue Signaling	6.97	Accepted
H4	E-WOM → Purchase Intention	2.55	Accepted
H5	Self-Esteem → Purchase Intention	3.27	Accepted
H6	Virtue Signaling → Purchase Intention	3.00	Accepted
H7	Narcissism → Purchase Intention	3.96	Accepted

Source:SEM-LISREL data processing results

5. Discussion

The results of this study reveal a significant relationship between narcissism personality traits and various psychological and social variables that influence purchase intention towards Premium Electric Car products in Indonesia. The following discussion will discuss each finding based on theoretical perspectives and previous empirical findings, especially within the framework of the Theory of Planned Behavior (TPB) and Extended TPB (ETPB).

The results of this study indicate that narcissism plays an important role in shaping consumer behavior towards premium electric cars. Consumers who have narcissistic traits tend to be more active in spreading their information and experiences through electronic word of

mouth (e-WOM). This is done not only to share, but also to build self-image and gain social recognition (Kim & Jang, 2018; Luarn et al., 2016). Within the framework of the Theory of Planned Behavior (TPB), this behavior is influenced by positive attitudes towards e-WOM, pressure from the social environment, and confidence in their ability to do so. The Extended TPB (ETPB) approach adds that narcissism as a personal character helps strengthen e-WOM intentions and behavior (Marokhu & Fatoki, 2024; Chao & Yu, 2024).

In addition, narcissism has also been shown to increase self-esteem. Individuals with this trait often use symbolic consumption, such as buying luxury products to feel more confident and valued (Mao et al., 2020; Burgmer et al., 2021). The TPB explains that the formation of this self-esteem is related to attitudes towards premium products, norms from the social environment, and perceptions of control over purchasing decisions. In the ETPB, narcissism functions as part of a psychological identity that drives symbolic consumption behavior (Lombardi et al., 2024).

Interestingly, narcissistic traits also encourage virtue signaling behavior, which is demonstrating moral values through consumption, such as buying environmentally friendly products to appear to care about social issues. This behavior tends to be done in order to gain recognition as a good or ethical person (Krispenz & Bertrams, 2023; Ok et al., 2021). In the TPB, this is influenced by attitudes, social norms, and perceptions of control, while the ETPB sees it as a form of social identity expression driven by narcissism (Chao & Yu, 2024).

Furthermore, this study also found that the more frequently consumers engage in e-WOM, the more likely they are to intend to purchase the product. This sharing activity not only strengthens personal beliefs but also forms social norms in the digital environment that drive purchasing decisions (Roy et al., 2019; Lăzăroiu et al., 2020). Within the ETPB framework, e-WOM even strengthens the identity as a progressive and environmentally conscious consumer (Wongthahan et al., 2025).

Self-esteem also plays an important role in increasing purchase intention. Individuals who have high self-confidence tend to be more confident in their purchasing decisions, especially for products with symbolic value (Razmus & Laguna, 2024; Rofiq et al., 2024). In both TPB and ETPB, self-esteem strengthens the relationship between intention and consumption behavior through attitudes, norms, and perceived control.

Meanwhile, virtue signaling has also been shown to increase purchase intentions, especially when the product represents certain moral or social values. Consumers want to be known as caring and responsible individuals, and purchasing is one way to demonstrate this (Cozzio et al., 2022; Kretschmer & Kahl, 2021).

Finally, narcissism has been shown to directly increase purchase intention. Narcissistic individuals tend to want to stand out through the ownership of products that can increase their social status. Both TPB and ETPB illustrate that this trait forms positive attitudes, supportive social norms, and confidence in purchasing ability (Jiang et al., 2022; Laheri et al., 2024).

Overall, the results of this study indicate that narcissism is not just a personal trait, but also influences the way consumers interact, form self-image, and make purchasing decisions, especially for products that have symbolic, social, and environmental value.

6. Conclusion.

This study concludes that narcissism is a personality construct that directly and indirectly influences consumer purchase intention towards Premium Electric Car products in Indonesia. Through the mediation of electronic Word of Mouth (e-WOM), self-esteem, and virtue signaling, narcissism encourages the formation of strong purchase intentions, especially when consumption has high symbolic, emotional, and moral values. Within the framework of the Theory of Planned Behavior (TPB) and Extended TPB, consumption behavior is not only

influenced by attitudes, subjective norms, and perceived behavioral control, but also by psychological and emotional factors such as the need for social validation, self-image, and status achievement. Consumers do not only buy premium electric cars because of their function, but also because the car represents the values of identity, ethics, and prestige that they want to display in the social space.

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THE EFFECT OF SELF CONGRUENCE ON BRAND LOYALTY IN FASHION PRODUCTS IN INDONESIA: THE ROLE OF FUNCTIONAL CONGRUENCE MEDIATION AND CONSUMER INVOLVEMENT MODERATION

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Abstract

This study aims to understand how consumer self-congruence influences brand loyalty in the fashion product market in Indonesia. The increasingly competitive fashion industry highlights the need for a deeper understanding of consumer perceptions toward brands. One significant psychological factor believed to affect brand loyalty is self-congruence, the extent to which consumers feel that a brand reflects their personal identity. This research employs a quantitative approach by distributing questionnaires to 100 active fashion product consumers. The analysis was conducted using Structural Equation Modeling (SEM) based on Partial Least Squares (PLS). The findings reveal that self-congruence significantly influences brand loyalty, both directly and indirectly through functional congruence. Functional congruence proves to be a strong mediator. Meanwhile, involvement does not moderate the relationship between self-congruence and functional congruence to brand loyalty in fashion brands (clothes) in Indonesia.

Keywords: self-congruence, functional congruence, brand loyalty, involvement, fashion products

1. Introduction

The Indonesian fashion sector is growing quickly, with brands facing ever fiercer competition both at local and internationally (Rosi & Muliatie, 2024). The rapid expansion is further accelerated by the increasing presence of global brands such as Calvin Klein, Gucci, Tiffany & Co., Louis Vuitton, Dior, Chanel, Bvlgari, Adidas, H&M, Levi's, and Burberry, which intensifies the competitive landscape and raises consumer expectations for both quality and brand image (Nurhayati, 2023). This trend presents major challenges for fashion companies aiming to keep customers loyal. Since loyal consumers not only buy repeatedly, but are also more likely to promote the brand and resist switching to competitors (Maulasena *et al*., 2024). As a result, building brand loyalty has become a top priority for many companies as they craft marketing strategies to stand out in a crowded marketplace (Boateng *et al*., 2020). Key drivers of this loyalty include self-congruence, where alignment between a consumer's self-identity and brand image strengthens commitment (Aguirre-Rodriguez et al., 2012; Sung & Kim, 2010). and functional congruence, which elevates loyalty when a brand's practical benefits (e.g., quality, comfort) consistently meet consumer needs (Hee Kwak & Kang, 2009). Additionally, high-involvement consumers exhibit more selective and critical brand evaluations, ultimately deepening their loyalty through deliberate involvement (Shin et al., 2017).

Previous research has examined the relationship between self-congruence and brand loyalty directly or indirectly (Das, 2014; Kang et al., 2015; Liu et al., 2012; Liu et al., 2022; Sirgy et al., 1997, 2008; Zogaj et al., 2021). In addition, actual and ideal self-congruence positively affects functional congruence (Huber et al., 2010; Hung & Petrick, 2012; Kumar & Nayak, 2014; Lee et al., 2017; Ryu & Lee, 2013; Sirgy et al., 1991). Functional congruity has

relationship with brand loyalty (Kressmann et al., 2006; Nikhashemi & Valaei, 2018; Sargeant et al., 2006; Willems et al., 2016; Zogaj et al., 2021). Self-verification (i.e., true self-congruence) increases when people deal more closely with an issue and are therefore more involved (e.g., Malär *et al*., 2011; Sirgy *et al*., 2008). In the context of involvement, the study of (Shin et al., 2019) shows that involvement not only increases attention to the brand, but also moderates the strength of the relationship between brand image and loyalty.

Although many studies have examined self-compatibility and brand loyalty, understanding of the role of mediating functional congruence and moderating consumer involvement is still limited. In this case, the integration of self-congruence, functional congruence, and consumer involvement in a single research model is still rare. In addition, most of the research still focuses on the context of developed countries and does not fully reflect the characteristics of consumer behavior in Indonesia, especially in the fashion (clothing) industry. Previous studies have tended to separate the role of each variable, without looking at how their interconnectedness and interaction shape consumer loyalty simultaneously. Therefore, there is still a gap to develop a more comprehensive understanding of the psychological and functional factors that influence brand loyalty in the context of local culture and markets.

The main purpose of this study is to analyze the influence of self-congruence on brand loyalty both directly and indirectly through functional congruence in the context of fashion products in Indonesia. In addition, this study also aims to examine the role of moderation from consumer involvement in strengthening the relationship between self-congruence and functional congruence to brand loyalty. By developing a model that integrates these three variables, this study is expected to provide new insights into the psychological and functional factors that affect consumer loyalty in the Indonesian fashion industry, as well as make a practical contribution to brand marketing strategies.

2. Literature review

5.15. The Effect of Self-Congruence on Brand Loyalty

Self-congruity influences brand attachment based on the idea of self-expansion theory (Malär *et al*., 2011). Self-congruence, which represents the extent to which a brand is part of the customer's self-concept, is positively related to self-brand connection, which stands out from attitudes towards (Park *et al*., 2010). Previous research has revealed the positive effects of actual and ideal self-congruence on customer behavior (e.g. actual and ideal self-congruence positively influences customer behavior because higher similarity of perception (i.e., self-congruence) forces customers to feel more consistency and harmony between themselves and the brand (Malär *et al*., 2011). As a result, actual and ideal self-congruence strengthens the relationship between the customer and the brand (Huber *et al*., 2018; Japutra *et al*., 2019), which results in increased brand loyalty (Hung *et al*., 2019; Kang *et al*., 2015).

In recapitulation that actual and ideal self-congruence influences individual behavior in several contexts (Choi & Reid, 2016; Kaufmann et al., 2016; Zhu et al., 2019) led to the conclusion that self-congruence has a positive effect on donor loyalty. In addition, it also confirms the relationship between image congruity (self-congruity and functional congruity) to the three components of loyalty (cognitive, affective, and native loyalty. Previous research has proven that actual self-congruence has a positive effect on brand loyalty (Das, 2014; Kang *et al*., 2015; Sirgy *et al*., 2008). Likewise, the ideal of self-congruence has a positive effect on brand loyalty (Das, 2014; Kang *et al*., 2015; Liu *et al*., 2022; Sirgy *et al*., 2008; Zogaj *et al*., 2021). So based on this, a hypothesis was developed:

H1. Self-congruence has a positive effect on brand loyalty

5.16. The Effect of Self-Congruence on Functional Congruence

Sirgy & Su (2000) argue that self-congruence and functional congruence are essential for understanding destination imagery and traveler decision-making. Self-congruence refers to the compatibility / mismatch between the perceived image of a destination and the self-image of the tourist. Previous research has revealed the positive effects of functional congruence on customer behavior (Lee *et al*., 2017b) and then Su & Reynolds (2017) and Lee *et al*. (2017) show that functional congruence plays an important role in the hospitality context by confirming the positive effects of functional congruence on customer satisfaction and brand attitude. Choi & Reid (2016) confirmed the positive effects of functional congruence on customer behavior in the context of food, while Hung & Petrick (2012) confirmed the positive effects in the context of tourism.

Kumar & Nayak (2014) found that self-congruity is an important predictor of functional congruity in the context of tourism. The findings of Ryu & Lee (2013) also confirm that self-congruence based on participants' perceptions of a convention positively affects functional conformity. Thus, it can be stated that actual and ideal self-congruence positively affects functional congruence (Huber *et al*., 2010; Hung & Petrick, 2012; Lee *et al*., 2017; Sirgy *et al*., 1991). In addition, several previous studies have proven that actual and ideal self-congruence have a positive effect on adaptive functional congruence (Choi & Reid, 2016; Hung & Petrick, 2012; Kang *et al*., 2015; Kressmann *et al*., 2006; Lee *et al*., 2017a; Zogaj *et al*., 2021). Based on this, a hypothesis was developed:

H2. Self-congruence has a positive effect on functional congruence

5.17. The Effect of Functional Congruence on Brand Loyalty

Image congruity consists of self-congruity and functional congruity (He & Mukherjee, 2007). Lee *et al*. (2017) and Su & Reynolds (2017) show that functional congruence plays an important role in the hospitality context by confirming the positive effects of functional congruence on customer satisfaction and brand attitude. Choi & Reid (2016) confirmed the positive effects of functional congruence on customer behavior in the context of food, while Hung & Petrick (2012) confirmed the positive effects in the context of tourism. With respect to non-profit organizations, Willems *et al*. (2016) stated that the importance of organizational performance has increased over the decades. The relevance of organizational performance is supported by Sargeant *et al*. (2006), who show that organizational performance has a positive effect on donor behavior (i.e., trust and commitment).

Previous research has proven that functional congruence has a positive effect on brand loyalty (Kressmann *et al*., 2006; Zogaj *et al*., 2021). Some empirical research supports the idea that functional congruence mediates the relationship between self-congruence and brand loyalty. Sung & Kim (2010) found that self-congruence not only has a direct effect on brand loyalty, but also through the role of functional congruence, which increases consumer perception of product benefits. In addition, research by Iglesias et al. (2011) revealed that the function of products that match consumer expectations increases brand loyalty, even more so when the brand reflects the consumer's personal identity or values. This study shows that functional congruence acts as a mediator that strengthens the relationship between self-congruence and brand loyalty. Based on this, a hypothesis was developed:

H3. Functional congruence has a positive effect on brand loyalty

H4. Functional congruence mediates the relationship between self-congruence and brand loyalty

5.18. Customer Involvement as Moderation

Sirgy *et al*. (2008) developed a conceptual model that shows how self-congruence with sponsorship events affects brand loyalty. This model argues that self-congruence with event sponsorship has a positive influence on brand loyalty, especially under two conditions: (1) when the customer is aware of the company sponsoring the event, and (2) when the customer involves with the event. Zogaj *et al*. (2021) show that issue involvement reinforces (reduces) the influence of actual self-congruence and ideal self-congruence on donor loyalty. Regarding the relationship between functional suitability and donor loyalty, the involvement of the issue did not have a moderate effect.

Previous studies confirmed that involvement positively moderated the actual relationship of self-congruence to brand loyalty (Sirgy *et al*., 2008; Zogaj *et al*., 2021). When self-verification (i.e., true self-congruence) becomes more important as problem involvement increases, then self-improvement (i.e., ideal self-congruence) becomes less relevant as problem involvement increases. The reason is based on the finding that individuals tend to avoid self-enhancing interactions in high-involvement situations (Malär *et al*., 2011). A person's personal values and individual self-concept (i.e., true self-congruence) enhance one's self-concept (i.e., ideal self-congruence) and explain the effect of self-congruence on individual behavior (Claiborne & Sirgy, 2014).

Empirical research supports the idea that involvement moderates the relationship between functional congruence and brand loyalty. For example, a study by Jalees *et al*. (2014) found that high levels of involvement reinforce the influence of functional congruence on brand loyalty, as highly involved customers are more likely to choose brands that functionally fit their needs. Several studies have shown that utilitarian values become more important when individuals perceive a situation or action to be very important or relevant (e.g., (Celsi & Olson, 1988; Kressmann *et al*., 2006; Sirgy *et al*., 2008). In such high-involvement situations, individuals invest more cognitive effort in thinking about an action (e.g., buying an expensive product) than they do in low-involvement situations (e.g., buying an affordable product) (e.g., Fritz *et al*., 2017; Malär *et al*., 2011). As a result, individuals are more aware of utilitarian values such as attribute performance in high-involvement situations (e.g., Kressmann *et al*. (2006). Therefore, it can be expected that subjects that deal more intensively with nonprofit organizational issues (i.e., highly involved subjects) are more concerned with and relevance to utilitarian attributes. Based on this, a hypothesis was developed:

H5a. Involvement moderates the relationship between functional congruence and brand loyalty
H5b. Involvement moderates the relationship between self-congruence and brand loyalty

3. Methodology

This study uses a quantitative approach with a survey research design. The quantitative approach was chosen because it can provide a clear picture of the relationship between the variables studied, as well as allow statistical testing of hypotheses. The survey was used to collect data from respondents who are active consumers of fashion products in Indonesia. The data collected through the questionnaire will be analyzed to test the direct and indirect relationship between variables, as well as the role of moderation of consumer involvement.

10.1. Theoretical framework

This study uses the Theory of Self-Congruence (Sirgy, 1982) and the Expectancy-Value Model as the theoretical basis to explain how self-congruence (the fit between the consumer's self-concept and brand image) affects brand loyalty. The self-congruence theory states that consumers tend to choose brands that reflect their self-image, both actual and ideal, thus creating emotional attachment and repeat purchases. Functional congruence is the conformity between the functional attributes of the brand (e.g., quality, usability) and consumer needs. In this case it is assumed to be a mediator, since this symbolic conformity translates into a real

functional value (Sirgy *et al*., 1997). Consumer involvement, which reflects the personal relevance and involvement of consumers to fashion products (Zaichkowsky, 1985), plays a moderator role, as highly involved consumers tend to pay more attention to both symbolic and functional aspects of brands in forming loyalty (Kwak & Kang, 2009).

10.2. Conceptual framework

The conceptual framework of this study proposes a mediation-moderation model in sequence. First, self-congruence (independent variables) has a direct effect on brand loyalty (dependent variable), in accordance with previous findings that consumers build an emotional attachment to brands that reflect their identity (Das, 2014; Kang *et al*., 2015; Liu *et al*., 2022; Sirgy *et al*., 2008; Zogaj *et al*., 2021). Second, functional congruence acts as a mediator: self-congruence increases the perception of the brand's functional benefits (e.g., durability, comfort), which ultimately strengthens loyalty (Zogaj et al., 2021). For example, luxury brands like Gucci can build self-congruence through aspirational imagery, but long-term loyalty still requires functional excellence in their products.

Third, consumer involvement plays a role as a moderator. Consumers with high involvement levels (e.g., fashion lovers who regularly buy Louis Vuitton) show a stronger relationship between self-congruence and loyalty, as they carefully evaluate how the brand aligns with their self-concept and practical needs. In contrast, consumers with low involvement (e.g., H&M casual shoppers) may prioritize convenience over conformity, making the relationship weaker (Tu *et al*., 2021). Thus, this framework places functional congruence as a link between symbolic identity and behavioral loyalty, with consumer involvement determining the strength of the relationship in different contexts.

10.3. Instrumentation

Data was collected through a questionnaire compiled on a 5-point Likert scale, in which respondents were asked to rate from "Strongly Disagree" (1) to "Strongly Agree" (5) on existing statements. The questionnaire consists of four main sections that include questions related to self-congruence, functional congruence, involvement, and brand loyalty. Before being distributed to respondents, this instrument was tested first to measure its validity and reliability. The population in this study is consumers who actively buy fashion products in Indonesia. The sample of this study consisted of 165 respondents who were selected using the purposive sampling technique, which is a sample selection technique by considering certain criteria, such as respondents who have bought fashion products in the last 6 months and have experience with certain brands.

The Self Congruence variable measures the actual self-congruence and the Ideal self-congruence adopted from Japutra *et al*. (2019) which are each measured with three statement items. Variable Functional Congruence with three items adopted from Talukder *et al*. (2020). The Involvement variable was measured by four items adopted from O'Cass (2000). Meanwhile, the variable Brand loyalty was measured by four items adapted from Nam *et al*. (2011) and Chaudhuri & Holbrook (2001). This questionnaire uses a total of 15 statements, hence the minimum number of respondents is 5-10 times the number of statements (Hair *et al*., 2019), which is 150 respondents. The collected data will be analyzed using the Structural Equation Modeling (SEM) technique based on Partial Least Squares (PLS). SEM with PLS was chosen because it allows to test relationships between latent variables with relatively small sample sizes and can provide more flexible estimations.

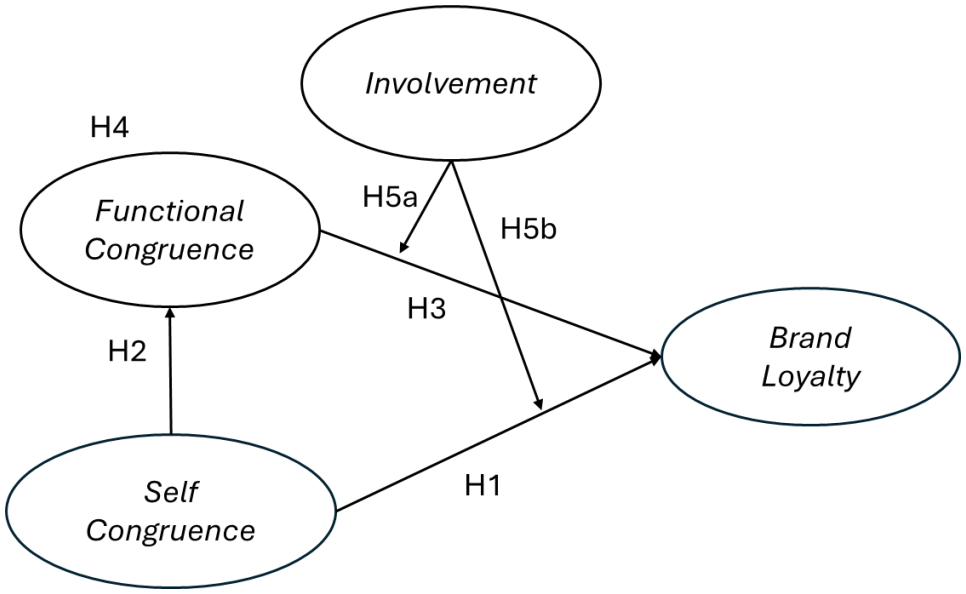

Figure 1. Conceptual Model

4. Results and Discussions

From the results of the validity and reliability test in Table 1, it can be seen that all constructs have a Composite Reliability (CR) value of > 0.90 (BL: 0.943, FC: 0.930, IN: 0.929, SC: 0.944), exceeding the minimum limit of 0.70 (Hair *et al*., 2017). The internal consistency of the items in each construct is very high which indicates the instrument measures the construct reliably and stably. All constructs had an Average Variance Extracted (AVE) value above 0.70 (BL: 0.780, FC: 0.827, IN: 0.723, SC: 0.751), higher than the minimum standard of 0.50 (Fornell & Larcker, 1981). FC has the highest AVE (0.827), followed by BL (0.780), SC (0.751), and IN (0.723). This means that each construct is able to explain 70% of the indicator's variants, proving the excellent validity of convergence. For all indicators, there is an outer loading of >0.70 (Hair *et al*., 2017), namely: FC1 (0.933) and BL3 (0.910) are the strongest indicators. In this case there is no indicator that needs to be removed (lowest load: SC1=0.810, still above the critical limit of 0.70) which means that each indicator is significantly representative of its construct.

In the Fornell-Larcker Criterion analysis (Table 2), the square root of AVE (√AVE) must be greater than the correlation with other constructs on the same row/column and if all √AVE > correlated with other constructs, then the validity discriminant is met. Table 2 shows that the assessment per construct for BL (0.894)> correlation with FC (0.759), IN (0.580), SC (0.708), then valid. FC (0.900)> correlated with BL (0.759), IN (0.549), SC (0.703), then valid. IN (0.847) > correlated with BL (0.580), FC (0.549), SC (0.562), then valid. SC (0.847) > correlated with BL (0.708), FC (0.703), IN (0.562), then valid. All constructs meet the Fornell-Larcker criterion. The square root value of AVE for each construct is greater than the correlation with the other construct, so it can be concluded that the discriminant validity of the model has been met. In this case there is no discriminating validity issue, each construct has a different identity and does not overlap excessively with other constructs. This indicates a reliable model, i.e. that the measurements used in the model are able to distinguish between one construct and another, so that the model can be used for further analysis, such as hypothesis testing or structural analysis.

Table 1. Instrument's validity and reliability test

Konstruk/Indikator	Outer Loading	Composite Reliability (CR)	AVE
Brand Loyalty (BL)		0,943	0,78
BL1	0,882		
BL2	0,892		
BL3	0,91		
BL4	0,89		
Functional Congruence (FC)		0,93	0,827
FC1	0,933		
FC2	0,907		
FC3	0,856		
Involvement (IN)		0,929	0,723
IN1	0,839		
IN2	0,814		
IN3	0,891		
IN4	0,814		
IN5	0,876		
Self Congruence (SC)		0,944	0,751
SC1	0,81		
SC2	0,848		
SC3	0,835		
SC4	0,878		
SC5	0,857		
SC6	0,851		

Table 2. Fornell-Larcker criterion

Indicator	BL	FC	IN	SC
BL	0,894			
FC	0,759	0,900		
IN	0,580	0,549	0,847	
SC	0,708	0,703	0,562	0,847

Table 3. Heterotrait-monotrait ratio (HTMT) – Matrix

Indicator	BL	FC	IN	SC
BL				
FC	0,843			
IN	0,634	0,615		
SC	0,770	0,780	0,614	

According to Henseler *et al*. (2015), HTMT is the ratio of the average correlation of indicators between constructs (heterotraits) to the average correlation of indicators in constructs (monotraits) where a low HTMT value indicates that the constructs are empirically distinguishable HTMT is calculated as the ratio between the average correlation of indicators between constructs (heterotraits) to the average correlation of indicators in constructs (monotraits). If the HTMT value between construct pairs is below 0.85 or 0.90, then the

research model is considered to have good discriminant validity. HTMT is a more sensitive tool for testing validity discriminators than Fornell-Larcker. From Table 3, it can be seen that BL-FC (0.843): Almost reached the critical HTMT value (0.85), so it is necessary to be aware of the problem of discrimination validity between BL and FC. FC-SC (0.780): Still below the critical value, but quite high. Other constructs have a correlation still below 0.85, so the validity discriminator is still acceptable.

Table 4. R Square

Indicator	R-square	R-square adjusted
BL	0,654	0,643
FC	0,495	0,491

In Table 4, BL has an R-square of 0.654 indicating that approximately 65.4% of the variation in the endogenous variable BL can be explained by the exogenous variable that affects it. Meanwhile, the R-square adjusted of 0.643 is slightly lower, indicating a correction to the bias due to the addition of independent variables, but still has strong predictive power. This value is included in the strong category according to the criteria (Chin, 1998) which states R-square ≥ 0.67 as strong, even though the BL value is slightly below (but very close to the strong threshold, and if referring to the criteria of Sarstedt *et al*. (2021) where the value of ≥ 0.50 is moderately strong.

Table 5. Fit Summary

Items	Saturated model	Estimated model
SRMR	0,052	0,064
d_ULS	0,455	0,707
d_G	0,379	0,389
Chi-square	362,207	364,946
NFI	0,856	0,855

Table 6. Hasil Pengujian Hipotesis

Hipotesis	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values	Result
H1. SC -> BL	0,623	0,622	0,061	10,283	0,000	Accepted
H2. SC -> FC	0,703	0,705	0,039	18,005	0,000	Accepted
H3. FC -> BL	0,490	0,482	0,081	6,023	0,000	Accepted
H4. SC -> FC -> BL	0,345	0,340	0,060	5,732	0,000	Accepted
H5a. IN x SC -> BL	-0,023	-0,029	0,072	0,323	0,747	Rejected
H5b. IN x FC -> BL	0,056	0,058	0,076	0,739	0,460	Rejected

SRMR < 0.08 is considered excellent, while SRMR < 0.10 is still acceptable for fit models (Henseler *et al*., 2016). From table 5, the SRMR is excellent (below 0.08), indicating that the model is able to represent the data well. For d_ULS and d_G there is no universal threshold, but the smaller the value the better the match. In this case, the d_ULS and d_G values are quite low. For the Chi-square, the smaller the better the model fits. It can be seen that the Chi-square

value is not much different between the saturated and estimated models, so there is no indication of a major problem from the Chi-square side. The NFI criterion > 0.90 is considered very good, 0.85–0.90 is acceptable, below 0.85 is not good. The result is that the NFI is quite good because it is close to 0.90, so in general this model is declared Fit.

From Table 6, it can be seen that there is a significant positive influence of self-congruence on brand loyalty (H1 accepted), thus supporting previous research (Das, 2014; Kang *et al*., 2015; Liu *et al*., 2022; Sirgy *et al*., 2008; Zogaj *et al*., 2021). When consumers feel that there is a match between their self-image and the brand, it will automatically encourage them to show loyalty to the brand. In other words, the alignment between actual or ideal self-image and brand image is the main factor that motivates consumers to stay loyal to this clothing brand.

The test results show that self-congruence has a positive and significant effect on functional congruence, so the second hypothesis (H2) in this study is proven. This research supports previous research that self-congruence has a positive effect on functional congruence (Choi & Reid, 2016; Huber *et al*., 2010; Hung & Petrick, 2012; Kang *et al*., 2015; Kressmann *et al*., 2006; Kumar & Nayak, 2014; Lee *et al*., 2017; Lee *et al*., 2017; Ryu & Lee, 2013; Sirgy *et al*., 1991; Zogaj *et al*., 2021). These findings reinforce the theory that the conformity of consumer self-image with brand image not only has an impact on psychological aspects, but also affects consumers' perception of the function and usefulness of the products offered. In other words, when consumers feel that a brand reflects their values and identity (such as conforming to or similar to their current or aspiring self-image), they are also more likely to judge that the product can optimally meet their functional needs. The functional needs of the clothes in this case such as providing a sense of comfort, fashionable, a price that matches its quality, providing satisfaction and even exceeding its expectations. This is in line with the results of research by Sirgy et al. (1991) who stated that functional congruence is significantly influenced by self-congruence, where the conformity of self-image can affect consumers' perception of the functional attributes of the product.

The results of the test in this study show that functional congruence has a positive and significant effect on brand loyalty, so that the third hypothesis (H3) is proven and supports previous research (Kressmann *et al*., 2006; Zogaj *et al*., 2021). These findings indicate that when consumers judge that the functionality and usability of products match their needs and expectations, brand loyalty will be stronger. The perception that the product is able to optimally meet the functional aspects provides satisfaction that encourages consumers to make a repeat purchase and recommend the brand to others. Consumers who feel the product fulfills the expected practical function are more likely to have a positive attitude towards the brand and show a long-term commitment. This long-term commitment can be realized by consumers in the form of if someone asks for advice, they will recommend this product brand, will choose to buy this brand or continue to use it in the future, and prefer this brand over other brands. This is in line with consumer behavior theory which states that functional satisfaction is one of the main factors influencing repeat purchase decisions and brand loyalty (Schiffman & Kanuk, 2007). Therefore, companies need to ensure that the product is not only emotionally appealing but also excels in the functional aspect to build ongoing loyalty.

Functional congruence positively mediates between self-congruence and brand loyalty, supporting hypothesis H4 and previous studies by Sung & Kim (2010) and Iglesias et al. (2011). Functional needs like comfort, fashionability, and fair pricing provide satisfaction and can strengthen the link between brand conformity and loyalty. In fashion, self-congruence both directly and indirectly boosts loyalty by enhancing perceptions of product benefits. Consumers who identify with a brand are more satisfied with its comfort and quality, increasing their loyalty. While other mediators like brand love or relationship quality reinforce this pathway,

specifically for functional congruence, satisfaction with product function amplifies loyalty when the brand image matches consumer identity.

Regarding involvement, the study found it does not moderate the relationship between functional congruence or self-congruence and brand loyalty (H5a and H5b rejected), contrary to prior research (Malär *et al*., 2011; Sirgy *et al*., 2008). Although involvement strengthens loyalty, it does not significantly moderate the path between functional congruence, self-congruence, and loyalty. Model replication Kressmann *et al*. (2006) showed product involvement affects self-congruence and functional congruence, but not their interaction with brand relationship quality or loyalty—thus, involvement does not moderate these relationships.

5. Conclusion

This study succeeded in proving that there is a close relationship between the main variables in the developed model, especially the influence of self-congruence and functional congruence on brand loyalty in clothing consumers. Self-congruence has been shown to have a positive effect on functional congruence and brand attachment, but it is not directly significant on brand loyalty. When consumers feel that their self-image aligns with the brand, they tend to believe the product is able to meet their needs and expectations, as well as build a strong emotional bond. However, loyalty does not only depend on the suitability of self-image, but also on the real experience provided by clothing brands in Indonesia. Other findings suggest that consumer involvement levels do not moderate the relationship between self-congruence and brand loyalty. The results of this study confirm the importance of marketing strategies that combine emotional and functional approaches to build consumer loyalty in the Indonesian clothing industry.

The limitation of this study is that the characteristics of respondents are relatively homogeneous, both in terms of region and market segment, which is a limiting factor in the generalization of research results. Consumers with different age, location, or cultural backgrounds may exhibit behaviors that are not uniform with the study sample. Therefore, future research should involve a more diverse and representative sample so that the picture of consumer behavior obtained becomes more comprehensive. Thus, the results of the study can better reflect the overall market dynamics.

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THE INFLUENCE OF TAX REGULATIONS AND POLICIES, COMPANY SIZE, AND ECONOMIC CONDITIONS ON THE CAPITAL STRUCTURE OF FOOD AND BEVERAGE COMPANIES LISTED ON THE INDONESIA STOCK EXCHANGE (2018 – 2023)

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Abstract

This study aims to investigate the impact of tax regulations and policies, company size, and economic conditions on the capital structure of firms in the food and beverage sector listed on the Indonesia Stock Exchange (IDX) from 2018 to 2023. In this regard, transparent and accountable financial reporting is crucial for providing clear information to investors and the general public. The data utilized in this research consists of secondary data obtained from the financial statements prepared by these companies. The analysis method employed is multiple linear regression with a panel data approach. The findings of this study indicate that tax regulations and policies, company size, and economic conditions exert a positive and significant influence on the capital structures adopted by these firms. These results offer valuable insights for decision-makers in managing capital structure and serve as guidance for investors when making investment decisions.

Keywords: Tax Regulations and Policies, Company Size, Economic Conditions, Capital Structure

1. Introduction

The capital market serves as a means of investment for the general public, providing individuals and institutions with more extensive access to participate in economic growth. Through stocks, bonds, and other financial instruments, the public cannot only increase the potential for positive outcomes but also contribute to business ventures that have the potential to create new job opportunities and innovations. Additionally, the modal market serves as a platform for investment diversification, which is crucial for mitigating risk. (Sari, A. R. & Harahap, 2021).

One of the most critical aspects of business management is the capital structure, particularly in the food and beverage industry, which is characterized by a lively and easy-to-understand business model for companies that sell food and beverages. Businesses in the food and beverage industry should utilize a reasonable and appropriate modal structure to enhance operational efficiency and support the company's growth, ultimately increasing its profitability. (Ronald S.G.S. Sipayung, 2024).

In capital structure analysis, it is necessary to consider and evaluate several factors that affect a company's financial situation. Higher profitability, defined as a company's ability to generate more revenue than it spends, indicates that if a company's profitability is increasing, it will be able to provide a substantial profit that can be utilized. (Setyawati, I., Molina, M., Muhani, M., & Huda, 2021).

Modal structure is a combination of preferred stock, common stock, and debt used to support business operations. Several factors influence the capital structure, including the rate of growth, business stability, asset structure, profitability, taxes, control, operational leverage, currency flexibility, internal business conditions, market conditions, lender and government agency attitudes, and management behavior. (Setyawati et al., 2024).

Capital structure refers to the business's use of equity and debt to create the right-hand side of the company's balance sheet. Brigham, E., & Houston (2019) State that "asset structure is the amount of assets that can be used as collateral as measured by comparing fixed assets to total assets". The capital structure is presented in terms of the Debt-to-Equity Ratio (DER), Debt-to-Asset Ratio (DAR), and Interest Coverage in several studies. In this study, DER serves as a proxy for the capital structure. As can be seen, the Food and Beverages company has a high capital structure with a DER greater than 0.8, indicating that the company has a significant debt when compared to its equity. This frequently results in aggressive financing strategies in capital-intensive industries where considerable investment is required for product and marketing innovation. (Aji et al., 2024). Table 1 shows the debt-to-equity ratio for ten food and beverage companies from 2018 to 2023.

Table 1. Debt to Equity Ratio for Food and Beverages Companies 2018 to 2018 2023

No.	Company	Stock code	DER						AVERAGE
			2018	2019	2020	2021	2022	2023	
1	PT. Prasidha Aneka Niaga Tbk.	PSDN	1.8	2.5	5.2	11.7	30.0	1.0	8.7
2	PT. Tiga Pilar Sejahtera Food Tbk.	AISA	1.6	1.6	2.5	1.3	1.2	1.2	1.6
3	PT. Tri Banyan Tirta Tbk.	ALTO	1.9	2.0	2.0	2.0	1.9	2.0	1.9
4	PT. Bumi Teknokultura Unggul Tbk.	BTEK	1.3	1.4	1.7	1.7	1.9	2.7	1.8
5	PT. Budi Strach & Sweetener Tbk.	BUDI	1.7	1.5	1.3	1.2	1.2	1.1	1.3
6	PT. Multi Bintang Indonesia Tbk.	MLBI	2.1	2.6	1.4	2.4	2.3	1.6	2.1
7	PT. Pratama Abadi Nusa Industri Tbk.	PANI	1.4	1.9	2.0	1.0	3.2	1.2	1.8
8	PT. Inti Agri Resources Tbk.	IIKP	0.6	1.0	1.4	1.5	1.5	1.2	1.2
9	PT. Sekar Laut Tbk.	SKLT	1.2	1.1	0.9	0.8	0.7	0.7	0.9
10	PT. Garudafood Putra Putri Jaya Tbk.	GOOD	0.9	0.9	0.9	1.3	1.1	0.9	1.0

Source: IDX, data processed

Table 1 lists 10 companies with a Debt-to-Equity Ratio (DER) threshold greater than 0.8%. If DER > 0.8, it indicates that the company has reduced its debt, which increases the risk to the company (Nguyen & Nguyen, 2020). The high DER is consistently seen as a reminder to be more considerate. This occurs because excessive debt might affect the stability of the company's financial operations, increase the risk of bankruptcy, and affect its long-term stability. Researchers have provided guidelines to ensure businesses utilize DER appropriately to mitigate financial risk (Kalash, 2021).

Factors that influence capital structure include asset structure, income stability, interest rate level, company profitability, firm size, asset growth or company growth, dividend policy,

business risk, rules and regulations, such as taxes, and company life cycle. In this study, tax regulations and policies, company size, and economic conditions are presented as factors that influence capital structure.

Policies and tax regulations have a significant impact on DER as they might affect a company's decision to choose between funding with debt and equity. Generally speaking, taxes that are detrimental to debt use, such as taxes that are attached to debt interest, can help businesses increase their DER. (Moro, A., & Faccio, 2020). This research suggests that companies engaging in tax avoidance tend to use high leverage. Tax avoidance occurs when companies utilize various loopholes in tax policy, such as debt, motivated by the desire to reduce the amount of tax that must be paid, as debt interest frequently fluctuates from tax. Regarding DER, businesses that engage in tax avoidance typically have a high debt-to-equity ratio, which is the DER.

According to research conducted by Sadiq, M., & Rahman (2021) Companies that are more successful in tax research have higher DERs because they use debt to maximize the benefits of tax-related interest-bearing debt. According to this study, the company's DER is caused by the loss of tax benefits on debt interest (such as interest tax shields or deductions). Businesses consistently provide debt as a response to more pronounced tax policies in their capital structure.

Company size is a metric used to describe how small or large a company is. A company that is very large has substantial total assets and a well-regarded reputation in the public eye, making it less necessary to pay for services or goods. It is generally not difficult for larger businesses to obtain information from smaller ones; the larger a company is, the easier it will be for that business to obtain external capital for a wide range of debt capacities. (Hutabarat, 2022).

Rajan, R. G., & Zingales (2020) Researched to examine various factors that affect a company's leverage, emphasizing how external factors, such as the size of the company, can affect the use of debt in the capital structure of businesses in various countries. This study utilizes company data from several countries to identify the factors influencing the debt-to-equity ratio (DER). The size of companies plays a vital role in determining their capital structure, with larger companies consistently having higher leverage. This is caused by easier access to external resources and the ability to incur larger debts without significantly increasing the risk.

The state of a country's economy can significantly impact the structure of its businesses. When the economy is doing well, this can lead to a decline in cash flow and value, an increase in volatility, a decrease in profitability, and an increase in business risk. The macroeconomic conditions of a country are closely tied to the state of the industrial sector, which experiences periods of growth and decline during times of inflation. In this study, the researchers examined the period from 2018 to 2023 for companies in the food and beverage industry listed on the Indonesian Stock Exchange, obtaining financial information from the official BEI website. (Prastio et al., 2022).

Research conducted by Ahmed, M., & Zafar (2022) found how inflation affects a company's financial structure, particularly how it affects DER. This study examines the relationship between macroeconomic factors (such as inflation) and capital structure, which involves debt. According to the results of this study, a high rate of inflation increases the cost of goods, making businesses more likely to use debt more frequently, which in turn leads to DER. This occurs because companies are more reluctant to pay off debt under high-inflation and high-interest-rate conditions.

The purpose of this study is to analyze the effects of regulations and tax policies, company size, and economic conditions on the capital structure of companies operating in the food and beverage industry that are listed on the Indonesia Stock Exchange (BEI) from 2018 to 2023.

2. Literature review

5.19. Tax regulations and policies

The importance of regulation and tax policy in shaping a business's capital structure cannot be overstated. According to Alsharif, A., & Alshammari (2022)Effective tax policies can help businesses optimize their capital structure by using various tax incentives. According to their research, companies operating in a country with a consistent tax regime tend to have more efficient capital structures.

In addition, research by Khwaja, A. I., & Mian (2021) Highlights the need for understanding changes to tax regulations that may impact the company's financial performance. They believe that a lack of rules can cause businesses to withdraw their investments, which will negatively impact their debt and equity.

Mohamad, N. A., & Zainuddin (2023) further explain that a tax structure may influence a company's preference when choosing between debt and equity. In the Indonesian context, Sari, R., & Putri (2023) examine how tax regulations affect the food and beverage industry and provide specific advice on how these regulations affect businesses in that industry. Additionally, research by Pramudianto, A., & Jannah (2023) Indicates that macroeconomic conditions, which are frequently impacted by tax behavior, also contribute to capital structure. This suggests that businesses must consider both the economic and tax conditions when developing their business plans.

5.20. Company size

Company size is one of the most important factors that influence capital structure and funding decisions. According to the study, a company's size can impact its access to financing sources and its preference for debt or equity. According to Rajan, R. G., & Zingales (2020), larger companies have better access to the mainstream market and external peer review resources, making it easier to manage financial risk. This is because larger businesses typically have better reputations and more stable earnings, which makes them more attractive to creditors.

Further study by Gaio & Gonçalves (2022), indicates that the size of Indonesian companies in the food and beverage sector has a significant impact on capital structure. They believe that larger businesses consistently use more debt in their capital structure because they can benefit from economies of scale and lower capital costs.

Additionally, research by Alsharif, A., & Alshammari (2022) Indicates that a company's size affects not only access to capital but also investment decisions. Larger companies tend to be more aggressive when investing, which can eventually affect their capital structure.

According to recent research by Mohamad, N. A., & Zainuddin (2023)A company's size, along with other factors such as market conditions and tax behavior, is crucial in determining the capital structure in the food and beverage industries. This suggests that the company's size should be taken into account when evaluating funding decisions.

5.21. Economic conditions

Company size is one of the key variables that influences the capital structure and funding policy. According to the study, a company's size can be directly related to its access to financing sources and its preference for using debt or equity. Larger businesses often have better access to the mainstream market, which enables them to obtain funding at more affordable rates. This

factor makes it more difficult for larger firms to utilize debt in their capital structure, as they can leverage a larger economic scale. (Abor, J., & Biekpe, 2021).

Furthermore, Hossain, M. A., & Khan (2022) State that the size of the company has a significant impact on the state of the economy in Bangladesh. They concluded that larger businesses are more stable and have more predictable earnings, making them better equipped to manage risks related to debt.

Due to Narteh, B., & Odoom (2023)In the manufacturing sector, a company's size plays a crucial role in determining its capital structure. They state that larger companies can invest in larger projects that require more capital, which affects the proportion of debt in the capital structure.

According to research conducted in Indonesia by Salim, M., & Mulyadi (2023)The size of a company also influences its capital structure, with larger companies more likely to consider debt as the primary source of funding innovation. This indicates a higher level of trust from creditors regarding the ability of large businesses to repay their debts.

5.22. Capital Structure

The composition of a company's operations, which comprises both debt and equity, is referred to as its capital structure. One of the most critical financial decisions that can impact a company's value and capital costs is the decision regarding its capital structure. The capital structure theory has evolved from theories that assume a pure market to theories that consider several factors, including information asymmetry and agency costs. (Zhao, 2018).

One of the fundamental theories of capital structure is the Modigliani-Miller (MM) theory, which posits that, in a market free from taxes, bankruptcy, and information asymmetry, a company's capital structure is irrelevant to its value. (Modigliani; & Miller, 1958). However, this assumption is often not realistic in the real world.

The trade-off theory recognizes the value of debt's taxes, but it also reduces the cost of bankruptcy. Businesses strive to balance the profit margin with the cost of doing business to achieve the ideal capital structure. (Kraus & Litzenberger, 1973). In other words, the pecking order theory posits that businesses possess more internal (profit) resources than external ones. If external resources are required, they have more resources than employees due to information asymmetry issues. (Myers & Majiuf, 1975).

These theories are continually being questioned and refined through empirical research. For example, research by Rahman et al. (2023) Indicates that businesses in the market are frequently more vulnerable to debt due to a decline in access to the capital market. Additionally, factors such as company size, profitability, and growth can also influence the capital structure. (Tanjung, H., & Sari, 2022).

3. Methodology

This study utilizes secondary data sources from the official website of the Indonesian Stock Exchange, specifically annual financial reports from 2018 to 2023. The software used in this study was Stata Ver 14. Because the study data has both a cross-sectional and a time-series component, the panel data model was utilized to estimate (Jeffrey M. Wooldridge, 2009).

There are 25 firms in the food and beverage industry listed on the Indonesia Stock Exchange, which makes up the study's population. After determining several parameters, the sample is selected via purposive sampling, resulting in 20 firms as the sample.

Multiple regression equations are used to analyze the relationship between internal and external factors and bank performance because they allow for the explicit control of numerous other factors that concurrently affect the dependent variable. (Gujarati & Porter, 2010; Jeffrey M. Wooldridge, 2009). One example of this is the following model:

$$Y_{it} = \beta_0 + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \varepsilon_{it} \quad \text{.....(1)}$$

Table 2 lists the variables that are used as a capital structure proxy and the variables that affect it. Some notes and effects are expected from each of the variables, as they are mentioned in the literature in the table above.

Table 2. Overview of the Regression Model's Variables

Variable	Proxy	Definition	Hypothesis with DER
Dependent variable			
Capital structure	Debt-to-Equity Ratio (DER)	The ratio used to measure the proportion of a company's debt compared to its equity.	NA
Independent variable			
Tax Regulation and Policy	Effective Tax Rate (ETR)	The effective tax rate is used to measure taxes paid as a proportion of economic income.	Negative
Firm Size	Natural logarithm of total assets (LNTA)	The natural logarithm of the total value of all assets owned by an individual or entity at a given point in time	Positive
Economic Conditions	Inflation (INF)	The process of a general and persistent increase in the prices of goods and services in an economy over a given period.	Negative

The following multiple regression formula is based on the variables used in the study:

$$DER_{it} = \beta_0 + \beta_1 ETR_{it} + \beta_2 LNTA_{it} + \beta_3 INF_{3it} + \varepsilon_{it} \quad \text{.....(2)}$$

The Ordinary Least Squares (OLS) method remains the standard approach for estimating multiple regression models, including the assessment of factors such as autocorrelation, heteroscedasticity, and multicollinearity, as illustrated in Equation (2). Panel data models—namely fixed effects, random effects, and common effects—were previously estimated. Based on the results of the Hausman, Chow, and Lagrange Multiplier (LM) tests, the random effects model was chosen over the fixed and common effects models. (Greene, 2002; Kenward & Roger, 1997; Setyawati et al., 2017; White, 1980).

4. Results and discussions

The study utilized data from 138 observations across 23 companies spanning 6 years. The descriptive statistics of the data are presented in Table 3.

Table 3. Descriptive Statistics

Variables	Obs	Mean	Std. Dev	Min	Max
DER	138	1.23725	2.7352	0.14	30
ETR	138	25.3262	16.8204	0.07	139.11
INF	138	0.02483	0.01021	0.01	0.041
LNTA	138	7.78662	1.66635	4.42	12.148

Source: Stata Ver 14

Table 3 shows that the mean values of ETR, INF, and LNTA are higher than their standard deviations, indicating that the data is generally more homogenous or consistent rather than widely dispersed. It is implied that there are few extreme values or outliers and that most data values are near the mean.

In selecting the panel data model estimation, the Chow test is conducted to determine between common effect and fixed effect, by looking at the probability value of F (0.015) < alpha (0.05), so that the fixed effect is selected. The selection of the panel model between common effect and random effect using the Breusch Pagan Lagrange Multiplier (LM) Test, where the Prob chi2 value (0.0000) < alpha (0.05), so that the panel model used is random effect. Meanwhile, to select the fixed effect and random effect methods using the Hausman test, where the Prob chi2 value (0.1955) < alpha (0.05), so that the random effect is used. Of the three panel data estimation model tests above, the most appropriate model to use is random effect.

The OLS test, which includes tests for multicollinearity, heteroscedasticity, and autocorrelation, is displayed in Tables 4, 5, and 6.

Table 4. Multicollinearity Test

Variable	VIF	1/VIF
ETR	16.57	0.00319039
INF	15.94	0.00168375
LNTA	16.57	0.00152211
Mean VIF	15.21	

Source: Stata Ver14

Table 5. Heteroscedasticity Test

Breusch-Pagan Lagrange Multiplier Panel Heteroscedasticity Test Ho: Panel Homoscedasticity – Ha: Panel Heteroscedasticity	
Lagrange Multiplier LM Tests	1259.93884
Degrees of Freedom	22
P – value > Chi2 (22)	0

Source: Stata Ver 14

Table 6. Autocorrelation Test

N (res <= -.393074631690979) = 69 N (res > -.393074631690979) = 69	
obs	138
N (runs)	32
Z	-6.49
Prob > | z |	0

Source: Stata Ver 14

The multicollinearity test, as suggested by the Variance Inflation Factor (VIF), is displayed in Table 4. There is no multicollinearity between the independent variables because the VIF value is larger than 10, and the 1/VIF value is 0.01 or below (Gujarati & Porter, 2010)The heteroscedasticity tests were performed using the Likelihood Ratio test (LR test) and the Breusch-Pagan Lagrange Multiplier (BP-LM test) (Setyawati, 2016). The model's variance structure is not heteroscedastic, as indicated by the p-value of less than 0.05 in Table 5. Table 6 for the autocorrelation test using the Wooldridge test reveals that there is no autocorrelation, as the p-value is greater than 0.05.

According to the F-statistical test (global test), the model can be accepted as an explanation for the dependent variable, as the p-value is less than 0.05, indicating statistical significance. An R^2 value of 71.68% demonstrates that variations in ETR, LNTA, and INF can account for 71.68% of the variance in DER, whereas variations in other variables not included in the model account for 28.32%.

The research model's estimated outcomes are as follows:

$$DER_{it} = 1.62 + 0.006\ ETR_{it} - 0.14\ LNTA_{it} + 22.73 INF_{3it}$$

Table 7 displays all of the estimation findings.

Table 7. Estimation Result

Equation					R2
DER =	1.62	+ 0.0066 ETR*** (1.13)	- 0.14 LNTA*** (- 1,31)	+ 22.73 INF** (0.06)	71.68

*, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively.

Source: Stata Ver 13

The effective tax rate has a notably favorable impact on the debt-to-equity ratio. The positive regression coefficient shows that a company's propensity to take on more debt increases with the Effective Tax Rate. Because loan interest can be subtracted from taxable income (tax shield), businesses with a high Effective Tax Rate may attempt to lower their tax burden by utilizing debt-based financing. According to capital structure theory, particularly the trade-off theory, businesses weigh the tax advantages of debt against the risk of bankruptcy. A high Effective Tax Rate raises the debt-to-equity ratio by making the tax benefits of debt more alluring. Tax incentives or constraints in fiscal efficiency may be reflected in a high Effective Tax Rate. Businesses use debt finance to cover their investment or operating capital needs, which raises the debt-to-equity ratio. The findings of this study are consistent with those of studies by Fitriani, A., & Dewi (2022); Lee, H., & Kim (2020); Rahman, M. A., & Sari (2023); Wijaya, T., & Sihombing (2021) where the results show that Effective Tax Rate encourages management to favor debt-based funding due to the tax savings (tax shield) from debt interest. This further strengthens the connection between the debt-to-equity ratio and the Effective Tax Rate. Additionally, this result aligns with financial theories, such as the pecking order theory and the trade-off theory.

The debt-to-equity ratio is substantially impacted negatively by total assets. These findings suggest that the Debt-to-Equity Ratio decreases with increasing firm size (total assets). The proportion of debt to equity decreases significantly as the firm size grows, as it is highly negatively correlated. Businesses with substantial total assets are less reliant on external loans, as they can generate larger internal earnings. Due to their perceived stability and credibility, large corporations can secure non-debt funding sources, such as retained earnings or new shares, without increasing their leverage (debt-to-equity ratio). Furthermore, to lower the risk of bankruptcy, large businesses often employ a conservative capital structure strategy, which reduces their debt-to-equity ratio. (Setyawati, 2017). This study supports the findings of other studies by Alamsyah, A., & Nugroho (2023; Kim, S., & Park (2020); Putri, D. A., & Wibowo (2022); Wijaya, T., & Mahendra (2021), which demonstrates that larger businesses are typically more financially independent and rely on internal capital rather than debt due to the significant adverse effect of total assets on DER. Given that big businesses often steer clear of high-leverage risks, this data supports both the pecking order hypothesis and a portion of the trade-off theory.

Inflation has a notably favorable impact on the debt-to-equity ratio. This result indicates that a company's DER ratio increases in proportion to the rate of inflation. Since it is substantially positive, it suggests that rising inflation prompts businesses to increase the proportion of debt in their capital structure relative to equity (Prastio et al., 2022). The actual value of debt payments gradually declines in inflationary circumstances. Because the financial load is "lighter" in exact terms, debt becomes more alluring. Because the interest rate is set and

the actual value of the money paid declines, businesses opt to employ debt. Costs of manufacturing and distribution rise with inflation.

Businesses frequently turn to debt borrowing to sustain operating cash flow, which raises DER. While capital demands rise and companies turn to debt as an alternative source of funding, inflation frequently causes equity values to stagnate or even decline (if stock prices drop or retained earnings are reduced). The research of Nguyen, T. T., & Vo, (2020); Rahman, M. H., & Utami (2021); Sari, N. D., & Prabowo (2022); Yuliani, E., & Darmawan (2023) Additionally, other studies are consistent with this one. Companies are encouraged to expand debt financing due to rising inflation because Equity becomes inadequate, operating costs increase, and the actual value of debt declines (becoming cheaper in real terms). As a result, the Debt-to-Equity Ratio rises sharply.

5. Conclusion

This study draws the following conclusions from panel data regression analysis using a random effects model: the debt-to-equity ratio is significantly improved by the effective tax rate. This implies that a company's propensity to employ debt-based financing increases with its effective tax rate due to the tax shield benefits of loan interest. The size of the company (as measured by LN Total Assets) hurts the debt-to-equity ratio. Because large organizations often have sufficient internal funding sources and steer clear of excessive leverage concerns, the proportion of debt to equity tends to decrease with company size. The debt-to-equity ratio is much improved by inflation. Since the real value of debt payments is lower and the value of equity tends to stagnate during periods of high inflation, businesses typically take on more debt.

To prevent debt financing from posing a long-term bankruptcy risk, the company must manage its capital structure, taking into account both inflation and tax implications. The size of the company should be used to minimize reliance on debt and optimize internal funding efficiency. Tax laws must be designed to prevent excessive debt use, for instance, by restricting the advantages of overly generous tax shelters. In an inflation-prone environment, oversight of the firm's capital structure is equally crucial.

To present a more comprehensive picture, future studies are anticipated to include additional variables, such as profitability, liquidity, asset structure, interest rates, or dividend policy. Similar studies may be conducted to see whether the effect patterns are the same or different in other industrial sectors, such as heavy manufacturing, energy, or technology, in addition to the food and beverage industry. To better understand the strategic motives underlying capital structure decisions, future research is anticipated to employ dynamic models or mixed methodologies, which integrate quantitative techniques with management interviews. A broader understanding of how fiscal policy and the macroeconomic environment influence business capital structure can be gained through cross-country research using a cross-country analytical technique.

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THE ROLE OF TRUST IN MODERATING THE INFLUENCE OF SERVICE QUALITY, BRAND IMAGE, AND PRICE PERCEPTIONS ON GROUP INSURANCE REPURCHASE DECISIONS AT PT ASURANSI ABC INDONESIA

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Abstract

The revenue data of PT ABC Life Indonesia Insurance for the last four years from 2020 to 2023 has fluctuated, therefore it is necessary to have consistent revenue growth by increasing sales, one of which is by increasing repurchase decisions on corporate customers who are using or have purchased ABC group insurance products in Indonesia. This study aims to analyse the effect of trust in moderating price perceptions on repurchase decisions. The sampling technique used non-probability sampling with a sample size of 119 respondents, Data collection using questionnaires and data analysis techniques using Structural Equation Modelling (SEM) analysis processed with Warp PLS 7.0. The results showed that Service Quality has a positive and significant effect on Repurchase Decisions. Brand Image has a positive but insignificant effect on Repurchase Decisions. Price Perception has a positive and significant effect on Repurchase decisions. Trust successfully moderates the relationship between Service Quality and Repurchase decisions. Trust is unable to moderate the relationship between Brand Image and Repurchase Decision Trust successfully moderates the relationship between Price Perception and Repurchase Decision.

Keywords: trust, service quality, brand image price perceptions, repurchase decisions

1. Introduction

Kotler and Keller (2016) emphasize that retaining existing customers is more profitable than constantly acquiring new ones. Repeat purchase decisions are crucial because they reflect customer satisfaction, which can drive loyalty and recommendations (Suryani & Rosalina, 2024; Mawaddah et al., 2024). In the insurance industry, repeat purchases impact gross premium income, as shown by fluctuations in PT Asuransi ABC Indonesia's revenues between 2020 and 2023.

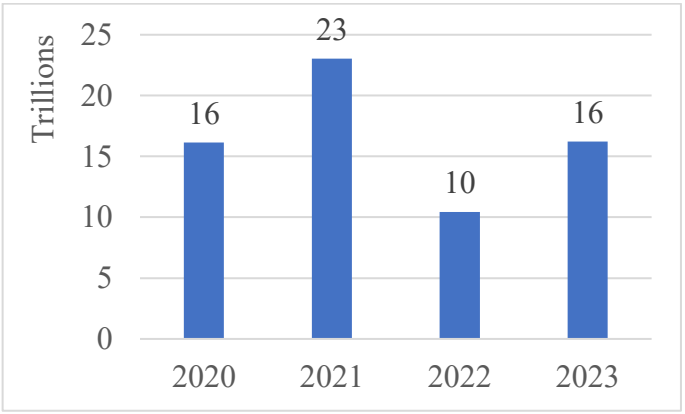


Figure 1.1 Graphic Gross Premium Income (in trillion) PT Asuransi ABC Indonesia 2020 until 2023

Repeat purchase decisions are influenced by Service Quality, Brand Image, and Price Perception. Research findings vary regarding Service Quality: some studies (Suryani &

Rosalina, 2019; Rachmansyah et al., 2023; Valentine et al., 2023) report a positive and significant effect, while others (Rifqiyyah & Surianto, 2024; Tussifah et al., 2024; Chasanah & Fauzan, 2021) find the influence insignificant.

Similar discrepancies appear for Brand Image. Studies by Damaryanti et al. (2022), Krismonanda & Iskandar (2021), and Wardhani et al. (2021) show a positive and significant effect, whereas Setiowati & Farida (2024), Rusnovia & Aryani (2024), and Marpaung et al. (2024) found no significant impact.

Price Perception also shows mixed results. Studies by Viani & Imbayani (2022), Insyira & Irianto (2024), and Prayoni & Respati (2020) found a positive and significant effect, while Ardiyani & Andriana (2024), Khuswatun & Yuliati (2022), and Risqi & Rizqiawan (2023) show no significant influence.

These differing research findings indicate a research gap. To address this inconsistency, the current study proposes a model incorporating Trust as a moderating variable, believed to strengthen or weaken the relationship between the independent variables (Service Quality, Brand Image, Price Perception) and repeat purchase decisions (Nurrachmi & Setiawan, 2020; Waruwu & Elizabeth, 2024; Baruno & Susanto, 2020). Management is defined as the art and science of planning, organizing, coordinating, and controlling resources to achieve objectives (Fayol, Terry, Hasibuan).

2. Literature review

Marketing involves creating, communicating, distributing, and exchanging value to satisfy customer needs (AMA, Kotler & Keller, Laksana, Tjiptono).

2.1. Marketing Management

The art and science of selecting target markets and attracting, retaining, and growing customers by creating and delivering superior customer value. It involves analysis, planning, implementation, and control of marketing programs (Kotler & Keller, Assauri, Howard, Basu Swasta & Irawan)

2.2. Theory of Reasoned Action (TRA)

Explains that human behavior is driven by intentions, which are influenced by attitudes toward the behavior and subjective norms. Behavior is seen as a rational result of intentions shaped by individual beliefs (Fishbein & Ajzen).

2.3. Theory of Planned Behavior (TPB)

TPB extends TRA by adding perceived behavioral control, emphasizing individuals' confidence in their ability to perform a behavior (self-efficacy) which affects both intentions and actual behavior (Ajzen).

2.4. Theory of Planned Behavior (TPB)

Consumer Decision Model (CDM) by Howard (1989) explains the consumer decision-making process through six interconnected variables: information, brand recognition, attitude, confidence, intention, and purchase.

2.5. Purchase Decision

refers to the stage where consumers actually buy a product or service, influenced by psychological, social, cultural, personal, and external factors, following stages such as problem recognition, information search, evaluation of alternatives, purchase decision, and post-purchase behavior (Kotler & Keller).

2.6. Repeat Purchase Decision

Involves consumers buying the same product or service again due to satisfaction from previous purchases. Indicators include repeat buying, recommending to others, and brand loyalty (Tjiptono).

2.7. Marketing Mix

Marketing Mix is a combination of strategic elements used to influence market demand. Originally 4Ps (Product, Price, Place, Promotion), it expanded to 7Ps in services marketing, adding People, Process, and Physical Evidence to address the unique characteristics of services (Kotler & Keller).

2.8. Service Quality (SERVQUAL)

Measured through five dimensions: tangibles, reliability, responsiveness, assurance, and empathy. It compares customer expectations with actual service experiences (Parasuraman et al.).

2.9. Brand Image

Brand Image is consumers' perception of a brand, formed through strong, favorable, and unique associations (Kotler & Keller, Tjiptono).

2.10. Price Perception

Price Perception is consumers' interpretation of the value and benefits they receive in relation to the price paid, involving affordability, quality alignment, competitiveness, and perceived value (Kotler & Armstrong, Tjiptono).

2.11. Trust

Trust is consumers' positive belief or expectation that the seller will fulfill their promises, encompassing benevolence, ability, integrity, and willingness to depend (Kotler & Keller, Mowen & Minor).

3. Methodology

3.1. Conceptual Framework

The conceptual framework is a model illustrating the relationship between theories and the variables studied, showing how independent variables (X), dependent variables (Y), and moderating variables (Z) are interconnected (Sugiyono, 2018). This framework guides hypothesis development and research analysis.

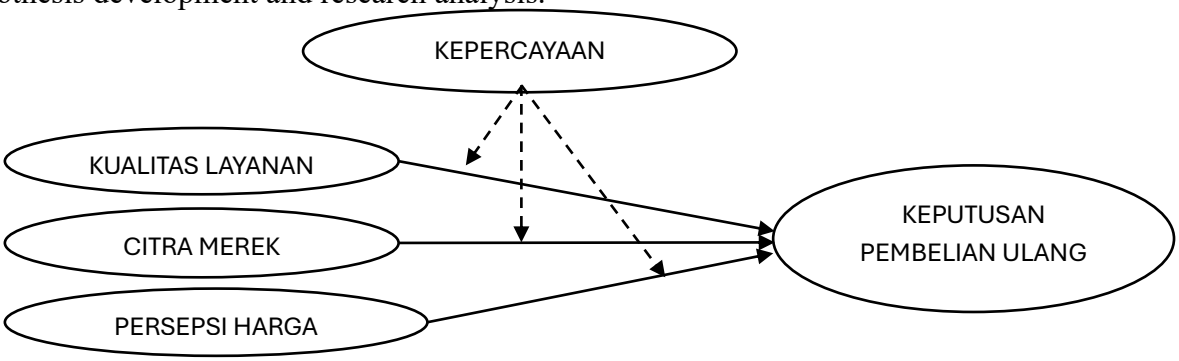


Figure 3.1 Conceptual Framework

3.2. Research Model

The research model depicts the hypothesized relationships among variables and serves as a blueprint for empirical testing.

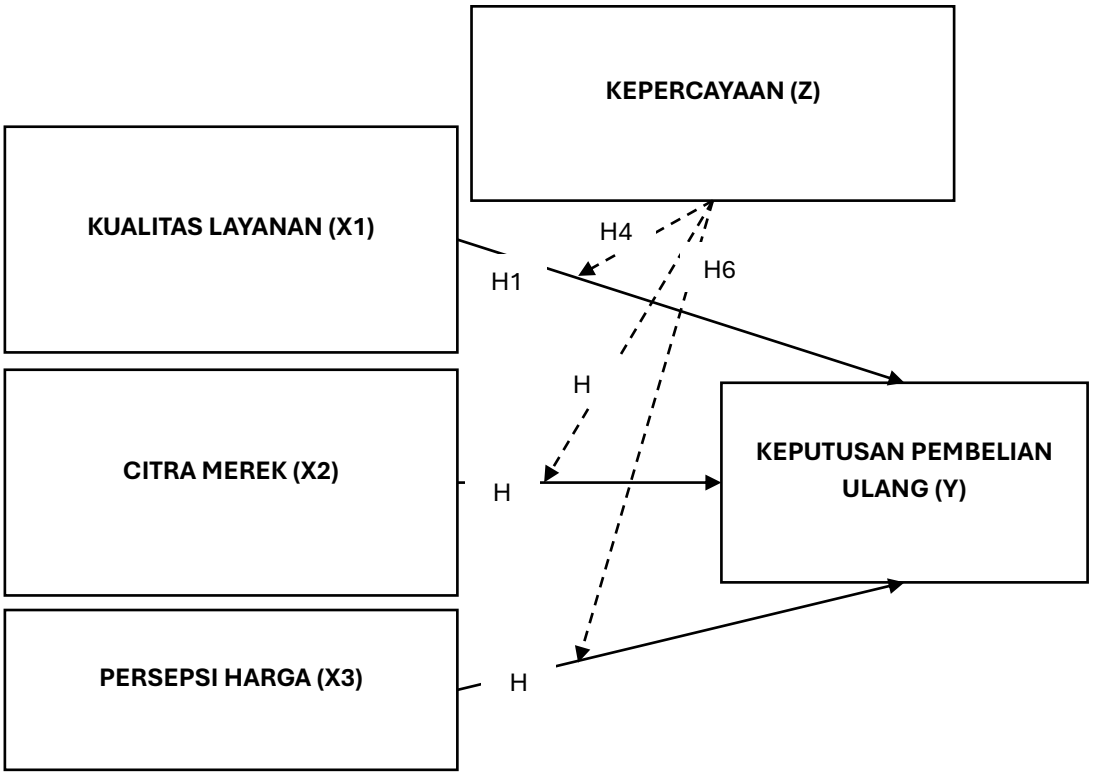


Figure 3.2 Research Model

3.3. Research Hypotheses

Six hypotheses were formulated:

- H1: Service Quality (X1) positively affects Repeat Purchase Decision (Y).
- H2: Brand Image (X2) positively affects Repeat Purchase Decision (Y).
- H3: Price Perception (X3) positively affects Repeat Purchase Decision (Y).
- H4: Trust (Z) moderates the effect of Service Quality (X1) on Repeat Purchase Decision (Y).
- H5: Trust (Z) moderates the effect of Brand Image (X2) on Repeat Purchase Decision (Y).
- H6: Trust (Z) moderates the effect of Price Perception (X3) on Repeat Purchase Decision (Y).

3.4. Operational Definition of Variables

Variables are defined and measured with indicators:

- Service Quality (X1): Tangibles, Reliability, Responsiveness, Assurance, Empathy.
- Brand Image (X2): Strength, Favorability, and Uniqueness of Brand Associations.
- Price Perception (X3): Affordability, Price-Quality Fit, Competitive Price, Price-Value Fit.
- Trust (Z): Benevolence, Ability, Integrity, Willingness to Depend.
- Repeat Purchase Decision (Y): Repeat purchase, recommending to others, and brand loyalty.

All variables are measured using a Likert scale from 1 (Strongly Disagree) to 5 (Strongly Agree).

3.5. Population and Sample

The study population consists of customers who have used ABC Group Insurance in Indonesia. Because the exact number is unknown, the sample was determined using the Lameshow formula with a 95% confidence level and 9% margin of error, resulting in a sample size of 119 respondents.

3.6. Sampling Technique

A non-probability sampling technique was used, meaning not every individual in the population had an equal chance of being selected.

3.7. Data Collection Method

Data was collected via questionnaires using a Likert scale. The survey measured respondents' perceptions of the research variables.

4. Results and discussion

This study employed quantitative analysis using descriptive statistics and hypothesis testing through Structural Equation Modeling (SEM-PLS) via WarpPLS 7.0.

4.1. Respondent Profile

Among 119 respondents:

- Industry Type**:** 67.2% operate in the service sector, while 32.8% are in manufacturing.
- Ownership Status: 42% are foreign owned, suggesting a significant presence of foreign enterprises as ABC group insurance customers.
- Firm Size: 43.7% of respondents represent companies with 10–50 employees, indicating ABC's primary market consists of small to medium enterprises (SMEs).
- Asset Size: 58% of firms hold assets between IDR 1–10 billion, suggesting mid-sized firms predominantly purchase group insurance.
- Geographical Distribution: 85.7% of companies are in Greater Jakarta (Jabodetabek), highlighting the region's central role in ABC's client base.

4.2. Measurement Model Analysis (Outer Model)

- Convergent Validity: All factor loadings exceed the threshold of 0.70, confirming that indicators validly measure their respective constructs.

Table. 4.1. Convergent Validity Result

No	Variabel	Item Pernyataan	Nilai Loading Faktor	Keterangan
1	Kualitas layanan	KL1	0,809	Valid
2		KL2	0,805	
3		KL3	0,755	
4		KL4	0,845	
5		KL5	0,795	
6	Citra Merek	CM1	0,814	Valid
7		CM2	0,877	
8		CM3	0,858	

9	Persepsi Harga	PH1	0,793	Valid
10		PH2	0,835	
11		PH3	0,831	
12		PH4	0,842	
13	Kepercayaan	KPC1	0,861	Valid
14		KPC2	0,871	
15		KPC3	0,881	
16		KPC4	0,856	
17	Keputusan Pembelian Ulang	KPU1	0,880	Valid
18		KPU2	0,909	
19		KPU3	0,867	

- Average Variance Extracted (AVE): All constructs achieved AVE values above 0.50, indicating satisfactory convergent validity.

Table. 4.2. Discriminant Validity base on AVE results

Variabel	Nilai AVE	Keterangan
Kualitas layanan	0.644	Valid
Citra Merek	0.723	Valid
Persepsi Harga	0.681	Valid
Kepercayaan	0.752	Valid
Keputusan Pembelian Ulang	0.784	Valid

- Discriminant Validity: Fornell-Larcker criteria were satisfied, demonstrating that constructs are empirically distinct.

Table. 4.3. Discriminant Validity base on Fornell-Larcker results

Variabel	Kualitas Layanan	Citra Merek	Persepsi Harga	Keper-cayaan	Keputusan pembelian ulang
Kualitas Layanan	(0.814)				
Citra Merek	0.778	(0.850)			
Persepsi Harga	0.771	0.729	(0.829)		

Kepercayaan	0.802	0.677	0.825	(0.982)	
Keputusan Pembelian Ulang	0.789	0.639	0.816	0.867	(0.886)

- Reliability: Cronbach's Alpha and Composite Reliability for all constructs exceeded recommended thresholds (0.70), confirming measurement reliability.

Table. 4.3. Reliability Results

Variabel	Cronbach's Alpha Coefficients	Composite Reliability coefficient	Keterangan
Kualitas layanan	0.861	0.900	Reliabel
Citra Merek	0.808	0.886	Reliabel
Persepsi Harga	0.844	0.895	Reliabel
Kepercayaan	0.890	0.924	Reliabel
Keputusan Pembelian Ulang	0.862	0.916	Reliabel

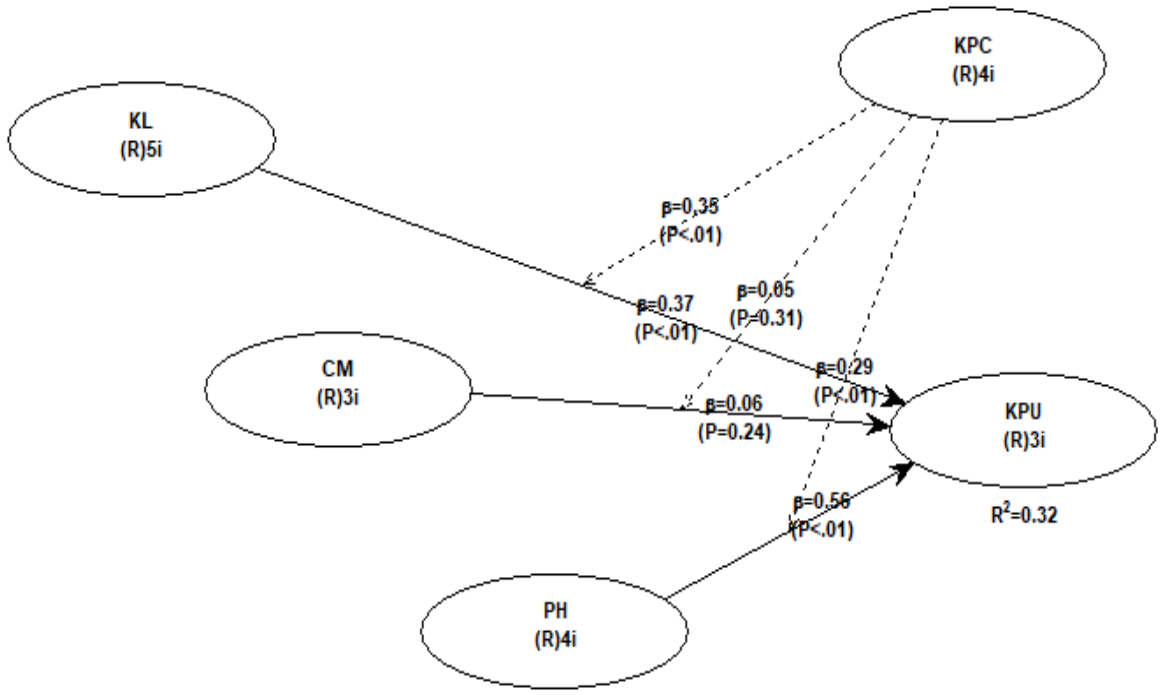
4.3. Structural Model Analysis (Inner Model)

4.3.1. Model Fit:

- The Average Path Coefficient (APC), Average R-squared (ARS), and Average Adjusted R-squared (AARS) were all significant ($p < 0.001$), indicating good model fit.
- Tenenhaus GoF value of 0.510 suggests strong overall model fit.

4.3.2. Path Coefficient.

Figure 4.1 Path Coefficient with WarpPLS 7.0



4.3.3. Coefficient of Determination (R^2):

The model explains 31.6% of the variance in repeat purchase decisions, while 68.4% remains influenced by other factors not included in this study.

4.3.4. Estimated Structural Equation:

KPU = 0.368 KL + 0.063 CM + 0.563 PH + 0.345 KPC*KL + 0.046 KPC*CM + 0.287 KPC*PH

where:
KPU = Repeat Purchase Decision
KL = Service Quality
CM = Brand Image
PH = Price Perception
KPC = Trust

4.3.5. Hypothesis Testing Results:

Relationship	Path Coefficient	p-Value	Conclusion
KL → KPU	0.368	<0.001	Significant (H1 accepted)
CM → KPU	0.063	0.243	Not significant (H2 rejected)
PH → KPU	0.563	<0.001	Significant (H3 accepted)
KPC*KL → KPU	0.345	<0.001	Significant (H4 accepted)
KPC*CM → KPU	0.046	0.305	Not significant (H5 rejected)
KPC*PH → KPU	0.287	<0.001	Significant (H6 accepted)

4.4. Discussion

Service Quality → Repeat Purchase (H1): Service quality exerts a significant positive influence on repeat purchase decisions for ABC group insurance. High-quality service—especially in assurance and reliability—enhances customer satisfaction and fosters repurchase intentions, consistent with prior findings (Suryani & Rosalina, 2019; Rachmansyah et al., 2023; Valentine et al., 2023) and supported by the Theory of Planned Behavior (TPB).

Brand Image → Repeat Purchase (H2): Brand image does not significantly influence repeat purchases. Despite ABC's positive reputation, customers prioritize tangible service experiences and perceived value over brand.

5. Conclusion

5.1. Conclusion

This study employed quantitative analysis using descriptive statistic Based on the analysis performed using WarpPLS 7.0, the following conclusions are drawn:

1. Service Quality exerts a significant positive effect on repeat purchase decisions in ABC's group insurance. Higher service quality enhances customers' intentions to renew their policies.
2. Brand Image does not significantly influence repeat purchase decisions. ABC's brand image is not a primary determinant in customers' decisions to repurchase group insurance products.
3. Price Perception significantly and positively affects repeat purchase decisions. Customers are more likely to repurchase when they perceive prices as fair and aligned with the benefits received.
4. Trust moderates the relationship between service quality and repeats purchase decisions positively and significantly, indicating that higher customer trust strengthens the impact of service quality on repurchase intentions.
5. Trust does not moderate the relationship between brand image and repeat purchase decisions, suggesting that brand image, even when coupled with trust, does not substantially influence repeat purchase behavior.
6. Trust significantly moderates the relationship between price perception and repeat purchase decisions, demonstrating that high levels of trust reinforce customers' positive perceptions of price fairness, leading to increased repurchase intentions.

5.2. Recommendations

5.2.1. Recommendations For Company

1. Enhance Service Responsiveness: Improve customer communication channels beyond phone and email, leveraging chat applications or AI-powered chatbots for timely responses, particularly for common inquiries about policies, claims, and benefits.
2. Refocus Brand Strategies: Shift emphasis toward factors more strongly influencing repeat purchases, such as service quality, price perception, and customer satisfaction, rather than relying solely on brand image.
3. Improve Price Transparency: Given the lower factor loading on price affordability, ABC should ensure transparent pricing and clearly communicate how premiums relate to the benefits offered, emphasizing the comparative advantages of ABC policies.
4. Strengthen Trust in Service Quality: Maintain open, honest communication about policy terms and claims processes. Provide seamless digital and offline channels for policy

information and customer service, and establish feedback mechanisms to better understand customer expectations.
5. Integrate Trust into Brand Communications: Reinforce trust through tangible service experiences, such as expedited claims processing and clear communication about customer rights and benefits, rather than relying solely on brand reputation.
6. Link Trust with Price Perception: Avoid hidden costs and invest in customer education initiatives that explain how premiums correspond to the tangible value and benefits received, thereby enhancing price-related trust.

5.2.2. For Future Researchers

1. Include Additional Variables: Explore other factors potentially influencing repeat purchase decisions, such as customer satisfaction, brand loyalty, customer experience, or psychological determinants.
2. Develop Mediation Models: Investigate mediating variables, like customer satisfaction, to explain how service quality or price perception influences repeat purchase intentions indirectly.
3. Employ Alternative Methodologies: Consider qualitative methods to gain deeper insights into customer decision-making processes regarding repeat purchases in the insurance sector.

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THE EFFECT OF FINANCIAL LITERACY, PERCEIVED EASE OF USE, AND PERCEIVED USEFULNESS ON THE INTENTION TO USE SHARIA FINTECH LENDING (A STUDY ON SMES IN MALANG CITY)

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Abstract

The advancement of information and communication technology has brought significant changes to many sectors, including the financial sector. Among the rapidly developing innovations is financial technology (fintech), which provides easy access to financial services, especially for MSMEs. This study aims to analyze the influence of financial literacy, perception of ease, and perception of usefulness on the interest of MSMEs in Malang City in using sharia-based fintech. Sharia fintech provides a financial alternative based on sharia principles, while encouraging national financial inclusion. This study uses a quantitative model of the survey method on MSME actors in Malang City. The data collected was analyzed using multiple linear regression to test the influence of independent variables on the interest in using sharia fintech. The study findings show that financial literacy has a significant positive effect on the interest of MSMEs in using sharia fintech. Perception of ease and perception of usefulness have also been shown to significantly influence the interest of MSMEs, where users feel that sharia fintech makes it easier to access financing and increases their operational efficiency. This study concludes that financial literacy, perception of ease, and perception of usefulness are the main factors that support the interest of MSMEs in utilizing sharia fintech services. Thus, efforts to increase financial literacy and develop a sharia fintech platform that is easily accessible and provides real benefits are very important to support the growth of MSMEs in Malang City.

Keywords: financial literacy, perceived convenience, perceived usefulness, sharia fintech, interest, MSMEs

1. Background Of Study

The development of information and communication technology has brought significant changes to many sectors of life, including the financial sector. One of the most important innovations that have emerged is Financial Technology (fintech), which leverages modern technology to provide financial services that are easier, faster, and more efficient. According to the National Digital Research Center (NDRC), fintech is an innovation that combines financial services with modern technology to meet the increasingly complex needs of users (Granita, 2020).

In Indonesia, fintech has experienced rapid growth, supported by the continued increase in internet penetration. According to a survey by the Indonesian Internet Service Providers Association (APJII), the internet penetration rate in Indonesia in 2024 reached 79.5%, with 221.6 million users out of a population of 278.6 million (OJK, 2024). This condition has become one of the driving factors for the widespread adoption of fintech services. Additionally, the presence of fintech is expected to drive national financial inclusion, considering the large

number of people still categorized as unbanked, meaning they do not have access to formal financial services.

One of the rapidly growing types of fintech in Indonesia is sharia-based fintech lending. According to data from the OJK (Financial Services Authority), there are seven licensed sharia fintech platforms, such as Ammana, Alami, Dana Syariah, and others. Sharia fintech not only provides access to financing but also offers financial services that comply with sharia principles, attracting the interest of small and medium-sized enterprises (SMEs) that want to maintain religious values in their financial activities (Alfarizi & Ngatindriatun, 2022).

Malang City, as one of the cities with rapid SME growth, serves as an example of a region that utilizes financial technology to support business development. Programs like Malang 4.0, initiated by the city government, aim to promote the digitalization of SMEs to make them more competitive in the market. Fintech provides easier and faster financing solutions for SMEs, helping them overcome the limited access to financing from traditional banking institutions (CNBC Indonesia, 2020).

However, the effectiveness of fintech adoption by SMEs is influenced by several factors. Financial literacy, for instance, is crucial in helping SMEs understand basic financial concepts, make sound decisions, and utilize fintech services optimally (Lusardi et al., 2011). Additionally, perceived ease of use and perceived usefulness of the technology also play a significant role in enhancing user interest (Nopy & Noersanti, 2022; Asri et al., 2022).

Based on this background, this study aims to examine the influence of financial literacy, ease of use perception, and usefulness perception on the intention to use sharia-based fintech lending among SMEs in Malang City. This study is expected to contribute to the development of sharia fintech and support the improvement of financial inclusion and literacy among SME actors.

Based on the background presented, the problem formulation in this study includes several key questions: Does financial literacy affect the intention to use sharia fintech lending among SMEs in Malang City? Does the perception of ease influence the intention to use sharia fintech lending among SMEs in Malang City? And does the perception of usefulness affect the intention to use sharia fintech lending among SMEs in Malang City?

The objectives of this study are to identify and analyze the effect of financial literacy on the intention to use sharia fintech lending among SMEs in Malang City, to identify and analyze the effect of the perception of ease on the intention to use sharia fintech lending among SMEs in Malang City, and to identify and analyze the effect of the perception of usefulness on the intention to use sharia fintech lending among SMEs in Malang City..

2. Literature Review

2.1. Fintech Syariah

According to Rusydiana (2019), sharia fintech refers to financial services or products that use technology based on sharia principles. Sharia P2P Lending is a financial service based on sharia principles that connects lenders and borrowers to carry out financing contracts in Indonesian Rupiah. Sharia fintech is an innovation in financial services based on sharia principles through the use of technological advancements. The schemes and offerings it utilizes differ from conventional services, and it also imposes specific restrictions on the use of funds to be invested (Nursyahida, 2022).

2.2. Intention to Use

Intention to use refers to the level of desire or how strongly an individual wants to engage in a specific behavior, or a person's planned conscious decision to either perform or not perform an action in the future, as predetermined (Permana, 2018).

2.3. Financial Literacy

Lusardi et al. (2011) state that financial literacy includes a set of skills and understanding about finance that an individual possesses in order to manage money and improve their standard of living. According to Mandel in the study by Rumbinianingrum & Wijayangka (2018), financial literacy is the ability to evaluate new and broad financial instruments and to assess financial instruments. Based on this definition, it can be concluded that financial literacy is the ability to understand and apply financial competencies, such as saving, budgeting, investing, and managing expenses.

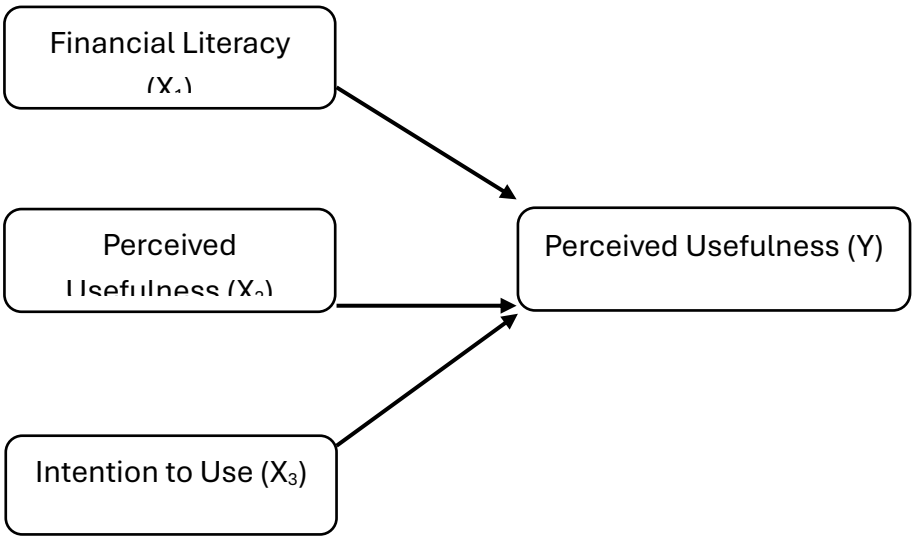
2.4. Perceived Ease of Use

According to Jogiyanto (2019:934), perceived ease of use is the extent to which an individual believes that using technology is clear and does not require much effort, but is easy to use and operate.

2.5. Perceived Usefulness

Muthi'ah & Indrarini (2023) define perceived usefulness as the degree to which users believe that using a system will result in benefits, such as improved performance. A person is likely to use an information technology system when they are convinced that the activity or task will be easier and that using the technology will improve their efficiency.

Figure 1. Conceptual Framework



Based on the explanation regarding the aspects that influence financial literacy and the differences in the findings related to financial literacy, the researcher formulates several research hypotheses. The first hypothesis (H1) states that financial literacy has a positive impact on the intention to use sharia fintech lending among SMEs in Malang City. The second hypothesis (H2) suggests that the perception of ease influences the intention to use sharia

fintech lending among SMEs in Malang City. Meanwhile, the third hypothesis (H3) states that the perception of usefulness affects the intention to use sharia fintech lending among SMEs in Malang City**.**

3. Methodology

This study uses a quantitative research approach, which relies on data in numerical form or data that can be converted into numbers. This approach aims to analyze the relationships between variables using appropriate statistical methods.

The research will be conducted in five sub-districts in Malang City: Blimbing, Kedungkandang, Klojen, Lowokwaru, and Sukun. The study will begin in September 2024 and will continue until completion, as outlined in the research plan.

In this study, the dependent variable being tested is the intention to use, with indicators including transnational interest, referential interest, preference interest, and exploratory interest based on Winanda's research (2024). This interest reflects the level of individual engagement in choosing, recommending, or seeking information about a particular product.

The independent variables in this study include Financial Literacy (X1), Perceived Ease of Use (X2), and Perceived Usefulness (X3). Each of these variables has indicators such as knowledge, trust, ability, and behavior for financial literacy, and flexibility, ease of interaction, ease of use, and ease of learning for perceived ease of use. Meanwhile, perceived usefulness includes efficiency, effectiveness, and its impact on performance enhancement.

4. Result And Discussion

4.1. Result

The population in this study consists of five sub-districts in Malang City: Blimbing, Kedungkandang, Klojen, Lowokwaru, and Sukun. The study focused on individuals who use sharia fintech and have a monthly turnover of at least 3,000,000 IDR. According to Table 4.1, a total of 22,976 questionnaires were distributed, but only 2,346 met the criteria. However, only 73 questionnaires could be processed as they were complete and met the required standards. The remaining questionnaires were excluded due to incomplete answers, resulting in a small percentage of usable data.

The characteristics of the sample are presented in terms of gender, business sector, and education level. Based on Table 4.2, the majority of respondents were male (52%), while 48% were female. In terms of the business sector, as shown in Table 4.3, the highest number of respondents were from the grocery store sector (28%), followed by the culinary sector (31%) and the fashion sector (12%). Table 4.4 illustrates that the majority of respondents had completed their high school education (78%), while 22% held a bachelor's degree (S1).

These characteristics provide a comprehensive overview of the respondents and their backgrounds, highlighting key demographic information related to their gender, business sectors, and educational levels. This information is crucial for understanding the context of the study and the sample used in the research.

Table Statistic Descriptive

Variabel	N	Min	Max	Mean	Std. Dev

Literasi keuangan (X1)	73	1	5	4,49	0,731
Persepsi Kemudahan (X2)	73	1	5	4,35	0,591
Persepsi kegunaan (X3)	73	1	5	4,05	0,291
Minat penggunaan (Y)	73	1	5	4,60	0,841

Sumber: Data primer diolah, 2025

The table above presents the descriptive statistics for the variables under study. The Financial Literacy (X1) variable has a mean of 4.49, with a minimum value of 1 and a maximum value of 5, and a standard deviation of 0.731, indicating that the data is generally concentrated around a high average. The Perceived Ease of Use (X2) variable has a mean of 4.35, with a minimum of 1 and a maximum of 5, and a standard deviation of 0.591, suggesting that respondents generally perceive a high level of ease in using sharia fintech. The Perceived Usefulness (X3) variable shows a mean of 4.05, with a smaller standard deviation of 0.291, indicating that respondents' views on the usefulness of sharia fintech are relatively consistent, although with less variation compared to other variables. Finally, the Intention to Use (Y) variable shows the highest mean of 4.60, with a standard deviation of 0.841, indicating a very high level of interest among respondents in using sharia fintech, though with slight variation among respondents. Overall, these descriptive statistics indicate that respondents tend to have positive and strong views regarding financial literacy, ease of use, and usefulness of sharia fintech, as well as a high level of intention to use it.

The instrument testing in this study consisted of validity, reliability, normality tests, and classical assumption tests. The validity test results indicated that all items for each variable, including independent variables such as financial literacy, perceived ease of use, and perceived usefulness, as well as the dependent variable, intention to use, were valid. The calculated r values for all indices were above the r table value of 0.227, with a total of 16 statements, divided into four statements for each variable: financial literacy, perceived ease of use, perceived usefulness, and intention to use.

The reliability test showed that the independent variables, including financial literacy, perceived ease of use, and perceived usefulness, were reliable, as their Cronbach Alpha scores were greater than 0.60. This indicates that the transparency, financial literacy, and religiosity in relation to the intention to become a customer at a sharia bank are all reliable.

In terms of normality, the test results in Table 4.8 showed an Asym. Sig. (2-tailed) value of 0.225. Since this value is greater than 0.05, it can be concluded that the data follows a normal distribution, which is a required assumption for the regression model.

The classical assumption tests revealed no issues of multicollinearity or heteroskedasticity. The multicollinearity test results showed tolerance values for each variable greater than 0.10 and VIF values less than 10, which indicates the absence of multicollinearity. The heteroskedasticity test results, with significance values of 0.380 for X1, 0.263 for X2, and 0.321 for X3, confirm that there is no heteroskedasticity in the regression model.

Table Multiple Liniear Regression

Variabel	Unstandardized Coefficients	Standardized Coefficients	**T**	**Sig.**

		B	SE	Beta		
1	(Constant)	0,945	1,267		0,746	0,458
	X1	0,021	0,034	0,027	0,673	0,002
	X2	0,020	0,046	0,016	0,385	0,001
	X3	0,315	0,017	0,575	18,661	0,000
a. Dependent Variable: Y						

Sumber : Data primer diolah, 2025

Equation

$$Y = 0{,}945 + 0{,}021X_1 + 0{,}020X_2 + 0{,}315X_3 + e$$

1. Intercept (0.945): The intercept (0.945) represents the expected value of Y (Intention to Use) when all the independent variables (X1, X2, X3) are equal to zero. In this case, if there were no influence from financial literacy, ease of use, or usefulness, the baseline level of intention to use would be 0.945.
2. Coefficient of X1 (0.021) – Financial Literacy: The coefficient for X1 (Financial Literacy) is 0.021. This means that for every 1 unit increase in financial literacy, the intention to use (Y) is expected to increase by 0.021, holding Perceived Ease of Use (X2) and Perceived Usefulness (X3) constant. The small coefficient indicates that while financial literacy does have a positive impact on intention to use, the effect is relatively modest compared to the other variables.
3. Coefficient of X2 (0.020) – Perceived Ease of Use: The coefficient for X2 (Perceived Ease of Use) is 0.020. This indicates that for every 1 unit increase in perceived ease of use, the intention to use (Y) increases by 0.020, holding the other variables constant. Like financial literacy, this effect is positive but small, showing that ease of use contributes slightly to the intention to use, though it's not the most influential factor.
4. Coefficient of X3 (0.315) – Perceived Usefulness: The coefficient for X3 (Perceived Usefulness) is 0.315. This is the largest coefficient among the three independent variables, meaning that Perceived Usefulness has the most significant impact on Intention to Use. For every 1 unit increase in perceived usefulness, Y (intention to use) is expected to increase by 0.315, holding Financial Literacy (X1) and Perceived Ease of Use (X2) constant. This suggests that users who perceive sharia fintech as more useful are much more likely to have a higher intention to use it.

The hypothesis testing in this study includes several tests: Simultaneous Test (F), Determination Test (R2), and t-Test (Partial Test). For the Simultaneous Test (F), based on the ANOVA test results in Table 4.12, the calculated F value is 243.971, with a significance level of 0.000. Since the significance value is less than 0.05, it can be concluded that the independent variables X1 (Financial Literacy), X2 (Perceived Ease of Use), and X3 (Perceived Usefulness) together have a significant effect on the intention to use. In the Determination Test (R2), as shown in Table 4.13, the Adjusted R Square value is 0.908, indicating that the independent variables—financial literacy, perceived ease of use, and perceived usefulness—can explain 90% of the variation in the dependent variable, intention to use. The remaining 10% of the variation is explained by other factors not included in the study. For the t-Test (Partial Test), the results show that all three variables (Financial Literacy, Perceived Ease of Use, and Perceived Usefulness) have a significant effect on the intention to become a customer at a

sharia bank. This suggests that each of these factors individually contributes to the likelihood of someone deciding to use sharia fintech.

4.2. Discussion

The Effect of Financial Literacy on Intention to Use

The findings of this study indicate that the "financial literacy" variable has a positive and significant impact on "intention to use". This result is supported by hypothesis testing and model feasibility conducted in this study. The higher the level of financial literacy an individual has, the greater their interest in using sharia fintech services. This is in line with Lusardi et al. (2011), who state that financial literacy involves the skills and understanding necessary to manage money and improve one's standard of living. In other words, individuals with a better understanding of financial management are more likely to utilize technology-based financial services, such as sharia fintech, which can enhance efficiency and access to better financial services (Mandel in Rumbinianingrum & Wijayangka, 2018). An increase in financial literacy encourages individuals to take advantage of sharia fintech, which directly influences their intention to use it.

The Effect of Perceived Ease of Use on Intention to Use

This study also shows that "perceived ease of use" has a positive and significant effect on "intention to use". These findings support the hypothesis test, showing that ease of use in sharia fintech significantly contributes to user interest. According to Jogiyanto (2019), perceived ease of use refers to how much an individual believes that using technology is easy and requires little effort. This means the easier an individual feels using sharia fintech, the more likely they are to use it. This aligns with the idea that comfort and ease of use in technology, as offered by sharia fintech, are major factors driving technology adoption. Therefore, the ease of access and use of sharia-based financial technology plays a crucial role in encouraging potential users to adopt it.

The Effect of Perceived Usefulness on Intention to Use

The findings of this study also indicate that "perceived usefulness" has a positive and significant effect on "intention to use". This hypothesis testing shows that the greater the perception of usefulness of sharia fintech, the more likely an individual is to use it. According to Muthi'ah & Indrarini (2023), perceived usefulness refers to the degree to which users believe that using a system will result in benefits, such as improved performance. In this context, users are more likely to choose to use sharia fintech if they believe that the system will make their financial activities easier, such as in terms of efficiency and fund management. In other words, if individuals see that sharia fintech can provide significant benefits in managing their finances, they will be more interested in using it, in line with the definition of perceived usefulness proposed by Muthi'ah & Indrarini (2023).

5. Conclusion

Based on the results of this study, it can be concluded that variables such as financial literacy, perceived ease of use, and perceived usefulness significantly influence the intention to use sharia fintech among SMEs in Malang City. Specifically, perceived usefulness has the greatest impact on the intention to use, followed by financial literacy and perceived ease of use. This indicates that the higher the level of financial literacy and the more positive the perception of the ease and benefits of using sharia fintech, the greater the interest in using it. Therefore, these factors are crucial in enhancing the adoption and usage of sharia fintech among SMEs.

As a suggestion, for the government and sharia fintech providers, it is essential to improve financial literacy, especially related to sharia-based financial technology. More intensive educational programs on financial management and understanding of sharia fintech can help the community, especially SMEs, to better comprehend the benefits and functionality of sharia fintech. On the other hand, sharia fintech service providers should continue to enhance the ease of use of their platforms by ensuring simpler user interfaces and better functionality. This will improve the user experience and, in turn, encourage the adoption of sharia fintech. For future research, it is recommended to explore other factors that may influence the intention to use sharia fintech, such as social, cultural, or other technical factors that contribute to increasing financial inclusion among SMEs. With these efforts, it is hoped that sharia fintech can grow more rapidly and provide greater economic benefits to Indonesian society.

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BUILDING ORGANIZATIONAL LOYALTY: A STUDY OF LEADERSHIP STYLE, MOTIVATION, AND COMMUNICATION IN HIMAPRODI MANAGEMENT"

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Abstract

This research aims to analyze and describe the influence of leadership style, motivation and organizational communication on the commitment of management study program members. This study involved a population consisting of members of the management study program. The sample was determined using the Slovin formula, resulting in 86 respondents. Data analysis was carried out using the Structural Equation Modeling (SEM) technique with the assistance of SPSS version 30 software. The variables in this study include Member Commitment as the dependent variable, and Leadership Style, Motivation, and Communication as the independent variables. The results of the study indicate that: 1) Leadership Style does not have a significant effect on Member Commitment, 2) Motivation does not significantly influence Member Commitment, and 3) Communication has a significant influence on Member Commitment.

Keywords: Member Commitment, Leadership Style, Motivation, Organizational Communication

1. Background of study

A student is someone who has the ability to understand the dynamics of global transformation and evolution, especially in education and society. As human resources with high character and intelligence, students have a strategic position and function as highly intellectual individuals to bring about changes in society. In the world of higher education, there is a close relationship between students and organizations on and off campus. Organizations are social entities that are organized in a planned manner, with generally identifiable boundaries, which strive consistently to achieve a collective vision.

This phenomenon was caused by several problems in management at the beginning of the period, resulting in a decline in the performance of the management when carrying out activities. These problems arose because it was still early in the period and the new leadership style had not yet been accepted by the Management Study Program Student Association management. There were also communication problems between the chairperson and the management, as well as between the management and other members. Communication was still unstable. Additionally, the shift in management and the introduction of new members into the Management Student Association require strong motivation to ensure that new members take their roles seriously within the organization. According to Triyanthi & Subudi (2018), commitment refers to the extent to which a member demonstrates loyalty toward an organization and its objectives, and has the resolve to remain an active member of the organization. Commitment to an organization can be influenced by various factors, one of which is the actions or attitudes of the members.

According to Siregar & Wardi, (2023) Leadership style is an approach or method used to lead an organization or institution. This style can be learned through leadership theory, but in practice, it is often influenced by the personality or habits of the leader.

According to Sosialisman et al., (2023) Motivation in an organization is the willingness to give maximum effort to achieve common goals, which is influenced by the extent to which these efforts are able to meet the personal needs of each individual. This motivation can also be interpreted as a force that fosters enthusiasm and drive from within a person.

According to Hawa (2020), organizational communication is a method established by management to optimize the exchange of information within an organization. The main objective of this communication is to support the achievement of the organization's vision and mission, as effective communication contributes directly to the success of these objectives.

The decline that occurred in the Management Study Program at the beginning of the period took the form of a decrease in the work programs carried out by the Management Study Program itself. Therefore, several supporting aspects that can be used to improve the commitment of the administrators include strengthening leadership style, improving communication, and increasing motivation in the organization. These factors are the basis for conducting research on this organization.

2. Literature review

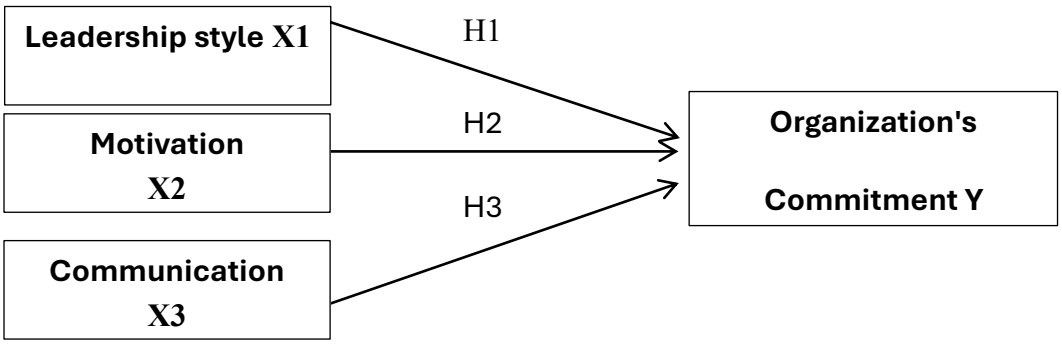
According to Andika & Pane (2018), commitment is a form of attitude or action of a person towards an organization, which is reflected in their desire to remain part of the organization and play an active role in achieving its established goals. According to Ariyani & Sugiyanto (2020), a high level of commitment to an organization is reflected in a deep belief in and acceptance of the values and goals embraced by that organization. According to Allen & Meyer (1990), the indicators of commitment are: Affective commitment, Continuance commitment, Normative commitment.

Siregar & Wardi, (2023) Leadership style is a specific approach or method used in leading an organization or institution. Although this style can be studied as part of leadership science, in practice it is often influenced by the personality and habits of the individual concerned. Meanwhile, according to Mulyadi et al. (2020), leadership can generally be defined as the capacity or potential that a person has to influence or guide individuals or groups in their efforts to achieve a specific goal. According to Babiak (2015), the indicators of leadership style are: Structuring, Authoritarian, Participative, Manipulative, Rewarding, and Unfriendly.

According to Thoha (2017), motivation is a factor that drives work enthusiasm within an organization, as well as enhances morale and decision-making within it. With motivation, organizational members work with a sense of responsibility, loyalty, discipline, as well as pride and self-confidence, which ultimately helps achieve organizational goals efficiently. Meanwhile, according to Ella Anastasya Sinambela (2021), work motivation is an important element in determining employee productivity and efficiency. According to Amabile et al. (1994), the indicators of motivation are: Challenge motivation, Pleasure motivation, Compensation motivation, and External motivation.

According to Siregar et al. (2021), communication within an organization is a highly critical aspect. The success of an organization is greatly influenced by how well communication is carried out by its leaders and members. Communication within an organization can be interpreted as signs that represent the existence of the organization itself, whether in the form of words, ideas, or structures that support, ensure, coordinate, and realize organized activities within a specific context. Meanwhile, according to Bonaraja et al. (2020), organizational communication is defined as the process of building a shared understanding

through the exchange of ideas among individuals in a hierarchical and structured system, with the aim of achieving common goals.



3. Hipotesis

H1 : Leadership style influences member commitment
H2 : Motivation influences member commitment
H3 : Organizational communication influences member commitment

4. Methodology

This study applies an explanatory research method with a quantitative approach. The research focuses on members of the Management Study Program Student Association (HIMAPRODI) located at the Secretariat: Jl. MT Haryono No. 193, Student Activity Unit (UKM), Faculty of Economics and Business, Islamic University of Malang. The research activities were conducted between November 2024 and May 2025.

The population used as the basis for this study includes all members of the HIMAPRODI Management executive board, comprising 5 members from the Executive Board (BPH), 20 members from the Human Resources (HR) division, 21 members from the Research and Development (RnD) division, 17 members from the Public Relations (PR) division, 18 members from the Creative (CR) division, and 21 members from the Entrepreneur (ETP) division. This study used the Slovin formula, which is formulated as follows:

$$n = \frac{N}{1 + \mathrm{N}(e)^2}$$

$$n = \frac{102}{1 + 102\ (0{,}05)^2}$$

$$n = \frac{102}{1{,}25}$$

$$n = 85{,}6 \text{ runded up to } 86$$

5. Results and discussion

The validity test results aim to test the validity of statements in a questionnaire that will be distributed to respondents.

Variable	Item	r Calculate	r Table	Terms and Conditions	Description
Organization's	Y1	0,233	0,1786		VALID

Variable	Item	r Calculate	r Table	Terms and Conditions	Description
Commitment (Y)	Y2	0,341	0,1786		VALID
	Y3	0,505	0,1786		VALID
	Y4	0,239	0,1786		VALID
	Y5	0,661	0,1786		VALID
	Y6	0,642	0,1786		VALID
	Y7	0,375	0,1786		VALID
	Y8	0,661	0,1786		VALID
	Y9	0,209	0,1786		VALID
	Y10	0,533	0,1786		VALID
	Y11	0,628	0,1786		VALID
	Y12	0,234	0,1786		VALID
	Y13	0,440	0,1786		VALID
	Y14	0,487	0,1786		VALID
	Y15	0,203	0,1786		VALID
	Y16	0,593	0,1786		VALID
	Y17	0,542	0,1786		VALID
	Y18	0,419	0,1786		VALID
	Y19	0,202	0,1786		VALID
	Y20	0,525	0,1786		VALID
	Y21	0,258	0,1786		VALID
	Y22	0,288	0,1786		VALID
	Y23	0,429	0,1786		VALID
	Y24	0,262	0,1786		VALID
Leadership Style (X1)	X1.1	0,585	0,1786		VALID
	X1.2	0,594	0,1786		VALID
	X1.3	0,458	0,1786		VALID
	X1.4	0,305	0,1786		VALID
	X1.5	0,301	0,1786		VALID
	X1.6	0,253	0,1786		VALID
	X1.7	0,445	0,1786		VALID
	X1.8	0,365	0,1786		VALID
	X1.9	0,275	0,1786		VALID
	X1.10	0,276	0,1786		VALID
	X1.11	0,281	0,1786	r calculation + r table	VALID
	X1.12	0,456	0,1786		VALID
	X1.13	0,277	0,1786		VALID
	X1.14	0,267	0,1786		VALID
	X1.15	0,314	0,1786		VALID
	X1.16	0,602	0,1786		VALID
	X1.17	0,422	0,1786		VALID
	X1.18	0,393	0,1786		VALID
	X1.19	0,198	0,1786		VALID

Variable	Item	r Calculate	r Table	Terms and Conditions	Description
	X1.20	0,357	0,1786		VALID
	X1.21	0,546	0,1786		VALID
	X1.22	0,553	0,1786		VALID
	X1.23	0,393	0,1786		VALID
	X1.24	0,499	0,1786		VALID
	X1.25	0,184	0,1786		VALID
	X1.26	0,546	0,1786		VALID
	X1.27	0,517	0,1786		VALID
	X1.28	0,363	0,1786		VALID
	X1.29	0,502	0,1786		VALID
	X1.30	0,433	0,1786		VALID
	X1.31	0,577	0,1786		VALID
	X1.32	0,542	0,1786		VALID
	X1.33	0,297	0,1786		VALID
	X1.34	0,416	0,1786		VALID
	X1.35	0,322	0,1786		VALID
	X1.36	0,559	0,1786		VALID
	X1.37	0,416	0,1786		VALID
	X1.38	0,504	0,1786		VALID
	X1.39	0,256	0,1786		VALID
	X1.40	0,344	0,1786		VALID
	X1.41	0,505	0,1786		VALID
	X1.42	0,476	0,1786		VALID
	X1.43	0,302	0,1786		VALID
	X1.44	0,430	0,1786		VALID
	X1.45	0,250	0,1786		VALID
	X1.46	0,258	0,1786		VALID
	X1.47	0,571	0,1786		VALID
	X1.48	0,570	0,1786		VALID
	X1.49	0,549	0,1786		VALID
	X1.50	0,338	0,1786		VALID
Organization Motivation (X2)	X2.1	0,565	0,1786		VALID
	X2.2	0,505	0,1786		VALID
	X2.3	0,508	0,1786		VALID
	X2.4	0,304	0,1786		VALID
	X2.5	0,292	0,1786		VALID
	X2.6	0,464	0,1786		VALID
	X2.7	0,582	0,1786		VALID
	X2.8	0,385	0,1786		VALID
	X2.9	0,292	0,1786		VALID
	X2.10	0,196	0,1786		VALID
	X2.11	0,581	0,1786		VALID

Variable	Item	r Calculate	r Table	Terms and Conditions	Description
	X2.12	0,258	0,1786		VALID
	X2.13	0,352	0,1786		VALID
	X2.14	0,333	0,1786		VALID
	X2.15	0,339	0,1786		VALID
	X2.16	0,298	0,1786		VALID
	X2.17	0,450	0,1786		VALID
	X2.18	0,608	0,1786		VALID
	X2.19	0,436	0,1786		VALID
	X2.20	0,645	0,1786		VALID
	X2.21	0,519	0,1786		VALID
Organizational Communication (X3)	X3.1	0,716	0,1786		VALID
	X3.2	0,537	0,1786		VALID
	X3.3	0,522	0,1786		VALID
	X3.4	0,569	0,1786		VALID
	X3.5	0,484	0,1786		VALID
	X3.6	0,366	0,1786		VALID
	X3.7	0,737	0,1786		VALID
	X3.8	0,611	0,1786		VALID
	X3.9	0,187	0,1786		VALID
	X3.10	0,502	0,1786		VALID
	X3.11	0,652	0,1786		VALID
	X3.12	0,628	0,1786		VALID
	X3.13	0,324	0,1786		VALID

Source: Processed data, 2025

The table above shows that all items in the questionnaire have a correlation value exceeding r table, which is 0.1786 with a degree of freedom (df) = N - 2. Therefore, it can be concluded that each item meets the validity criteria.

The reliability test describes the level of consistency of respondents' answers to the statements compiled in the questionnaire.

Variabel	Cronbach's Alpha	Cronbach's Alpha > 0,60	Description
Organizational commitment (Y)	0,797	> 0,60	Reliabel
Leadership Style (X1)	0,900	> 0,60	Reliabel
Organizational Motivation (X2)	0,795	> 0,60	Reliabel
Organizational Communication (X3)	0,793	> 0,60	Reliabel

Source: Processed data, 2025

Based on the data in the table above, the test results of the variables of leadership style, organizational motivation, organizational communication, and organizational commitment are reliable and can be used in research. The test results show that the data used meets the reliability

criteria. A Cronbach's Alpha value > 0.06 proves that the data is reliable and suitable for use in research.

This study used the Kolmogorov-Smirnov normality test..

One-Sampel Kolmogorov-Smirnov Test		
		Unstandardized Residual
N		86
Normal Parameters	Mean	,0000000
	Std. Deviation	6,71016836
Most Extreme Differences	Absolute	,043
	Positive	,037
	Negative	-,043
Test Statistic		,043
Asymp. Sig (2-tailed)[c]		,200
a. The test distribution is normal.		

Source: Processed data, 2025

Referring to the Kolmogorov-Smirnov test results shown in the table, the Asymp. Sig (2-tailed) value for the four variables is 0.200, which is greater than 0.05. This indicates that the data in this study has met the assumption of normality.

Coefficients		
Model	Collinearity Statistics	
	Tolerance	VIF
1. (Constant)		
Organizational commitment	,397	2,522
Motivation	,464	2,156
Organizational Communication	,411	2,434
a. Dependent Variable: Member Commitment		

Source: Processed data, 2025

Based on the table above, the results show that the Leadership Style variable (X1) has a VIF of 2.522, the Organizational Motivation variable (X2) has a VIF of 2.156, and the Communication variable (X3) has a VIF of 2.434. Since all three independent variables have VIF values less than 10, it can be concluded that this regression model is free from multicollinearity among its independent variables.

Coefficients					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1. (Constant)	15,716	7,721		2,036	,045
Organizational commitment	,014	,051	.049	,282	,779
Motivation	-,043	,112	-,061	-,383	,703
Organizational Communication	-,169	,160	-,178	-1,054	,295
a. Dependent Variable: abss					

Source: Processed data, 2025

Based on the table, it can be seen that the significance value of the Leadership Style variable (X1) is 0.779, the Organizational Motivation variable (X2) is 0.703, and the Organizational Communication variable (X3) is 0.295. All of these significance values are greater than 0.05, indicating that there is no heteroskedasticity in each variable. Therefore, it

can be concluded that the regression model does not exhibit heteroskedasticity issues, as all

Coefficients					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1. (Constant)	36,223	12,673		2,858	,005
Organizational commitment	,051	,083	.089	,608	,545
Motivation	,089	,184	,065	,483	,631
Organizational Communication	,799	,263	,436	3,039	,003
a. Dependent Variable: Member Commitment					

independent variables have significance values above 0.05.

Source: Processed data, 2025

The regression equation produces:

$Y = a + b_1 . X_1 + b_2 . X_2 + b_3 . X_3 + b_4 . X_4 + e$

$Y = 36.223 + 0{,}051X_1 + 0{,}089X_2 + 0{,}799X_3 + e$

Based on the results of multiple linear regression, it can be explained as follows :

a) The constant value (a) of 36.223 indicates that the variables of leadership style (X1), organizational motivation (X2), and communication (X3) have no effect or are zero, resulting in an organizational commitment value of 36.223. The constant value is the baseline value of organizational commitment that occurs when all independent variables have no effect whatsoever.
b) The regression coefficient value (b1) = 0.051 (positive). A positive sign means that if the leadership style variable (X1) increases, it will increase organizational commitment (Y), and conversely, if the leadership style variable (X1) decreases, it will decrease organizational commitment (Y).
c) The regression coefficient value (b2) = 0.089 (positive). The positive sign means that if the organizational motivation variable (X2) increases, it will increase organizational commitment (Y), and conversely, if the organizational motivation variable (X2) decreases, it will decrease organizational commitment (Y).
d) The regression coefficient value (b3) = 0.799 (positive). A positive sign means that if the organizational communication variable (X2) increases, it will increase organizational commitment (Y), whereas if the organizational communication variable (X2) decreases, it will decrease organizational commitment (Y).

Anova					
Model	Sum of Squares	df	Mean Square	f	Sig.
1. Regression	1680,272	3	560,091	11,992	<,001
Residual	3829,821	82	46,705		
Total	5510,093	85			
a. Dependent Variable: Member Commitment b. Predictors: (Constant), Leadership Style, Motivation, Organizational Communication					

Source: Processed data, 2025

Based on these results, the significance value is 0.001 < 0.05. Thus, it shows that hypothesis 1 (H1) in the study, Leadership Style (X1), Motivation (X2), Organizational Communication (X3) together influence Organizational Commitment (Y).

The t-test aims to identify the influence of each independent variable on the dependent variable through a t-test. The results of the test in this study are presented as follows.

Coefficients					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
2. (Constant)	36,223	12,673		2,858	,005
Organizational commitment	,051	,083	.089	,608	,545
Motivation	,089	,184	,065	,483	,631
Organizational Communication	,799	,263	,436	3,039	,003
a. Dependent Variable: Member Commitment					

Source: Processed data, 2025

1) Leadership Style (X1)
   With a t-value of 0.608 and a significance value of 0.545 > 0.05, it shows that it does not have a significant effect on organizational commitment, indicating that H1 is rejected.
2) Organizational Motivation (X2)
   With a t-value of 0.483 and a significance level of 0.631 > 0.05, this indicates that it does not significantly influence organizational commitment, thus rejecting H2.
3) Organizational Communication (X3)
   With a t-value of 3.039 and a significance level of 0.003 < 0.05, this indicates a significant effect on organizational commitment, indicating that H3 is accepted.

Based on these results, it can be concluded that the variables of leadership style (X1) and organizational motivation (X2) do not have a significant effect on organizational commitment (Y), while organizational communication (X3) has a significant effect on organizational commitment (Y).

The coefficient of determination (Adjusted R-square) is the model's ability to explain the variation in the dependent variable. The coefficient of determination ranges from 0 to 1, and the R-square value ranges from 0 to 1 (0 < R-square < 1).

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1.	,553	,305	,280	6,832
a. Predictors: (Constant), Leadership Style, Motivation, Organizational Communication				

Source: Processed data, 2025

Based on the results obtained from the table, it can be concluded that the Adjusted R Square is 0.280, which means the influence of independent variables on dependent variables. This means that 28% is influenced by independent variables, while 72% is influenced by other variables outside the study. The dependent variable, organizational commitment (Y), can be explained by the variables communication style (X1), organizational motivation (X2), and organizational communication (X3).

Based on the results of this study, it is known that leadership style does not have a significant effect on the commitment of HIMAPRODI Management members. This means that the level of leadership style does not directly affect the level of commitment of members to the organization. This may be due to findings in the descriptive analysis showing that leaders who impose their will on members can actually reduce their commitment to the organization. This finding aligns with the results of a study conducted by Rusni et al. (2022), which showed that

leadership style has a positive but insignificant effect on organizational commitment among members of the Kangean Islands Student Association (IMAKA) in Malang.

Based on the results of the analysis in this study, it was found that organizational motivation does not significantly influence the commitment of management program members. Motivation does not influence commitment when members of the organization do not have a strong drive to commit to the organization's goals, even though they are interested in certain aspects of the existing activities. These results are consistent with the research by Sari (2018), whose findings indicate that motivation does not significantly influence organizational commitment, and according to Shanty et al. (2017), whose findings indicate that motivation does not significantly influence organizational commitment.

Based on the analysis in this study, it was found that organizational communication significantly influences the commitment of management program members. Communication has a very large influence on members' commitment within an organization. These results align with the research by Eko Putro et al. (2023), whose findings indicate that the motivation variable has a positive and significant influence on the organizational commitment variable of the Student Executive Board (BEM) at Surabaya Institute of Technology.

6. Conclusion

Leadership style does not significantly affect organizational commitment in the management study program. Organizational motivation does not significantly affect organizational commitment in the management study program. Organizational communication significantly affects organizational commitment in the management study program.

This study has a number of limitations, so the findings obtained do not fully meet expectations. Some limitations in this study and recommendations for future research are: This study only analyzes leadership style, motivation, and organizational communication as determinants of member commitment, so there are still other variables that can be used as material for further research. This study has too many statement items, so respondents are reluctant to fill them out.

Based on the results of the research conducted, the researcher presents several recommendations: The Management Student Association should be made a home for all its executives so that loyalty and commitment continue to exist and grow stronger to achieve the organization's goals. The next leader or chairperson should proactively set aside their ego for the sake of the organization and its members, so that all members feel supported and guided for the benefit of both the members and the Himaprodi Management organization. Members of the Management Student Association are encouraged to pay more attention to the following aspects: improving precision in completing tasks to ensure responsibilities are carried out meticulously, future leaders should be able to delegate tasks to members based on their respective competencies, strengthening the dissemination of information to all members, and increasing motivation for members to contribute to achieving the organization's goals.

It is recommended to use other variables in future research, as commitment is not solely influenced by the variables studied in this research. Thus, future research results can better represent the factors that shape the commitment of Himaprodi Management members comprehensively.

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SOCIAL MEDIA OPTIMISATION AND PRODUCT INNOVATION IN PROMOTING THE DEVELOPMENT OF MSMES (A STUDY OF BUSINESS ACTORS IN BULULAWANG SUBDISTRICT, MALANG REGENCY)

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Abstract

This study aims to examine the extent of the influence of Social Media and Product Innovation on the development of businesses carried out by MSMEs in Bululawang District, Malang Regency. The approach used in this study is quantitative with an explanatory research type. The sampling technique was carried out by purposive sampling, with a total of 113 respondents from MSMEs, which was determined using the Lemeshow formula because the population size was not known with certainty. The data collection process was carried out by distributing questionnaires, while the data analysis method used was multiple linear regression. Based on the results of the analysis, it is known that Social Media and Product Innovation have a positive and significant influence on business development among MSMEs

Keywords: Social Media, Product Innovation, Business Development

1. Background of Study

MSMEs also play a strategic role in promoting the economic welfare of society. Its role includes improving living standards, creating jobs, encouraging economic growth, and contributing to income distribution in various layers of society Lorensa (2022) . MSMEs have a strategic role in driving Indonesia's economic growth, with a large contribution to GDP and job creation. However, in the midst of the rapidly growing digital era, MSME players face challenges to adapt to technology, especially in utilising social media as a marketing tool, as well as creating product innovations that suit market needs.

This phenomenon is caused to examine the extent of the influence of social media and product innovation on the development of MSME businesses in Bululawang District. It is expected to provide a comprehensive understanding of the role of the two variables in encouraging increased business capacity, as well as providing data-based recommendations that are useful for MSME actors and local governments in developing this sector in a more competitive direction. Driving the growth of MSMEs today is the use of social media. Data from the Ministry of KUKM shows that in 2010, only 2% of entrepreneurs used social media to market their products. However, by 2023, this figure increased to 75%, and is projected to reach 85% by 2025, with the number of social media users in Indonesia reaching 200 million people. This shows that social media has become the main marketing medium, especially for MSMEs that need a wide reach at a more efficient cost.

According to Lorensa (2022) Social Media is a strategy in introducing products both directly and indirectly which aims to build consumer awareness, strengthen memory, and form attitudes and recognition of a product.

According to Masnun et al., (2024) Product Innovation encourages business people to create entirely new products or give a touch of renewal to existing products.

According to Kurniawan (2022) Business development is a series of efforts aimed at increasing the ability, effectiveness and competitiveness of a business. These efforts include implementing various strategies and tactical steps to expand market coverage, drive revenue growth, and bring innovation in the products and services offered.

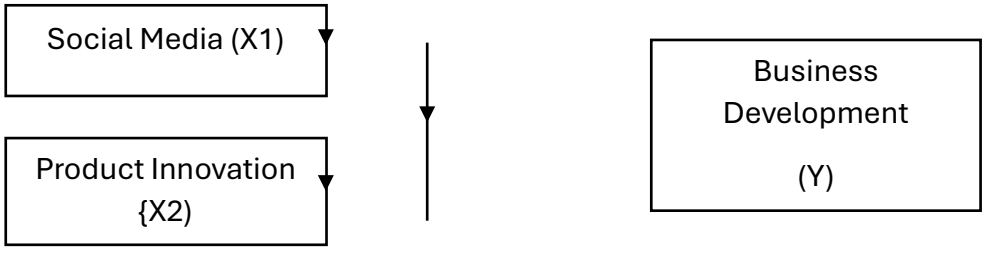
The development of MSME businesses in Bululawang Sub-district shows a tendency to stagnate, which is marked by the low utilisation of social media as a marketing tool and the lack of product innovation by business actors. Therefore, several factors that can be used to encourage the growth of MSME businesses include optimising the use of social media in promotional strategies, as well as encouraging the creation of product innovations that are in accordance with market needs. These factors are the basis for conducting research on MSMEs in Bululawang District.

2. Literature Review

According to Anoraga Pandji, (2017) in the journal Paloa et al (2024) business development can be defined as the way an entrepreneur manages his business based on his motivation and creative ideas. According to Nitisusantro (2010) in the journal Azzahra (2021) business development is steps taken by local governments, communities, and other stakeholders to empower a business unit through the provision of facilities and assistance on an ongoing basis. According to Kurniawan (2022) Indicators of business development, namely: Turnover Growth, Operational Efficiency, Product Diversification, Utilisation of Digital Technology.

According to Rika Widianita (2023) social media is a web-based service designed to build networks between users and provide space for them to connect with each other in certain communities. Meanwhile, according to Nasrullah (2015) in the journal (Kenny, 2021) social media is a medium on the internet that allows users to present themselves, interact, cooperate, share information, communicate with others and form social ties. According to Praditya (2019) Social media indicators, namely: Participation, Openness, Conversation, Community, Connecting.

According to Kotler and Keller in Rika Widianita (2023) states that innovation can be in the form of new products, services, ideas, or perceptions that arise from individuals. In the view of consumers, innovation refers to anything new that is considered different from the previous product or service. Meanwhile, according to Kotler (2012) in the journal Masnun et al (2024) asserts that innovation is not only limited to the creation of new products or services, but also includes new ways of thinking about business and the application of processes that are different from usual. According to (Setiadi, 2010) in Aliatul Margareth, et al (2015) states that innovation indicators are: relative advantage, compatibility, complexity, trialability, involvement.



Gambar 1. Research Model

3. Hypothesis

H1 : The use of social media has a positive and significant effect on the development of MSME businesses in Bululawang District.
H2 : Product innovation has a positive and significant effect on the development of MSME businesses in Bululawang District.

4. Methodology

This study applies an *explanatory research* method with a quantitative approach. The focus of the research was on MSMEs in Bululawang District, Malang Regency. The research activities were conducted between November 2024 and June 2025.

The population used as the basis for this study includes all MSMEs operating in Bululawang Sub-district, totalling 114 MSMEs. These MSMEs cover various business sectors such as agriculture, livestock, trade, and services.

5. Result And Discussion

The validity test results aim to test how valid a statement is in a questionnaire that will be distributed to respondents.

Table 1 Validity Test Result

Variable	Item	r Count	r Table	Terms Conditions	Description
Development Business (Y)	Y1	0,739	0,1830	r count>r table	Valid
	Y2	0,719	0,1830	r count>r table	Valid
	Y3	0,675	0,1830	r count>r table	Valid
	Y4	0,576	0,1830	r count>r table	Valid
Social Media (X1)	X1.1	0,663	0,1830	r count>r table	Valid
	X1.2	0,656	0,1830	r count>r table	Valid
	X1.3	0,681	0,1830	r count>r table	Valid
	X1.4	0,481	0,1830	r count>r table	Valid
	X1.5	0,756	0,1830	r count>r table	Valid
Product Innovation (X2)	X2.1	0,683	0,1830	r count>r table	Valid
	X2.2	0,672	0,1830	r count>r table	Valid
	X2.3	0,617	0,1830	r count>r table	Valid
	X2.4	0,583	0,1830	r count>r table	Valid
	X2.5	0,712	0,1830	r count>r table	Valid

Source: Data processed, 2025

The table above shows that all statement items in the questionnaire have a correlation value that exceeds r table, which is 0.1856 with degrees of freedom (df) = N - 2. Therefore, it can be concluded that each statement item meets the validity criteria..

Table 2 Reliability Test Result

Variabel	Cronbach Alpha	Ketentuan	Keterangan
Perkembangan Usaha (Y)	0,611	>0,60	Reliabel
Media Sosial (X1)	0,647	>0,60	Reliabel
Inovasi Produk (X2)	0,662	>0,60	Reliabel

Source: Data Processed, 2025.

Based on the data table above, the test results of the leadership style variables, organisational motivation, organisational communication, and organisational commitment are shown to be reliable and can be used in research. The test results show that the data used meets the reliability criteria. *The Cronbach's Alpha* value> 0.06 is evidence that the data is reliable and suitable for use in research.

Table 3 Normality Test Result

One-Sample Kolmogorov-Smirnov Test		
		Unstandardized Residual
N		113
Normal Parameters[a,b]	Mean	.0000000
	Std. Deviation	1.33650199
Most Extreme Differences	Absolute	.076
	Positive	.045
	Negative	-.076
Test Statistic		.809
Asymp. Sig. (2-tailed)		.530
a. Test distribution is Normal.		

Source: Data Processed, 2025

Referring to the Kolmogorov-Smirnov test results displayed in the table, the Asymp. Sig (2-tailed) for the four variables is 0.530, which is greater than 0.05. This indicates that the data in this study have fulfilled the assumption of normality.

Table 4 Multicollinearity Test Rusult

Coefficients		
Model	Collinearity Statistics	
	Tolerance	VIF
1. (Constant)		
Social Media	,588	1,702
Product Innovation	588	1,702

a. Dependent Variable: Business Development		

Source: Data Processed, 2025

Based on the table above, the results show that the Social Media variable (X1) VIF) is 1.702, the Product Innovation variable (X2) is 1.702. Product Innovation (X2) variable is 1.702. Because both independent variables have a VIF value of less than 10, it can be said that this regression model is free from multicollinearity symptoms between the independent variables

Table 5 Heteroscedasticity Test Result

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.761	.976		1.804	.074
	X1	-.068	.054	-.155	-1.252	.213
	X2	.031	.055	.070	.566	.573

a. Dependent Variable: ABS_RES

Based on this table, it is obtained that the significance value of the Social Media variable (X1) is 0.213, the Product Innovation variable (X2) is 0.573. All of these significance values are greater than 0.05, which means that there is no heteroscedasticity in each variable. Thus, it can be concluded that the regression model does not experience heteroscedasticity problems, because all independent variables have a significance value above 0.05.

Table 6 Multiple Linear Regression Analysis

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	6.481	1.446		4.483	.000
	X1	.367	.081	.460	4.534	.000
	X2	.127	.080	.162	1.593	.114

a. Dependent Variable: Y

The regression equation results in:

$Y = a + b_1 . X_1 + b_2 . X_2 + b_3 . X_3 + e$

$Y = 6.481 + 0.367X_1 + 0.127X_2 + e$

Based on the multiple linear regression results, it can be explained as follows:

a) The constant value (a) 6.481 indicates that the social media variable (X1), product innovation (X2) has no effect or is zero, then the value of organisational commitment is 6.481. The constant value is the basic value of business development that occurs when all independent variables have no effect at all.
b) Regression coefficient value (b1) = 0.367 (positive). The positive sign means that if the social media variable (X1) increases, it will increase business development (Y), otherwise if the social media variable *(*X1) decreases, it will decrease business development (Y).
c) Regression coefficient value (b2) = 0.127 (positive). The positive sign means that if the product innovation variable (X2) increases, it will increase organisational commitment (Y), otherwise if the organisational motivation variable (X2) decreases, it will decrease organisational commitment (Y).

Table 7 F Test Result

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	100.225	2	50.112	27.554	.000[a]
	Residual	200.059	110	1.819		
	Total	300.283	112			

a. Predictors: (Constant), X2, X1

b. Dependent Variable: Y

Based on these results, the significance value is 0.000 <0.05. Thus, it shows that hypothesis 1 (H1) in the study, Social Media (X1), Product Innovation (X2) together have an effect on Business Development (Y).

Table 8 Result of the t-test

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	6.481	1.446		4.483	.000
	Social Media	.367	.081	.460	4.534	.000
	Product Innovation	.127	.080	.162	1.593	.114

a. Dependent Variable: Y

1) Social Media (X1)
   With a t value of 1.981 and a significance value of 0.000< 0.05, it shows that it has a significant effect on business development, indicating H $_1$is accepted.
2) Product Innovation (X2)
   With a t value of 1.981 and a significance value of 0.114> 0.05, indicating that it has no significant effect on business development, indicating H $_2$is rejected.

Based on these results, it can be concluded that the social media variable (X1) has a significant effect on organisational commitment (Y), while product innovation (X3) has no significant effect on organisational commitment (Y).

Table 9 Coefficient of Determination Test Result (Adjusted R *Square*)

The coefficient of determination (*Adjusted* R *square*) is the ability of the model to explain variations in the dependent variable. The coefficient of determination is between zero and 1 and the R *square* value is between 0 and 1 (0 < R Square < 1.

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.578[a]	.334	.322	1.34860

a. Predictors: (Constant), X2, X1

b. Dependent Variable: Y

Based on the results obtained from the table, it can be concluded that the *Adjusted* R *Square* is 0.322, which means the effect of the independent variable on the dependent variable. This means that 32.2% is influenced by the independent variable, while 67.8% is influenced by other variables outside the study. The dependent variable, namely business development (Y), can be explained by social media variables (X1), product innovation (X2).

Based on the results of this study, it is known that there is a significant positive influence between social media and product innovation on business development with a coefficient of determination of 32.2%. This shows that the combination of marketing strategies such as social media and product innovation can encourage MSMEs to carry out business development. These findings are in line with the results of research conducted by Azzahra (2021) with the results of the study showing that media and product innovation simultaneously affect business development research on Dimsum businesses in Medan Johor.

Based on the results of the analysis in this study, it shows that there is a significant positive influence between social media and business development. This shows that marketing strategies using social media can affect business development. The results of this study are in line with Soleha et al (2024) which states that there is a significant positive effect on the use of Social Media and Product Innovation on Business Development in MSMEs in Kanigaran District, Probolinggo City.

Based on the results of the analysis in this study, it shows that product innovation has no significant effect on business development. Product innovation has no effect on business development is less effective in supporting business development, so that it has a negative impact. It is possible that the innovations made have not been able to meet market needs or have not been matched by adequate marketing strategies and resources, so it is necessary to evaluate and adjust so that innovation can make a positive contribution to business development. This result is in accordance with research from Suhaera (2024) whose research results show that product innovation has no significant effect on business development.

6. Conclusion

Social media and product innovation have a significant effect on business development Social media has a significant effect on business development. Product innovation has no significant effect on business development.

In this study, there are several limitations that need to be considered, as for the limitations of this study, among others: This study only uses two independent variables, namely social media and product innovation and one dependent variable, namely business development. This research was only conducted at MSMEs in Bululawang, Malang Regency. The data collection method only uses a questionnaire

Based on the results of the research that has been conducted, the researcher makes the following recommendations: For Further Researchers can be improved by adding other more relevant variables such as the halal label in order to be able to explain variations in the dependent variable more thoroughly. For UMKM Actors the next leader or chairman must be pro-active in putting aside his ego for the benefit of the organisation and its members, so that all members feel nurtured and directed for the good of the members and the Himaprodi Management organisation.

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FROM SPIRITUALITY TO DIGITALIZATION, STRATEGIES FOR INCREASING CUSTOMER LOYALTY AT INDONESIAN ISLAMIC BANK (BSI)

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Abstract

This study aims to analyze the influence of spiritual marketing, sharia compliance, customer experience, and banking digitalization on customer loyalty at Indonesian Islamic Bank (BSI). A quantitative approach was used with purposive and random sampling techniques. The sample size of 100 respondents was determined using the Slovin formula. Data collection was conducted through questionnaires and analyzed using SPSS. The analysis included validity tests, reliability tests, normality tests, classical assumption tests, multiple linear regression, F-tests, t-tests, and determination coefficients (R^2). The results of the study indicate that all four variables significantly influence customer loyalty toward BSI. These findings highlight the importance of a value-based approach rooted in spiritual values, sharia compliance, positive experiences, and digitalization of services in building loyalty. This study provides strategic recommendations for BSI management and suggests further research incorporating additional variables such as service quality and product innovation.

Keywords: spiritual marketing, sharia compliance, customer experience, banking digitalization, customer loyalty, Bank Syariah Indonesia (BSI).

1. Background Of Study

Islamic banks are financial institutions that run their operations based on Islamic sharia principles, which not only carry out basic banking functions such as raising funds, but also try to avoid practices that challenge Islamic values, such as usury, gharar, and maysir (Safitri et al., 2023). In practice, Islamic banks earn profits through profit-sharing systems, profit margins, and service income in contrast to conventional banks that rely on interest (Sari et al., 2024). In addition, Islamic banks have a strategic role in creating a more inclusive and social justice-based economic system (Djamil, 2023; Haikal & Efendi, 2024).

Customer loyalty is a key factor in the sustainability of Islamic banking, mainly due to the aspect of trust in the bank's compliance with sharia principles (Khusnul Istiqomah et al., 2023). Islamic bank customers tend to choose services that not only offer financial benefits but also align with their Islamic values (Nugraha Triyan Putra & Thamrin, 2021). One approach that can increase *customer loyalty* is *spiritual marketing,* which is a marketing strategy that emphasizes the values of honesty, transparency, and social responsibility, thus creating an emotional bond between banks and their customers (Permatasari & Ratna Yunita, 2023; Pitri, 2024).

Apart from *spiritual* aspects*, digitalization* is also an important factor in maintaining *customer loyalty*. Islamic banks that are able to provide digital services such as mobile banking, internet banking, and sharia-based QR payments can increase convenience in transactions (Budiman & Karnadi, 2023; Nasir Tajul Aripin et al., 2022). This digitalization also allows banks to provide more personalized services, such as zakat reminder features and sharia investment calculators.

Indonesian Islamic Bank (BSI) as the largest Islamic bank in Indonesia has a strategic role in supporting the halal industry ecosystem and Islamic financial inclusion. With an asset value of IDR 357.90 trillion in the first quarter of 2024, BSI dominates the Islamic banking industry in Indonesia, far surpassing its competitors such as Bank Muamalat and CIMB Niaga Syariah. However, despite its rapid growth, BSI faced major challenges, including a cyberattack in May 2023 that disrupted banking services and tested the loyalty of its customers (BBC News Indonesia, 2023). The incident raised concerns among customers, especially in Aceh, which relies heavily on Islamic banking services following the closure of conventional banks in the region.

Therefore, this study aims to analyze the effect of *spiritual marketing, sharia compliance, customer experience, and digitalization of banking* on customer loyalty of Indonesian Islamic Bank. By exploring the relationship between these factors, this research is expected to provide insight into strategies to increase customer loyalty as well as policy recommendations that can be implemented by Islamic banking to improve service quality and competitiveness in the Islamic financial industry in Indonesia.

2. Literature Review

According to Caroline Chiko (2022) *Spiritualism* is a view that focuses more on moral values and spiritual aspects, and ignores the material elements in human life. Meanwhile, marketing is the process of designing and carrying out the concept, pricing, promotion, and distribution of product and service ideas to facilitate exchanges that meet the needs of both individuals and organizations. Nurjannah et al. (2023) also added that, *Spiritual Marketing* aims to create openness and equality for all parties. This marketing is based on honesty and moral values to prevent prejudice and ensure that no party is harmed.

Shariah Compliance is one of the main foundations in the development of Islamic banks, which is the difference between Islamic banks and conventional banks. Also is the obedience of Islamic banks in carrying out sharia principles, where all bank operations comply with Islamic rules, especially in the aspect of how to do business, (Oktapiani & Anggraini, 2022) . Based on PBI 13/2/PBI/2019, bank compliance includes values, behaviors, and actions that are in accordance with regulations, including sharia principles for Islamic banks. The better the implementation of *Shariah Compliance*, the higher the customer's confidence in the suitability of transactions with Islamic law, which in turn increases their loyalty.

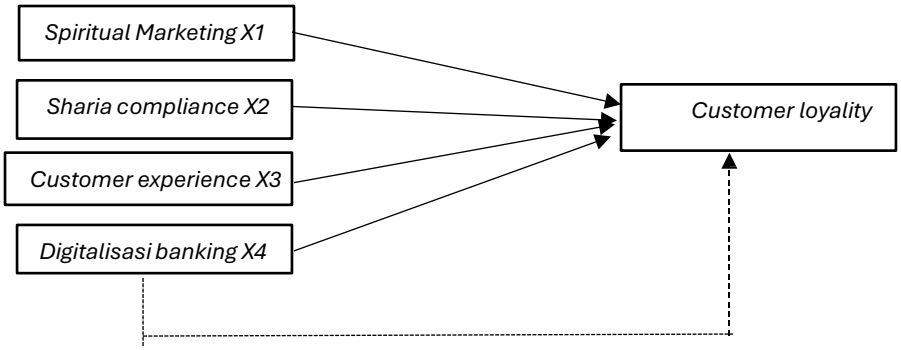
According to Sulivyo, (2021) .*Experience* is a personal event that arises as a stimulus reaction Experience includes all events in life, in simple terms, marketers must build an environment that is aligned with customer needs and understand what they really want. Tegor & Husain (2017)) states that *Customer Experience* is defined as a series of consumer engagements with products, companies, or parts of the organization that trigger certain responses. This experience is highly personalized and reflects customer involvement at various levels, both *rationally*, emotionally, *sensory*, physically, and *spiritually*. *Customer Experience* is the internal and subjective response of customers that arises from their interaction with the company, either directly or indirectly. Direct interactions usually occur at the initiative of the customer, such as in the purchase and service process. Meanwhile, indirect interactions occur without planning, for example through exposure to products, brands, advertisements, or promotions.

Mobile banking makes it easier for customers to perform banking transactions, such as balance inquiry and fund transfer, allowing users to transact anytime and anywhere. *Mobile*

banking services make it easier for customers to perform various banking transactions, such as checking the amount of funds, transferring funds between bank accounts, etc. Through this feature, mobile phone users can transact easily anytime and anywhere. As a result, many banks are competing to provide *M-banking* services to increase convenience and the number of customers. (Fadlan & Dewantara, 2018)

According to Mukti et al. (2022), loyalty is the customer's desire to continue using the product, which plays an important role in the success of Islamic banking. Al-Ghifari & Khusnudin, (2022) also argue that customer loyalty is reflected in their loyalty in buying or using banking products and services repeatedly. This loyalty shows customer commitment to a product, which has a crucial role in the world of marketing. For companies, the existence of loyal customers is needed so that the business can develop and be sustainable. loyal customers are those who have a commitment to continue using certain products, have the desire to make repeat purchases, and are willing to recommend them to other customers. (Astuti et al., 2020)

Figure 1. Research Model



Based on the conceptual framework, the following hypotheses can be formulated:
H1: *Spiritual marketing, sharia compliance, customer experience, and banking digitalization* simultaneously influence BSI customer loyalty
H2: *Spiritual marketing* influences BSI customer loyalty
H3: *Sharia compliance* influences BSI customer loyalty
H4: *Customer experience* influences BSI customer loyalty
H5: *Banking digitalization* influences BSI customer loyalty

3. Methodology

This research uses a quantitative approach, Ardiansyah et al. (2023) define quantitative methods as an approach that collects and analyzes numerical data to describe the relationship between variables statistically. The location of this research covers all regions of Indonesia, with a focus on data collection in 38 provinces, from November 2024 to February 2025.

Sugiyono (2018: 117) defines population as a collection of objects or subjects with certain characteristics that are studied to be analyzed and concluded. This study has a population of 20.5 million known through the official BSI website. And using *purposive sampling* and *accidental sampling* techniques, for the sampling technique using the slovin formula, so that the number of samples taken was 100 respondents.

This study utilizes primary and secondary data. Primary data was collected directly from respondents through an online questionnaire addressed to Bank Syariah Indonesia customers. Meanwhile, secondary data was obtained from documents related to Bank Syariah Indonesia. Data collection was carried out using a 5-point *Likert scale* to assess respondents' perceptions.

4. Results and Discussion

Table 1. Descriptive Statistic Test Results

Descriptive Statistic					
	N	Minimum	maximum	mean	std. deviation
spiritual marketing (x1)	100	12	20	17.24	2.046
sharia compliance (x2)	100	9	15	13.41	1.491
customer experience (x3)	100	16	25	22.02	2.395
banking digitalization (x4)	100	17	30	26.33	2.912
customer loyalty (Y)	100	12	20	17.51	1.982
Valid N *(listwise)*	100				

Descriptive analysis shows the average *spiritual marketing* score of 17.24, *sharia compliance* 13.41, *customer experience* 22.02, *banking digitalization* 26.33 and customer loyalty 17.51. These results indicate that respondents tend to give a positive assessment of banking *digitalization*, while *sharia compliance* gets a lower score.

Table 2 Validity Test Results

Variable	Item	r Count	r Table	Description
Customer Loyalty (Y)	Y1.1	0.727	0.1966	Valid
	Y1.2	0.728	0.1966	Valid
	Y1.3	0.702	0.1966	Valid
	Y1.4	0.65	0.1966	Valid
Spiritual Marketing (X1)	X1.1	0.698	0.1966	Valid
	X1.2	0.721	0.1966	Valid
	X1.3	0.734	0.1966	Valid
	X1.4	0.694	0.1966	Valid
Sharia Compliance (X2)	X2.1	0.752	0.1966	Valid
	X2.2	0.752	0.1966	Valid
	X2.3	0.797	0.1966	Valid
Customer Experience (X3)	X3.1	0.623	0.1966	Valid
	X3.2	0.63	0.1966	Valid
	X3.3	0.729	0.1966	Valid
	X3.4	0.642	0.1966	Valid
	X3.5	0.7	0.1966	Valid

Banking Digitalization (X4)	X4.1	0.72	0.1966	Valid
	X4.2	0.678	0.1966	Valid
	X4.3	0.707	0.1966	Valid
	X4.4	0.605	0.1966	Valid
	X4.5	0.686	0.1966	Valid
	X4.6	0.663	0.1966	Valid

The rtable value is 0.1966 (df = 98) at the 5% error rate. The instrument is declared valid if rcount> 0.1966 and invalid if rcount < 0.1966. Based on the results of the validity test with SPSS, all items on the Spiritual Marketing (X1), Sharia Compliance (X2), Customer Experience (X3), Digitalization Banking (X4), and Customer Loyalty (Y) variables are said to be Valid.

Table 3. Reliability Test Results

Variable	Reliability Coefficient	*Cronbach's Alpha*	Description
Spiritual Marketing (X1)	0.675	0,6	Reliable
Sharia Compliance (X2)	0.647	0,6	Realizable
Customer Experience (X3)	0.681	0,6	Realizable
Banking Digitalization (X4)	0.762	0,6	Realizable
Customer Loyalty (Y)	0.657	0,6	Realizable

Based on the reliability test in Table 3, each variable has a reliability coefficient value that exceeds 0.6 on *Cronbach's Alpha.* This shows that all statement items in this study are considered reliable.

Table 4 Normality Test Results

Parameter	**Value**
Asymp.Sig (2-tailed)	200c.d

The normality test shows that the data is normally distributed with a Sig. value of 0.200> 0.05, so it can be stated that the residual data is normally distributed. This shows that the assumption of normality in statistical analysis has been met.

Table 5. Multicollinearity Test Results

Variable	***Tolerance***	**VIF**	**Description**
X1	0.775	1.292	No multicollinearity
X2	0.537	1.863	No multicollinearity occurs
X3	0.45	2.222	No multicollinearity
X4	0.501	1.995	No multicollinearity occurs

Based on Table 5, the *tolerance* value for *spiritual marketing, sharia compliance, customer experience and digitalization banking* variables is more than 0.10, while the VIF value is less than 10. Thus, it can be concluded that there is no multicollinearity problem in this study.

Table 6. Heteroscedasticity Test

Variable	**Sig**	**Description**
Spiritual Marketing (X1)	0.78	No Heteroscedasticity Occurs
Sharia Compliance (X2)	0.396	No Heteroskedasticity Occurs

Customer Experience (X3)	0.854	No Heteroscedacity Occurs
Banking Digitalization (X4)	0.185	No Heteroscedasticity Occurs

Table 6 shows that the heteroscedasticity *test* is performed using the *Glejser test* method, where the significance value (sig.) is considered. In the variables of *spiritual marketing, sharia compliance, customer experience, and* banking *digitalization*, the sig. value is more than 0.05 or 5%. Thus, it can be concluded that the data in this study are free from heteroscedasticity.

Table 7. Multiple Linear Regression Test Results

Coefficients [a]					
Model	***Unstandardized Coefficients***		***Standardized Coefficients***	**t**	***Sig***
	B	*Std.Error*	*Beta*		
1.	-067	1.387		-048	962
X1	181	068	187	2.667	009
X2	269	112	202	2.400	018
X3	258	078	311	3.380	001
X4	196	059	288	3.305	001

Regression analysis shows that all independent variables, namely *spiritual marketing, sharia compliance, customer experience and digitalization of banking, have* a significant effect on the dependent variable (customer loyalty).

Table 10. Test Results of the Coefficient of Determination

Model Summary					
model	R	r square	adjusted r square	std. error of the estimate	
1	798[a]	637	622	1.219	

Based on the *R Square* value of 0.637 (63.7%), it can be interpreted that the *Spiritual Marketing (*X1*), Sharia Compliance (*X2*), Customer Experience (*X3*), and Digitalization Banking (*X4*)* variables are able to explain variations in customer loyalty (Y) As much as 63.7% is influenced by the variables studied, while 36.3% comes from other factors outside this study.

Based on the research results, the F test shows that the variables of *Spiritual Marketing, Sharia Compliance, Customer Experience, and Banking Digitalization* simultaneously have a significant effect on Customer Loyalty. These results indicate that an increase in these four variables can increase overall customer loyalty. This research is in line with studies conducted by Lestari & Kusumadewi (2017) and Fadilla et al. (2024) which states that spiritual marketing, sharia compliance, customer experience, and digitalization banking factors together affect customer loyalty.

From the research results, it is known that *Spiritual Marketing* has a significant effect on Customer Loyalty. The higher the application of spiritual marketing, the stronger customer loyalty to BSI. These results support the research of Lestari & Kusumadewi (2017) which states that *spiritual marketing* has a positive influence on customer loyalty.

Based on the research results, the *Sharia Compliance* variable has a significant effect on Customer Loyalty. The higher the level of bank compliance with sharia principles, the greater

the customer loyalty to the bank. This research is in line with a study conducted by Siregar (2022) which states that *sharia compliance* has a positive effect on customer loyalty.

From the research results, it is known that the *Customer Experience* variable has a significant effect on Customer Loyalty. The better the banking experience felt by customers, the higher their level of loyalty to BSI. These results support the research of Fadilla et al. (2024) which states that customer experience has a positive influence on the loyalty of Islamic bank customers.

Based on the research results, the *Banking Digitalization* variable has a significant effect on Customer Loyalty. Reliable and easily accessible digital banking services can increase customer loyalty to BSI. This research is in line with the Vahlevi & Indra Vitaharsa study (2022) which states that *mobile banking* services have a positive influence on customer loyalty.

5. Conclusion

This study shows that Spiritual Marketing, Sharia Compliance, Customer Experience, and Banking Digitalization simultaneously have a positive and significant effect on customer loyalty at Bank Syariah Indonesia (BSI). Individually, each of these four variables has also been proven to have a significant influence. This underscores that spiritual values, adherence to Sharia principles, a positive banking experience, and optimal digital services are crucial factors in building customer loyalty at BSI.

BSI is advised to continue strengthening its spiritual value-based marketing strategy and improving the quality of its banking service digitalization in order to create a more convenient and efficient experience for customers. Further research is recommended to include other variables such as customer trust and digital service quality in order to gain a more comprehensive understanding of the factors that influence loyalty. In addition, the use of different research models and expansion of the sample size could yield more accurate and representative findings.

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THE ROLE OF TAX VOLUNTEER MODERATION IN THE INFLUENCE OF E-FILING ON INDIVIDUAL TAXPAYER COMPLIANCE (STUDY ON LECTURERS AND EMPLOYEES OF THE UNIVERSITY OF ISLAM MALANG)

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Abstract

This study aims to analyze the impact of e-Filing on the compliance of individual taxpayers with tax volunteers as a moderation variable in taxpayers, lecturers, and employees of the University of Islam Malang.This study uses a quantitative research method with the type of causal relationship research (causal relationship). This study uses primary data obtained through questionnaires. The population in this study is individual taxpayers at the University of Islam Malang with a sample of 222 respondents. The method used in this study is Moderated Regression Analysis (MRA) using SPSS Version 27. The results of the study indicate that the use of e-Filing has a positive and significant effect on the compliance of taxpayers and tax volunteers cannot moderate the influence of e-Filing on the compliance of taxpayers, lecturers and employees at the University of Islam Malang.The implications of this research are expected to contribute to the development of tax science and provide information and input for the DJP for decision-making in designing tax policies. The limitation of this study is that the research subject is only individual taxpayers, lecturers, and employees of the University of Islam Malang, and this study only uses one independent variable, namely e-Filing. It is recommended for future researchers to expand the research subjects to taxpayers, lecturers, and employees at other universities to obtain more representative results. Future researchers are also expected to add independent variables such as tax socialization, tax understanding, and digital literacy to achieve a more comprehensive understanding of the factors that influence tax compliance.

Keywords: E-Filing, Taxpayers Compliance, Tax Volunteers

1. Introduction

Tax is mandatory participation that is required for individuals or entities that do not receive direct rewards and is used for the benefit of the community. Optimal tax revenue allows the government to ensure sustainable economic growth and improved people's welfare. Therefore, the country's growth will increase if the community as taxpayers fulfills their obligations in paying taxes (Permadi & Mauludi AC, 2023).

Taxpayer compliance is 1054part of the taxpayer to fulfill obligations and exercise tax rights. Taxpayer compliance is the key to the government's success in obtaining tax revenue (Inayah. et al., 2023). In fact, there are still many taxpayers who have not reported their taxes due to the low level of compliance. Some of the factors that make the level of compliance low include tax knowledge, taxpayer awareness and taxpayer's ability to fulfill tax obligations (Nandiroh et al., 2021). The following is data on the compliance of Indonesian taxpayers in the 2020-2023 period.

No	Year	Number of Taxpayers	Reported tax returns	Compliance Ratio
1.	2020	14.1 Million	12.1 Million	85,41 %
2.	2021	13.2 Million	13.1 Million	98,73 %
3.	2022	13.8 Million	12.9 Million	93,71 %
4.	2023	13.9 Million	13.0 Million	94.07 %

In table 1, there is a ratio of individual taxpayer compliance in submitting tax returns in 2020-2023 and there are fluctuations. Compliance with tax return submission in 2021 increased by 13.32%, in 2022 it decreased by 5.02%, while in 2023 it increased by 0.36%. This decline is a concern to develop a more effective strategy in maintaining a more optimal level of compliance.

The government has made various efforts to maximize tax revenue by harmonizing tax regulations and optimizing the tax system. However, there are still many taxpayers who consider taxes as a burden, so taxpayers avoid reporting and paying taxes (Ardika, 2023). Negative perception of taxes arises due to a lack of education about the benefits obtained from tax payments so that taxpayers feel that the contribution is not proportional to the services received. In addition, there is a stigma that taxes only benefit certain parties and do not have a real impact on society. This perception will have an impact on tax avoidance, evasion and low compliance (Judijanto, 2024).

The government in improving taxpayer compliance makes efforts by implementing a *Self Assessment System* tax collection, where taxpayers are given full power to calculate, report, and pay their own taxes in accordance with applicable regulations. The success of this system distribution is greatly influenced by the compliance of taxpayers with the convenience and transparency provided by information technology.

The Directorate General of Taxes innovates to the taxation system with the launch of *e-Filing* (Fuzzi Rachmawwati et al., 2022). *E-Filing* is a technological innovation in tax system, which is used to improve services to taxpayers (Supriatiningsih & Jamil, 2021). Research Siswanti (2021) states that with the application of *e-Filing* reporting timeliness is improved, this is due to the ease of use sharing and reporting are not time-limited. However, the reality is that there are still many taxpayers who have not been able to use *e-Filing*. According to Fidyaningrum (2024) in research Andini et al, (2024) states that new and old taxpayers are still not used to using *e-Filing*.

To face these challenges, the Directorate General of Taxes held a tax volunteer program. This tax volunteer aims to provide socialization to taxpayers in fulfilling their tax obligations, especially assisting in tax reporting through *e-Filing* with the aim of increasing taxpayers' compliance and awareness in carrying out their rights and obligations (Ambarwati & Nadiya, 2022). According to research Nandiroh et al., (2024) stating that socialization and assistance are successful in increasing tax compliance is proven by reporting the Notification Letter (SPT) on time and correctly. Research Listiani et al., (2023) shows that tax volunteers have a positive influence in providing education and socialization so that they can increase taxpayer compliance.

This study was conducted to examine how the role of tax volunteer moderation in the influence of *e-Filing* on individual taxpayer compliance. The purpose of this study is to analyze the influence of *e-Filing* on taxpayer compliance moderated by tax volunteers. The results of

this research are expected to contribute to the development of tax science, as a reference material for future researchers, as well as provide information and input for the DJP for decision-making in designing tax policies.

2. Literature review

2.1. Tax Compliance Theory

The theory of tax compliance was initiated by Milgram (1963). This theory describes a condition in which a person obeys a set rule. There are two perspectives on compliance with the law, namely normative and instrumental. The normative perspective is related to morality and ignores self-interest. The instrumental perspective assumes that the individual as a whole is driven by self-interest and perception of behavior-related changes.

2.2. The Relationship Between e-Filing and Individual Taxpayer Compliance

e-Filing is a tax reporting system that is carried out electronically with taxpayers filling out and submitting tax returns via the internet. Hardika et al., (2022) declares that ease of use *E-filing* can help taxpayers in reporting their taxes anytime and anywhere. Taxpayers have the perception that *e-Filing* effectively helps speed up tax return reporting with more accurate results and can report its taxes anytime and anywhere. This perception helps increase taxpayer compliance.

2.3. The Relationship Between Tax Volunteers Moderates the Influence of e-Filing on Taxpayer Compliance

The role of tax volunteers in carrying out their duties optimally will have an impact on taxpayers to have adequate skills in reporting tax returns so that the implementation of the use of *e-Filing* will have an impact on taxpayer compliance. According to Andini, tax volunteers have proven to be able to moderate the relationship between the implementation of *e-filing* and WPOP compliance, thereby strengthening the positive impact *of e-Filing* on taxpayer compliance.

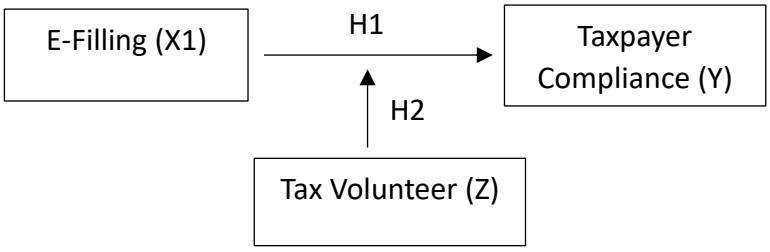

Figure 1 Conceptual Framework

2.4. Hypothesis

H1: The use of *e-Filing* has a positive effect on taxpayer compliance.
H2: Tax volunteers moderate the influence of *e-Filing* use on taxpayer compliance.

3. Methodology

3.1. Type, Location, and Research Time

This study uses a quantitative research method with a type of causal relationship research. This study was conducted on individual taxpayers of the University of Islam Malang Jl. MT

Haryono No. 193, Dinoyo, Lowokwaru District, Malang City, East Java 65144. The research time is November 2024 to April 2025.

3.2. Population and Sample

The population in this study is individual taxpayers at the Islamic University of Malang. The population in this study is 497 taxpayers. The sample in this study is individual taxpayers, namely lecturers and employees at the Islamic University of Malang. The sampling technique uses *the Random Sampling* technique. To determine the size of the sample amount, the *Slovin formula* was used with a sample error rate of 5% so that a sample of 222 respondents was obtained.

3.3. Variable Operational Definition

a. *E-Filing* (X)
   e-Filing is a computerized system assistance in filling out or submitting annual tax returns. The use of *e-Filing* aims to make reporting easier because it can be done anytime and anywhere. With *e-Filing*, taxpayers can provide services easily so that they can increase compliance.
b. Taxpayer Compliance (Y)
   Taxpayer Compliance is an activity carried out in order to implement tax regulations that must be implemented by all Taxpayers.
c. Tax Volunteer (Z)
   The effectiveness of the tax volunteer program can be measured from the extent to which this program is able to achieve the main goals, namely increasing tax socialization, helping the community understand tax obligations, and increasing taxpayer compliance.

3.4. Sources and Methods of Data Collection

In this study, primary and secondary data sources were used. The primary data source is through a questionnaire that is given directly to the respondents who have been determined. Secondary data were obtained through previous research and databases. This study uses a data collection method in the form of a questionnaire with a Likert scale of 5.

3.5. Data Analysis Methods

This research uses an interaction test technique or often referred to as *Moderated Regression Analysis* (MRA). A moderation variable is a variable that can strengthen or weaken the relationship between independent variables and dependent variables (Sugiyono, 2020). The following is the regression equation of the research variables used:

$$Y = a + \beta 1X + \beta 2X.Z + e$$

Information:

Y = Taxpayer Compliance
A = Konstanta
β1 – β2= Regression Coefficient
X = Usage *e-Filing*
Z = Tax Volunteer
X.Z = The interaction variable between the use of *e-Filing* and the tax volunteers who Describing the influence of the moderation variable, the tax volunteer who moderates the effect of the use of *e-Filing* on taxpayer compliance.
e = Error

4. Results and discussions

The data obtained in the research from the distribution of questionnaires conducted at the University of Islam Malang with a population of 497 people. The sample determination using *the Slovin formula* was obtained by a sample of 222 respondents. Data was processed using SPSS Version 27.

Descriptive Statistical Test

Table 2 Descriptive Statistical Test Results

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Hours of deviation
E-Filing	222	1	5	3.93	.608
Taxpayer Compliance	222	1	5	4.05	.576
Tax Volunteer	222	1	5	3.95	.580
Valid N (listwise)	222				

Source: Primary Data processed, 2025

Based on table 2, it can be concluded that *the e-Filing variable* obtained a minimum value of 1 and a maximum value of 5 with an average of 3.93, meaning that the respondents gave answers tending to agree with the statement of *the e-Filing* variable (X) and the standard deviation of 0.608. Meanwhile, the Taxpayer Compliance variable (Y) obtained a minimum value of 1 and a maximum value of 5 with an average of 4.05, meaning that the respondent gave an answer in agreement with the statement of the Taxpayer Compliance variable (Y) and the standard deviation of 0.576. For the Tax Volunteer variable (Z), a minimum value of 1 and a maximum value of 5 were obtained with an average of 3.95, meaning that respondents who gave answers tended to agree with the statements of the Tax Volunteer variable (Z) and the standard deviation of 0.580.

Test Instruments

1. Validity Test

Table 3 Validity Test Results

Variabel	Item	R Count	R Table	Information
E-Filing	X.1	0,752	0,137	Valid
	X.2	0,861	0,137	Valid
	X.3	0,774	0,137	Valid
	X.4	0.717	0,137	Valid
	X.5	0,719	0,137	Valid
	X.6	0,733	0,137	Valid
Taxpayer Compliance	Y.1	0,732	0,137	Valid
	Y.2	0,791	0,137	Valid
	Y.3	0,738	0,137	Valid
	Y.4	0,762	0,137	Valid
	Y.5	0,746	0,137	Valid
Tax Volunteer	Z.1	0,742	0,137	Valid
	Z.2	0,725	0,137	Valid
	Z.3	0,692	0,137	Valid
	Z.4	0,688	0,137	Valid

	Z.5	0,713	0,137	Valid
	Z.6	0,761	0,137	Valid
	Z.7	0,693	0,137	Valid

Source: Primary Data processed, 2025

Based on the results of table 3, it shows that the r value of the table > r calculation is 0.137, it can be concluded that all statement items from *the e-Filing*, Taxpayer Compliance, and Tax Volunteer variables are valid.

2. Reliability Test

Table 4 Reliability Test Results

Variabel	*Cronbach Alpha*	Conditions	Information
E-Filing (X)	0,847	>0,60	Reliabel
Taxpayer Compliance (Y)	0,810	>0,60	Reliabel
Tax Volunteer (Z)	0,897	>0,60	Reliabel

Source: Primary Data processed, 2025

Based on table 4, the test results from *the variables of e-Filing*, Tax Compliance, and Tax Volunteers were declared reliable because the *Cronbach Alpha* value > 0.60.

Normality Test

Table 5 Normality Test Results

One-Sample Kolmogorov-Smirnov Test			
			Unstandardized Residual
N			222
Normal Parametersa,b	Mean		.0000000
	Hours of deviation		2.11192896
Most Extreme Differences	Absolute		.047
	Positive		.047
	Negative		-.032
Test Statistic			.047
Asymp. Sig. (2-tailed)[c]			.200d
Monte Carlo Sig. (2-tailed)[e]	Sig		.289
	99% Confidence Interval	Lower Bound	.278
		Upper Bound	.301

Source: Primary Data processed, 2025

Based on table 5, the results of the normality test can be seen from the value of Asymp Sig. (2-tailed) of 0.200 which is greater than 0.05, then it can be concluded that the results of the normality test using the Kolmogorov smirnov test show normal distributed data.

Classic Assumption Test

1. Multicollinearity Test

Table 6 Multicollinearity Test Results

Coefficientsa

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig	Tolerance	VIF
1	(Constant)	5.742	1.070		5.368	.000		
	E-Filling	.325	.049	.411	6.627	.000	.638	1.567
	Tax Volunteer	.248	.044	.349	5.630	.000	.638	1.567

Source: Primary Data processed, 2025

Based on table 6 of the results of the Multicollinearity test, it can be seen that the value of *tolerance* variabel *e-Filing* and Tax Volunteers 0.638 > 0.10 and VIF value 1.567 < 10 can be concluded that there is no multicollinearity in independent variables in the regression equation because the value of *tolerance* > 0.10 and VIF value < 10.

2. Heteroscedasticity Test

Table 7 Heteroscedasity Test Results

Coefficientsa						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig
		B	Std. Error	Beta		
1	(Constant)	2.873	.642		4.475	.000
	E-Filing	.009	.029	.026	.311	.756
	Tax Volunteer	-.051	.026	-.162	-1.939	.054
a. Dependent Variable: Abs_Res						

Source: Primary Data processed, 2025

Based on table 7, it can be seen that the significance value of the *e-Filing variable* is 0.756 > 0.05 and the significance value of the Tax Volunteer variable is 0.054 > 0.05, so it can be concluded that the independent variable does not experience heteroscedasticity because the significance value is >0.05.

MRA Test

Table 8 MRA Test Results

Coefficientsa						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig
		B	Std. Error	Beta		
1	(Constant)	1.370	5.835		.235	.815
	E-Filling	.507	.244	.642	2.076	.039
	Tax Volunteer	.409	.216	.576	1.893	.060
	E-Filling* Tax Volunteer	-.007	.009	-.411	-.762	.447

a. Dependent Variable: Taxpayer Compliance

Source: Primary Data processed, 2025

Based on table 8, the results of the MRA (*Moderated Regression Analysis)* test constantly show that it has a beta value of 1.37, *e-Filing* produces a beta value of 0.507, Tax Volunteers produce a beta value of 0.409. Based on these data, the regression equation can be seen as follows:

Tax Compliance = 1.370 + 0.507E-Filing -0.07 E-Filing.TV + e

Based on these equations, it can be seen that:

1. The constant value (α) of 1.370 indicates that *the e-Filing* variable and the interaction of *the e-Filing* and Tax Volunteer variables if the value is 0, then Taxpayer Compliance has a level of 1.370.
2. The value of the regression coefficient β1 is 0.507, if *e-Filing* (X) increases by 1% then Taxpayer Compliance (Y) increases by 50.7% assuming that all other variables are constant
3. The value of the regression coefficient β2 is -0.007, if the interaction *of e-Filing* and Tax Volunteers increases by 1%, then Taxpayer Compliance (Y) decreases by 0.7% assuming that all other variables are constant.

Uji Hypothesis

1. Coefficient of Determination Test (R2)

Table 9 Determination Coefficient Test Results

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.681a	.464	.457	2.124
a. Predictors: (Constant), X.Z, Relawan Pajak, E-Filling				

Source: Primary Data processed, 2025

Based on table 9, it can be seen that the results of the determination coefficient test can be seen from the *Adjusted R Square* of 0.457 which means that the independent variable can explain the relationship of the dependent variable by 45.7% and as much as 54.3% is influenced by the variable outside the moderation variable.

2. T test

Table 10 Test Results t

Coefficientsa						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig
		B	Std. Error	Beta		
1	(Constant)	1.370	5.835		.235	.815
	E-Filling	.507	.244	.642	2.076	.039
	Tax Volunteer	.409	.216	.576	1.893	.060
	E-Filling* Tax Volunteer	-.007	.009	-.411	-.762	.447
a. Dependent Variable: Taxpayer Compliance						

Source: Primary Data processed, 2025

Based on table 10, it can be concluded that:

1. It is known that the significance value is 0.39 < 0.05, so it can be concluded that H1 is accepted which means that there is a positive and significant effect between *the e-Filing* variable on Taxpayer Compliance
2. It is known that the significance value is 0.447 > 0.05, so it can be concluded that H2 was rejected which means that there is no influence between the variables of Tax Volunteers and *e-Filing* on Taxpayer Compliance.

4. Research Results

1. The Effect of E-Filing on Individual Taxpayer Compliance.

The results of the study show that the application of *e-Filing* have a positive and significant effect on the Compliance of Individual Taxpayers. This proves that the application of *e-Filing* can encourage Taxpayer Compliance in fulfilling tax obligations. According to the theory *tax compliance* (Tax Compliance) by Milgram (1963) states that taxpayer compliance is driven by personal interests and perceptions of changes related to behavior. Changes made by the Directorate General of Taxes (DJP) in updating the online tax return reporting system through *e-Filing* very precise in improving compliance. *e-Filing* can overcome the perception of low risk, where taxpayers feel safer and more confident in fulfilling tax obligations. In addition, the ease of access and transparency provided by the system *e-Filing* can increase the awareness and motivation of taxpayers to meet tax obligations. This is in line with tax compliance theory which states that individuals tend to be compliant if they are directly involved and have control over the tax reporting process. The results of this study support previous research from Hardika et al., (2022) which states that the ease of use *e-Filing* can help taxpayers in reporting their taxes anytime and anywhere. In addition, the tax reporting process has become simpler. The theoretical implications of this research are useful for the development of tax science and as a reference material for future researchers. Practically, this research is useful for the Directorate General of Taxes in designing better tax administration policies to improve the quality of technological infrastructure, strengthen data security systems, and simplify administrative procedures to make them more accessible. So that the system *e-Filing* more optimal in supporting transparency, accountability, and effectiveness of tax administration in Indonesia.

2. The Effect of Tax Volunteer Interaction with E-Filing on Individual Taxpayer Compliance.

The results of the study show that the role of Tax Volunteers with *e-Filing* has no effect on Taxpayer Compliance. This shows that Tax Volunteers are not able to moderate the influence *e-Filing* on Individual Taxpayer Compliance, Lecturers and Employees at the University of Islam Malang. According to the theory *Tax Compliance* (Tax Compliance) developed by Milgram (1963), a person's compliance with tax rules is influenced by authority factors and social pressure. Individuals tend to obey the rules when there is an authority figure giving instructions or when the taxpayer feels they are in an environment that supports compliance. In this case, the existence of tax volunteers as parties who provide education and assistance can function as a form of informative authority that influences taxpayers to fulfill their obligations. However, for lecturers and employees who are generally already tied to the automatic tax withholding system by employers, the influence of tax volunteers on taxpayer compliance tends to be smaller than individual taxpayers who do not have a direct tax withholding system. In addition, the use of *e-Filing* As a modern tax administration system, it is also related to increasing tax compliance because it provides easy access and transparency in tax reporting. This system allows taxpayers to report their taxes independently, quickly, and

accurately. The results of this study support previous research from Palupi (2024) which states that the role of tax volunteers has not been maximized to help taxpayers fill out their tax returns through *e-Filing* Due to the limited number of volunteers, it is not spread to certain areas so that not all receive assistance from tax volunteers to fill in the *e-Filing* in order to comply with taxpayer compliance. Socialization and education from tax volunteers has not been optimal in reaching taxpayers who already have an understanding of taxation and are used to using automated systems, such as lecturers and employees. The theoretical implications of this research for the development of science and subsequent researchers contribute to the development of tax compliance theory. General of Taxes in optimizing cooperation with educational institutions to expand the reach of tax education programs involving tax volunteers. In addition, the DGT can provide more structured training for tax volunteers to be able to deliver materials effectively and in accordance with applicable regulations so that they can support the increase of tax awareness more broadly and form a culture of tax compliance.

5. Conclusion

Based on the results of the research that has been conducted, it can be concluded that the use of e-Filing has a positive and significant effect on taxpayer compliance. e-Filing provides convenience and efficiency in filling out tax return reporting so as to encourage the compliance of taxpayers of Lecturers & Employees of the Islamic University of Malang in fulfilling tax obligations. Tax Volunteers cannot moderate the influence of e-Filing on the compliance of Lecturers and Employees at the Islamic University of Malang. This is because lecturers and employees are already bound by the automatic tax withholding system by employers, the influence of tax volunteers on taxpayer compliance tends to be smaller than individual taxpayers who do not have a direct tax withholding system. In addition, socialization and education from tax volunteers has not been optimal in reaching taxpayers who already have an understanding of taxation and are used to using automated systems, such as lecturers and employees.

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THE INFLUENCE OF TAX INFORMATION DISSEMINATION, TAX SANCTIONS, AND TAXPAYER AWARENESS ON LAND AND BUILDING TAXPAYER COMPLIANCE AMONG RESIDENTS IN TULUSREJO SUBDISTRICT.

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Abstract

This study aims to analyze the influence of tax information dissemination, tax sanctions, and taxpayer awareness on the compliance of land and building taxpayers among residents in Tulusrejo Subdistrict. The research method used is quantitative with a multiple linear regression approach. Data were collected through questionnaire distribution to registered taxpayers within the study area. The hypothesis test results indicate that, simultaneously, tax information dissemination, tax sanctions, and taxpayer awareness have a significant effect on taxpayer compliance, with a significance value of 0.000 ($p < 0.05$). Partially, each of the three independent variables also significantly influences taxpayer compliance. The broader and more effective the dissemination of tax information, the stricter the enforcement of tax sanctions, and the higher the taxpayers' awareness, the greater their compliance in fulfilling tax obligations.

Keywords: Tax Information Dissemination, Tax Sanctions, Taxpayer Awareness, Taxpayer Compliance, Land and Building Tax, Multiple Linear Regression, Quantitative Research, Tulusrejo Subdistrict.

1. Introduction

Taxes are one of the main sources of state revenue used to fund national development in order to achieve the welfare of all Indonesian people. Tax is a compulsory contribution by taxpayers to the state, owed by individuals or entities, which is coercive based on law, without receiving direct compensation, and used for state purposes for the prosperity of the people. According to Law No. 28 of 2007 Article 4 Paragraph 1, tax is a mandatory obligation imposed on society as mandated by the state and regulated by applicable laws. The money collected from tax payments will be used by the government to improve public welfare.

As the primary source of revenue in the State Budget (APBN), taxes contribute more than 70% (Suhendri, 2018). Taxes are one of the largest sources of state income, alongside other sources such as oil and gas revenues and non-tax revenues (Sitanggang & Hikmawati, 2024). This encourages the government to promote economic growth. Economic growth can increase people's income, and higher income boosts their potential to pay taxes. A high level of tax payment to the government supports development and reduces dependency on foreign debt.

Land and Building Tax (PBB) is the right and authority of local governments to manage. With the enactment of Law No. 28 of 2009 on Regional Taxes and Regional Retribution, the urban and rural sectors of the Land and Building Tax were transferred to become local taxes (Sapriadi, 2013). Land and Building Tax has fully become a regional tax managed by local governments, and its revenue goes into the Regional Treasury. Locally Generated Revenue (PAD) is one of the funding sources for implementing governance and development. Based on this regulation, every region in Indonesia has the right to manage its own Land and Building Tax. The revenue generated from this tax becomes regional income. Therefore, each region has the right to enhance and optimize the collection of Land and Building Tax. The optimization

of this tax must be supported by taxpayer compliance in paying the Land and Building Tax (PBB).

Indonesia is the fourth most populous country in the world. The population is spread across 38 provinces. The country of Indonesia cannot be separated from the concept of taxation. According to Law No. 28 of 2007, Article 1 Paragraph 1, tax is defined as "a mandatory contribution to the state owed by an individual or entity that is coercive in nature based on the law, without receiving direct compensation and used for state purposes for the greatest welfare of the people."

2. Literature review

Definition of Tax

Tax is a mandatory contribution that must be paid by individuals or business entities to the state, based on Law Number 28 of 2007. Tax is coercive in nature without direct compensation to the taxpayer, but it is fully used for the interests of the state and the welfare of the people. The Directorate General of Taxes (DGT) states that paying taxes is not only an obligation but also a form of public participation in financing national development. According to Dr. Soeparman Soemahamidjaja, tax is a compulsory levy collected by the government to finance the production of public goods and services in order to improve the welfare of society.

Dissemination of Tax Information

The dissemination of tax information is the process of distributing and communicating tax-related information to taxpayers with the aim of increasing their understanding of tax obligations, the benefits of taxation, and the procedures to be followed in fulfilling those obligations. According to Amalia (2020), effective information dissemination can help taxpayers understand their rights and obligations, thereby improving compliance in paying taxes. Tax information can be distributed through various sources such as printed media (brochures, pamphlets), electronic media (television, radio), and digital media (websites, applications, and social media). Additionally, the government may conduct outreach through seminars, community forums, or direct meetings to make the information more easily understood and accepted by the public.

For the dissemination of tax information to be effective, the content delivered must be clear and easy to understand, especially for those without a background in taxation. Explanations about tax rates, payment procedures, and applicable penalties should be presented in simple and structured language. The purpose of this information dissemination is to increase taxpayer awareness of the importance of paying taxes on time and understanding their rights and obligations in the tax system. Furthermore, consistency in the dissemination of information also plays an important role, as information delivered regularly can help taxpayers better remember and understand their obligations. Therefore, authorities must regularly update tax information and provide relevant education regarding policy or regulatory changes.

Tax Sanctions

Tax sanctions are consequences imposed on taxpayers who fail to fulfill their tax obligations according to the applicable laws and regulations. According to Ii & Pustaka (2002), the purpose of tax sanctions is to enforce taxpayer compliance by penalizing those who violate established rules. Tax sanctions can take the form of interest penalties, increased penalties, fines, and criminal sanctions, each with different levels of violation and consequences. These sanctions are expected to have a deterrent effect on taxpayers so that they become more disciplined in fulfilling their tax obligations.

Based on Article 7 of the General Provisions and Tax Procedures Law (UU KUP) No. 28 of 2007, tax sanctions are imposed if the taxpayer fails to submit the Tax Return (SPT) within the specified deadline. This is also regulated in Article 3, paragraphs 3 and 4 of the 2007 UU KUP, which stipulates the following deadlines for submitting SPTs: (a) Periodic Tax Returns

must be submitted no later than 20 days after the end of the tax period; (b) Annual Income Tax Returns for individual taxpayers must be submitted no later than 3 months after the end of the tax year; and (c) Annual Income Tax Returns for corporate taxpayers must be submitted no later than 4 months after the end of the tax year. If taxpayers fail to meet these deadlines, administrative sanctions will be imposed according to the applicable regulations.

Taxpayer Awareness

Taxpayer awareness is a crucial factor in determining the level of public compliance in fulfilling tax obligations. One of the main challenges in implementing regional taxes is the low public awareness of their tax obligations, lack of guidance for related agency staff, delays in receiving the Tax Due Notification Letter (SPPT), and weak enforcement of tax violations (Budiati, 2017). According to Fitriana (2014), awareness is defined as the state of knowing or understanding something, and in the context of taxation, it relates to the tax system and policies. Thus, tax awareness refers to a condition in which a person understands and realizes the importance of taxation. Syakura (2011) adds that tax awareness includes understanding, knowledge, and the proper and voluntary implementation of tax regulations.

Muliari & Setiawan (2011) identify several indicators of tax awareness, which include knowledge of tax rules and regulations, understanding of the function of taxes as a source of state revenue, and the willingness of taxpayers to calculate, pay, and report taxes correctly and voluntarily. High tax awareness enables taxpayers to actively participate in the tax system without coercion or threats of sanctions. Conversely, low tax awareness can lead to unutilized tax potential, thereby hindering development (Mutia, 2014). Low public participation in tax payments can also delay the implementation of government programs that rely on tax revenue. Therefore, the government must undertake various efforts to increase tax awareness, one of which is through transparency in managing regional taxes. With transparency, the public will have greater trust in the government and feel more encouraged to pay taxes voluntarily.

Taxpayer Compliance

Compliance, in general, is the attitude of obeying and adhering to rules or regulations. In the context of taxation, compliance means the willingness of taxpayers to fulfill tax obligations according to prevailing laws. According to Muhamad Karyadi (2021), tax compliance includes the attitude of obeying, submitting, and carrying out tax regulations properly. Alam (2014) also explains that compliance is the motivation of individuals, groups, or organizations to act or refrain from acting according to established regulations. In a tax system that adheres to the self-assessment principle, voluntary tax compliance is a core pillar. Taxpayers are responsible for calculating, paying, and reporting their taxes independently, accurately, and on time (Dan et al., 2011).

According to Fitriana (2014), taxpayer compliance can be divided into two types: formal compliance and material compliance. Formal compliance is the condition where taxpayers meet administrative tax obligations in accordance with the law, such as submitting the Tax Return (SPT) on time. Material compliance means that the taxpayer not only meets administrative requirements but also complies with the substance and purpose of taxation. This includes compliance with the material truth in tax reporting.

3. Methodology

This study uses a quantitative approach with a correlational research type. Quantitative research, as explained by Kasiram in a study (Yuni Fitriani, 2017), is a method aimed at acquiring knowledge by utilizing numerical data as a tool to analyze information related to the subject under investigation. Meanwhile, correlational quantitative research refers to a type of study that aims to identify relationships between specific variables and to make predictions

based on the relationships identified among those variables, as explained by Anita Wijayanti (2017).

4. Results and discussions

4.1. Descriptive Statistical Analysis

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Tax Information Dissemination (X1)	125	1	5	4,19	0,393
Tax Sanctions (X2)	125	1	5	4,18	0,460
Tax Awareness (X3)	125	1	5	4,12	0,438
Taxpayer Compliance (Y)	125	1	5	4,21	0,343
Valid N (listwise)	125				

Source: SPSS Statistic 24.0 Output

Based on the analysis results, all variables — Tax Information Dissemination (X1), Tax Sanctions (X2), Tax Awareness (X3), and the dependent variable Taxpayer Compliance (Y) — have value ranges from 1 (strongly disagree) to 5 (strongly agree), with the mean values of each variable exceeding 4. This indicates that respondents generally answered "agree" to the statements presented for each variable. The variable Y (Taxpayer Compliance) has the highest mean value at 4.21, followed by X1 (4.19), X2 (4.18), and X3 (4.12), suggesting that tax information dissemination is generally well received by respondents.

4.2. Instrument Testing

4.2.1. Validity Test Results

Based on the results of the validity test, the research instrument is considered valid if the calculated r-value exceeds the critical r-table value at a 5% significance level. The test showed that the r-values for all 25 questionnaire items were greater than the r-table value of 0.176. The highest r-value was 0.752 (item 11), and the lowest was 0.294 (item 22). Therefore, it can be concluded that all items in the questionnaire are valid.

4.2.2. Reliability Test Results

The reliability test showed varying levels of instrument reliability across different variables. For Tax Information Dissemination (X1), Cronbach's Alpha was 0.492, indicating moderate reliability. For Tax Sanctions (X2), the Cronbach's Alpha value was 0.626, indicating high reliability. For Tax Awareness (X3), the value was 0.532, also showing moderate reliability. For Taxpayer Compliance (Y), the value was 0.659, indicating high reliability. Thus, all instruments can be considered reliably appropriate for research.

4.3. Normality Test

The results of the normality test show that all variables — Tax Information Dissemination (X1), Tax Sanctions (X2), Tax Awareness (X3), and Taxpayer Compliance (Y) — are normally distributed. This is shown by the significance values (Asymp. Sig), all of which are greater

than 0.05: X1 (0.078), X2 (0.091), X3 (0.189), and Y (0.200). Therefore, the data meet the normality assumption and are suitable for further analysis.

4.4. Classical Assumption Test

Multicollinearity Test Results

Coefficients[a]								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	15,778	2,616		6,031	0,000		
	X1	0,597	0,161	0,342	3,711	0,012	0,523	1,913
	X2	0,378	0,146	0,253	2,594	0,011	0,465	2,151
	X3	0,289	0,143	0,184	2,017	0,046	0,532	1,881
a. Dependent Variable: Y								

Source: SPSS Statistic 24.0 Output

Based on the table above, no independent variable has a tolerance value less than 0.10 or a VIF greater than 10. Therefore, the regression model is free from multicollinearity.

Heteroscedasticity Test Results

Coefficients[a]								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	9,218	1,434		6,43	0,000		
	X1	0,027	0,088	0,032	0,301	0,764	0,523	1,913
	X2	0,065	0,08	0,092	0,812	0,418	0,465	2,151
	X3	-0,448	0,078	-0,603	-5,71	0,347	0,532	1,881
a. Dependent Variable: ABS_RESIDUAL								

Source: SPSS Statistic 24.0 Output

Based on the Glejser test results, all variables have significance levels greater than 0.05. Thus, the regression model is free from heteroscedasticity.

4.5. Multiple Linear Regression Test

Coefficients[a]				
Model	Unstandardized Coefficients	Standardized Coefficients	t	Sig.

		B	Std. Error	Beta		
1	(Constant)	15,778	2,616		6,031	0,000
	Tax Information (X1)	0,597	0,161	0,342	3,711	0,000
	Tax Sanctions (X2)	0,378	0,146	0,253	2,594	0,000
	Tax Awareness (X3)	0,289	0,143	0,184	2,017	0,000

Source: SPSS Statistic 24.0 Output

The constant value is 15.778. The coefficients for Tax Information Dissemination (X1), Tax Sanctions (X2), and Tax Awareness (X3) are 0.597, 0.378, and 0.289, respectively.

4.6. F-Test Results (Simultaneous Regression Test)

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	676,603	3	225,534	34,837	,000[b]
	Residual	783,349	121	6,474		
	Total	1459,95	124			
a. Dependent Variable: Y						
b. Predictors: (Constant), X3, X1, X2						

Source: SPSS Statistic 24.0 Output

The significance value is 0.000 ($p < 0.05$), indicating that all three independent variables jointly influence taxpayer compliance.

4.7. Coefficient Of Determination

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,681[a]	0,463	0,45	2,5444
a. Predictors: (Constant), X3, X1, X2				

Source: SPSS Statistic 24.0 Output

The Adjusted R Square value is 0.450, indicating that 45% of the variation in taxpayer compliance (Y) can be explained by the independent variables (X1, X2, X3).

4.8. T-Test Results (Partial Regression Test)

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	15,778	2,616		6,031	0,000
	X1	0,597	0,161	0,342	3,711	0,000
	X2	0,378	0,146	0,253	2,594	0,011
	X3	0,289	0,143	0,184	2,017	0,046
a. Dependent Variable: Y						

Source: SPSS Statistic 24.0 Output

The significance values are all below 0.05, indicating that each independent variable significantly affects the dependent variable (Y).

4.9. Discussion

The result of the first hypothesis test using the F-Test (Simultaneous Regression) shows that the variable Tax Information Dissemination has a significant influence on Taxpayer Compliance. This is evidenced by a significance value of 0.000, which is less than the 0.05 threshold. Therefore, it can be concluded that tax information dissemination (X1) plays an important role in increasing taxpayer compliance in paying Land and Building Tax (PBB). The effective dissemination efforts in Tulusrejo Subdistrict—via digital platforms and traditional methods—have helped residents access accurate and understandable information about their tax obligations.

Furthermore, the second hypothesis test using the Coefficient of Determination indicates an Adjusted R Square of 0.450, meaning that the independent variables collectively influence the dependent variable by 45%. The T-Test results also reinforce this finding, with significance values below 0.05, confirming that the tested factors significantly contribute to taxpayer compliance. These findings serve as a foundation for developing policies and strategies to enhance taxpayer compliance, such as strengthening tax information dissemination to raise public awareness and fulfill tax obligations effectively.

5. Conclusion And Recommendations

5.1. Conclusion

Based on the results of hypothesis testing in this study on the influence of tax information dissemination, tax sanctions, and taxpayer awareness on Land and Building Tax compliance in Tulusrejo Subdistrict, it can be concluded that tax information dissemination has a significant effect on taxpayer compliance, with a significance value of 0.000, which is less than 0.05. This indicates that the broader and more effective the tax information received by the public, the higher their level of compliance in paying taxes. Tax sanctions also have a significant effect on taxpayer compliance, with a significance value of 0.000, showing that the strict enforcement of sanctions can increase public awareness in fulfilling their obligations. In addition, taxpayer awareness significantly influences their compliance in paying taxes—meaning that the higher their awareness of the importance of taxation, the greater the level of compliance exhibited.

5.2. Recommendations

Based on the findings of this study, several recommendations can be made for various stakeholders. For the development of taxation science, this research can serve as a foundation for advancing tax-related theories, particularly those concerning the factors that affect taxpayer

compliance and the importance of technology in tax systems—such as the use of digital platforms for education and online tax payment. Future researchers are encouraged to include additional variables that may influence tax compliance and to employ more diverse research methods, such as qualitative or mixed-method approaches, to gain deeper insights. Additionally, taxpayers are encouraged to be more proactive in seeking tax information and to enhance their awareness of the role of taxation in regional development. For the Directorate General of Taxes, it is recommended to strengthen tax information dissemination through digital media, enhance sustainable tax education programs, and enforce tax sanctions consistently to improve taxpayer discipline.

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THE INFLUENCE OF HALAL KNOWLEDGE, ISLAMIC RELIGIOSITY, AND ATTITUDE ON PURCHASING DECISIONS FOR HALAL COSMETICS AMONG GENERATION Z AT MALANG ISLAMIC UNIVERSITY.

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Abstract

This study aims to analyze the influence of Halal Knowledge, Islamic Religiosity, and Attitude on the purchase decision of Wardah brand halal cosmetics among Generation Z at the Islamic University of Malang. The research is based on the Theory of Planned Behavior (TPB) proposed by Ajzen (1991. A quantitative research method with a survey approach was used. Data were collected from 100 Generation Z respondents who are users of halal cosmetics at the Islamic University of Malang. Data analysis was performed using SPSS software, including instrument testing (validity and reliability), multiple linear regression analysis, classical assumption testing, and hypothesis testing. The results showed that the Islamic Religiosity variable had a significant influence on the purchase decision of Wardah brand halal cosmetics. This indicates that the higher a person's level of Islamic religiosity, the more likely they are to purchase halal cosmetic products. However, the Halal Knowledge and Attitude variables did not show a significant influence on purchase decisions. This shows that knowledge about halal products and a positive attitude towards halal products do not directly affect purchase decisions among Generation Z at the Islamic University of Malang. This research provides practical implications for halal cosmetic producers in designing more effective marketing strategies by emphasizing religious values in marketing communication.

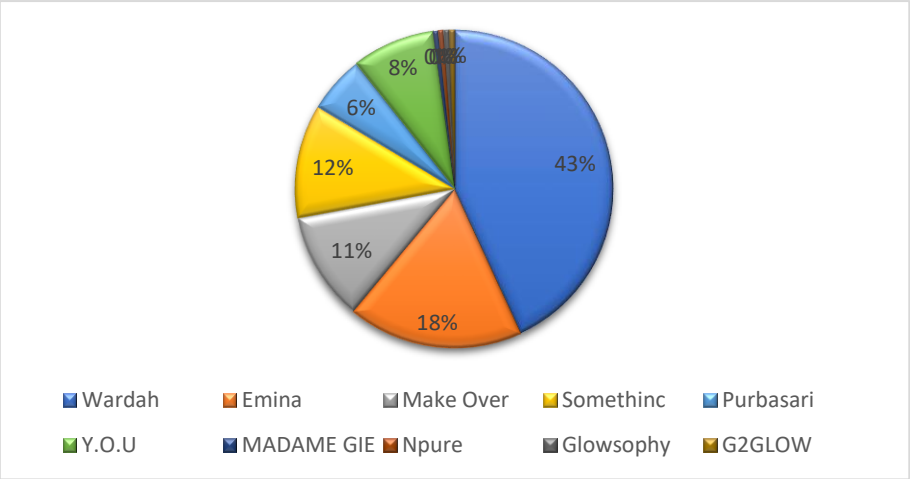
Keywords: Halal Knowledge, Islamic Religiosity, Attitude, and Purchase Decision

1. Introduction

Currently the Muslim population in the world 1.6 billion people or 25% of the world population has reached 7 billion. The Muslim population is spread across various countries, including 56 countries with a majority Muslim population which has a total GDP of 6.7 trillion dollars (Wahyudi, Setiawan, and ... 2023). According to data from the Ministry of Religious Affairs uploaded in 2020, the Muslim population of Indonesia reached 229.62 million people or around 87.2% of the total population of Indonesia which amounted to 269.6 million people. If projected to the world Muslim population which is estimated to reach 2.2 billion by 2030, the Indonesian Muslim population accounts for around 13.1% of all Muslims in the world as a whole. The potential of Muslim consumers is reflected in the aspect of global spending of Muslim consumers in the food and lifestyle sector which is expected to reach $3.7 trillion by 2019 (Adinugraha and Sartika 2019). This figure indicates the core market potential for the halal food and lifestyle industry, or halal lifestyle. This industry is part of the popular halal industry

In Indonesia, one of them is in the halal cosmetics sector. The rapid progress in the halal cosmetics sector is currently attracting attention, especially among women. Nowadays many women want to look beautiful and attractive. For women, appearance is the number one thing that must be considered (Ummah 2019). White skin and clean face are now the standard of beauty. Many women use cosmetic products to improve their facial appearance. Cosmetics become one of the important items to fulfill the needs and desires of women to look more attractive and beautiful.

According to the Indonesian Association of Cosmetics Companies and Associations (PPA Kosmetika Indonesia), the growth in the number of Indonesian cosmetics industries reached 21.9 percent, with 913 companies in 2022 and 1,010 companies in mid-2023. In addition, cosmetic companies now compete in meeting the demand for cosmetic products by presenting



various innovations to meet consumer needs. However, with the majority of the population being Muslim, the need for halal cosmetics in Indonesia is increasingly significant.

Figure 1 Survey Results of Halal Cosmetics Users

Based on the results of a survey conducted at the Islamic University of Malang (UNISMA) involving 100 respondents, In this study, the majority of respondents chose the Wardah brand, so the analysis mostly discussed the factors that influence Wardah's purchasing decisions. with the result that 43% of them use Wardah products. one of the pioneers of halal cosmetics in Indonesia which shows the dominance of this brand in the halal cosmetics market. especially Generation Z, which is currently the largest consumer group in Indonesia in the age range of 19-26 years, which is the largest group, has a great influence on market trends, including the halal cosmetics industry.

Generation Z is a generation that is very up to date with issues spread on social media or the internet. They usually find information through the internet, product reviews on social media, or advice from influencers. Currently, Generation Z consumers are more interested and trusting to buy products if they have seen product reviews from trusted sources on social media (Mutiara and Syahputra 2018). Generation Z has important characteristics and is accustomed to evaluating products, such as ensuring that the halal aspect of cosmetics is in accordance with religious principles and influences their purchasing decisions.

Machfoedz (2010: 44) suggests that decision making is a process of assessing and selecting from various alternatives in accordance with the interests of certain interests by determining an option that is considered the most profitable. To better understand this process, Ajzen's Theory of Planned Behavior (TPB) (1991) explains that consumer purchasing decisions are influenced by three main components, namely attitude toward behavior, subjective norm, and perceived behavioral control.

Wardah as a halal cosmetics brand, has significant relevance in this study because this brand is known among the younger generation and has a strong reputation as a product that emphasizes halalness. This shows that Halal Knowledge understood by customers about the halal status of products and Islamic Religiosity contribute to the formation of a positive attitude towards the brand. Wardah's Islamic beliefs and principles are in line with the religious background of Generation Z at the Islamic University of Malang, so knowledge about halal

and their religious beliefs can be an important factor in their decision to use halal cosmetics. This research focuses on the Islamic-educated Generation Z, which consists of students of the Islamic University of Malang (UNISMA). In this case, a brand like Wardah, which consistently upholds Islamic values and halalness, is a good candidate for research on how Halal Knowledge, Islamic Religiosity, and Attitude towards halal cosmetic products influence consumer decisions. At the Islamic University of Malang (UNISMA), which has a strong religious background, it is expected that these variables play a big role in influencing Generation Z students' choice of halal cosmetics.

Problem Formulation

Based on the background that has been described, the following problem formulations are obtained:

1. Is there an influence of Halal Knowledge on Generation Z's decision to purchase halal cosmetics, especially the Wardah brand?
2. Is there an influence of Islamic Religiosity in encouraging Generation Z's decision to purchase halal cosmetics, especially the Wardah brand?
3. Is there an influence of Attitude on Generation Z's decision to purchase halal cosmetics, especially the Wardah brand?

Research Objectives

Based on the formulation of the problem, this study aims to determine:

1. Analyzing the relationship between Halal Knowledge on Generation Z's decision to purchase halal cosmetics, especially the Wardah brand.
2. Assess the effect of Islamic Religiosity on purchasing preferences for halal cosmetics, especially the Wardah Gen Z brand.
3. Assessing the role of Attitude in influencing purchasing decisions for halal cosmetics, especially the Wardah brand among Generation Z.

2. Theory Basis And Hypothesis Development

Theory of Planned Behavior (TPB)

Theory Planned Behavior (TPB) was proposed by Ajzen (1991) as a development of the previous theory, namely Theory of Reasoned Action (TRA). TPB explains that human behavior is not only influenced by intentions or intentions but also by perceptions of the individual's ability to control this behavior. According to Ajzen, there are three main determinants that influence a person's intention to perform a behavior, namely attitudes towards behavior, subjective norms, and perceptions of behavioral control.

Purchasing Decision

Sunyoto (2013: 87) states that purchasing decisions are consumer actions in determining preferences among the various brands available. Kotler and Keller (2016: 198) add that purchasing decisions are the selection of certain brands based on consumer interest in several available alternatives.

Halal Knowledge

Bonne et al. (2007) explained that halal knowledge affects the awareness and attitudes of Muslim consumers in choosing halal products. Consumers who have a high understanding of halal tend to be more selective and choose products that comply with their religious rules. In addition, Ambali & Bakar, (2014) emphasized that halal awareness is not only limited to food, but also extends to other products such as cosmetics and medicines. Mukhtar & Butt, (2012) revealed that halal knowledge has a significant influence in increasing the purchase intention of halal products, especially among religious Muslim consumers.

Islamic Religiosity

Stark and Glock (1968) describe religiosity in five concepts, namely: There are 5

dimensions: belief, ritual practice, experience, knowledge and consequential. Considering this concept of religiosity in consumption, we can assert that it is the level that determines the choice in choosing products according to the teachings of Islam. Mokhlis, (2009) found that religiosity has a significant influence on the consumption patterns of Muslim consumers, including their preference for halal products. Research by Shah et al., (2011) also revealed that religiosity is a major factor in purchasing decisions for halal products, especially among the younger generation of Muslims. Said et al. (2014) emphasized that consumers with a high level of religiosity pay more attention to the halalness of products, including cosmetics.

Attitude

According to Kotler and Keller, consumer behavior is influenced by various stimuli, both from marketing aspects such as products, services, prices, distribution, and communication, as well as from external factors such as economic conditions, technological advances, political situations, and culture. These factors then influence consumers' psychological aspects, including motivation, perception, learning, and memory, as well as their personal characteristics, such as cultural, social, and personality. Furthermore, consumers will undergo stages in the purchasing decision process, from need recognition, information search, evaluation of alternatives, to the decision to buy and behavior.

Conceptual Framework

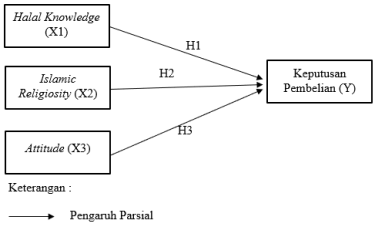


Figure 2 Conceptual Framework

Research Hypothesis

Based on the theoretical review of the results of empirical studies, the hypotheses that can be formulated are as follows:

H1: Halal Knowledge has a positive and significant effect on purchasing decisions for halal cosmetics by Generation Z.

H2: Islamic Religosity has a positive and significant effect on purchasing decisions for halal cosmetics by Generation Z.

H3 : Attitude has a positive and significant effect on the decision to purchase halal cosmetics by Generation Z.

3. Research Methods

Type, Location, and Time of Research

The type of research used in this research is explanatory research (explanatory research) using a quantitative approach. According to Sugiyono (2013: 21) “explanatory research” is research that intends to explain the position of the variables studied and the relationship between one variable and another.

This study uses Ajzen's Theory of Planned Behavior (TPB) (1991) as the main theoretical framework. This study aims to explain how each component of TPB (attitude, subjective norms, and perceived behavioral control) influences the decision to purchase Wardah halal cosmetics among Generation Z. The object of this research was conducted at Islamic University students. The object of this research was conducted on students of the Islamic University of Malang who fulfill the category of Generation Z users of Wardah halal cosmetics. This research was conducted from December 2024 to February 2025.

Population and Sample

The population in this study was 63211 students of the Islamic University of Malang. The sample research was calculated using the Slovin formula and the resulting number of samples needed was 100 respondents. The sampling technique used is purposive sampling with several predetermined criteria, namely based on age, based on religion and experience in using Wardah halal cosmetics.

Data Source

The data source used in this study is primary data distributed directly to students of the Islamic University of Malang through intermediary media (questionnaire).

Data Collection Methods

This study uses data collection methods through questionnaires. Researchers use a Likert measurement scale by providing 5 levels of answers to respondents to understand a person's opinion, perception or attitude.

4. Results

Validity Test

Table 1.1 Validity Test

Variabel	Item	R hitung	R tabel r tabel (df = 97, α = 0.05)	Sig.	Keputusan
Halal Knowledge (X1)	X1.1	387	197	< 0.001	Valid
	X1.2	360	197	< 0.001	Valid
	X1.3	472	197	< 0.001	Valid
	X1.4	429	197	< 0.001	Valid
	X1.5	587	197	< 0.001	Valid
Islamic Religiosity (X2)	X2.1	426	197	< 0.001	Valid
	X2.2	385	197	< 0.001	Valid
	X2.3	482	197	< 0.001	Valid
	X2.4	409	197	< 0.001	Valid
	X2.5	518	197	< 0.001	Valid
Attitude (X3)	X3.1	425	197	< 0.001	Valid
	X3.2	334	197	< 0.001	Valid
	X3.3	428	197	< 0.001	Valid
	X3.4	412	197	< 0.001	Valid
Keputusan Pembelian (Y)	Y1	573	197	< 0.001	Valid
	Y2	576	197	< 0.001	Valid
	Y3	653	197	< 0.001	Valid
	Y4	512	197	< 0.001	Valid

Data

Variabel	Cronbach's Alpha	Keputusan
Halal Knowledge (X1)	0,447	Reliable
Islamic Religiosity (X2)	0,470	Reliable
Attitude (X3)	0,167	Reliable
Keputusan Pembelian (Y)	0,345	Reliable

source: Output SPSS 27, 2025

The results of the validity test in the table above explain that the value of r count more on the variables Halal Knowledge, Islamic Religiosity, Attitude, towards purchasing decisions is greater than the value of r table where these results explain that all question items are declared valid.

Reliability Test

Table 1.2 Reliability Test

Data source: SPSS 27 output, 2025

Based on the table of reliability test results, the four variables tested, namely Halal Knowledge (X1), Islamic Religiosity (X2), Attitude (X3), and Purchase Decision (Y), show the Cronbach's Alpha coefficient above 0.60. This indicates that all of these variables are reliable.

Normality Test Results

The normality test using the One-Sample Kolmogorov-Smirnov method is carried out by referring to the value listed on the Asymp. Sig. (2-tailed). normality using the One-Sample Kolmogorov-Smirnov method is done by referring to the value listed on the Asymp. Sig. (2-tailed).

Table 1.3 Normality Test Results

One-Sample Kolmogorov-Smirnov Test			
			Unstandardized Residual
N			100
Normal Parameters[a,b]	Mean		,0000000
	Std. Deviation		1,15088574
Most Extreme Differences	Absolute		,076
	Positive		,069
	Negative		-,076
Test Statistic			,076
Asymp. Sig. (2-tailed)[c]			,170
Monte Carlo Sig. (2-tailed)[d]	Sig.		,168
	99% Confidence Interval	Lower Bound	,158
		Upper Bound	,177
a. Test distribution is Normal.			
b. Calculated from data.			
c. Lilliefors Significance Correction.			
d. Lilliefors' method based on 10000 Monte Carlo samples with starting seed 1314643744.			

Data source: SPSS output 27, 2025

Based on table 3, it can be concluded that the data shows normal distribution. Evidenced by the variable significance value of more than 0.05.

Classical Assumption Test Results

Multicollinearity Test

The multicollinearity test is carried out to analyze the tolerance value and variance inflation factor (VIF).

Table 1.4 Multicollinearity Test Results

Variable	**Tolerance**	**VIF**	**Decision**

Halal Knowladge(X1)	0,578	1,730	Multicollinearity Free
Islamic Religiosity(X2)	0,518	1,931	Multicollinearity Free
Attitude(X3)	0,497	2,011	Multicollinearity Free

Data source : Result of *Output* SPSS 27, 2025

From table 4, it can be concluded that there is no multicollinearity between each independent variable, because the tolerance value is above 0.01 and the VIF value is less than 10.

Heteroscedasticity Test

The heteroscedasticity test aims to identify the existence of inequality of residual variants between one observation and another. In this study, the test used is the Glejser Test.

Table 1.5 Heteroscedasticity Test Results

Variable	t	Sig	Decision
Halal Knowladge(X1)	0,169	0,866	Heteroscedasticity Free
Islamic Religiosity(X2)	-1,677	0,097	Heteroscedasticity Free
Attitude(X3)	1,345	0,182	Heteroscedasticity Free

Data source: SPSS 27 Output Results, 2025

Based on table 6, the results of the heteroscedasticity test show that the significance value for each variable is greater than α> 0.05. The significance value for Halal Knowledge is recorded at 0.886 for Islamic Religiosity 0.97, Attitude is 0.182, Thus, it can be concluded that the regression equation model does not experience heteroscedasticity problems.

Multiple Linear Regression Analysis Results

The purpose of this test is to identify the effect of the independent variables (Halal Knowledge, Islamic Religiosity, and Attitude) on the dependent variable (Purchase Decision), both individually and as a whole.

Table 1.6 Multiple Linear Regression Analysis Results

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	5,915	1,750		3,379	,001
	Halal Knowladge(X1)	,021	,079	,029	,266	,790
	Islamic Religiosity(X2)	,374	,092	,464	4,089	,000
	Attitude(X3)	,179	,129	,161	1,390	,168
a. Dependent Variable: Keputusan Pembelian (Y)						

Data source: SPSS 27 Output Results, 2025

The research results in table 7 show that Halal Knowledge (X1) does not have a significant effect on purchasing decisions (Sig = 0.790> 0.05), indicating a knowledge-behavior gap. Although consumers have a good understanding of halal, this does not directly influence their purchasing decisions. Decisions are more influenced by other factors such as environment and habits.

In contrast, Islamic Religiosity (X2) has a significant influence on purchasing decisions with a coefficient of 0.374 and Sig < 0.001. This result shows that the higher a person's level

of religiosity, the more likely they are to buy halal cosmetics. This finding supports the Planned Behavior theory (TPB) that subjective norms and individual beliefs play an important role in purchasing decisions.

Attitude (X3) has a positive but insignificant effect (Sig = 0.168 > 0.05). This shows that although a positive attitude towards halal cosmetics exists, purchasing decisions are still influenced by external factors such as price, quality, and brand preference.

Overall, this study indicates that religiosity is more dominant than halal knowledge and attitude in influencing purchasing decisions for halal cosmetics among Generation Z. The marketing strategy for halal cosmetics should emphasize the religiosity aspect to increase the attractiveness for consumers with high religious awareness.

Hypothesis Test Results

F Test Results (Simultaneous Test)

The F-test is an estimation procedure used to assess whether the independent variables in a regression model simultaneously have a significant effect on the dependent variable.

Table 1.7 F Test Results (Simultaneous Test)

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	73,871	3	24,624	18,027	,000[b]
	Residual	131,129	96	1,366		
	Total	205,000	99			
a. Dependent Variable: Keputusan Pembelian (Y)						
b. Predictors: (Constant), Attitude(X3), Halal Knowladge(X1), Islamic Religiosity(X2)						

Data source: SPSS Output 27, 2025

Based on table 1.7, it can be concluded that the results of this test can be seen in Table 8. Where the calculated F value = 18,027 with Sig. <0.001 indicates that the regression model as a whole is significant in predicting halal cosmetic purchasing decisions.

Where this shows that the variables Halal Knowledge, Islamic Religiosity, and Attitude together have a significant effect on purchasing decisions for halal cosmetics.

The results of the t test (Partial Test)

Table 1.8 The results of the t test (Partial Test)

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	5,915	1,750		3,379	,001
	Halal Knowladge(X1)	,021	,079	,029	,266	,790
	Islamic Religiosity(X2)	,374	,092	,464	4,089	,000
	Attitude(X3)	,179	,129	,161	1,390	,168
a. Dependent Variable: Keputusan Pembelian (Y)						

Data source: SPSS 27 Output Results, 2025

The t test results above show that:

a) Halal Knowledge (X_1) The t test results show that Halal Knowledge has no significant effect on purchasing decisions (t = 0.266; Sig = 0.790> 0.05), so H_1 is rejected.
b) Islamic Religiosity (X_2) Islamic Religiosity has a positive and significant effect on

purchasing decisions (t = 4.089; Sig <0.001), so H_2 is accepted.
Attitude (X_3) Attitude has no significant effect on purchasing decisions (t = 1.390; Sig = 0.168> 0.05), so H_3 is rejected.
Results of the Coefficient of Determination (R^2)
The coefficient of determination (R Square) is an estimation method used to measure how much variation in the dependent variable can be explained by the independent variables.

Table 1.9 Test Results of the Coefficient of Determination (R^2)

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,600[a]	,360	,340	1,169
a. Predictors: (Constant), Attitude(X3), Halal Knowladge(X1), Islamic Religiosity(X2)				

Data source: SPSS 27 Output Results, 2025

Based on table 1.9, the R Square value is recorded at 0.360. which means that 36% of the variation in halal cosmetic purchasing decisions can be explained by the Halal Knowledge, Islamic Religiosity, and Attitude variables. The remaining 64% is influenced by other factors not included in this research model.
The Influence of Halal Knowledge on Halal Cosmetics Purchasing Decisions Halal Cosmetics Purchasing Decisions Among Generation Z at the Islamic University of Malang

The results showed that the Halal Knowledge variable in this study has a coefficient value of 0.021 with a significance value of 0.790 (>0.05), which indicates that this variable has no significant effect on purchasing decisions for halal cosmetics.

These results are in line with research (Arsad, 2023) which states that most Muslim consumers better understand the concept of halal in the context of food compared to cosmetics.

The Influence of Islamic Religiosity on Halal Cosmetics Purchasing Decisions Halal Cosmetics Purchasing Decisions Among Generation Z at the Islamic University of Malang

The results showed that Islamic Religiosity has a significant influence on purchasing decisions for halal cosmetics, as the results of multiple regression analysis show that the Islamic Religiosity variable (X1) has a positive and significant effect on Purchasing Decisions (Y). This shows that the higher a person's level of religiosity, the greater their tendency to choose halal cosmetic products. Consumers with a high level of religiosity are more careful in choosing the products they use and tend to ensure that the cosmetics they buy are in accordance with sharia principles.

This purchasing decision can be influenced by the awareness that the use of halal products is not only limited to food and beverages, but also includes body care products such as cosmetics. This finding is consistent with the study by (Sukma and Cahyono 2021) which states that religiosity has a positive influence on purchasing decisions for halal products.

The Influence of Attitude on Halal Cosmetics Purchasing Decisions Halal Cosmetics Purchasing Decisions Among Generation Z at the Islamic University of Malang

The results showed that Attitude did not have a significant influence on purchasing decisions, as the results of multiple regression analysis showed Attitude, this shows that even though someone has a positive attitude towards halal cosmetics, this does not always materialize in the form of concrete actions in the form of purchasing decisions. A good attitude towards a product does not necessarily encourage consumers to choose that product, because purchasing decisions are often influenced by various other factors such as price, promo, quality,

product availability, and the habit of using certain brands. This result is different from research by (Nisa & Ridlwan, 2022) which found that attitude has a significant effect on purchase intention of halal cosmetics. This difference may be due to other factors such as price, quality, product availability, and the habit of using certain brands that are more dominant in influencing purchasing decisions.

5. Conclusions And Suggestions

5.1. Conclusions

Based on the results of the research that has been conducted, it can be concluded as follows:

1. Halal Knowledge does not have a significant influence on purchasing decisions for Wardah Brand halal cosmetics among Generation Z at the Islamic University of Malang.
2. Islamic Religiosity has a significant influence on purchasing decisions for Wardah Brand halal cosmetics among Generation Z at the Islamic University of Malang.
3. Attitude does not have a significant influence on the decision to purchase Wardah Brand halal cosmetics among Generation Z at the Islamic University of Malang.Operational Burden.

5.2. Limitation

1. This research was only conducted on student respondents at the Islamic University of Malang, so the results cannot necessarily be generalized to all Generation Z in Indonesia or other community groups with different characteristics.
2. This study only examines the influence of Halal Knowledge, Islamic Religiosity, and Attitude, whereas there are other factors that may have more influence on purchasing decisions for halal cosmetics, such as price, product quality, market trends, or recommendations from influencers.
3. There are limitations when using questionnaires, namely that sometimes the answers given by respondents do not match the actual situation.
4. Only 34% of the variation in purchasing decisions for halal cosmetics can be explained by the variables Halal Knowledge, Islamic Religiosity, and Attitude. The remaining 66% is influenced by other factors that are not included in this research model.

5.3. Suggestion

1. Future research should involve respondents from various universities or wider community groups so that the research results can be more generalized and reflect more diverse consumer preferences.
2. To get more comprehensive results, future research can add other variables that may have more influence on purchasing decisions for halal cosmetics, such as price, product quality, and market trends.

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THE INFLUENCE OF INTELLECTUAL CAPITAL ON FINANCIAL PERFORMANCE: EVIDENCE FROM FINANCE COMPANIES IN THE HOLDING AND INVESTMENT SUB-SECTORS LISTED ON THE INDONESIA STOCK EXCHANGE 2019-2023 PERIOD

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Abstract

The good or bad condition of a company's financial performance, aside from being evaluated from the ability to manage its tangible assets, is also determined by intangible assets or intellectual capital. This study aims to analyze the influence of Intellectual Capital on financial performance of finance companies in the holding and investment sub-sector listed on the IDX during the 2019-2023 period as the main subject. Research method used is descriptive quantitative, with the population involved in this study is 19 companies. Furthermore, to obtain the required data, the sampling technique was conducted by using purposive sampling technique and obtained as many as 16 companies or 80 data that will be analyzed in this study. Results found, partially Value added capital employed, Structure Capital Value Added, and Value Added Human Capital have a significant positive influence on company performance, while the Value Added Intellectual Capital has a significant negative impact. Simultaneously Value added capital employed, Structure Capital Value Added, Value Added Human Capital, and Value Added Intellectual Capital have a significant positive influence on financial performance.

Keywords: Value Added Capital Employed, Structure Capital Value Added, Value Added Human Capital, Value Added Intellectual Capital, Financial Performance

1. Introduction

The development of technology has made many businesses strive to get shareholders' attention, which makes financial reports become more crucial due to its importance in decision-making, which is assessed based on the business's capability to earn profit. Study discovered that good or bad company performance is not only determined by its tangible assets but also by the intangible assets, especially intellectual capital (Andika & Dewi Astini, 2022; T. K. Dewi & Wirakusuma, 2018). Intellectual capital is a valuable company asset in current business practices. Intellectual Capital is a concept of resources based on intangible assets and is optimally utilized to perform the company's strategy effectively and efficiently, in order to be used as a corporate competency tool to enhance their competitiveness (T. K. Dewi & Wirakusuma, 2018). In Resource-Based Theory (RBT) perspective, if a company could optimize their resources, the company would have a strong competitive advantage and competitiveness against their competitors (Krivorotov et al., 2020).

Intellectual capital may create a company's wealth (financial performance improvement). In Indonesia, intellectual capital began to develop after the issuance of the Financial Accounting Standard Guidelines (PSAK) No. 19 regarding intangible assets. Based on PSAK No. 19 revised 2009, a business engaged in goods and services still requires high intellectual capital for administration and management purposes (PSAK No. 19 Year 2009). Intellectual capital is classified as a unique asset which is able to stimulate and create a competitive advantage for the company, which in turn provides added value to the company (E. Sukmana & Azizah, 2024). Intellectual capital is classified as intangible assets, in which intangible assets have its own advantages compared to tangible assets, among them are intangible assets have a

longer economic life and it can be renewed (Prasetio in Sukmana & Fitria, 2019). Therefore, intellectual capital has to be a particular concern, despite the fact that this is not stated explicitly (Wahyuni et al., 2023). However, direct measurement of intellectual capital is not feasible, Pulic (2000, 2004) has suggested to assess the efficiency of Value Added Intellectual Capital (VAIC), which is measured based on the company's intellectual capabilities.

The relationship between VAIC™ and financial performance has been proven empirically in various studies (Chen et al., 2020; Firer & Mitchell Williams, 2023; Kurniawan & Muslichah, 2019). Kurniawan & Muslichah (2019) discovered that intellectual capital has an impact on the company's financial performance, creating company value supported with good and efficient intellectual capital will assist the company in carrying out its business activities. However, contradicting with these findings, Dewi & Wirakusuma (2018) found that intellectual capital has no effect on the company's financial performance. Similar results were found by Pratiwi & Sudarso (2016) which found that intellectual capital has no effect on the company's financial performance, Intellectual Capital disclosures are still low and there are no standards related to the measurement and disclosure of Intellectual Capital in Indonesia which causes the public or investors to be unable in making the right judgment regarding the company's Intellectual Capital growth rate.

The occurrence of empirical research gaps has encouraged this study's urgency . This study tries to exploring whether intellectual capital can affect financial performance by taking finance companies in the holding and investment subsector listed on the Indonesia Stock Exchange for the 2019-2023 period as a case study.

2. Literature review

5.23. Resource Based Theory

Resource based theory is a theory that explained how the company's work ideally functions when it has a good competitive advantage and allows it to obtain value-added (Putri et al., 2023). Ulum (2022) describes that the company achieves a competitive advantage and achieves better performance due to the success of properly managing assets in the form of physical assets or intangible assets that have been created, owned, and utilized by the corporation to maintain a competitive strategy and gain profits.

Intangible assets can be viewed as strategic assets that provide a long-term competitive advantage to the business. These factors include having intrinsic value to the business, difficult to imitate by other businesses to increase profits, rarity (only a few companies have it), and difficulty to substitute so it cannot be replaced by products from other companies, which one of them is intellectual capital (Zamah & Rahayu, 2019).

Resource-based theory basically assesses resources owned by the organization as well as managing and utilizing these resources. Companies can achieve greater value and improve their financial performance with better usage of intellectual capital.

5.24. Intellectual Capital

Pulic (2004) argues that intellectual capital is a resource which is not in the form of cash and covers different assets, covering processes or technology that can be used to generate additional revenue for the business, stronger customer relationships, knowledge, experience, and skills related to employee competencies. Putri et al., (2023) believes that intellectual capital is an asset that has no form and is a combination of human, process, consume that can provide a competitive advantage to the organization.

Arifin (2020) states that intellectual capital is the empowerment of knowledge sources that are very instrumental in providing value added to the organization both physically and financially visible, but it cannot be reflected in the financial statements. Therefore, there is a need for a solution to measure and report the company's intellectual capital, and how

intellectual capital gives the idea of Value Added Intellectual Capital Coefficient (VAIC™) can be developed.

Value Added Intellectual Capital (VAIC™) coefficient model can be calculated using the following formula to determine the contribution of each resource participant in achieving value added (Pulic, 2000):

a) Value Added Capital Employed (VACA)
Value added capital employed (VACA) is an indicator to measure capital efficiency.

$$VACA = \frac{VA}{CA} \quad (2.1)$$

Description :
VACA : *Value Added Capital Employed*
VA : *Value Added*
CA : *Capital Employed* (equity, net profit)

b) Value Added Human Capital (VAHU)
Value Added Human Capital (VAHU) is an indicator to measure labor efficiency:

$$VAHU = \frac{VA}{HC} \quad (2.2)$$

Description :
VAHU : *Value Added Human Capital*
VA : *Value Added*
HC : *Human Capital* (Employee Expenses)

c) Stucture Capital Value Added (STVA)
Structure Capital Value Added (STVA) is an indicator used to measure the efficiency of structural capital (organization, process and technology).

$$STVA = \frac{SC}{VA} \quad (2.3)$$

Description :
STVA : *Structure Capital Value Added*
SC : *Structure Capital* (VA-HC)
VA : *Value Added*

d) Value Added Intellectual Capital (VAIC^{TM})
Value Added Intellectual Capital can indicate the intellectual capital capability of a company which or can indicate BPI (*Business Performance Index*).

$$VAIC^{TM} = VACA + VAHU + STVA \quad (2.4)$$

Description :
VAIC^{TM} : *Value Added Intellectual Capital*
VACA : *Value added capital employed*
VAHU : *Value Added Human Capital*
STVA : *Structure Capital Value Added*

5.25. Financial Performance

Company financial performance is a way to assess how an entity has grown by following the principles of financial implementation accurately and appropriately. According to Dewi & Rahayu (2020) company financial performance is aimed at ensuring that the company can conduct evaluations and improve operational activities in order to compete with other companies. Furthermore, it also aims to show investors or anyone concerned that the company is credible. The assessment of company performance is a crucial, as it can determine the extent of the company's success in a certain period.

Kesaulya & Christina (2019) state that financial performance has the result of being evaluated by the company in the future. Profitability analysis enhances the evaluation of a

company in utilizing profits and the effectiveness of company management, considering the company's main goal is to make a profit. Return on Asset is a ratio that shows returns earned on all assets utilized. Return on Asset reflects the profitability of the business along with the efficiency of the company when using resources to create profit. Destiani & Hendriyani (2021) also gave the same explanation that ROA reflects the company's ability to generate profits by utilizing and managing its total assets. ROA can be calculated in the following way

$$ROA = \frac{Laba\ Bersih}{Total\ Aset} x100\% \quad (2.5)$$

.

3. Methodology

This study utilizes a quantitative descriptive approach to assess research variables with numbers which aim to prove the hypothesis. The objects in this study are Finance companies in the Holding and Investment sub-sector listed on the Indonesia Stock Exchange during the 2019-2023 observation period, which amounted to 19 companies. In order to obtain data that suits the research requirements, this study uses purposive-sampling techniques and obtains as many as 16 companies with the total data that will be used is 80 data. In addition, to answer the hypothesis proposed, this study conducted multiple linear regression analysis.

4. Results and discussions

4.1. Results

After conducting data collection, it will be analyzed through statistical testing using IBM SPSS Version 26 and Microsoft Excel.

Descriptive Statistic

Descriptive statistics is used to identify the minimum, maximum, mean, and standard deviation values of the data obtained. Descriptive statistics results in this study are presented in Table 1:

Tabel 10. Descriptive Statistics

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
VACA	80	-1.17	1.09	.0818	.24805
VAHU	80	-88.52	355.67	9.9495	55.15801
STVA	80	-14.06	4.47	.2157	2.44803
VAIC	80	-87.85	357.36	10.2470	55.42536
ROA	80	-8.90	8.29	-.0333	1.39018
Valid N (listwise)	80				

Source: Data Processed, 2025

Among the 80 data collected, there is a large variation in each of the variables. VACA variable has an mean value of 0.0818 with a standard deviation of 24.805, which indicates a very widespread distribution of data (min: -1.17; max: 1.09). VAHU and VAIC recorded extreme dispersion: VAHU had a min value ranging from-88.52 to max 355.67 (mean: 9.95; SD: 55.16), while VAIC's min value was in the range of -87.85 to max 357.36 (mean: 10.25; SD: 55.43). STVA shows the highest average (2.157) with a relatively low standard deviation (2.45), although it has a negative minimum value (-14.06). ROA recorded a negative mean (-0.0333) and standard deviation of 1.39, reflecting the instability of the sample's financial performance (min: -8.90; max: 8.29).

Classical Assumption Test

The classic assumption test is a condition for regression analysis and hypothesis testing, which includes normality test, multicollinearity test, heteroscedasticity test and autocorrelation test.

Normality Test

In this study, normality test is evaluated using the One-Sample Kolmogorov-Smirnov method, where if the obtained sig. value is > 0.5, the data can be assumed to be normally distributed. Normality test result is presented in Table 2.

Tabel 11. Normality Test Result

One-Sample Kolmogorov-Smirnov Test		
		Unstandardized Residual
N		52
Normal Parameters[a,b]	Mean	.0000000
	Std. Deviation	.19717806
Most Extreme Differences	Absolute	.098
	Positive	.070
	Negative	-.098
Test Statistic		.098
Asymp. Sig. (2-tailed)		.200[c,d]
a. Test distribution is Normal.		
b. Calculated from data.		
c. Lilliefors Significance Correction.		
d. This is a lower bound of the true significance.		

Source: Data Processed, 2025

Normality test results obtained a significance value (0.200) > 0.05, therefore it can be decided that the normality assumption is fulfilled.

Multicollinearity Test

Multicollinearity test aimed to check if there is a correlation between independent variables in the regression model. If a correlation between independent variables occurs, it is called a multicollinearity, or problem. Multicollinearity is considered a problem if VIF> 10 and tolerance value <0.10. The multicollinearity test results are presented in Table 3.

Table 12. Multicollinearity Test Result

Coefficients[a]								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-.053	.088		-.601	.551		
	Value added capital employed	.407	.115	.406	3.554	.001	.753	1.329
	Value Added Human Capital	.794	.210	.794	3.786	.000	.224	4.469
	Structure Capital Value Added	.568	.197	.569	2.890	.006	.254	3.930
	Value Added Intellectual Capital	-.663	.293	-.663	-2.266	.028	.115	8.706
a. Dependent Variable: Return on Asset								

Source: Data Processed, 2025

Multicollinearity test results, indicate that technically the results still fulfill the non-multicollinearity assumption with VIF values on each variable < 10 and tolerance > 0.10. So it can be decided if there is no multicollinearity.

Heteroscedasticity test

Heteroscedasticity test is aimed to examine if there is an inequality of variance in the regression model from the residuals of one observation to another. In this study heteroscedasticity test is assessed by utilizing scatterplot diagram, the results of heteroscedasticity test are presented in Figure 1.

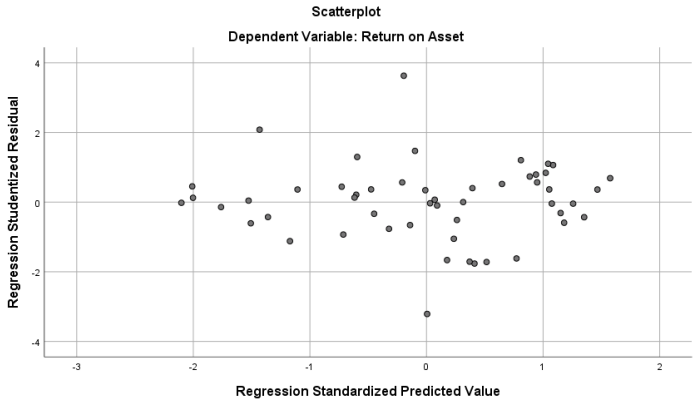

Figure 1. Scatterplot

Source: Data Processed, 2025

Scatterplot diagrams between standardized predicted values and standardized residuals display a random pattern of data points distribution and does not create a certain pattern (such as expanding, narrowing, or wavy) around the horizontal axis. The residual distribution tends to stabilize around the zero line with no systematic increase or spread of variance as the predicted value increases. This random pattern indicates that the assumption of homoscedasticity is fulfilled, which means that the residual error variance is constant between observations.

Autocorrelation Test

Autocorrelation test aimed to examine if there is a correlation between the error of confounders in period t and errors in period t-1 (previous) in a regression model. In detecting the presence or absence of autocorrelation, Durbin-Watson (DW) testing method is used by comparing Durbin-Watson (DW) calculations with Durbin-Watson (DW) table (dU). A good DurbinWatson (DW) result is a score of dU < d < 4-dU. The results of autocorrelation test are presented in Table 4.

Table 13. Autocorrelation Test

Model Summary[b]					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.733[a]	.537	.498	.2053973	1.416
a. Predictors: (Constant), *Value Added Intellectual Capital*, *Value added capital employed*, *Structure Capital Value Added*, *Value Added Human Capital*					
b. Dependent Variable: Return on Asset					

Source: Data Processed, 2025

According to autocorrelation tests results, the Durbin-Watson value is 1.416. Then the lower bound value (dU) is 1.4000 and upper bound value (dL) is 1.7228. Therefore, it can be concluded that if there is no autocorrelation problem (1.4000 < 1.416 < 2.6000) or (dU < d < 4-dU), then the data is ready for the next test.

Multiple Regression Analysis

Regression analysis has been used to examine the causality between independent and dependent variables, the results of multiple linear regression analysis are presented in Table 5.

Tabel 14. Multiple Regression Analysis

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.053	.088		-.601	.551
	Value added capital employed	.407	.115	.406	3.554	.001
	Value Added Human Capital	.794	.210	.794	3.786	.000
	Structure Capital Value Added	.568	.197	.569	2.890	.006
	Value Added Intellectual Capital	-.663	.293	-.663	-2.266	.028
a. Dependent Variable: Return on Asset						

Source: Data Processed, 2025

From these results, the following equation is obtained:

$$Y = -0{,}053 + 0.407 + 0.794 + 0.568 - 0.663 \quad (4.1)$$

1. Constant value -0.053 indicates that if Value Added Capital Employed, Value Added Human Capital, Structure Capital Value Added and Value Added Intellectual Capital is 0, then financial performance will be -0.053.
2. Coefficient Value added capital employed is 0.407 which has a positive value, which means that if there is an increase in Value added capital employed, it will increase financial performance by 0.407.
3. Coefficient of Value Added Human Capital is 0.794 with positive value, which means that if there is an increase in Value Added Human Capital, it will increase financial performance by 0.794.
4. Coefficient of Structure Capital Value Added is 0.568 which has a positive value, which means that if there is an increase in Structure Capital Value Added, it will increase financial performance by 0.568.
5. Coefficient of Value Added Intellectual Capital is -0.663 which has a negative value, which means that if there is an increase in Value Added Intellectual Capital, it will reduce financial performance by -0.663.

Coefficient Determination Analysis

Coefficient determination analysis is used to determine the effect of the independent variable on the dependent variable, the coefficient determination test is presented in Table 6.

Tabel 15. Coefficient Determination

Model Summary[b]				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.733[a]	.537	.498	.2053973

a. Predictors: (Constant), *Value Added Intellectual Capital*, *Value added capital employed*, *Structure Capital Value Added*, *Value Added Human Capital*
b. Dependent Variable: Return on Asset

Source: Data Processed, 2025

From the results of coefficient determination analysis, Value added capital employed, Structure Capital Value Added, Value Added Human Capital, and Value Added Intellectual Capital are capable of explaining 53.7% of Return on Asset (ROA) variation, as represented by the R Square value 0.537. Adjusted by the number of predictors and sample size, an Adjusted R Square value 0.498 indicates that statistically, this model explains about 49.8% of the variability in ROA after considering degrees of freedom. The R value (multiple correlation coefficient) of 0.733 indicates a strong relationship between all independent variables together on the dependent variable.

Hypothesis Testing

In order to discover the influence of the independent variables analyzed in this study on the dependent variable, hypothesis testing is carried out which is evaluated by t-test and f-test.

T test

The t test is carried out to assess whether there is a significant effect of the independent variable on the dependent variable. The results of the t test are presented below

Tabel 16. t-test

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.053	.088		-.601	.551
	Value added capital employed	.407	.115	.406	3.554	.001
	Value Added Human Capital	.794	.210	.794	3.786	.000
	Structure Capital Value Added	.568	.197	.569	2.890	.006
	Value Added Intellectual Capital	-.663	.293	-.663	-2.266	.028
a. Dependent Variable: Return on Asset						

Source: Data Processed, 2025

Table 7 presents the results of partial hypothesis testing, with the results listed as follows:

1. Value Added Capital Employed has a significant positive effect on Financial Performance, which is proven with a sig. value 0.001 (0.001 <0.05) and a t-statistic 0.554 with a positive value.
2. Value Added Human Capital has a significant positive effect on Financial Performance, which is proven with a sig. value of 0.000 (0.000 <0.05) and a t-statistic 3.786 with a positive value.
3. Structure Capital Value Added has a significant positive effect on Financial Performance, which is proven by a sig. value 0.006 (0.006 <0.05) and a t-statistic of 2.890 which has a positive value.
4. Value Added Intellectual Capital has a significant negative effect on Financial Performance, which is proven by the sig. value of 0.028 (0.028 <0.05) and a t-statistic value -2.266 which has a negative value.

F test

The f test is conducted to assess the effect of all independent variables on dependent variables simultaneously. The results of the f test are presented in Table 8.

Tabel 17. F-test

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.302	4	.576	13.642	.000[b]
	Residual	1.983	47	.042		
	Total	4.285	51			
a. Dependent Variable: Return on Asset						
b. Predictors: (Constant), *Value Added Intellectual Capital* , *Value added capital employed* , *Structure Capital Value Added* , *Value Added Human Capital*						

Source: Data Processed, 2025

Table 8 presents the results of f -test which indicate that there is a positive and significant effect of Value Added Intellectual Capital, Value Added Capital Employed, Structure Capital Value Added, and Value Added Human Capital on financial performance simultaneously, as proven by the acquisition of sig. 0.000 and f-statistic value 13.642 with a positive value.

4.2. Discussion

Value Added Capital Employed Influence on Financial Performance

Value Added Capital Employed has a significant positive influence on financial performance, value added capital employed represented the amount of added value produced by the use of company's physical capital. These findings are aligned with resource-based theory which states that efficiently managed capital is a source of sustainable competitive advantage (Nimtrakoon, 2015). Knowledge and information possessed by employees can create value-added efficiency to create corporate wealth in form of physical capital. Physical capital utilization is essential to achieve profitability, without physical capital a company will not be able to carry out its operational activities (Arifin, 2020). Sukmana & Fitria (2019) believes that a company that is capable of maximizing relationships between companies and their partners could be used to enhance financial performance.

Value Added Human Capital Influence on Financial Performance

Value added human capital has a significant positive effect on financial performance, because knowledge, competence and expertise in the human capital component are able to encourage companies to create innovation. Well-developed human capital would provide a solution to every problem faced by the company. This finding is consistent with Arifin (2020), where human capital is a very important element for the company. Knowledge, competence and expertise attached to the human capital can encourage companies to create innovation. Zamah & Rahayu (2019) further explained that the ability of human resources to create innovation in physical capital owned by the company to generate wealth for the company will influence cost management so that the production and operational activities are carried out efficiently and eventually enhance financial performance. But in contrast to Jayanti & Binastuti (2017) findings, which argue that VAHU has not been able to influence financial performance because companies spend funds on employees but are not equivalent to the value added obtained.

Structure Capital Value Added Influence on Financial Performance

Structure Capital Value Added affects financial performance, which means that structural capital efficiency is able to improve the company's profit-making skills. This indicates that strengthening the management and utilization of structural capital can increase the added value

and financial performance of the company. The results are in line with research conducted by (Arifin, 2020; R. J. Sukmana & Fitria, 2019; Zamah & Rahayu, 2019) which found that structural capital value added affects financial performance. If resources is effectively managed would be able to create its own value so that the company has a competitive advantage to achieve profitability (Arifin, 2020). But this research is in contrast to the research of Azahra & Gustyana (2020), which states that STVA is not capable of improving financial performance in companies.

Value Added Intellectual Capital Influence on Financial Performance

Study findings showed that intellectual capital has a significant negative effect on financial performance. The higher intellectual capital value, the more efficient capital utilization of the company, which creates value added for the company. However, Pratiwi & Sudarso (2016) believe that this finding occurs due to the low level of intellectual capital disclosure and the absence of standards for intellectual capital disclosure or measurement in Indonesia. As a result, the public or investors are not yet capable of accurately assessing intellectual capital. Therefore, the measurement of relationship between intellectual capital and financial performance in the future remains uncertain.

Value Added Capital, Value Added Human Capital, Employed Influence, Structure Capital Value Added Influence, and Value Added Intellectual Capital on Financial Performance

Findings revealed that simultaneously Value added capital employed, Structure Capital Value Added, Value Added Human Capital, and Value Added Intellectual Capital have a significant positive effect on financial performance. This study also discovered if Value added capital employed, Structure Capital Value Added, Value Added Human Capital, and Value Added Intellectual Capital are able to explain 53.7% of the financial performance of the finance sector of the holding and investment sub-sector in Indonesia. This condition may occur due to the fact that in the financial industry, capability which includes risk analysis and portfolio management has its roots in intangible assets. A company with knowledgeable employees has an advantage in terms of innovation, and excellent reputation, which is essential, that will encourage more people to spend more and invest more (Ni et al., 2021).

5. Conclusion

Research conducted on holding and investment companies listed on IDX 2019-2023 period, Partially, Value Added Capital Employed (VACA), Structural Capital Value Added (STVA), and Value Added Human Capital (VAHU) proved to have a significant positive effect, in line with the principle of Resource-Based Theory which emphasizes valuable, rare, and inimitable resources as pillars of competitive advantage. However, a surprising finding occurs in Value Added Intellectual Capital (VAIC) which has a significant negative effect partially, which indicates that the high cost of IC development does not automatically lead to direct conversion into short-term profitability, especially if there is an imbalance in allocation between its components or miscoordination between human capital and supporting infrastructure. Therefore, companies need to balance resource allocation, strengthen knowledge management systems, and utilize VAIC as a diagnostic tool, rather than just a performance metric, in order to achieve sustainable competitive advantage.

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THE EFFECT OF PERCEIVED USEFULLNESS AND PERCEIVED SAFETY OF SYSTEM ACCOUNTING ON INTENTION TO ADOPT DIGITAL PAYMENT IN CIMAHI CITY SMES

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Abstract

Indonesia's digital financial transactions recorded rapid growth during the January-March 2022 period. According to a Bank Indonesia (BI) report, the value of electronic money transactions grew 42.06% in the first quarter of 2022. BI also estimates that the transaction value will grow 18.03% to IDR360 trillion throughout 2022 (Rahman, 2022). One of the factors driving the growth of Indonesia's digital economy is the digital payment system (Birny, 2022). Financial Technology (Fintech) is one of the innovations in financial services that can provide convenience to the public to facilitate transactions. The problem that is currently feared by fintech business actors is cybercrime. Losses from cybercrime are difficult to estimate and verify because in addition to financial losses, other losses due to damage, loss or leakage of private data cause a decline in the reputation of a company (B. Shekar & Prabha, 2020). The Kompas poll in January 2022 recorded that 67.8% of respondents had made transactions on online sites. Meanwhile, the results of a survey by the Indonesian Internet Service Providers Association (APJII) in June 2020 reported that 56.8% of respondents shopped online. Based on the results of the two studies, there is an increasing trend in transaction activities in the digital ecosystem. However, the payment method still leans towards conventional methods. The findings show that more than half of the respondents most often use cash payment methods. The majority use cash on delivery (COD). Fintech technology provides many benefits for business people, namely no need to look for change, transactions are recorded automatically, have data on income and expenses and can get many promos. But unfortunately, there are still some people who are reluctant to use fintech technology. The factors that cause this include convenience, security and lack of information on non-cash payments. The purpose of this study was to determine the effect of perceived usefullness and perceived safety of the accounting system on the intention to adopt digital payment in Cimahi City MSMEs partially and simultaneously. The research method used in this research uses descriptive analysis with quantitative methods. The object of research is MSMEs in Cimahi city, with the number of samples taken representing a population of 376 samples. The results of this study indicate that perceived usefullness and perceived safety of the accounting system affect the intention to adopt digital payment in Cimahi City MSMEs partially and simultaneously.

Keywords: Accounting information system, Fintech, purchase intention

1. Introduction

Indonesia's digital financial transactions recorded rapid growth during the January-March 2022 period. According to a Bank Indonesia (BI) report, the value of electronic money transactions grew 42.06% in the first quarter of 2022. BI also estimates that the transaction value will grow 18.03% to IDR360 trillion throughout 2022 (Rahman, 2022). One of the benefits obtained by making digital payments includes easier, faster payment transactions and

can reduce costs. A payment system is said to be efficient if it can minimise costs to benefit from a transaction.

One of the factors driving Indonesia's digital economic growth is the digital payment system (Birny, 2022). Quoting from the results of IDC research reveals that in 2025 there will be 125 million new e-wallet users, this number will make Indonesia the largest e-wallet user country in Southeast Asia (Birny, 2022). Professor of Finance Management, IPMI Business School, Roy Sembel said that digital inequality is an issue of global concern. One of the global issues that has become the world's concern besides environmental issues, is the issue of digital inequality. Digital inequality includes the inequality of people who own digital devices that can be assessed by equipment, autonomy of use, skills, social support and the purpose for which the technology is utilised, thus raising the possibility that new technology can create more inequality. It is hoped that the digital payment system will be able to reduce digital inequality.

Financial Technology (Fintech) is one of the innovations in financial services that can provide convenience to the public to facilitate transactions. Fintech is a technology-based industry that provides various financial services. There are several Financial Technology services such as digital payments, lending, financing, financial planning, investment.
Currently, with the Russian-Ukrainian war, the impact on the GDP and inflation of countries in the world is very pronounced. For this reason, efficiency is increasingly needed, one of which is digitalisation, including digitalisation of the payment system. Xendit's Head of Business Development, Nor Meydia emphasised the importance of digital payments for businesses. 'For B2C companies, this will bring businesses into a market that contains customers whose digital literacy is already very good and these are the 25-34 age group that accounts for more than 50% of online shopping,' she explained (Birny, 2022). (Martha Rahayu, 2022) revealed that the ease of checkout on websites and applications can encourage merchant sales conversion. The checkout feature innovation allows transaction information to be accessed completely and easily on one page, so consumers can save time to make payments on the merchant's website or application. This can potentially drive more sales conversions on the merchant side. In the last five years, Dea said Midtrans has shortened the time needed to complete online payments by 70% (Martha Rahayu, 2022).

The term 'digital payment' refers to a payment technique in which payment data and instructions are transmitted via a digital device, such as a mobile phone (Sahi et al., 2022). In Indonesia itself, there are several types of digital payments, one of which is e-wallet or digital wallet. Currently, many banks have launched their own version of digital wallets. Apart from banks, private companies have also launched their digital wallets, such as Gopay, OVO, DANA, Shoppee pay and so on (Dimas, 2022).

The Central Bureau of Statistics released e-commerce statistics for 2020 with quite interesting facts. People are increasingly fond of buying goods online, but most payments are made by cash on delivery (COD) or direct cash payments. One of the contributing factors, according to a researcher at the Centre for Indonesian Policy Studies, Thomas Dewaranu, is trust. People are not fully confident in digital money storage or transactions (VoA Indonesia, 2021). In rural areas, people are not comfortable with using digital payments such as e-wallets or even fintech because they do not have trust. Some people have concerns regarding information through television media regarding pinjol scams or through the radio (VoA Indonesia, 2021). In addition, the problem that fintech business players are currently concerned about is cybercrime. Losses from cybercrime are difficult to estimate and verify because in addition to financial losses, other losses due to damage, loss or leakage of private data cause a decline in the reputation of a company (B. Shekar & Prabha, 2020). As a result of cybercrime attacks, all countries in the world are affected, especially for countries that are still developing

in the field of information and communication technology, which is characterised by a dramatically increasing level of cybercrime (Kshetri, 2019).
A Kompas poll in January 2022 recorded that 67.8% of respondents had made transactions on online sites. Meanwhile, the results of a survey by the Indonesian Internet Service Providers Association (APJII) in June 2020 reported that 56.8% of respondents shopped online. Based on the results of the two studies, there is an increasing trend in transaction activities in the digital ecosystem. However, the payment method still leans towards conventional methods. The findings show that more than half of the respondents most often use cash payment methods. The majority use cash on delivery (COD) and a small proportion pay cash via Indomaret and Alfamart outlets. The factors of convenience, security and lack of information on non-cash payments are obstacles, therefore, payment digitalisation needs to be balanced with consumer literacy (Nugraheni, 2022).
Digital payment systems make economic processes better so that the government encourages micro, small and medium enterprises (MSMEs) to implement digital payment systems in their businesses. Moreover, the Deputy Governor of Bank Indonesia revealed that Financial Inclusion is a theme carried by developing countries in the G20, namely how to raise the level of marginalised groups affected by the pandemic to recover immediately and MSMEs are included in this group (Rosana, 2022).

2. Literature review

2.1 Digital Payment

Digital payment or referred to as digital payment is a type of payment that uses electronic media such as sms banking, internet banking, mobile banking and electronic wallets. All of these activities can be done using only electronic devices, namely smart phones (Saputra 2019). Currently, the use of digital payments has dominated generations X, Y, and Z. Transactions using digital are indeed fairly easy and practical, besides that another benefit of using transactions through digital payments is the promotions obtained such as cashback, and discounts (Houston 2020). Digital Payment is a representative of all non-cash payments, which are also defined as electronic payment transactions between buyers and sellers using savings accounts via the internet or electronic networks.

2.2 Perceived Usefulness

Perceived usefulness is defined as the extent to which a person believes that using a technology will improve their job performance. From this definition, it is known that perceived usefulness is a belief about the decision-making process. Thus, if someone believes in a useful information system, he will use it. Conversely, if someone believes that the information system is less useful then he will not use it. Previous studies have shown that the construct of perceived usefulness has a positive and significant effect on interest in using information systems (e.g. Davis, 1989; Chau, 1996; Igbaria et al., 1997; Sun, 2003). Previous studies also show that perceived usefulness is the most significant and important construct that influences attitude, behavioural intention and behaviour in using technology compared to other constructs.

H1 : Perceived usefulness affects intention to adopt digital payments
H1 : Perceived usefulness affects intention to adopt digital payments

2.3 Perceived safety of accounting system

An accounting information system is certainly not free from the risk of damage to the system. Various threats that come can damage the effectiveness of the system and can even

damage all existing data. Users certainly need a system that is comfortable and efficient to use. System security will encourage user interest in using the Accounting Information System because information security is believed to be able to provide benefits to system users. According to Titisari (2015), good and reliable technology is technology that is considered safe for its users. System security is part of system quality which will affect the satisfaction of accounting information system users. Perceived security can be measured through indicators, namely: not worrying about providing information, believing that information is protected, and believing that the security of money on electronic devices is guaranteed during transactions (Waspada, 2012). (Mudjiyanti, Kusbandiyah and Wardani, 2023) reveal perceived security measures the extent to which accounting information system users feel safe when using certain digital services.) In this study, perceived safety of the accounting system is defined as the perception of umkm entrepreneurs as users of accounting information systems to feel safe when using fintech services.

H2 : Perceived safety of the accounting system affects the intention to adopt digital payments

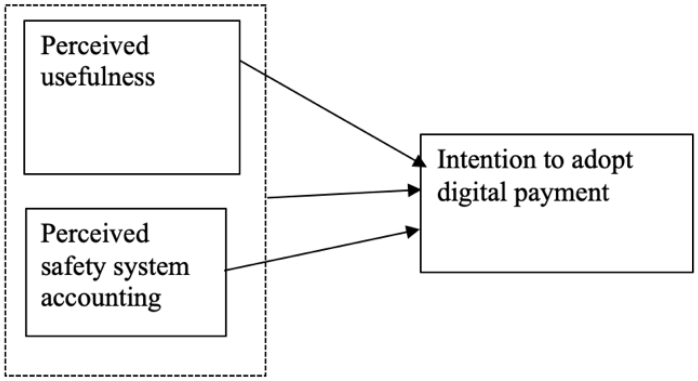
2.4 Intention to adopt digital payment

Intention is the desire to perform behaviour (Rehman et al., 2019). Ajzen (1991) reveals that intention is an important indicator of the extent to which individuals perform certain behaviours and how much effort from the individual to perform actual behaviour (Rehman et al., 2019). One study of consumers in Thailand concluded that intention to buy via the internet is influenced by attitude towards behaviour, subjective norms and perceived behavioural control (Laohapensang, 2009) and consumer purchases intention has a significant effect on consumer behaviour to buy online (Rehman et al., 2019). Several previous researchers have revealed that intention plays an important role in influencing consumers' actual behaviour to transact ((He et al., 2008); (Laohapensang, 2009); (Pavlou & Fygenson, 2006)). Based on the description above, it can be concluded that intention is the main factor that determines the behaviour of an individual. So it can be concluded that intention to adopt digital payment is the desire to use digital payments.

H3 : Perceived Usefulness and Perceived safety of the accounting system affect the intention to adopt digital payments.

3. Methodologyc

This type of research is descriptive analysis research and quantitative methods. Descriptive analysis is a statistic used to analyse data by describing or describing the data that has been collected as it is without intending to make general conclusions or generalisations. While quantitative methods are research methods for examining certain populations or samples, purposive sampling techniques, data collection using research instruments, statistical data analysis with the aim of testing predetermined hypotheses (Sugiyono, 2012). This research was conducted in Cimahi City. The research analysis unit was UMKM Cimahi City. The number of samples used in this study were 376 MSMEs in Cimahi city.



4. Results and Discussion

Descriptive Test Results

Based on the results of descriptive analysis of perceived usefullness variables, perceived safety system accounting, intention to adopt digital payment can be seen from the average score in the following table:

4.1 Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Perceived Usefullness	376	16	60	50,14	6,117
Perceived Safety System Accounting	376	9	45	37,09	5,082
Intention to Adopt Digital Payment	376	22	55	43,54	6,081
Valid N (listwise)	376				

The results of the analysis related to the variables of perceived usefulness, perceived safety system accounting, intention to adopt digital payment are as follows. The perceived usefulness variable has a fairly high average value, which is 50.14 from a maximum scale of 60, indicating that most respondents feel the system used is quite useful. The perceived safety system accounting variable has an average of 37.09 from a maximum scale of 45, indicating that respondents generally feel this system is quite safe. The intention to adopt digital payment variable has an average value of 43.54 from a maximum scale of 55, which indicates that most respondents have a high tendency to use digital payments. Based on the overall results, it can be concluded that among the three variables analysed, the perceived usefulness variable has a fairly high average value of 50.14, which shows that respondents believe that using a technology will improve their job performance. The variable that has the lowest average value among the variables perceived usefullness, perceived safety system accounting, intention to adopt digital payment is perceived safety system accounting. (Mudjiyanti, Kusbandiyah and Wardani, 2023) reveal perceived security measures the extent to which accounting information system users feel safe when using certain digital services. perceived safety system accounting has a low average value, this is because umkm business people feel that they still do not feel safe regarding personal data, especially financial data involved in business transactions using fintech which can be misused by irresponsible parties such as personal data theft. In addition, business people also still feel concerned about transactions that fail to be recorded due to internet network problems.

4.2 Hasil pengujian hipotesis

Tabel 1. Hasil uji T

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	4,804	1,919		2,503	,013
	Perceived Usefullness	,319	,041	,321	7,764	<,001
	Perceived Safety System Accounting	,613	,050	,512	12,376	<,001

a. Dependent Variable: Intention to Adopt Digital Payment

Tabel 2. Hasil uji F

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	7467,738	2	3733,869	217,623	<,001[b]
	Residual	6399,741	373	17,157		
	Total	13867,479	375			

a. Dependent Variable: Intention to Adopt Digital Payment
b. Predictors: (Constant), Perceived Safety System Accounting, Perceived Usefullness

Tabel 3. Hasil uji koefisien determinasi

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,734[a]	,539	,536	4,142

a. Predictors: (Constant), Perceived Safety System Accounting, Perceived Usefullness

Based on table 1, it can be concluded that the perceived usefulness and perceived safety system accounting variables affect the intention to adopt digital payment and Perceived Safety System Accounting has a greater influence (B = 0.613) than Perceived Usefulness (B = 0.319), which means that safety factors play a greater role in determining a person's intention to use digital payments. Based on table 2, it can be concluded that the significance value is <0.001, which shows that there is an influence between perceived usefulness and perceived safety of the accounting system on the intention to adopt digital payment. Based on table 3, it can be concluded that 53.9% of the variation in intention to adopt digital payment can be explained by the Perceived Usefulness and Perceived Safety System Accounting variables and the other 46.1% is explained by other factors not examined in this study such as discounts, promotions, perceived ease of use and others.

4.3 Discussion

Based on the results of hypothesis testing (H1) that has been carried out, the results of Perceived Usefulness have a significant effect on intention to adopt digital payment. This can be seen from the sig value <0.001. The magnitude of the effect of perceived usefulness on intention to adopt digital payment is 31.9%. The results of this study are in line with the results of previous research, namely research by Davis, 1989; Chau, 1996; Igbaria et al., 1997; Sun, 2003. Previous studies have shown that perceived usefulness is the most significant and important construct that influences attitude, interest (behavioural intention) and behaviour in using technology compared to other constructs. the more a person believes that using a technology will improve their job performance, it will also have an impact on increasing interest in using fintech.

Based on the results of hypothesis testing (H2) that has been carried out, the results of perceived safety system accounting have a significant effect on intention to adopt digital payment. This can be seen from the sig value <0.001. The magnitude of the effect of perceived sefety system accounting on intention to adopt digital payment is 61.3%. Based on the results of hypothesis testing, the perceived safety of the accounting system variable has a greater influence than the Perceived Usefulness variable. Respondents considered that the security of the accounting system was the main thing that determined the interest in using fintech. The results of this study are in line with previous research, namely (Wijaya et al., 2024), (Habibur Rahman, Al-Amin and Sharmin Lipy, 2020), (Sarwar et al., 2024). Security is a very important and crucial issue when making electronic payments (Travilla, 2015). Security system accounting services include security measures to protect users' personal and financial information from unauthorised access or cyber attacks. Strong security is felt necessary by users, in this case umkm businessmen, when using fintech platforms. Fintech companies can offer stronger security so that customers will be more willing to agree and use these services because they are confident that their information will be safe (Aribake et al., 2020).

Based on table 2. the results of hypothesis testing (H3) that have been carried out provide results that Perceived Usefulness, perceived safety of the accounting system has an effect on intention to adopt digital payments, this can be seen from the significance value of <0.001. Based on table 4, it is known that Perceived Usefulness and perceived sefety system accounting affect the intention to adopt digital payment by 53.9% and 46.1% is influenced by other factors not examined in this study such as discounts, promotions, perceived ease of use and others. This shows that a person's interest in using fintech is influenced by Perceived Usefulness, perceived safety system accounting. This shows that umkm owners will consider using fintech technology if fintech technology has benefits for umkm owners in improving their performance and accounting system security factors related to personal data and financial transactions.

5. Conclusion

Based on the results of research that has been processed and various research discussions carried out, there are several conclusions, namely:

1. Perceived Usefulness affects the intention to adopt digital payment
2. Perceived safety system accounting affects the intention to adopt digital payment
3. Perceived Usefulness and perceived safety system accounting have an effect on intention to adopt digital payment 3.

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THE INFLUENCE OF LECTURER COMPETENCE, QUALITY OF WORK LIFE, AND PERCEIVED ORGANIZATIONAL SUPPORT ON AFFECTIVE COMMITMENT AND ITS IMPLICATIONS ON THE LECTURER PERFORMANCE AT PRIVATE UNIVERSITY IN THE BANDUNG METROPOLITAN AREA

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Abstract

This study aims to analyze the factors influencing lecturer performance in private universities in the Bandung Metropolitan area. The main focus of this research is on lecturer competence and quality of work life in supporting their productivity and professionalism. Using a quantitative approach, this study collected empirical data through questionnaires, which were statistically analyzed to identify the relationships between variables. The findings indicate that lecturer competence is in the moderately high to high category, with the pedagogical dimension being the most dominant, while the personality dimension still needs improvement. Meanwhile, the quality of work life is categorized as fairly good to good, with the opportunity to develop work skills as the most significant factor, whereas lecturers' rights in the workplace remain a challenge. These findings suggest the need for policies to enhance competence and improve quality of work life to support optimal lecturer performance in carrying out the Tri Dharma of Higher Education.

Keywords: Lecturer competence, quality of work life, lecturer performance, private universities, Bandung Metropolitan.1. Introduction

1. Introduction

Education is the primary foundation for the development of quality human resources. Quality education produces competitive individuals who can contribute to national progress (Griffin, 2022). In the context of higher education, lecturers play a strategic role in producing graduates who are competent and globally competitive. Law No. 20 of 2003 on the National Education System emphasizes that the goal of education is to develop students' potential so they become faithful, devout, and knowledgeable individuals (Law No. 20 of 2003).

Furthermore, the role of lecturers is regulated by Law No. 14 of 2005 on Teachers and Lecturers, which states that lecturers are professionals whose main responsibilities include carrying out the Tri Dharma of Higher Education: education and teaching, research, and community service (Law No. 14 of 2005). Therefore, to carry out these responsibilities effectively, lecturers must possess adequate competencies and work in an environment that supports their productivity and professionalism (Karlina, 2021).

However, various studies have shown that lecturer performance in Indonesia still faces several challenges. A study conducted by Manik (2018) revealed a gap between expectations and the reality of teaching and research quality among lecturers at private universities. One of the main factors affecting lecturer performance is competence, including pedagogical, professional, social, and personal aspects (Kreber, 2018). In addition, the quality of work life—covering compensation, work environment, and opportunities for self-development—is also a key determinant of performance effectiveness (Munawaroh, 2020).

On the other hand, perceived organizational support (POS) also plays a role in enhancing lecturer motivation and loyalty. Lecturers who feel valued and supported by their institutions tend to have higher affective commitment, which in turn positively impacts their productivity

and job satisfaction (Anggriawan, 2023). According to research by Darmawan (2021), lecturers with high levels of perceived organizational support are more actively engaged in research and community service compared to those who feel less supported by their institutions.

Considering these phenomena, this study aims to analyze the influence of competence, quality of work life, and perceived organizational support on affective commitment and its implications for lecturer performance at private universities in the Bandung Metropolitan Area.

2. Literature review

2.1. The Relationship Between Lecturer Competence and Quality of Work Life

There is a relationship between lecturer competence and quality of work life. This can be seen more clearly in the following theoretical explanations and previous research.

According to Karlina Ali (2022), competence has a close relationship with education. The higher the level of education, the greater the expected increase in a lecturer's competence, as advanced education is often accompanied by experience and strong dedication, which can enhance performance.

In a study by Takalao (2019), quality of work life significantly influences employee performance. Quality of work life is a major issue that deserves the organization's attention. This refers to the idea that quality of work life can enhance employee participation in the organization. The better the quality of an employee's work life, the more it positively impacts their performance within the organization.

Research conducted by Ervian Ikhe Widowati et al. (2022) also showed a significant relationship between competence and quality of work life.

Based on the theories explained and the research conducted, it can be concluded that lecturer competence has an influence on the quality of work life.

2.2. The Relationship Between Lecturer Competence and Perceived Organizational Support

There is a relationship between lecturer competence and perceived organizational support. This can be seen more clearly in the following theoretical explanations and research findings.

Jatmiko (2020) explained that there is a positive and significant relationship between competence and perceived organizational support. Competence refers to the knowledge, skills, and attitudes possessed by an employee that are relevant to the job standards, enabling them to perform the tasks designed for them effectively, both now and in the future.

Furthermore, based on the research conducted by Prima (2022), competence is a combination of mastery, knowledge, skills, values, and attitudes that are reflected in the habits of thinking and acting when carrying out tasks or work. Lecturers play a crucial role in the learning process by contributing to the development of scientific knowledge, helping students become skilled and intelligent individuals.

Didit Darmawan et al. (2021) stated that Perceived Organizational Support (POS) refers to the extent to which employees feel that the organization cares about their well-being and values their contributions. In the context of lecturers, POS includes their perception of support from the educational institution, such as financial support, professional development, and the facilities provided to support teaching and research activities.

Lecturers with high competence may also feel more appreciated by their institutions. When institutions recognize and reward outstanding lecturers, it can enhance their perception of organizational support. Based on the theories and research described, it can be concluded that there is an influence between lecturer competence and perceived organizational support.

2.3. The Relationship Between Quality of Work Life and Perceived Organizational Support

According to Darmawan (2021), quality of work life is not only about employees' opinions, attitudes, and expectations regarding their work, but also about their interpretation of

all conditions and the fulfillment of their needs, as well as their perception of satisfaction and conditions experienced within the organization where they work.

Furthermore, a previous study by Mardikaningsih (2021) showed that there is a positive and significant relationship between quality of work life and perceived organizational support, where employees' perception reflects how secure they feel and the extent to which they perceive support from their organization.

Additionally, based on the research by Ignatius (2022), quality of work life includes working conditions and environments, as well as beneficial life aspects such as work-life balance, self-actualization, compensation, and supervisory behavior. Quality of work life is a measure of how well an employee can fulfill their personal needs through their work experience within the organization.

2.4. The Influence of Lecturer Competence on Affective Commitment

According to Tadrib (2018), the effort to produce high-quality and competitive graduates requires the presence of qualified lecturers. A qualified lecturer is one who possesses a high level of competence, which includes pedagogical competence, professional competence, personal competence, and social competence.

Furthermore, based on previous studies, as explained by Widya (2022), affective commitment refers to the emotional attachment of employees to the values and goals of their organization, which can contribute to the advancement of the organization (Tang, Kang, Lee, & Park, 2021). Employees who have a strong sense of commitment to their organization are more likely to adhere to organizational rules and participate actively in its development. They are also more likely to remain with the organization compared to employees who lack such commitment. This commitment is reflected through their belief in and emotional connection to the organization.

Lecturer competence refers to the abilities possessed by a lecturer, which include mastery, knowledge, skills, values, and attitudes, all of which are reflected in habitual thinking and actions during effective and efficient teaching and learning processes aimed at shaping students to become intelligent individuals and valuable human resources (Hariroh et al., 2022; Neta et al., 2021).

2.5. The Influence of Quality of Work Life on Affective Commitment

According to Didit Darmawan (2021), the concept of quality of work life includes work ethics and several aspects of working conditions, measures of work conditions, employee satisfaction, and production efficiency. Employee welfare is a key topic within the concept of quality of work life. Quality of work life is not only about employees' opinions, attitudes, and expectations regarding their jobs but also their interpretation of all conditions and the fulfillment of their needs, as well as their perception of satisfaction and the conditions they experience in the organization where they work.

Furthermore, according to Agung (2023), there is a direct influence of quality of work life on affective commitment, a direct influence of intrinsic motivation on job satisfaction, and a direct influence of quality of work life on job satisfaction.

According to Suhardi (2023), there is a significant influence of quality of work life (QWL) on affective commitment, which involves workers being given the opportunity to make decisions about their job design and workplace, and what they need to produce products or deliver services most effectively. Quality of work life is a somewhat broad concept referring to various aspects of the work experience.

Good quality of work life plays an important role in strengthening employees' affective commitment. Organizations that provide a supportive work environment and value employee welfare tend to have employees who are more emotionally attached, loyal, and committed to the organization's long-term success.

2.6. The Influence of Perceived Organizational Support on Affective Commitment

The study conducted by Ni Made Anggun Cahayu et al. (2019) shows that Perceived Organizational Support has a significant relationship with Affective Commitment. To enhance employees' organizational commitment, organizations should be able to provide support to their employees, as the higher the support given, the greater the job satisfaction experienced by the employees.

Research on the relationship between perceived organizational support and affective commitment was also conducted by Intan (2022). Perceived Organizational Support plays an important role in increasing affective commitment. When employees feel that the organization supports them—whether in terms of well-being, recognition, or interpersonal relationships—they tend to develop a stronger emotional attachment, which ultimately increases their loyalty and desire to contribute optimally to the organization.

When employees feel that the organization supports them, either through recognition of their contributions or concern for their well-being, it can enhance their emotional attachment to the organization. The perceived support makes employees feel valued, which strengthens their affective commitment.

2.7. The Influence of Affective Commitment on Lecturer Performance

According to Muhammad Ras (2018), affective commitment shows a significant relationship with performance. To enhance employees' organizational commitment, organizations should be able to provide support to their employees, as the higher the support given, the greater the job satisfaction experienced by employees.

Furthermore, a previous study by Rayu (2020) found that affective commitment has a significant influence on optimal performance—performance that meets organizational standards and supports the achievement of organizational goals. An organization that strives to improve the capabilities of its human resources is a good organization, and this is an important factor in enhancing employee performance. Improved employee performance will naturally lead to progress for the organization. Performance management refers to all activities undertaken to improve organizational or company performance, including the performance of individual employees and workgroups within the organization.

M. Adhan (2020) states that the success of an educational institution can be seen from the performance of its lecturers. Lecturer performance refers to the ability of a lecturer to carry out assigned tasks and to complete them effectively.

Affective commitment plays an important role in enhancing lecturer performance. Lecturers who feel emotionally attached to their institutions are more motivated to make maximum contributions—whether in teaching, research, or other activities that support the institution's mission and objectives.

3. Methodology

This study is both descriptive and verificative in nature. Descriptive research is a type of conclusive research that aims to obtain a description of the independent and dependent variables (Malhotra, 2020). There were 375 randomly selected respondents in Permanent lecturers at private universities in the Bandung metropolitan area.

This study employed a cross-sectional method, in which data were collected at a specific point in time to evaluate the relationships between variables. The data analysis technique used is Structural Equation Modeling (SEM) with the assistance of Lisrel 8.8 software. SEM was chosen because it allows for the analysis of complex relationships between latent and manifest variables.

3.1. Theoretical framework

The theoretical framework of this study is grounded in management science as the grand theory, with human resource management and organizational behavior serving as the middle-range theories. Organizations, in their efforts to achieve their goals, must navigate rapidly changing environments, making the role of human resources critically important. This is equally true in educational institutions, where human resources play a vital role in the institution's development. All stakeholders—such as principals, teachers, staff, students, and parents—interact to form the organizational culture of the institution.

Therefore, in educational institutions, human resources, particularly teachers or lecturers, are the most valuable assets that must be continuously developed and supported.

In this study, Competence, Quality of Work Life, and Perceived Organizational Support are the independent variables, Affective Commitment is the intervening variable, and Performance is the dependent variable. All these elements are classified under Applied Theory.

3.2. Conceptual framework

This conceptual framework is a contribution to advance the cognizance of the work from home environment influences productivity. Figure 1 showed that there are two main variables, job demands and job resources, that classify an employees' working condition. Job demands are the physical, psychological, social or organizational aspects of a job that require physical and/or psychological effort from an individual. They are associated with a physical and/or psychological cost and can include time pressures, heavy workloads, stressful working environments, role ambiguity and poor work relationships. On the other hand, job resources are the physical, psychological, social or organization factors that enable an individual to achieve goals and reduce stress.

The model asserts that employee well-being can be negatively impacted when job demands are high, and job resources are low, resulting in high strain and low motivation. Alternatively, when job demands are high and job resources are high, engagement and performance is improved, as illustrated in Figure 1.

3.3. Instrumentation

The research instrument used was a questionnaire with a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree). The variables measured in this study include:

- Lecturer competence (subject mastery, innovation in teaching, use of technology in learning)
- Quality of work life (work environment, work-life balance, social support)
- Perceived organizational support (institutional support, recognition of achievements, career development opportunities)
- Affective commitment (loyalty, sense of belonging to the institution, work motivation)
- Lecturer performance (teaching effectiveness, research contributions, involvement in community service)

Data were processed using SPSS 27 and Lisrel 8.72, with tests for validity, reliability, and path analysis.

Validity and Reliability Testing

- Validity: All indicators had a correlation value > 0.300, indicating that all items were valid.
- Reliability: The Cronbach's Alpha coefficients ranged from 0.804 to 0.917, indicating a high level of reliability.

As a result of using Structural Equation Modeling with LISREL 8.7, the model shown in Figure 4.1

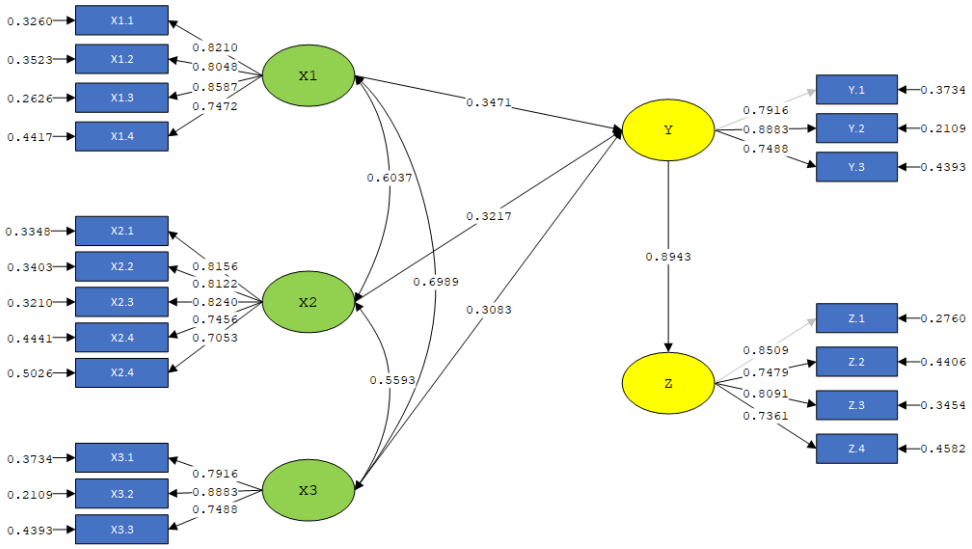

Figure 1. Research paradigm: Structural Equation Modeling (SEM)

4. Results and discussions

a. Validity Test of Lecturer Competence

Variable	Item Pertanyaan	r-hitung	r-kritis	Keterangan
Kompetensi Dosen	Item 1	0,709	0,300	Valid
	Item 2	0,368	0,300	Valid
	Item 3	0,759	0,300	Valid
	Item 4	0,668	0,300	Valid
	Item 5	0,764	0,300	Valid
	Item 6	0,696	0,300	Valid
	Item 7	0,694	0,300	Valid
	Item 8	0,661	0,300	Valid
	Item 9	0,379	0,300	Valid
	Item 10	0,692	0,300	Valid
	Item 11	0,604	0,300	Valid
	Item 12	0,627	0,300	Valid
	Item 13	0,650	0,300	Valid
	Item 14	0,588	0,300	Valid
	Item 15	0,593	0,300	Valid
	Item 16	0,309	0,300	Valid
	Item 17	0,534	0,300	Valid
	Item 18	0,426	0,300	Valid
	Item 19	0,325	0,300	Valid
	Item 20	0,409	0,300	Valid

Based on table the questionnaire on Lecturer Competence, which consists of 20 indicators across 4 dimensions, is considered valid because the calculated r-value (r-count) is greater than the critical r-value of 0.300.

b. Validity Test of the Quality of Work Life Variable

Variable	Item Pertanyaan	r-hitung	r-kritis	Keterangan
Kualitas Kehidupan Kerja	Item 1	0,567	0,300	Valid
	Item 2	0,712	0,300	Valid
	Item 3	0,687	0,300	Valid
	Item 4	0,649	0,300	Valid
	Item 5	0,607	0,300	Valid
	Item 6	0,576	0,300	Valid
	Item 7	0,602	0,300	Valid
	Item 8	0,618	0,300	Valid
	Item 9	0,562	0,300	Valid
	Item 10	0,537	0,300	Valid
	Item 11	0,532	0,300	Valid
	Item 12	0,342	0,300	Valid
	Item 13	0,540	0,300	Valid
	Item 14	0,568	0,300	Valid
	Item 15	0,594	0,300	Valid
	Item 16	0,356	0,300	Valid
	Item 17	0,308	0,300	Valid
	Item 18	0,395	0,300	Valid
	Item 19	0,356	0,300	Valid
	Item 20	0,471	0,300	Valid
	Item 21	0,487	0,300	Valid
	Item 22	0,526	0,300	Valid
	Item 23	0,531	0,300	Valid
	Item 24	0,488	0,300	Valid
	Item 25	0,304	0,300	Valid

Based on Table, the questionnaire on Quality of Work Life, which consists of 25 indicators across 4 dimensions, is considered valid because the calculated r-value (r-count) is greater than the critical r-value of 0.300.

c. Validity Test of the Perceived Organizational Support

Variable	Item Pertanyaan	r-hitung	r-kritis	Keterangan
Persepsi Dukungan Organisasi	Item 1	0,695	0,300	Valid
	Item 2	0,792	0,300	Valid
	Item 3	0,730	0,300	Valid
	Item 4	0,706	0,300	Valid
	Item 5	0,698	0,300	Valid
	Item 6	0,775	0,300	Valid
	Item 7	0,801	0,300	Valid
	Item 8	0,743	0,300	Valid
	Item 9	0,732	0,300	Valid
	Item 10	0,739	0,300	Valid
	Item 11	0,747	0,300	Valid
	Item 12	0,760	0,300	Valid
	Item 13	0,746	0,300	Valid
	Item 14	0,767	0,300	Valid

Variable	Item Pertanyaan	r-hitung	r-kritis	Keterangan
	Item 15	0,642	0,300	Valid

Based on Table, the questionnaire on Perceived Organizational Support, which consists of 15 indicators across 4 dimensions, is considered valid because the calculated r-value (r-count) is greater than the critical r-value of 0.300.

d. Validity Test of the Affective Commitment

Variable	Item Pertanyaan	r-hitung	r-kritis	Keterangan
Komitmen Afektif	Item 1	0,471	0,300	Valid
	Item 2	0,612	0,300	Valid
	Item 3	0,625	0,300	Valid
	Item 4	0,642	0,300	Valid
	Item 5	0,758	0,300	Valid
	Item 6	0,699	0,300	Valid
	Item 7	0,752	0,300	Valid
	Item 8	0,701	0,300	Valid
	Item 9	0,707	0,300	Valid
	Item 10	0,693	0,300	Valid
	Item 11	0,664	0,300	Valid
	Item 12	0,656	0,300	Valid
	Item 13	0,629	0,300	Valid
	Item 14	0,639	0,300	Valid
	Item 15	0,600	0,300	Valid

Based on Table, the questionnaire on Affective Commitment, which consists of 15 indicators across 3 dimensions, is considered valid because the calculated r-value (r-count) is greater than the critical r-value of 0.300.

e. Validity Test of the Lecturer Performance

Variable	Item Pertanyaan	r-hitung	r-kritis	Keterangan
Kinerja Dosen	Item 1	0,687	0,300	Valid
	Item 2	0,680	0,300	Valid
	Item 3	0,623	0,300	Valid
	Item 4	0,655	0,300	Valid
	Item 5	0,621	0,300	Valid
	Item 6	0,599	0,300	Valid
	Item 7	0,598	0,300	Valid
	Item 8	0,624	0,300	Valid
	Item 9	0,587	0,300	Valid
	Item 10	0,594	0,300	Valid
	Item 11	0,634	0,300	Valid
	Item 12	0,514	0,300	Valid
	Item 13	0,650	0,300	Valid
	Item 14	0,628	0,300	Valid
	Item 15	0,545	0,300	Valid
	Item 16	0,322	0,300	Valid
	Item 17	0,483	0,300	Valid
	Item 18	0,452	0,300	Valid

Variable	Item Pertanyaan	r-hitung	r-kritis	Keterangan
	Item 19	0,422	0,300	Valid
	Item 20	0,310	0,300	Valid

Based on Table, the questionnaire on Lecturer Performance, which consists of 20 indicators across 4 dimensions, is considered valid because the calculated r-value (r-count) is greater than the critical r-value of 0.300.

f. Reliability Test

Pengujian Reliabilitas Variabel

Variable	r-hitung	r-tabel	Keterangan
Kompetensi Dosen	0,886	0,700	Reliabel
Kualitas Kehidupan Kerja	0,880	0,700	Reliabel
Persepsi Dukungan Organisasi	0,940	0,700	Reliabel
Komitmen Afektif	0,906	0,700	Reliabel

Based on the results of the reliability test above, the reliability coefficients of the research instrument are greater than 0.700, which means all the research variables are considered reliable or meet the requirements. Since both the validity and reliability tests indicate that all variables are valid and reliable, it means that the instrument (questionnaire) used is valid and reliable.

Results of Data Normality Test

One-Sample Kolmogorov-Smirnov Test

		Kompetensi Dosen	Kualitas Kehidupan Kerja	Persepsi Dukungan Organisasi	Komitmen Afektif	Kinerja Dosen
N		375	375	375	375	375
Normal Parameters[a,b]	Mean	64.0667	79.9653	50.2000	50.1280	65.8293
	Std. Deviation	9.52836	11.13031	9.47019	9.07483	9.41143
Most Extreme Differences	Absolute	.088	.161	.081	.075	.094
	Positive	.088	.161	.062	.048	.079
	Negative	-.071	-.092	-.081	-.075	-.094
Test Statistic		.088	.161	.081	.075	.094
Asymp. Sig. (2-tailed)[c]		.097	.061	.104	.125	.093

a. Test distribution is Normal.

b. Calculated from data.

c. Lilliefors Significance Correction.

Based on the results of the normality test presented in Table above, the model shows multivariate normality assumptions are met, where the Asymp. Sig (2-tailed) probability values obtained are greater than the established significance level (0.05) for all variables. Therefore, it can be concluded that the data to be processed have a normal distribution.

5. Conclusion

Based on the results of data analysis and discussion, this study produces several main conclusions:

1. Lecturer Competence at Private Universities in the Bandung Metropolitan Area is categorized as fairly high to high. The largest dimension is Pedagogical competence, while the smallest dimension is Personality. Lecturer competence is still uneven among lecturers.
2. The Quality of Work Life of lecturers at Private Universities in the Bandung Metropolitan Area is categorized as fairly good to good. The largest dimension is the Opportunity to

Use and Develop Work Environment Skills, while the smallest dimension is the Rights of Lecturers/Staff within the Office.

3. Perceived Organizational Support is categorized as fairly high to high. The largest dimension is Supervisory Support, while the smallest dimension is Perceived Fairness.
4. Affective Commitment of lecturers at Private Universities in the Bandung Metropolitan Area is categorized as fairly high to high. The largest dimension is Personal Characteristics, while the smallest dimension is Organizational Characteristics.

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BRAND AWARENESS AND BRAND IMAGE ON REPURCHASE INTENTION WITH CUSTOMER SATISFACTION AS A MEDIATING VARIABLE AT AMBOINA RESTAURANT BANGKALAN

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Abstract

This study aims to analyze the influence of brand awareness and brand image on repurchase intention with customer satisfaction as a mediating variable at Restoran Amboina, Bangkalan. The research employs a quantitative approach, utilizing a sample of 50 respondents who have made multiple purchases at the restaurant. The findings indicate that both brand awareness and brand image significantly affect customer satisfaction. Furthermore, customer satisfaction serves as a mediator that strengthens the relationship between brand awareness and repurchase intention, as well as between brand image and repurchase intention. The results highlight the importance of not only enhancing brand awareness but also managing a positive brand image to foster customer loyalty and encourage repeat purchases. The study concludes that in the competitive culinary business, understanding and meeting customer expectations is crucial for maintaining loyalty and driving repurchase decisions.

Keywords: Brand Awareness, Brand Image, Customer Satisfaction, Repurchase Intention.

1. Introduction

Amboina restaurant Bangkalan is one of the famous food stalls in Bangkalan, Madura. This food stall has been established since 1965 and has become one of the culinary tourism destinations in Bangkalan. However, with the increasing number of food stalls popping up in Bangkalan, the Amboina Bangkalan gang restaurant must try to maintain customer satisfaction and increase repurchase decisions.

According to Kotler (2017), customer satisfaction is the result of a comparison between customer expectations and product or service performance. If customer satisfaction is not met, the customer will look for other alternatives that are more satisfying (Kotler, 2017). Therefore, the Amboina food stall in Bangkalan Alley must ensure that customer satisfaction is a top priority in its marketing strategy.

In addition, brand awareness and brand image are also very important in increasing customer satisfaction and repurchase decisions. According to Aaker (1991), brand awareness is the ability of customers to remember and recognize brands. Brand image is the image or picture formed by customers about the brand (Aaker, 1991). If brand awareness and brand image are positive, then customers will be more likely to buy products or services from that brand.

Customer satisfaction can influence repurchase decisions. If customers are satisfied with the product or service they buy, then they will be more likely to buy the same product or service again in the future (Oliver, 1997).

According to Blackwell (2001), consumer behaviour is influenced by various factors, including customer satisfaction and repurchase decisions. If customers are satisfied with the product or service they purchase, then they will be more likely to purchase the same product or service again in the future (Blackwell, 2001).

Problem Formulation

The problem formulations in this study are:

1. What is the effect of Brand Awareness (X1) on Repurchase Decisions (Y) at Amboina Restaurant, Bangkalan?
2. What is the effect of Brand Image (X2) on Repurchase Decisions (Y) at Amboina Restaurant, Bangkalan?
3. What is the effect of Brand Awareness (X1) on Repurchase Decisions (Y) through Customer Satisfaction (Z) as a mediating variable?
4. What is the effect of Brand Image (X2) on Repurchase Decisions (Y) through Customer Satisfaction (Z) as a mediating variable?
5. What is the effect of the Repurchase Decision (Y) on Customer Satisfaction (Z) at Amboina Restaurant, Bangkalan?
6. What is the effect of Brand Awareness (X1) on Customer Satisfaction (Z) at Amboina Restaurant, Bangkalan?
7. What is the effect of Brand Image (X2) on Customer Satisfaction (Z) at Amboina Restaurant, Bangkalan?

Research Objectives

The objectives of this study are:

1. Analyzing the Effect of Brand Awareness (X1) on Repurchase Decisions (Y).
2. Analyzing the Effect of Brand Image (X2) on Repurchase Decisions (Y).
3. Analyzing the Effect of Brand Awareness (X1) on Repurchase Decisions (Y) through Customer Satisfaction (Z) as a Mediating Variable.
4. Analyzing the Effect of Brand Image (X2) on Repurchase Decisions (Y) through Customer Satisfaction (Z) as a Mediating Variable.
5. Analyzing the Effect of Repurchase Decision (Y) on Customer Satisfaction (Z).
6. Analyzing the Effect of Brand Awareness (X1) on Customer Satisfaction (Z).
7. Analyzing the Effect of Brand Image (X2) on Customer Satisfaction (Z)

2. Literature review

2.1. Brand Awarness

Brand Awareness refers to the extent to which consumers are familiar with a particular brand and can recognize or recall it. It is an important component of brand equity and plays an important role in the consumer decision-making process. Brand awareness can be grouped into two main types: brand recognition (the ability to recognize a brand when prompted) and brand recall (the ability to retrieve a brand from memory when given a product category). According to Aaker (1991), brand awareness is one of the key dimensions of brand equity that influences consumer perception and behaviour. Strong brand awareness can generate a positive brand image and increase customer loyalty.

The importance of brand awareness has many aspects. Keller (1993) emphasizes that brand awareness is very important for consumers to consider a brand during the buying process. Consumers are more likely to choose brands they recognize over brands they are not familiar with, which can significantly affect market share. Research by Chaudhuri and Holbrook (2001) shows that higher levels of brand awareness can lead to greater levels of brand loyalty. When consumers are aware of a brand, they are more likely to develop a preference for the brand, which results in repeat purchases. In addition, a study by Huang and Sarigöllü (2014) found that brands with higher awareness tend to be competitive in the market, especially in crowded markets where consumers have many alternatives.

2.2. Brand Image

Brand image is an important element in marketing strategy that can influence purchasing decisions and customer loyalty. According to Aaker (1991), brand image refers to a set of associations and perceptions that consumers have about a brand. This includes the attributes, benefits, and values associated with the brand. Aaker emphasizes that a strong brand image can

help companies differentiate their products from competitors and create customer loyalty. Keller's (1993) brand image in the Customer-Based Brand Equity (CBBE) model that a positive brand image can increase customer loyalty, influence purchasing decisions, and create a higher perception of value in the eyes of consumers. This shows that brand image is not just a superficial concept, but also a strategic asset that can affect business performance.

Kotler and Keller (2016) further emphasize the significance of the brand image. They argue that brand image is the result of consumers' experiences with the brand, including interactions with products, services, and marketing communications. They emphasize that companies must actively manage their brand image to ensure that the image formed is in line with the brand's values and goals. Bennett and Rundle-Thiele (2005) also support the importance of brand image in creating customer loyalty. They found that a positive brand image can increase customer satisfaction and encourage repeat purchases, indicating a direct relationship between brand image and purchasing decisions.

2.3. Customer Satisfaction

Customer satisfaction is the result of a comparison between customer expectations and the performance of the product or service received. According to Kotler and Keller (2016), customer satisfaction occurs when product or service performance meets or exceeds customer expectations. If the product or service performance is below expectations, the customer will feel dissatisfied. Therefore, understanding customer expectations is very important for companies to be able to meet or even exceed their expectations. Research by Kumar and Reinartz (2016) also shows that customer satisfaction contributes to customer loyalty, which in turn can increase company profitability.

According to Choudhury and Kar (2018), customer satisfaction not only affects repurchase decisions but also affects word-of-mouth recommendations. They found that satisfied customers tend to recommend products or services to others, which can increase the company's market share. In addition, research by Ali et al. (2016) showed that customer satisfaction is positively related to brand image, which can increase customer loyalty and overall business performance.

Ladhari (2016) emphasizes that good service quality contributes to customer satisfaction. Ladhari found that service quality dimensions such as reliability, responsiveness, and empathy strongly influence customer satisfaction. Homburg et al. (2017) showed that customer satisfaction can influence repurchase intentions and loyalty, so companies should focus on improving customer experience to create stronger relationships and improve overall business performance.

2.4. Repurchase Decision

A customer's decision to purchase the same product or service in the future, defined by Oliver (1997) as customer loyalty, is one of the important aspects of marketing. Customer loyalty not only reflects satisfaction with the product or service that has been purchased but also includes a commitment to continue to choose a particular brand or company in the future. According to Kotler and Keller (2016), customer loyalty can result from consistent positive experiences, where customers feel that the products or services they choose meet or exceed their expectations.

According to Kumar and Reinartz (2016), there is a positive relationship between customer satisfaction and loyalty, where satisfied customers tend to make repeat purchases. Choudhury and Kar (2018) also assert that word-of-mouth recommendations, which often stem from positive customer experiences, can influence repurchase decisions. This suggests that companies should focus on improving customer experience to build strong loyalty.

Homburg et al. (2017) showed that factors such as product quality, customer service, and brand image contribute to repurchase decisions. They found that customers who feel valued

and get good service are more likely to return and make a purchase. Ladhari (2016) also emphasized the importance of service quality in building customer loyalty, where dimensions such as reliability and responsiveness strongly influence repurchase decisions. Thus, companies need to manage all aspects of the customer experience to ensure that they not only gain new customers but also retain existing ones.

2.5. Relationship between Variables

Brand Awareness (X1) → Repurchase Decision (Y): High brand awareness can increase the likelihood of customers making repurchases. When customers recognize and remember a brand, they are more likely to choose products from that brand when making future purchases.

Brand Image (X2) → Customer Satisfaction (Z): A good brand image can increase customer satisfaction. Customers who have a positive image of the brand tend to feel more satisfied with their experience because they associate the brand with good quality and value.

Brand Awareness (X1) → Customer Satisfaction (Z): Brand awareness can affect customer satisfaction. When customers recognize the brand and have clear expectations about the product or service, they are more likely to feel satisfied if the product meets or exceeds their expectations.

Brand Image (X2) → Customer Satisfaction (Z): A good brand image can increase customer satisfaction. Customers who have a positive image of the brand tend to feel more satisfied with their experience because they associate the brand with good quality and value.

Customer Satisfaction (Z) → Repurchase Decision (Y): Customer satisfaction serves as a mediator between brand awareness and brand image with repurchase decisions. Customers who are satisfied with their experience are more likely to make repeat purchases, regardless of how well they recognize the brand or how positive the brand image is.

Brand Awareness (X1) → Customer Satisfaction (Z) → Repurchase Decision (Y): In this relationship, brand awareness not only affects repurchase decisions directly but also through customer satisfaction. If customers have high awareness of the brand and are satisfied, they will be more likely to make a repurchase.

Brand Image (X2) → Customer Satisfaction (Z) → Repurchase Decision (Y): Similarly, a positive brand image can increase customer satisfaction, which in turn affects repurchase decisions. Customers who have a positive image of the brand and feel satisfied with the product or service will be more likely to repurchase.

3. Methodology

This study uses a quantitative approach which aims to analyze the relationship between the independent variables (Brand Awareness and Brand Image), the mediating variable (Customer Satisfaction), and the dependent variable (Repurchase Decision). According to Sugiyono (2016), quantitative research is used to test hypotheses based on numerical data and uses statistical analysis tools.

The population in this study were people of productive age in Bangkalan Regency, which amounted to 658,352 people according to data from the Central Statistics Agency (BPS). With the criteria that the sample had bought more than once at RM Amboina. Given the very large population, sampling was done using the Slovin formula.

Slovin Formula:

$n = N / (1 + (N * e2))$

Where:

n = Number of samples

N = Total population (658,352)

e = Margin of error (0.15)

n = 658,352 / (1 + (658,352 * 0.15^2)) n = 44.44 ≈ 50

So, with a margin of error of 15%, the sample required is around 50 respondents.

This research uses a purposive sampling technique, where respondents are selected based on certain criteria, namely customers who have made transactions at Amboina Restaurant. This technique is considered appropriate for obtaining data from customers who are relevant to the research topic.

Data was collected through a questionnaire distributed to 100 respondents. The questionnaire uses a 5-point Likert scale to measure the respondent's level of agreement with statements related to Brand Awareness, Brand Image, Customer Satisfaction, and Purchasing Decisions. Measurement using a Likert scale can help in measuring attitude and perception variables, as described by Sugiyono (2016).

Before data analysis is carried out, validity and reliability tests need to be carried out to ensure that the research instrument is suitable for use. The validity test is used to measure whether the items in the questionnaire actually measure what should be measured (Ghozali, 2018). Meanwhile, the reliability test is carried out to ensure the consistency of the measurement results of the same instrument in different situations.

Data were analyzed using SmartPLS (Partial Least Square) to test the relationship between the research variables. SmartPLS was chosen because it is able to analyze complex structural models with mediating variables, as stated by Hair et al. (2014). This analysis allows researchers to see the direct and indirect effects between independent and dependent variables, as well as the role of mediating variables. The analysis steps taken are:

1. Measurement Model Test (Outer Model): To test the validity and reliability of measurement items.
2. Structural Model Test (Inner Model): To test the relationship between variables in the research model, both directly and indirectly.
3. Hypothesis Test: Hypothesis testing is done by looking at the t-statistic and p-value to determine the significance of the relationship between variables.

4. Results and discussions

Results of Validity Testing

Validity testing is conducted to determine whether a questionnaire is valid or not. A questionnaire is considered valid if its questions can reflect the aspects that the questionnaire aims to measure. In this study, validity testing was performed by analyzing convergent validity and discriminant validity. Below are the results of the validity tests conducted in this research involving 50 respondents.

The Average Variance Extracted (AVE) method was used to assess the discriminant validity of each construct and latent variable. The AVE value should be greater than 0.50 (Ghozali & Latan, 2015: 74). In this research model, the AVE values for each variable are above 0.50, as shown in Table 1 below:

Table 1: Results of Average Variance Extracted (AVE)
Construct Reliability and Validity

Variabel	Cronbach's Alpha	rho_A	Reliabilitas Komposit	Rata-rata Varians Diekstrak (AVE)
X1	0.939	0.941	0.961	0.891
X2	0.962	0.963	0.969	0.841
Y	0.973	0.973	0.978	0.880
Z	0.957	0.959	0.972	0.921

Sumber: Output SmartPLS 3 processed 2024

From Table 1 above, since there are no issues with convergent validity, discriminant validity testing will be conducted. Discriminant validity relates to the principle that measurements (manifest variables) from different constructs should not have a high correlation. To obtain the discriminant validity value, the method used is to consider the square root of the AVE. The desired square root value must be higher than the correlation values, which can be seen in Table 2 below:

Tabel 2 Results Square Root Of Variance Extacted (AVE)
Discriminant Validity

Variabel	X1	X2	Y	Z
X1	0.944			
X2	0.926	0.917		
Y	0.836	0.883	0.938	
Z	0.710	0.780	0.841	0.960

Sumber: Output SmartPLS 3 processed 2024

From Table 2 above, it can be stated that the square root of the AVE for all constructs is higher than the relationships between those variables and other variables. The square root of the AVE and the values below it refer to the correlation values between constructs. Thus, it is evident that the square root of the AVE is greater than the correlation values. Therefore, it can be concluded that all variables in this study are valid as they have met the criteria for discriminant validity. This discriminant validity is obtained by considering the cross-loading values in the measurement of the constructs. The cross-loading values indicate the level of relationship between each construct and its indicators, as well as the indicators of other constructs.

Results of Reliability Testing

Reliability testing is used in this study to examine and demonstrate whether the instrument can be trusted, is appropriate, accurate, and consistent in collecting data. To assess the reliability of the variables, there are two methods that can be used: Cronbach's Alpha (α) and composite reliability, often referred to as Dillon Goldstein's Rule of Thumb. Reliability can be considered acceptable if the Cronbach's Alpha value is greater than 0.6; if the Cronbach's Alpha value is less than 0.60, then the data from the questionnaire is considered unreliable or inconsistent (Ghozali & Latan, 2015).

Tabel 3 Value Crombach's Alpha dan Composite Reliability
Construct Reliability and Validity

Variabel	Cronbach's Alpha	rho_A	Reliabilitas Komposit	Rata-rata Varians Diekstrak (AVE)
X1	0.939	0.941	0.961	0.891
X2	0.962	0.963	0.969	0.841
Y	0.973	0.973	0.978	0.880
Z	0.957	0.959	0.972	0.921

Sumber: Output SmartPLS 3 processed 2024

As seen from Table 3 above, the results of the reliability testing indicate that both Cronbach's Alpha and Composite Reliability for all variables have values above 0.60.

Therefore, it can be concluded that all variables are reliable and meet the reliability testing criteria.

Test R-Square

The first step in testing the inner model or structural model is to examine the R-square values, which are presented in Table 4 below:

Tabel 4 Value R-Square

Variabel	R Square	Adjusted R Square
Y	0.782	0.772
Z	0.718	0.699

Sumber: Output SmartPLS 3 processed 2024

Based on the regression analysis results shown in the table, the R Square value for variable Y is 0.782, and for variable Z, it is 0.718. Referring to the categories proposed by Hair et al. (2011) and Ghozali & Latan (2015), an R Square value above 0.75 indicates that variable Y falls into the strong category. The remaining 21.8% of the variation is influenced by other factors not included in this study.

Meanwhile, the R Square value for variable Z is 0.718, which also indicates a strong category. Thus, 28.2% of the remaining variation is influenced by other variables not included in this research.

Overall, these results indicate that both variables Y and Z have a significant relationship with the independent variables studied, and the regression model used is quite effective in explaining the variation in the data. However, it is important to note that although both variables show strong R Square values, there is still a significant proportion of variation that cannot be explained by the model, highlighting the need for further research to identify other factors that may contribute.

Test Bootstapping Direct Effect

The hypothesis testing for direct effects in this research is conducted by examining the obtained T-Statistic and P-Values. The T-Statistic and P-Values in SmartPLS 3 are obtained through a bootstrapping process applied to the model that has been validated and deemed reliable. The hypothesis is accepted if the T-Statistic value is greater than the T-table value of 3.210 or if the P-Values are less than 0.001. The results of the hypothesis testing are displayed in Table 5 below:

Tabel 5 Test Value Bootstapping Direct Effect

Path Coefficients Direct Effects

Variabel	**Sampel Asli (O)**	**Rata-rata Sampel (M)**	**Standar Deviasi (STDEV)**	**T Statistik (|O/STDEV|)**
X1 -> Y	0.128	0.068	0.254	0.504
X1 -> Z	-0.178	-0.257	0.368	0.484
X2 -> Y	0.764	0.824	0.232	3.289
X2 -> Z	0.323	0.412	0.431	0.750
Y -> Z	0.704	0.693	0.254	2.773

Sumber: Output SmartPLS 3 processed 2024

From Table 5 above, the results of the Bootstrapping test using SmartPLS 3 can be explained as follows:

The Influence of Brand Awareness (X1) on Repurchase Decision (Y)

Data shows that the T-Statistic value for the influence of Brand Awareness (X1) on Repurchase Decision (Y) is 0.504, which is lower than 1.96. This indicates that the influence of Brand Awareness on repurchase decisions is not significant. According to Aaker (1991), brand awareness is a key component of brand equity. Although it is important, research shows that brand awareness does not always guarantee repurchase decisions. Consumers may recognize a brand but may not have a positive experience or feel connected to that brand (Keller, 1993). Therefore, Brand Awareness contributes less significantly to Repurchase Decisions.

The Influence of Brand Image (X2) on Repurchase Decision (Y)

On the other hand, the T-Statistic value for the influence of Brand Image (X2) on Repurchase Decision (Y) is 3.289, which is greater than 1.96, indicating that this influence is significant. Brand Image is the consumer's perception of a brand formed through experiences and interactions. According to Kotler and Keller (2016), a positive brand image can enhance customer loyalty and encourage repurchase decisions. Research shows that a strong brand image can create trust among consumers, thereby increasing the likelihood of them making a repurchase (Chaudhuri & Holbrook, 2001). Thus, Brand Image has a strong positive influence on Repurchase Decisions.

The Influence of Repurchase Decision (Y) on Customer Satisfaction (Z)

The T-Statistic value for the influence of Repurchase Decision (Y) on Customer Satisfaction (Z) is 2.773, which is greater than 1.96, indicating that this influence is significant. Customer satisfaction is the consumer's evaluation of their experience with a product or service. According to Oliver (1999), customer satisfaction is the result of a comparison between expectations and actual performance. Repurchase decisions are often influenced by the level of customer satisfaction. If customers feel satisfied, they are more likely to make a repurchase (Anderson & Fornell, 1994). Therefore, Repurchase Decisions have a significant influence on Customer Satisfaction.

The Influence of Brand Awareness (X1) on Customer Satisfaction (Z)

Data shows that the T-Statistic value for the influence of Brand Awareness (X1) on Customer Satisfaction (Z) is 0.484, which is lower than 1.96, indicating that this influence is not significant. Although brand awareness is important, its impact on customer satisfaction is not always direct. According to Kotler and Keller (2016), customer satisfaction is more influenced by product quality and customer experience than by brand awareness alone. Research indicates that brand awareness can contribute to customer satisfaction, but its contribution may be limited if not accompanied by positive experiences and good product quality (Aaker, 1991). Therefore, Brand Awareness has a limited contribution to Customer Satisfaction.

The Influence of Brand Image (X2) on Customer Satisfaction (Z)

Lastly, the T-Statistic value for the influence of Brand Image (X2) on Customer Satisfaction (Z) is 0.750, which is lower than 1.96, indicating that this influence is not significant. Brand Image can affect customer satisfaction through the perceived quality and value offered by the brand. According to Zeithaml (1988), the value perceived by customers contributes to their satisfaction. Although a positive brand image can enhance customer satisfaction, the insignificant influence of Brand Image on Customer Satisfaction suggests that other factors, such as product and service quality, may be more influential in determining customer satisfaction (Fornell, 1992).

The Influence of Brand Awareness (X1) on Repurchase Decision (Y) through Customer Satisfaction (Z) as a Mediating Variable

The analysis results show that the total influence of Brand Awareness (X1) on Repurchase Decision (Y) through Customer Satisfaction (Z) is -0.303. This negative influence indicates that an increase in Brand Awareness tends to decrease repurchase decisions when mediated by Customer Satisfaction. While Brand Awareness is important in building consumer awareness, the overall impact on repurchase decisions becomes negative, which may be due to other unmeasured factors in this model. According to Aaker (1991), Brand Awareness is the consumer's ability to recognize or recall a specific brand, which should positively contribute to purchase decisions. However, if the customer's experience with the product does not meet their expectations, it can lead to dissatisfaction, resulting in lower purchase decisions. Therefore, while Brand Awareness can enhance brand recognition, it is crucial to ensure that customer experiences are also positive to encourage better repurchase decisions.

The Influence of Brand Image (X2) on Repurchase Decision (Y) through Customer Satisfaction (Z)

The analysis results show that the total influence of Brand Image (X2) on Repurchase Decision (Y) through Customer Satisfaction (Z) is 0.992. This significant positive influence indicates that an increase in Brand Image contributes positively to repurchase decisions through Customer Satisfaction. This suggests that a good Brand Image can enhance customer satisfaction, which in turn increases repurchase decisions. According to Keller (1993), Brand Image is the consumer's perception of a brand formed through experiences, communication, and interactions with that brand. A positive Brand Image not only creates trust and loyalty among consumers but also enhances customer satisfaction because consumers feel that the brand meets or even exceeds their expectations. Thus, this research emphasizes the importance of building and maintaining a strong brand image to drive higher customer satisfaction and repurchase decisions.

Results of Bootstrapping Test (Indirect Effects)

To demonstrate whether Customer Satisfaction (Z) can serve as an intervening variable that mediates the effects of Brand Awareness (X1) and Brand Image (X2) on Repurchase Decision (Y), the following presents the results of the indirect effects test in the table below:

Tabel 6 Results Bootstapping Indirect Effect Test

Specific Indirect Effects

Variabel	Sampel Asli (O)	Rata-rata Sampel (M)	Standar Deviasi (STDEV)	T Statistik (|O/STDEV|)	P Values
X1 -> Y -> Z	0.090	0.052	0.182	0.494	**0.621**
X2 -> Y -> Z	0.538	0.567	0.253	2.127	**0.033**

Sumber: Output SmartPLS 3 Processed 2024

According to the table above, it can be observed that there are two relationships indicating the presence or absence of indirect effects among the variables, which can be explained as follows:

Brand Awareness (X1) on Repurchase Decision (Y) through Customer Satisfaction (Z)

The results of the bootstrapping test indicate that the influence of Customer Satisfaction (Z) as an intervening variable in the relationship between Brand Awareness (X1) and Repurchase Decision (Y) is not significant. The original sample value (O) is 0.090, with a T-Statistic of 0.494 and a P-Value of 0.621. A P-Value greater than 0.05 suggests that this

influence is not significant, meaning that Customer Satisfaction does not function as a mediator in the relationship between Brand Awareness and Repurchase Decision.

Therefore, it can be concluded that although Brand Awareness is important in building brand recognition, its influence on repurchase decisions through customer satisfaction is not proven to be significant in this study.

Brand Image (X2) on Repurchase Decision (Y) through Customer Satisfaction (Z)

The results of the bootstrapping test for the relationship between Brand Image (X2) and Repurchase Decision (Y) through Customer Satisfaction (Z) show significant results. The original sample value (O) is 0.538, with a T-Statistic of 2.127 and a P-Value of 0.033. A P-Value less than 0.05 indicates that this influence is significant, meaning that Customer Satisfaction serves as an effective mediator in the relationship between Brand Image and Repurchase Decision. This suggests that a positive Brand Image can enhance customer satisfaction, which in turn encourages higher repurchase decisions. Therefore, it can be concluded that improving Brand Image is crucial for increasing customer satisfaction and, consequently, driving repurchase behavior.

5. Conclusion

This study aims to analyze the influence of brand awareness and brand image on repurchase decisions, with customer satisfaction as a mediating variable at Amboina Restaurant in Bangkalan. The results indicate that both brand awareness and brand image have a significant impact on customer satisfaction. Brand awareness, which reflects the extent to which customers recognize and remember the brand, contributes to increased customer satisfaction. Meanwhile, brand image, which encompasses the positive perceptions and associations that customers have with the brand, also plays a crucial role in creating a positive experience for customers.

Furthermore, customer satisfaction has been shown to function as a mediator that strengthens the relationship between brand awareness and brand image with repurchase decisions. This indicates that customers who are satisfied with their experiences are more likely to make repeat purchases. These findings emphasize the importance of marketing strategies that focus not only on increasing brand awareness but also on managing a positive brand image. In the increasingly competitive culinary business context, understanding and meeting customer expectations is key to maintaining loyalty and encouraging repurchase decisions.

This study also highlights that in the culinary business world, where many options are available to consumers, strong brand awareness and brand image can be determining factors in attracting and retaining customers. Therefore, strategies that focus on improving service quality, product innovation, and effective communication with customers are essential for creating satisfying experiences and building long-term relationships with customers.

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FROM FRUGAL LIVING TO FINANCIAL FREEDOM: A CASE STUDY OF WORKERS IN INDONESIA

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Abstract

This study aims to examine the influence of frugal living on financial freedom with personal financial management as a mediating variable. Using a quantitative approach and Partial Least Squares Structural Equation Modeling (PLS-SEM), data were collected through questionnaires distributed to workers in Indonesia. The results show that frugal living has a significant and positive influence on personal financial management. In turn, personal financial management significantly affects financial freedom. However, frugal living does not directly influence financial freedom but has an indirect effect through financial management as a mediating variable. The mediation effect is classified as moderate based on the upsilon v value. The model demonstrates good reliability and validity, with adequate model fit as indicated by R square, Q square, SRMR, and Goodness of Fit (GoF) values. These findings suggest that the practice of frugal living, when supported by effective financial management, can enhance individuals' ability to achieve long-term financial freedom.

Keywords: Frugal Living, Financial Management, Financial Freedom, Personal Finance, PLS-SEM

1. Introduction

In the era of globalization and digitalization, individuals are facing increasingly complex economic challenges. Rising prices of basic necessities, a growing consumerist lifestyle, and uncertainties caused by crises and pandemics have made personal financial management more important than ever (CNBC, 2023; Bank Indonesia, 2023). Particularly in Indonesia, many low-income earners—those earning under two million rupiah monthly—are experiencing significant financial strain, as evidenced by high consumption-to-income ratios and declining savings (Bank Indonesia, 2023). One behavioral response to these conditions is the adoption of frugal living, a lifestyle that emphasizes reducing unnecessary spending, making rational consumption decisions, and prioritizing needs over wants (Gill *et al.*, 2020). Frugal living is not only a cost-saving approach but also a long-term strategy to achieve financial balance and well-being. It encourages self-control and the ability to delay gratification, which are crucial in working toward financial freedom .

Among workers, who typically have stable monthly incomes, the potential to implement frugal living is significant. However, even with regular income, financial stress can persist without effective personal financial management (Lusardi and Mitchell, 2013). Furthermore, research indicates that financial literacy alone does not ensure prudent financial behavior unless it is supported by core values such as simplicity and responsibility (Atkinson, A., & Messy, 2012). The rise of e-commerce in Indonesia, growing by 78% and leading globally in growth (Directorate General of Informatics Applications, 2019), has made online shopping a part of daily life. Although convenient, this trend often encourages impulsive spending, especially when driven by social phenomena like Fear of Missing Out (FOMO) (Anggraeni, 2021). With incomes not increasing proportionally post-pandemic (Kuriyama, 2023), this widens the risk of financial imbalance—particularly for lower-income groups (Inayati, Isnawati Jamilah and Sujianto, 2024).

Overall, frugal living has shown a positive impact not only on financial stability but also on psychological well-being, life satisfaction, and preparedness for financial crises (Lastovicka *et al.*, 1999). Therefore, promoting frugal behavior through practical financial education is essential. It should be seen not merely as a survival mechanism, but as a sustainable strategy toward achieving long-term financial freedom and life balance, especially for professionals and academics.

2. Literature Review

2.1. Frugal Living

Frugal living is a lifestyle that emphasizes managing finances in a thrifty and efficient manner, with a focus on reducing unnecessary expenses (Dwi, 2023). This concept involves prioritizing needs over wants and making rational consumption decisions to maintain financial balance (Soman & Ainslie, 2021). Frugal living is not merely about saving money, but also a long-term strategy aimed at achieving economic stability and improving overall well-beingb (Gill *et al.*, 2020). Individuals who adopt this lifestyle tend to have stronger self-control and are more capable of delaying gratification in pursuit of greater financial goals. In the academic context, particularly among lecturers, frugal living becomes highly relevant as they face a variety of financial demands—from professional needs such as publications and seminars to family responsibilities (Bank Indonesia, 2023).

2.2. Personal Financial Management

Personal Financial Management (PFM) refers to an individual's ability to plan, organize, control, and evaluate personal financial activities in order to achieve desired financial goals (Gitman, 2014). Effective personal financial management includes managing income, expenses, savings, investments, and debt control (Bari & Bari, 2019). PFM plays a crucial role as a moderating variable that can strengthen or weaken the relationship between frugal living and the achievement of financial freedom.

Individuals who practice frugal living but lack strong personal financial management skills tend to face difficulties in achieving financial freedom (Xiao & Porto, 2017). Conversely, effective PFM can maximize the benefits of frugal living, thereby supporting asset accumulation and improving financial risk management (Lusardi and Mitchell, 2013). Therefore, PFM serves as a critical link that determines the success of implementing frugal living in achieving financial freedom.

2.3. Financial Freedom

Financial freedom is defined as a condition in which an individual has full control over their personal finances, allowing them to meet life’s necessities without relying on active income (Gitman & Joehnk, 2005). Financial freedom is achieved through careful financial management, including budgeting, saving, investing, and reducing consumer debt (Xiao & Porto, 2017). Studies have shown that financial freedom significantly contributes to psychological well-being and reduces financial-related stress (Lastovicka et al., 1999).

For lecturers, achieving financial freedom is an important indicator in maintaining quality of life and professional productivity. However, research by Prabawani & Sulistyowati (2020) indicates that long-term financial planning among Indonesian lecturers still needs to be strengthened, particularly in preparing for retirement.

3. Methodology

This study employs a quantitative approach aimed at measuring and analyzing the relationship between Frugal Living (X) and Financial Management (Z) in achieving Financial Freedom (Y). The research is explanatory in nature, as it seeks to explain causal relationships among variables through statistical modeling.

The sampling technique used in this study is probability sampling, with questionnaires distributed online. Given that this research involves three variables (one independent and two dependent variables), it is categorized as multivariate. According to Hair et al. (2021), a minimum of 10 respondents per variable is required for multivariate analysis. Therefore, the minimum sample size for this study is 30 respondents.

Data were collected through a structured questionnaire developed based on indicators for each variable: Frugal Living (X), Personal Financial Management (Z), and Financial Freedom (Y). The questionnaire employed a 5-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree), and was distributed both online and in person to eligible respondents.

The collected data were analyzed using the Partial Least Squares (PLS) method with the help of SmartPLS software. This technique was applied to test the structural relationships among variables and to assess the strength and significance of the hypothesized paths in the research model.

4. Result and Discussion

4.1. Measurement Model Evaluation

The measurement model in this study consists of a reflective measurement model, in which the variables frugal living (X), financial management (Z), and financial freedom (Y) are measured reflectively. According to Chin (1998), the evaluation of a reflective measurement model includes the following criteria: loading factor greater than 0.60, composite reliability greater than 0.70, Cronbach's alpha greater than 0.70, and average variance extracted (AVE) greater than 0.50.

Table.1 Outer Loading

Variabel	Item pengukuran	Outer Loading	Result
Frugal Living	I always clearly distinguish between needs and wants before buying something.	0,643	Valid
	I prefer to buy items for their function, not for their brand.	0,613	Valid
	I avoid consumer debt for purchasing non-urgent items..	0,741	Valid
	I feel content with a simple and modest lifestyle.	0,769	Valid
	I prefer saving money rather than spending it on unnecessary things.	0,704	Valid
Financial Management	I have both short-term and long-term financial plans	0,732	Valid
	I create a monthly budget to manage my expenses.	0,692	Valid
	I record all my expenses to find out where my money is being used	0,620	Valid
	I can control my spending so it doesn't exceed my income.	0,751	Valid
	I set aside a portion of my income to save every month.	0,794	Valid
	I have an emergency fund for	0,821	Valid

	unexpected needs.		
	I regularly review and evaluate my financial situation.	0,700	Valid
	I feel confident in making personal financial decisions.	0,680	Valid
Financial Freedom	I feel financially secure in both the short and long term.	0,701	Valid
	I can make life decisions without worrying too much about the financial aspect.	0,776	Valid
	I have sufficient savings or investments for the future.	0,840	Valid
	I don't experience excessive stress about my financial situation.	0,740	Valid
	I have more free time because I don't have to constantly work for money.	0,623	Valid
	I am free to choose a job because I am not dependent on a specific salary.	0,615	Valid
	I feel I've reached or am working toward the financial freedom I aspire to.	0,862	Valid

Table.2 Cronbach Alpha, Composite Reability, AVE

Variabel	Cronbach Alpha	Composite Reability	AVE
Frugal Living	0,734	0,834	0,510
Financial Management	0,872	0,899	0,520
Financial Freedom	0,864	0,894	0,550

The frugal living variable is measured by five (5) valid measurement items, with outer loadings ranging from 0.613 to 0.741, indicating that all five items are valid indicators of the frugal living construct. The reliability level of the variable is acceptable, as shown by Cronbach's alpha and composite reliability values above 0.70, indicating strong reliability. The level of convergent validity, as indicated by an Average Variance Extracted (AVE) value of 0.510, exceeds the threshold of 0.50, thus meeting the criteria for good convergent validity. Overall, the measurement items explain 51% of the variance within the frugal living variable.

The financial management variable is measured by eight (8) valid measurement items, with outer loadings ranging from 0.620 to 0.821, indicating that these items are valid indicators of financial management. The reliability of the variable is acceptable, supported by Cronbach's alpha and composite reliability values above 0.70. The convergent validity is supported by an AVE value of 0.520, which exceeds the 0.50 threshold, indicating good convergent validity. Overall, the measurement items explain 52% of the variance within the financial management variable.

The financial freedom variable is measured by seven (7) valid measurement items, with outer loadings ranging from 0.615 to 0.862, showing that these items are valid indicators of financial freedom. The variable's reliability is acceptable, with Cronbach's alpha and composite

reliability values above 0.70, confirming its reliability. The convergent validity, indicated by an AVE value of 0.550, also meets the requirement of being greater than 0.50, indicating strong convergent validity. In total, the measurement items account for 55% of the variance within the financial freedom variable.

4.2. Discriminant Validity Evaluation

Discriminant validity evaluation should be conducted by referring to the Fornell and Larcker criterion. Discriminant validity is an evaluation to ensure that the constructs are theoretically distinct and empirically supported through statistical testing. According to the Fornell and Larcker criterion, discriminant validity is established when the square root of the AVE (Average Variance Extracted) for each construct is greater than the correlations between that construct and any other constructs in the model.

Table.3 *Fornell Lacker Criterion*

	Financial Freedom	Financial Management	Frugal Living
Financial Freedom	0,742		
Financial Management	0,719	0,726	
Frugal Living	0,484	0,609	0,697

The financial freedom variable has a square root of AVE (0.742) that is greater than its correlations with Financial Management (0.726) and Frugal Living (0.697). This indicates that the discriminant validity of the financial freedom variable is satisfied. The Financial Management variable has a square root of AVE (0.726) that is greater than its correlation with Frugal Living (0.697). This indicates that the discriminant validity of the Financial Management variable is also satisfied.

Table.4 Cross Loading

Item pengukuran	Frugal Living	Financial Management	Financial Freedom
I always clearly distinguish between needs and wants before buying something.	**0,643**	0,479	0,337
I prefer to buy items for their function, not for their brand.	**0,613**	0,237	0,356
I avoid consumer debt for purchasing non-urgent items..	**0,741**	0,480	0,403
I feel content with a simple and modest lifestyle.	**0,769**	0,406	0,328
I prefer saving money rather than spending it on unnecessary things.	**0,704**	0,467	0,256
I have both short-term and long-term financial plans	0,226	**0,732**	0.622
I create a monthly budget to manage my expenses.	0,363	**0,692**	0,357
I record all my expenses to find out where my money is being used	0,391	**0,620**	0,318
I can control my spending so it doesn't exceed my income.	0,545	**0,751**	0,612
I set aside a portion of my income to save	0,422	**0,794**	0,493

every month.			
I have an emergency fund for unexpected needs.	0,488	**0,821**	0,552
I regularly review and evaluate my financial situation.	0,555	**0,700**	0,404
I feel confident in making personal financial decisions.	0,478	**0,680**	0,654
I feel financially secure in both the short and long term.	0,359	0,584	**0,701**
I can make life decisions without worrying too much about the financial aspect.	0,390	0,487	**0,776**
I have sufficient savings or investments for the future.	0,470	0,698	**0,840**
I don't experience excessive stress about my financial situation.	0,350	0,488	**0,740**
I have more free time because I don't have to constantly work for money.	0,214	0,403	**0,623**
I am free to choose a job because I am not dependent on a specific salary.	0,183	0,252	**0,615**
I feel I've reached or am working toward the financial freedom I aspire to.	0,424	0,634	**0,862**

Based on the table above, it can be seen that the cross-loading values of each indicator on its respective construct are higher than on other constructs. Therefore, it can be concluded that the criteria for discriminant validity have been met.

4.3. Structural Model Evaluation

Structural model evaluation is related to hypothesis testing regarding the influence between research variables. The evaluation of the structural model is carried out in three stages.

First, by examining the absence of multicollinearity between variables using the Inner VIF (Variance Inflation Factor) value. An Inner VIF value below 5 indicates no multicollinearity among variables (Hair, 2021).

Second, hypothesis testing between variables is conducted by observing the t-statistic or p-value. If the calculated t-statistic is greater than 1.96 (the critical value from the t-table) or the p-value is less than 0.05, there is a significant effect between variables. Additionally, the results should include the 95% confidence interval of the estimated path coefficients.

The third step involves evaluating the f square (f^2) value, which represents the effect size of direct relationships at the structural level. The interpretation criteria are: 0.02 = small effect, 0.15 = medium effect, and 0.35 = large effect (Hair, 2021).

Moreover, the f square value for mediation effects, referred to as upsilon v, is calculated by squaring the mediation coefficient. According to Lachowicz et al. (2018), as interpreted in Ogbeibu et al. (2022), the upsilon v values are categorized as follows: 0.02 = weak mediation effect, 0.075 = moderate mediation effect, and 0.175 = strong mediation effect.

Table.5 Inner VIF

	Financial Freedom	Financial Management	Frugal Living
Financial Freedom			
Financial Management	1,591		

Frugal Living	1,591	1.000	

Before conducting hypothesis testing on the structural model, it is necessary to examine whether multicollinearity exists among the variables using the Inner VIF (Variance Inflation Factor) statistic. The estimation results show that the Inner VIF values are less than 5, indicating a low level of multicollinearity between variables. This result strengthens the robustness of the parameter estimates in SEM-PLS, suggesting that they are unbiased.

Table.6 Hypothesis Testing: Direct Effects

Hypothesis	Path Coefficient	p-value	95% Confidence Interval for the Path Coefficient		F square
			Lower Bound	Upper Bound	
H1. Frugal Living Financial Management	0,609	0,000	0,539	0,717	0,591
H2. Financial Management Financial Freedom	0,675	0,000	0,516	0,860	0,596
H3. Frugal Living Financial Freedom	0,073	0,573	-0,193	0,310	0,007

Based on the results of the hypothesis testing above, the following findings are obtained:

1. The first hypothesis (H1) is accepted, indicating that frugal living has a significant effect on financial management, with a path coefficient of 0.609 and a p-value of 0.000 (< 0.05). At a 95% confidence interval, the effect of frugal living on financial management lies between 0.539 and 0.717. Furthermore, frugal living has a strong effect at the structural level on financial management (f square = 0.591).
2. The second hypothesis (H2) is accepted, indicating that financial management has a significant effect on financial freedom, with a path coefficient of 0.675 and a p-value of 0.000 (< 0.05). At a 95% confidence interval, the effect of financial management on financial freedom lies between 0.516 and 0.860. Financial management also has a strong effect at the structural level on financial freedom (f square = 0.596).
3. The third hypothesis (H3) is rejected, meaning there is no significant effect of frugal living on financial freedom, with a path coefficient of 0.073 and a p-value of 0.573 (> 0.05). At a 95% confidence interval, the effect of frugal living on financial freedom lies between -0.193 and 0.310. The effect of frugal living on financial freedom is low at the structural level (f square = 0.007).

Table.7 Uji Mediasi

Hipotesis	Path Coefficient	p-value	95% Confidence Interval for the Path Coefficient		Upsilon V
			Upper Bound	Lower Boung	
H4. Frugal Living Financial Management Financial Freedom	0,411	0,000	0,306	0,576	0,169

4. Based on the calculation results above, the fourth hypothesis (H4) is accepted, indicating that financial management acts as a mediating variable, mediating the indirect effect of frugal living on financial freedom, with a mediation path coefficient of 0.411 and a p-value of 0.000. At the structural level, the mediating role of the mindset transformation has a moderate mediation effect, with an upsilon v value of 0.169, which is slightly below the threshold for a strong effect (0.175).

4.4. Evaluation of Model Goodness and Fit

PLS is a variance-based Structural Equation Modeling (SEM) analysis that focuses on model testing aimed at predictive studies. Therefore, several measures have been developed to determine whether a model is acceptable, such as R square, Q square, SRMR (Hair et al., 2019), and the Goodness of Fit Index (Sarstedt & Henseler, 2013). In addition, model robustness is assessed through linearity testing of the relationships between variables.

Table.8 R Square

	R square	R square adjusted	Q square
Financial Freedom (Y)	0,520	0,504	0,251
Financial Management (Z)	0,371	0,61	0,177

The R square value reflects the proportion of variance in the endogenous variable that can be explained by exogenous and/or other endogenous variables within the model. According to Chin et al. (1996), the quantitative interpretation of the R square value is as follows: 0.19 (weak effect), 0.33 (moderate effect), and 0.66 (strong effect). Based on the data processing results above, it can be stated that frugal living explains 37.1% of the variance in financial management, indicating a moderate effect. Financial management explains 52% of the variance in financial freedom, also indicating a moderate effect.

The Q square value represents predictive accuracy, showing how well changes in exogenous and/or endogenous variables can predict the endogenous variable. This measure serves as a form of validation in PLS to indicate whether the model has predictive relevance. A Q square value greater than 0 indicates that the model has predictive relevance. According to Hair et al. (2019), the quantitative interpretation of the Q square value is as follows: 0 (low predictive relevance), 0.25 (moderate), and 0.50 (high). Based on the data processing results, the Q square value for the financial freedom variable is 0.251 (moderate predictive accuracy), while for mindset transformation it is 0.177 (low predictive accuracy).

Tabel.8 SRMR

	Model Estimation
SRMR	0.072

SRMR (Standardized Root Mean Square Residual) is a model fit measure that represents the difference between the observed correlation matrix and the model-implied correlation matrix. According to Hair (2021), an SRMR value below 0.08 indicates a good model fit. The estimated SRMR value of 0.072 suggests that the model demonstrates an acceptable fit. This implies that the empirical data can adequately explain the relationships among the variables within the model..

Table.9 GoF Index

Rata-rata Communality	Rata-rata R square	GoF Index
0,526	0,445	0,235

The Goodness of Fit (GoF) Index is a global model evaluation that combines the assessment of both the measurement model and the structural model. The GoF Index can only be calculated for reflective measurement models and is computed as the square root of the product of the average communality and the average R square. According to Wetzels et al. (2009), the interpretation of the GoF Index value is as follows: 0.1 (low), 0.25 (moderate), and 0.36 (high). Based on the data analysis, the calculated GoF value is 0.235, which falls within the moderate category.

5. Conclusion

This study concludes that frugal living plays a significant role in enhancing personal financial management among workers in Indonesia. Individuals who adopt a frugal lifestyle tend to manage their finances more effectively by budgeting, saving, and avoiding unnecessary spending. Personal financial management, in turn, has a strong and significant influence on the achievement of financial freedom, indicating that disciplined financial behavior is key to achieving long-term financial stability and independence. However, the study finds that frugal living does not have a direct significant effect on financial freedom. Its influence is realized indirectly through the mediating role of financial management, which shows a moderate mediation effect. This highlights the importance of integrating frugal values with sound financial practices in order to transform cost-saving behavior into real financial outcomes.

In conclusion, fostering frugal living habits alongside improving personal financial management skills can be an effective strategy for individuals particularly workers to achieve greater financial freedom and resilience in the face of economic uncertainty.

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THE EFFECTIVENESS OF CORPORATE SOCIAL RESPONSIBILITY IN EVALUATING CORPORATE SOCIAL PERFORMANCE: A SYSTEMATIC LITERATURE REVIEW

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Abstract

This study employs a Systematic Literature Review (SLR) to examine the effectiveness of CSR in improving corporate social performance. The analysis highlights CSR's role in strengthening stakeholder relations, supporting green innovation, and enhancing reputation, with leadership and well-planned strategies as key enablers.

Keywords: Corporate Social Responsibility, Social Performance, Systematic Literature Review

1. Introduction

In contemporary business practices, organizational sustainability has become a critical concern among corporate managers. CSR is widely adopted as a strategic instrument not only for cultivating a favorable corporate image but also for contributing to sustainable development. CSR refers to a company's social obligations toward society and the environment (Baden & Wilkinson, 2021). Socially, the public expects companies to operate without neglecting internal social dimensions, such as employee welfare, as well as external societal responsibilities like community empowerment.

CSR strategies are essential to establish harmonious relationships with stakeholders and ensure long-term profitability, thereby enhancing corporate value (Khasanah et al., 2024). CSR contributes positively to public perception and investor confidence by reflecting the company's commitment to addressing social challenges, which can ultimately improve financial performance (Satria & Gunarsih, 2023).

As awareness grows regarding the environmental and social impacts of business operations, CSR has evolved into a core component of strategic corporate commitments, balancing profitability with societal obligations. Transparent CSR implementation has become a benchmark for organizational accountability (Nopriyanto, 2024), while excessive CSR disclosure may lead to financial strain due to increased expenditures (Afifah et al., 2021). Against this backdrop, the present study aims to analyze effective CSR applications that can improve social performance through a comprehensive literature review approach.

2. Literature review

2.1. Corporate Social Responsibility (CSR)

In the context of globalization, CSR has evolved from a peripheral, philanthropic activity to a core element of business strategy. It is now widely recognized that sustainable corporate success is contingent upon a balanced integration of economic, social, and environmental goals. According to Shahzad et al. (2020), CSR significantly contributes to Sustainable Performance (SP), a comprehensive construct that encompasses long-term viability in social, environmental, and financial terms.

Porter and Kramer (2011) have famously emphasized that CSR should be seen not merely as a cost or charitable donation but as an opportunity to create shared value. Stakeholder theory further asserts that corporations bear responsibilities not just to shareholders but to a broader

ecosystem that includes employees, customers, communities, and the environment (Freudenreich et al., 2020).

In high-impact sectors such as tourism and hospitality, particularly in countries like China, CSR has demonstrably contributed to enhanced sustainability performance (Font & Lynes, 2018). Globally, the CSR agenda has motivated firms to engage in strategic planning and adopt stakeholder-centric approaches, promoting long-term social equity and innovation in sustainability practices (Ling et al., 2022; Sharif et al., 2020).

Importantly, CSR is instrumental in building organizational legitimacy, enhancing stakeholder engagement, and fostering public trust—factors that are increasingly vital in a socially aware and environmentally conscious marketplace. As societal expectations rise, companies must embrace CSR as a strategic commitment, rather than a marketing gimmick.

2.2. Corporate Social Performance (CSP)

Corporate Social Performance (CSP) refers to measurable outcomes in environmental, social, and governance (ESG) areas that demonstrate an organization's accountability to its stakeholders (Chen & Delmas, 2010; Orlitzky et al., 2003). CSP is not limited to philanthropic donations or compliance with regulations—it encompasses the entire spectrum of socially responsible actions embedded in corporate strategy and operations.

As stakeholders—from investors to regulatory bodies—increasingly prioritize ESG considerations, companies are under pressure to show tangible progress on social issues such as human rights, diversity and inclusion, employee development, and community engagement. These issues have become key indicators of corporate value and competitiveness.

A robust CSP framework can help organizations mitigate risks, attract top talent, secure capital, and foster innovation. According to Joyce & Paquin (2016), integrating social performance into the core strategy not only meets external expectations but also strengthens internal culture and organizational identity.

2.3. Linking CSR and Social Performance

CSR and CSP are deeply interconnected. CSR acts as the strategic driver, while CSP is the operational outcome. A company's commitment to CSR—reflected in initiatives like environmental stewardship, ethical labor practices, and community involvement—can directly influence its social performance metrics.

Collier and Esteban (2007) argue that CSR commitment, both emotional and intellectual, significantly motivates organizations to engage in meaningful sustainability efforts. These efforts may include waste reduction, carbon emissions control, renewable energy adoption, and inclusive stakeholder participation.

Moreover, CSR participation, which reflects the active involvement of employees and managers in CSR initiatives, serves as a crucial mediator between CSR intent and performance outcomes (Anser et al., 2020; Rivera et al., 2017). Strong leadership, particularly transformational leadership, is essential to align CSR activities with organizational goals and values (Dai et al., 2022).

Ultimately, firms that embed CSR into their core business model gain strategic advantages: enhanced risk management, stronger brand equity, deeper community relations, and long-term financial stability (Dangelico & Pontrandolfo, 2015)..

3. Methodology

This research applies the Systematic Literature Review (SLR) methodology, adhering to the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines. The SLR approach enables comprehensive identification, evaluation, and synthesis of existing scholarly studies to draw generalized insights. Data was collected through the Scopus database and additional scholarly sources using Harzing's Publish or Perish software.

Using a set of refined keywords, 363 articles were identified. After screening using Covidence, 146 articles qualified for eligibility assessment. Ultimately, 12 peer-reviewed publications met the inclusion criteria and were selected for in-depth analysis. The findings derived from this curated sample were systematically categorized to extract dominant themes, identify research gaps, and inform theoretical and practical implications.

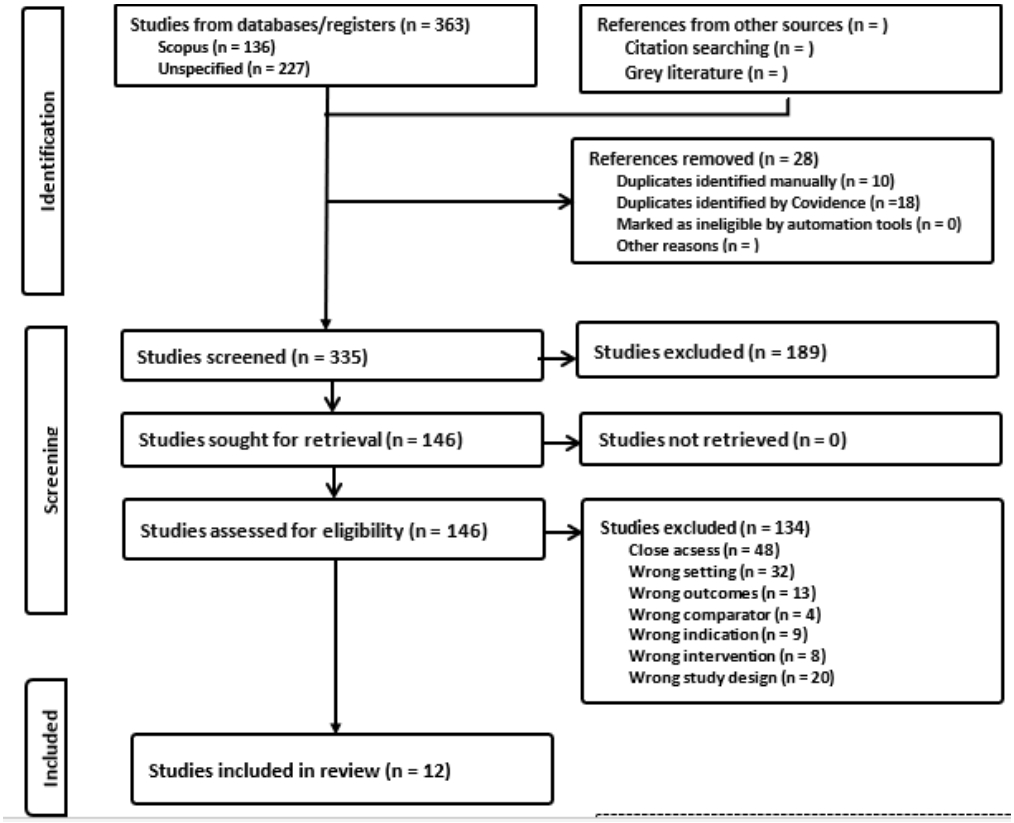

Figure 1. Screening Process

4. Results and discussions

A total of 12 articles related to the effectiveness of Corporate Social Responsibility (CSR) in evaluating Corporate Social Performance were identified through the literature search. These findings are outlined in Table 1.

Table 1. Summary of Journal Article Analysis

No	Literature	Objective	Findings
1	Anser et al., 2020	To analyze the influence of CSR commitment and participation on social performance (SP) and environmental performance (EP), and the mediating role of CSR participation.	CSR commitment positively predicts CSR participation. CSR participation significantly impacts both SP and EP. Furthermore, CSR commitment has a direct and significant effect on SP and EP, with CSR participation acting as a mediator, amplifying the positive influence of CSR commitment on both social and environmental performance.
2	Hussain et al., 2022	To examine the impact of Corporate Social Responsibility	CSR has a moderate effect on environmental performance. The study

No	Literature	Objective	Findings
		on environmental performance using data from ten major industrial organizations in Lahore, Pakistan.	also reveals that green innovation, green capabilities, environmental strategy, and transformational green leadership serve as mediating factors that enhance the relationship between CSR and environmental outcomes.
3	Xie et al., 2022	To explore how CSR can influence sustainable environmental performance.	CSR plays a pivotal role in improving sustainable environmental outcomes. The findings reinforce the view that CSR is not merely a social initiative but also a strategic mechanism for strengthening the linkage between organizational support and environmental performance.
4	Khan & Ahmad Lone, 2023	To explore the influence of various factors—including green accounting, capital structure, and CSR—on corporate value.	CSR policies and environmental practices significantly affect corporate financial performance and overall efficiency. The study underscores the importance of integrating sustainable environmental policies within corporate strategy to enhance firm value and market performance.
5	Cheema & Javed, 2017	To analyze the growing demand for human resource management competencies in green practices, including selection, recruitment, reward systems, and training implementation.	Green human resource management practices exert a strong positive influence on fostering sustainable environmental behavior within organizations.
6	Xiao et al., 2024	To investigate the impact of CSR practices on green innovation (GI) and sustainable performance (SP) in medium and large manufacturing firms in China.	CSR targeting both external and internal stakeholders has a positive effect on the dynamic green capabilities of manufacturing enterprises in China.
7	Dai et al., 2022	To examine the impact of CSR, transactional leadership, and transformational leadership on sustainable performance.	CSR, along with both transactional and transformational leadership, has a positive influence on sustainable corporate performance.
8	Malik et al., 2021	To explore the mediating role of Organizational Citizenship Behavior towards the Environment (OCBE).	OCBE significantly mediates the relationship between CSR and Green Human Resource Management (GHRM) practices. Furthermore, OCBE has a substantial impact on sustainable performance.
9	Umair et al., 2023	To explore the moderating effect of transformational leadership	Transformational leadership moderates the relationship between hard GTM and

No	Literature	Objective	Findings
		between Green Talent Management (GTM) and Innovative Work Behavior (IWB), as well as between GTM and Green Performance (GP) of employees.	IWB. However, no significant moderation is observed in the relationships between soft GTM and IWB or between GTM and GP.
10	Zhao et al., 2021	To assess the implementation status of GHRM practices in construction firms in Nepal.	Both GHRM and CSR have a positive effect on sustainable organizational performance in construction firms.
11	Yousaf, 2021	To analyze the role of Environmental Management Initiatives (EMI) in defining environmental performance within the hospitality industry.	The authenticity of EMI and CSR are key and significant determinants of environmental performance in the hospitality sector.
12	Ye et al., 2022	To understand how Green Organizational Strategy (GOS) promotes Environmental CSR (ECSR) and Green Technological Innovation (GTI) to achieve Organizational Sustainable Performance (OSP).	GOS exerts a strong positive effect on ECSR, GTI, and OSP. ECSR significantly influences both GTI and OSP. Additionally, GTI acts as a core mediating variable linking GOS and ECSR to sustainable organizational performance.

The implementation of Corporate Social Responsibility (CSR) has been shown to exert a markedly positive influence on a firm's social performance. An in-depth analysis of a range of scholarly studies affirms that CSR engagement serves as a pivotal mechanism for enhancing not only organizational social outcomes but also corporate image and legitimacy. For example, Anser et al. (2020) demonstrated that CSR functions as a mediating conduit, linking a firm's commitment to improved social and environmental performance. Similarly, the active involvement of both internal and external stakeholders in CSR programs significantly contributes to the development of green organizational capabilities and the advancement of social performance (Xiao et al., 2024). Furthermore, interdisciplinary collaboration—particularly those involving behavioral change and innovation—has been empirically proven to substantially elevate social performance and yield enduring, sustainable impact, as highlighted by Hussain et al. (2022) and Malik et al. (2021).

The efficacy of CSR is contingent upon a constellation of internal and external factors. Among them, transformational leadership emerges as a critical determinant in strengthening the nexus between CSR and green innovation, as noted by Umair et al. (2023). Additionally, the strategic integration of CSR with green human resource management (GHRM) practices has been shown to foster deeper employee engagement in advancing the organization's social mission (Malik et al., 2021; Zhao et al., 2021). When CSR is embedded within well-orchestrated environmental strategies or driven by innovation-led initiatives, it yields more profound and enduring impacts on social performance (Hussain et al., 2022; Xie et al., 2022). Moreover, cultivating robust relationships with local communities through CSR has been found to enhance a company's social acceptance and legitimacy, reinforcing its societal license to operate (Xiao et al., 2024).

Despite these promising findings, significant gaps remain within the extant body of CSR literature. A disproportionate number of studies are confined to specific sectors—most notably manufacturing and hospitality—limiting the generalizability of the findings and leaving cross-sectoral insights underdeveloped. Moreover, the cultural dimensions—both local and national—that potentially shape stakeholder perceptions and the effectiveness of CSR initiatives remain underexplored. The methodological diversity in measuring social performance across studies further complicates efforts to draw consistent comparisons and hinders the formulation of unified evaluation standards.

These insights yield critical implications for both corporate practitioners and policy architects. Organizations must ensure that CSR commitments are not merely symbolic, but are operationalized through sustained, cross-functional engagement—particularly through synergy with human resource divisions and transformative leadership. Strategic emphasis should be placed on cultivating transformational leaders capable of aligning CSR with long-term social innovation. From a policy perspective, firms must embed CSR within broader organizational sustainability frameworks while prioritizing green innovation and meaningful community partnerships. To advance the field, future research should aim to standardize indicators of social performance and delve deeper into the contextual and cultural variables that influence CSR efficacy. Expanding the empirical base through cross-sectoral studies will also enrich the understanding of CSR's transformative potential across diverse industrial landscapes.

5. Conclusion

This study underscores the critical role that effective implementation of Corporate Social Responsibility (CSR) plays in enhancing corporate social performance. The success of CSR initiatives is fundamentally driven by active stakeholder engagement—both internal and external—as well as robust cross-functional collaboration that incorporates elements such as green innovation and the integration of CSR into human resource management practices. Transformational leadership further strengthens the synergy between CSR and environmentally driven or socially innovative initiatives. Simultaneously, strong relationships with local communities contribute to improved social legitimacy and public acceptance of the company.

Nevertheless, this study is not without limitations. A major constraint lies in the predominant focus on specific industry sectors, which restricts the generalizability of the findings. Additionally, there is a notable lack of inquiry into cultural influences—both at the local and national levels—that may shape the perception and impact of CSR. The inconsistent use of performance indicators across the reviewed studies also complicates comparative analysis and limits the formulation of cohesive evaluation metrics.

To address these gaps, future research should prioritize cross-sectoral analyses that capture the broader dynamics of CSR application. Further exploration into the role of cultural context is essential to understand how CSR is perceived and operationalized across different sociocultural environments. Moreover, there is a pressing need to develop standardized indicators for measuring social performance, enabling more accurate benchmarking across industries.

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THE EFFECT AN EMPIRICAL INVESTIGATION OF MINING COMPANIES LISTED ON THE INDONESIA STOCK EXCHANGE FOR THE 2019–2023 PERIOD EXAMINING THE IMPACT OF CORPORATE SOCIAL RESPONSIBILITY ON FINANCIAL PERFORMANCE

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Abstract
This study aims to investigate the relationship between corporate social responsibility disclosure and financial performance. Secondary data from sustainability and annual reports that were obtained from the official websites of each firm and the IDX are used in the quantitative approach of the study. The study's population comprises 98 mining businesses listed on the IDX between 2019 and 2023, with a sample size of 66 firms that meet the criteria. The conventional assumption test and descriptive statistical analysis were the analysis techniques employed, The SPSS version 27 program was used to process the hypothesis test and examination of numerous linear regressions. The results of the study show that debt has a detrimental effect on financial performance, corporate social responsibility has an effect on financial performance, and the amount of the organization has no bearing on financial success.
Keywords: mining, financial performance, and corporate social responsibility

1. Introduction

One A company's financial success is a key determinant of its health as it demonstrates its capacity to produce profits and survive market competition (Fajaryani & Suryani, 2018; Li *et al*., 2022). Financial performance can also be a reference to assess the profits obtained reflecting the company's healthy financial condition (Li *et al*., 2022; Marselia & Rivandi, 2023). An optimal financial performance of a company can attract investors attention, prompting them to consider the decision of investing their capital in a company (Costa & Fonseca, 2022; Jao *et al*., 2020). In order to support the business's operational requirements and guarantee investors' well-being by raising The cost of operating capital and the rate of return on investment both support the company's long-term financial health, particularly in the midst of increasingly fierce business competition (Raningsih & Artini, 2018). Companies must also consider the various challenges that exist in each company's industrial sector. Companies need to consider various challenges that arise in their industrial industries, including the mining industry where commodity prices, strict regulations, and high operating costs can hamper financial performance while demanding adaptive and innovative management strategies. (Ingrid, 2018).

The mining industry has its own challenges, one of which is fluctuations in the price of mining products. The commodity value of mining industry products tends to be less stable (Prastyo & Sertiartiti, 2018). Commodity prices can fluctuate significantly in a short period of time due to global factors such as demand, supply, and geopolitical conditions (Simatupang *et al*., 2023). As in 2019 to 2020, coal mining companies at PT. Adaro Energy Indonesia Tbk. experienced a decrease in net profit of 63.56%, in line with the decline at the lowest point in 2020 of coal commodities which was 41.7%. Meanwhile, in gold metal mining commodities at PT. Aneka Tambang Tbk. in the same year experienced a significant increase of 83.13% and the gold commodity itself increased by 17.5% (Economics, 2024). The data can provide an

overview of how fluctuations in commodity prices can significantly impact the financial results of businesses operating in the mining industry.

Numerous facets of the business' operations are significantly impacted by its financial success in the mining industry. The business may engage in operational or non-operational operations, such as current and planned projects (Simaremare & Gaol, 2018). Among these are the company's social and environmental initiatives, including prosper the people affected by mining activities, to protect and the environment around mining activities (Gumanti & Alkahfi, 2021). Planned CSR implementation enhances the company's standing in addition to encourages community empowerment and environmental conservation in the operational area (Mustari *et al*., 2023. The company carries out CSR through various social activities that aim to provide benefits to the community around the company (Li *et al*., 2022; Marthin *et al*., 2017). The company acts as an entity that integrates and balances aspects like social, economic, and environmental (Lubis et al., 2023). Some even consider it a paradigm shift that shifts the focus from just seeking profit to being responsible for society and the environment (Sari *et al*., 2020). The company is obliged to protect the environment and the welfare of the community as a result of mining operational activities, therefore CSR is a necessary program for companies that interact directly with the environment and the community around operations of the business (Qilmi, 2021). CSR disclosure is necessary in order to comply with government regulations based on Law No. 40 of 2007, which mandates that businesses involved Apply social and environmental principles in the natural resources industry initiatives as a way to demonstrate their responsibilities to the community. Helping investors make decisions is another motivation, as investors will also analyze and evaluate CSR-based.

Research conducted Wati *et al*. (2023), Prayanthi & Budiarso (2022), Hakimi *et al*. (2023), Volkova & Kuznetsova (Volkova & Kuznetsova, 2022), and Aspal *et al*. (2023) Show that corporate social responsibility (CSR) affects financial performance. Companies that disclose CSR will be better known by the public. Good CSR will improve the company's image as well as encourage it to get a license to act socially, which will automatically generate profits. This research was conducted in the mining sector because it has a nique characteristic that the company's activities involve more aspects of human resources, the environment and the economy than other sectors (Junianta, 2022). Mining companies are also important in the country's development, this industry supports the fulfillment of energy needs, provides raw materials for the national industry and becomes income through the country's foreign exchange (Pinangkaan *et al.*, 2022). The challenges Given the background information previously supplied, the findings of this inquiry may be expressed as follows. Does corporate social responsibility have an impact on the financial success of mining companies listed on the Indonesia Stock Exchange during the 2019–2023 period disclosure?.

2. Literature review

2.1. Legitimacy Theory

The connection between society and the organization is explained by the notion of legitimacy. Dowling and Pfeffer (1975) revealed that a company must operate in accordance with the norms, values and beliefs carried out by society. Legitimacy is a management system that aims to align companies with the public, governments, people, and neighborhood associations (Adnan *et al*., 2023; Massubagiyo & Widyawati, 2022). Society in the theory of legitimacy is among the crucial elements of a company's long-term success (Prayanthi & Budiarso, 2022). The company is required to communicate its responsibility to the community and stakeholders that The business has operated in line with social, economic, and environmental principles in its operational operations, which can improve the business's financial performance (Faley & Muslichah, 2020). As stated by Prayanthi and Budiarso (2022),

legitimacy theory is a perspective-oriented approach that allows a business to both influence and be impacted by the people it works with. The business has the necessary legitimacy and is required to uphold and expand it in order to get the trust of stakeholders and the public (Irine & Asyik, 2019).

2.2. Corporate Social Responsibility

Businesses must uphold integrity, behave morally, and comply with legal requirements in every aspect of their operations, according to the concept of corporate social responsibility (Lubis et al., 2023; Wei et al., 2020). The World Business Council for Sustainable Development (WBCSD) states that corporate social responsibility (CSR) is a kind of corporate responsibility that promotes sustainable economic growth by working with stakeholders, including communities, workers, and the general public, to build a more affluent world. CSR, according to Permensos No. 9/2020, is a way for businesses to actively participate entities in encouraging sustainable development, both social and environmental aspects, in order to create benefits for companies, local communities, and the wider community. Corporate social responsibility plays a role as a strategy for world businesses to protect and encourage community development (Azumah, 2020; Cahya, 2022). CSR initiatives play a very important role in risk management strategies, especially in providing social security. Through the implementation of CSR, it is anticipated that it will be able to contribute significantly to improving people's welfare and improving environmental quality in a sustainable manner rather than just being oriented towards short-term profits (Maf'ulla & Rachmawati, 2024; Xu, 2023). The formula for calculating corporate social responsibility according to (Wati *et al*., 2023) is as follows:

$$CSRDI = \frac{\sum Xij}{Nj}$$

2.3. Financial Performance

Financial performance is an important indicator to explain the financial status of a business throughout a given time frame (Lestari, 2021). A company's financial performance not only reflects actual growth, but also includes long-term prospects, stability of development, and the capacity to expand sustainably (Adriansyah *et al*., 2023; Costa & Fonseca, 2022). Information on financial performance is useful in predicting The capacity of the business to provide cash flow and maximize the utilization of existing sources of funds (Aspal *et al*., 2023; Ingrid, 2018). The success rate of the business in turning a profit is assessed using a variety of specific ratio measurements (Fitriya & Setyorini, 2019; Tarda *et al*., 2024). In this study, ROE refers to a certain kind of profitability ratio that aims to measure its ability to generate profits from shareholder investments (Rahailjaan & Kaok, 2024; Volkova & Kuznetsova, 2022). The formula for calculating financial performance measured by ROE is based on (Pratiwi *et al*., 2020) as follows:

$$ROE = \frac{Net\ Profit}{Equity\ Total}$$

3. Methodology

The method in this study uses a quantitative approach. The type of data used in this study is secondary data. This method is carried out by collecting data sourced from the annual report and sustainability report of every firm accessible on the Indonesia Stock Exchange's official platform as well as the company's official website. The research focuses on the 98 mining companies that were listed on the Indonesia Stock Exchange (IDX) between 2019 and 2023. Purposive sampling, which uses certain standards to ensure the applicability of the studied data, is used to determine the sample. (1) Mining companies that are listed on the Indonesia Stock

Exchange's 2019–2023 timeframe are the study's criteria. (2) Businesses that provide complete financial accounts for the 2019–2023 timeframe. (3) Businesses that, between 2019 and 2023, fail to report and engage in CSR initiatives. 61 businesses satisfied the sample requirements after the sampling criteria approach was used. This makes use of multiple linear regression analysis work because there is one independent (corporate social responsibility), two control variables (leverage and company size) and one dependent variable (financial performance). The analysis tool chosen to analyze the collected data is the SPSS 27 software.

4. Results and discussions

4.1. Results

Descriptive Statistical Analysis

	N	Minimum	Maximum	Mean	Std. Deviation
ROE	240	-0,508	0,615	0,08466	0,140094
CSR	240	0,067	0,978	0,35790	0,207695
Leverage	240	-3,405	6,358	1,09684	1,281532
Company Size	240	20,542	33,497	27,93264	3,169644

The following explanation is based on the descriptive statistical analysis test results, which are shown in the table 4.2 with 240 observations overall:

1. The Social responsibility of corporations The variable's values vary from a minimum of 0.067 to a maximum of 0.207695, with a mean of 0.35790 and a standard deviation of 0.207695 maximum value range of 0.978.
2. The return of equity (ROE) variable has a lowest value range of -0.508, a mean value of 0.08466, and a standard deviation of 0.140094 to a maximum value range of 0.615.
3. The leverage variable has a standard deviation of 1.281532, an average of 1.09684, and a minimum range of -3.405 to a maximum value range of 6.358.
4. The firm size variable has a standard deviation of 33.497, an average of 27.93264, and a minimum range of 20.542 3.169644.

Multiple Linear Regression Analysis

	Non-standard Coefficients		Coordinated Coefficients	t	Sig.
Variabel	B	Std. Error	Beta		
(Constant)	-0,009	0,058		-0,150	0,881
CSR	0,118	0,045	0,169	2,595	0,010
Leverage	-0,021	0,008	-0,174	-2,709	0,007
Company Size	0,003	0,004	0,050	0,750	0,454

The Since this study satisfies all of the conventional assumption tests for normality, multicollinearity, heteroscedasticity, and autocorrelation, the multiple linear regression model is considered feasible for application in the analysis. Examining table 4.10 The equation for the multiple linear regression model may be found in column B's Unstandardized Coefficients column as follows:

1. The regression coefficient of financial success to corporate social responsibility is 0.118, indicating a favorable trend. This implies that financial performance will rise for every 1% increase in CSR. However, a 1% drop in CSR results with a 0.118 drop in financial performance.
2. The leverage control variable's regression coefficient on financial performance is -0.021, indicating a negative trend. This indicates that financial performance will drop by -0.021

for every 1% rise in leverage. On the other hand, financial performance rises by -0.021 when leverage falls by 1%.

3. The company's size control variable's regression coefficient on financial performance is 0.003, indicating a positive trend. This suggests that for every 1% increase in the company's size, its financial performance increases. Conversely, when the business's size declines.
4.

T test (Partial)

According to the analysis's findings in table 4.10, The hypothesis test is partially described as follows:

1. Table 4.10's t-test analysis computation results indicate that the significance column is 0.010 and Column T's corporate social responsibility variable has a value of 2.595. The t-test's significance value is 0.010 < α (0.05), indicating that the variable has a significant influence, and the t-value of the SPSS test result is 2.595 and in the t-table is 1.651, indicating that the CSR variable has a positive effect on ROE.
2. The results of the t-test analysis computed on the leverage control variable were a t-value of -2.709 and a significance value of 0.007. The SPSS test result's t-value is 1.526, while the t-table's t-value is 1.681. This suggests that the variable has a substantial negative impact. With a significance score of 0.007 < α (0.05) from the t-leverage test, the variable has a significant influence. The findings indicate that the leverage variable significantly impairs ROE.
3. The The t-test analysis computed on the control variable of business size yielded a t-value of 0.750 and a significance value of 0.454. The variable has no significant impact, according to the firm size t-test, which has a significance value of 0.454 > α (0.05). It is possible to conclude that the control variable has no beneficial effects because the t-test results in SPSS are 0.750 and the t-table calculation is 1.651. It was determined that the control variable for business size had no impact on ROE.

Coefficient of Determination Test (R^2)

R	R Square	R-squared adjusted	Standard Deviation from the Estimate
0,251	0,063	0,051	0,118293

Based on Table 4.11, it can be seen that the results of the analysis of the determination coefficient test show that the adjusted R square value is 0.051 or 5.1%. This value indicates that the independent variable, namely CSR as well as the control variable, leverage and company size may account for 5.1% shows how the dependent variable ROE fluctuates, whereas variables account for the remaining 94.9% that are not present in this study.

4.2. Discussions

The Influence *of Corporate Social Responsibility* on Financial Performance

Based on The study's conclusions show that corporate social responsibility considerably raises return on equity, a gauge of financial success, for mining companies listed on the Indonesia Stock Exchange between 2019 and 2023. These results are in line with the legitimacy theory, which maintains that a business gains legitimacy via having good relationships with neighborhood organizations. The financial performance of the business will be greatly enhanced by the legitimacy it gains by engaging in CSR operations.

One The public's ability to see and evaluate the company's duties is one of the elements that contributes to CSR's notable benefits. Businesses that fulfill their obligations in a proper and consistent manner will win the public's trust, which will improve the company's reputation. A favorable reputation will increase public confidence in the company's mining operations, preventing roadblocks to the mining and production process, which will significantly boost the business's financial performance.

With the confidence of investors who put money into the business and set aside a portion of that money to adopt CSR methods that continuously benefit the company, CSR implementation in businesses has the potential to boost financial performance. Businesses that are dedicated to revealing Using corporate social responsibility to demonstrate concern for the environment and society will develop a favorable reputation that seeks to win over customers, investors, and the community, all of which will improve financial performance. Furthermore, businesses that are able to commit to CSR disclosure can prove their ability to address environmental stabilization issues. Although the company will spend a very large amount of capital at the beginning in carrying out CSR activities, the expenditure will be proportional to the results of future profits if the company can implement CSR with careful planning. Therefore, companies must pay more attention to every step of CSR activities that will be carried out to achieve the desired results, namely the reputation of the business and the confidence of stakeholders and the community. However, in the event that the company makes the wrong decision in planning and implementing CSR activities, the company can suffer significant losses.

The The results of the study are in line with research by Wati et al. that indicates corporate social responsibility significantly affects financial success. (2023), Prayanthi & Budiarso (2022), Hakimi et al. (2023), Vlokova & Kuznetsova (2022), and Aspal et al. (2023). achievements. This happens because companies that carry out CSR activities consistently tend to get a positive perception from stakeholders, so that companies have a great opportunity to obtain external funding from investors for the implementation of CSR that can improve financial performance (Prayanthi & Budiarso, 2022). Theoretically, the more CSR programs are implementedincreases the likelihood that the business will enhance its financial performance and that CSR will be a wise investment that can improve stakeholder relations (Aspal et al., 2023). One way that CSR is implemented for staff members is through the company's attempts to offer excellent working conditions and flexibility in the workplace. This practice is able to create incentives that encourage employees to be more productive, thus indirectly contributing to improving the company's financial performance (Hakimi *et al*., 2023).

The Influence of Leverage Control Variables on Financial Performance

Test results from the research demonstrate that financial performance (ROE) is significantly impacted negatively by the leverage control variable. One of the reasons leverage has a major negative impact is that investors and stakeholders are worried that using leverage excessively could have unanticipated consequences if it is not managed properly, which would have a major detrimental impact on the financial success of the business. According to the legitimacy concept, this is in opposition to the quantity of leverage value in a company has no influence on the legitimacy of the community, because the public does not see the legitimacy of a company from the amount of leverage it has.

According to the study's findings, the leverage control variable has no discernible impact on financial performance, which is consistent with research by Gemilang & Wiyoko (2022) and Savira & Hariyati (2021). Businesses with low leverage ratios are less risky; conversely, if a firm has a high leverage ratio, the risk is greater if the company is in a difficult financial situation. Companies that cannot manage leverage properly will create concerns for

stakeholders, thus significantly negatively affecting the company's financial performance business.

The Impact of Control Variables Related to Company Size on Financial Performance

Results of the study's test analysis indicate that there is no significant impact from the firm size control variable. The fact that investors and stakeholders focus on the potential and profitability demonstrated by One possible explanation for why the size of the firm has no appreciable effect on financial success is the company's quarterly financial statements rather than the size of the business. This is consistent with the legitimacy idea, big or small company size does not affect the legitimacy of the community. Companies can gain public legitimacy through CSR activities that are relevant to the community. When the company gains public legitimacy, the trust of investors and partners will increase, which will have a favorable effect on financial results. The results of the study also show that the control variable of the company's size has no appreciable effect on financial success, as reported by Nguyen & Lan (2021) and Fajaryani & Suryani (2018). This is due to the magnitude of the company's overall assets cannot determine financial performance.

5. Conclusion

The study's test results indicate that, for Corporate social responsibility enhances financial performance as determined by the Return on Equity for mining businesses listed on the IDX indicator. According to the study's findings, businesses that fulfill their responsibilities to the community and demonstrate their dedication to implementing CSR initiatives will be among the elements that significantly improve their financial performance down the road. The IDX-listed mining companies' financial performance is negatively impacted by leverage control factors. This is because the high level of leverage reflects a large debt burden, which can reduce investor confidence and hinder the stability of the business's financial results. The financial performance of mining businesses listed on the IDX is unaffected by the control variable of firm size. This has a major impact on financial performance as a large company size is not necessarily linked to high operational efficiency and financial success.

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UNDERSTANDING DIGITAL TRANSFORMATION AND EMPLOYEE WELL-BEING: A BALANCE OF OPPORTUNITIES AND CHALLENGES

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Abstract

Digital transformation is being used by an increasing number of businesses and organizations. Technology is getting more sophisticated, if you don't follow it, you will be left behind. A situation that is often found in companies or organizations is employees who feel worried or unsure about facing technological changes that are applied in their work processes. The goal of this research to ascertain how personnel are affected by the digital transformation and the factors that support the successful adoption of this technology. This Examine uses a Review of Systematic Literature (SLR). The results of this investigation show that Digital Transformation provides favorable and negative responses to both the physical and psychological aspects of employees. The role of the leader is most important in the successful adoption of digital transformation. This study can be used by other researchers as a start by taking certain parts of the research results to be investigated more broadly and in detail and can also be used as input and consideration for top management in managing employees in companies or organizations that adopt digital transformation.

Keywords : Digital Transformation; employees; employee psychology

1. Introduction

The role of digital transformation a crucial part in the activities carried out by company employees . Acceptance of the adoption of digital transformation by companies has various impacts that are felt both physically and psychologically, both positive and negative. A positive response by employees will have a good effect on the company and vice versa. Management support and benefits felt by employees possess a favorable influence on the acceptance of The process of digital transformation by employees (Mutambik and Almuqrin, 2024). When employees feel that digital transformation technology can threaten their jobs, they will resist change, so it is very important for leaders to be aware of these fears and provide employees with an understanding that the process of digital transformation presents a chance for them to improve their skills to accommodate the upcoming market (Tabrizi B *et al.*, 2019). Capabilities, collaboration processes related to Digital Transformation and Customer Service Experience contributes on performance and contextual performance (Guzmán-Ortiz *et al.*, 2020).

Job discomfort in the digital era results in decreased life satisfaction, but in employees who have job engagement, it does not decrease life satisfaction too much (Rafiq and Chin, 2019). Employee performance is affected by Digital Transformation, which can affect many aspects of work and productivity (Alzaabi, 2023) . Digital Transformation improves physical health but mental health can deteriorate (Dengler, Hiesinger and Tisch, 2022) . Employees with a paradoxical mindset are more likely to embrace Digital Transformation (without control variables). Employee attitudes towards change have a favorable and noteworthy effect on the adoption of digital transformation tactics. Business model changes do not moderate the

paradoxical thinking patterns and acceptance of DT. High expected change weakens the relationship between adoption of digital transformation and favorable attitudes toward change (Klein, Spieth and Söllner, 2024). Employees will feel no sense of attachment to the company if leaders are not sensitive to all aspects of change including Digital Transformation from the impact of the digital era (Purba, 2021) . Digital Transformation triggers employees to engage in intrinsically motivated processes (Kensbock and Stöckmann, 2021).

Skills and abilities possess a substantial influence on undergoing The shift to digital journey (Chatterjee *et al.*, 2022). Organizational initiatives that strongly support worker well-being and adaptation mechanisms in facing the challenges of the digital work environment are needed (Chigori, 2024). Digital leaders influence employee creativity (Zhu *et al.*, 2022). The process of developing competencies is dynamic. A higher degree of digital transformation can be attained through employee expertise. In order to facilitate organizational transformation towards digitization, personnel expertise is crucial (Blanka, Krumay and Rueckel, 2022). Teachers (also called employees in the world of education) are required to have technological knowledge, have skills in applying technology, transforming with the digital world, and also be creative in utilizing various devices from existing technology. All the dynamics that have occurred in teachers so far can be overcome by participating in various training and workshops to support teaching abilities (Tafonao, Her and Ditakristi, 2022).

Individuals' beliefs about personal abilities and situational resources influence whether they view emerging technology as chances for career development or as threats to their abilities (Solberg, Traavik and Wong, 2020). Cognitive job insecurity is negatively impacted by digital transformation (Dengler and Gundert, 2021)

A phenomenon often found in companies or organizations is employees who are afraid or hesitant to accept the challenges of technological change applied in their work. Before adopting or adapting to the Digital Transformation, employees feel insecure about their abilities or are reluctant to learn because they feel they cannot be one of the driving forces for researchers to review the impact of Transformation to digital.

A slow, deliberate and more thoughtful approach to the digital transformation of the sales force considers the risks. 71% of salespeople said that new technology greatly supports them in doing their jobs. Only a small percentage of 15% said that they don't like modern technologies for sales. New digital tools are raising fears and concerns among salespeople: 27% feel new technologies threaten their jobs, 25% worry about being replaced, 23% feel threatened by coworkers who are more tech-savvy, and 21% worry about losing their own power as a result of being obliged to share expertise (Alavi and Habel, 2021).

Digital Transformation has a positive impact on employee job satisfaction and affective commitment, which is contrary to the view that Digital Transformation increases stress and job insecurity (Nadeem *et al.*, 2024). The difference in these findings makes researchers interested in conducting a literature study on the topic of Digital Transformation for employees because this topic is a current issue that is still very relevant to be applied in operating a company.

This research attempts to offer a review and present a structured review of current research on how employees are affected by the digital transformation and what supports the successful adoption of this technology. Another objective is to identify research opportunities that can be explored by researchers in the future related to the impact of The Digital Revolution on employees. The study issues covered in this article include the following:

Q1 What are the positive and negative impacts of Digital Transformation on employee psyche?
Q2 What are the positive and negative impacts of Digital Transformation on employee physical appearance?
Q3 What supports The triumphant adoption of Digital Transformation in employees?

2. Literature review

2.1. Digital Transformation

Adopting disruptive technology to boost social welfare, value creation, and productivity is known as digital transformation (Ebert and Duarte, 2018). Digital Transformation, both within companies and within organizations, is the biggest change hitting businesses and organizations today (Baker, 2014). The incorporation of artificial intelligence (AI) and the Internet of Things (IoT) into CRM systems, one of which is Salesforce, is important in digital transformation (Potla, 2023). Cutting-edge digital technologies including AI, automation, robotics, cloud, and IoT, possess the capacity to drastically alter the nature of employment and give rise to worries about its future. Adaptation through business model renewal and transformation is key to staying competitive amidst rapid disruption. (Trenerry *et al.*, 2021). An important prerequisite for Digital Transformation capabilities is Digital Transformation competency, which is derived from the collection of required employee skills, knowledge and expertise. for successful (Osmundsen, 2020). Organizations/ companies can gain by putting into practice Digital Transformation thorough procedures for hiring, choosing, educating, and training as well as upkeep. Employee involvement and performance within the company (Al-Alawi *et al.*, 2023). The Digital Transformation process has reached a high level of implementation, showing positive trends and consistent progress in digitalization (Bikse *et al.*, 2021).

2.2. Positive effects of digital transformation on employees

The process of digital transformation has a favorable impact on leadership, middle management involvement, employee education, corporate social responsibility focus, innovation, knowledge sharing, work-family balance, psychological capital, job happiness, and career commitment (Alieva and Powell, 2023). Digital transformation is beneficial on sustainable performance (Alathamneh and Al-Hawary, 2023).

Higher staff digital literacy will be made possible by IT practices that are more knowledge-sharing oriented. The culture of knowledge sharing has not been able to facilitate The degree of employees' digital literacy. Digital literacy has a positive effect on technological readiness. Digital literacy has no substantial effect on the negative side of technological readiness. Positive technological Actual utilization is positively and significantly impacted by readiness. Actual use is not significantly impacted by negative technological preparedness (Cetindamar, Abedin and Shirahada, 2024).

The effects of significant changes caused by technological leaps, especially the impact of digitalization on all aspects of life. Talent recruitment is critical to the long-term success and survival of an organization. Digital talent screens job candidates more thoroughly than conventional groups prior to applying((Gilch and Sieweke, 2021). Actually, the digital HRM system in digital transformation is easy and fast and also allows employees to improve their abilities, skills and performance (Zhang and Chen, 2024).

2.3. Negative effects of digital transformation on employees

Digital transformation has an effect on employees including, usefulness (39.4%), perceived stress (40.0%), perceived job overload (18.0%), and perceived DT integration (34.6%). Increases perception of usefulness of Digital Transformation and negatively impacts stress. Stress associated with digital transformation is significantly and favorably impacted by workload. Excessive workload is negatively correlated with perceived usefulness of Digital Transformation (Guenzi and Habel, 2020). The uncertainty arising from digital transformation has the potential to trigger higher work stress (Winasis, Wildan and Sutawidjaya, 2020).

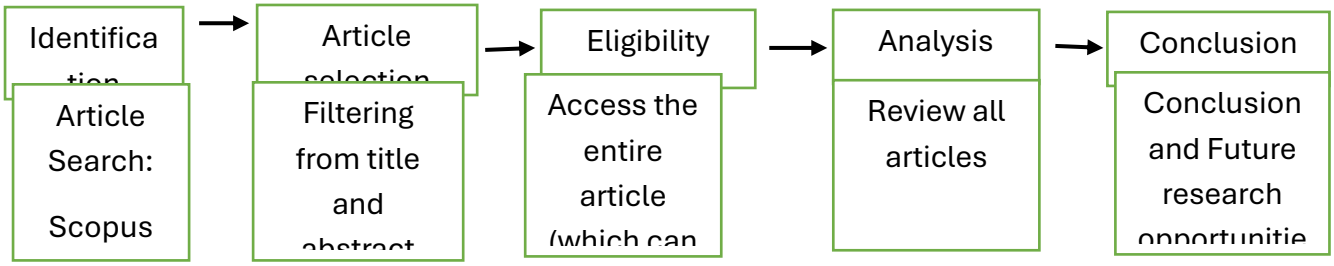
Digital transformation has a detrimental effect on employee proactivity, training, innovation, discretionary effort, and turnover intentions. Digital waste may also arise from staff training, awards, and recognition (Alieva and Powell, 2023)

Technological uncertainty increases technostress which has a negative impact on the subjective well-being of workers. Skills can change the coproduction work context from a work demand to a resource that helps employees face the challenges of digital transformation (Liu, Wang and Lin, 2023)

3. Methodology

The articles collected which were then identified came from articles discussing the effects of digital transformation adoption by companies applied to employees. The articles that have been collected in the analysis come from quantitative and qualitative data. The analysis in this study began by collecting articles from various journals in Scopus through Publish or perish with 200 articles with the keyword Digital Transformation on Employees, and articles with the keyword Digital Transformation on Employee Psychology found 15 articles. The articles used in 2014 to 2024, were then filtered into 27 articles, pertaining to how employees are affected by digital transformation. The articles were identified, selected, analyzed until a conclusion was reached. This study focuses on the findings of the articles obtained, the positive and negative impacts, and the factors that support the successful adoption of digital transformation. The complete process is illustrated in Figure 1, as illustrated by Vemberi (Fitriastuti *et al.*, 2019)as follows:

Figure 1 Review Method



Source: (Fitriastuti *et al.*, 2019)

4. Results and discussions

Based on the results of the review of these articles where the entire study focuses on digital transformation of employees. This study can be used as a preliminary study for academic researchers and practitioners. The articles above are taken from Google Scholar shows a summary of several studies focused on the current issues variable, namely Digital Transformation. considering the focus of the research, the results show that the impact of digital transformation on employees can be positive and negative and also factors that support success in adapting to digital transformation.

Positive employee responses to digital transformation include digital transformation supporting employees in completing their work. Recruitment of digital talent which is an application of digital transformation triggers changes in the company in the success and long-term survival of the organization and its employees. Digital talent screens prospective employees more intensively before applying. Top management leadership that adopts digital transformation will have better leadership, employees will also have a better focus on social responsibility in the company, by adopting digital transformation will create employees who have high innovation in their work, sharing knowledge will be easier if supported by digital transformation, employees who can adapt to digital transformation can easily create work-family balance, job satisfaction can be felt better by employees with the influence of digital transformation and employees who are related to digital transformation have a better career commitment.

Negative responses to the implementation of digital transformation by employees include For certain salespeople, new digital devices cause fear and worry. Salespeople believe that their jobs Could be in danger by new technology, some feel the possibility of being replaced by new technology and the possibility of being swapped out with coworkers with superior technological abilities, fear of the removal of individual authority inside the organization because the forced sharing of knowledge is also felt by employees who already have positions. Excessive workload, stress on employees is also felt as a result of digital transformation. Digital change can trigger the creation of digital waste in employee rewards and recognition and training. Digital transformation also makes employees think about changing jobs Technological uncertainty increases technostress which has a negative impact on employees' subjective well-being.

Digital Transformation can be successful by using a slow and deliberate approach to digitally transforming the sales force given the risks involved. Employees with paradoxical work patterns are more likely to accept digital transformation strategies. Higher information technology or information exchange will enable increased digital literacy among employees, where Technology readiness is positively impacted by digital literacy, and the actual use of cloud technology is positively and significantly impacted by technology readiness and cloud technology is one form of Digital Transformation. Employee capabilities and skills can influence the journey of Digital Transformation. Organizational initiatives can be adaptation mechanisms in facing the difficulties of the digital work environment.

Table 1 Research Results

Adopting digital transformation and its effects	Positive	Negative
Physique	Improving employee skills and performance, can increase productivity, improve physical health, create work-family balance, share knowledge better, help employee selection more effectively.	Digital waste in training, productivity can also decrease if not addressed properly, changing jobs
Psychic	Increased job satisfaction, better social responsibility	Fear and anxiety of being replaced by technology, fear of being stripped of power, stress due to excessive workload, declining mental health, increasing job insecurity, increasing technostress thus decreasing subjective well-being.

Source: Author 2025

Digital Transformation is actually not scary for employees in companies or organizations that adopt Digital Transformation. The role of leaders is needed to provide motivation, explain, provide understanding and guide employees in adapting to Digital Transformation very carefully considering that the human side must be given more attention. Employees who already feel insecure about their ability to use technology from Digital Transformation, many fears are felt with the existence of Digital Transformation, a soft and wise approach is needed by leaders to overcome problems from the psychological side.

5. Conclusion

The impact of digital transformation is substantial impact on all employee activities from various company backgrounds. Digital transformation can have both favorable and unfavorable

impacts on employees, both on their work and their psychology. From the various negative and positive impacts that have been discussed in this study, there are still many other impacts that have not been discussed in this study. This study can serve as a foundation for further investigation by taking certain parts of the research results to be investigated more broadly and in detail and can also be used as input and consideration for top management in managing employees in companies or organizations that adopt digital transformation. Further researchers can add variables that have not been discussed in this study, for example discussing in more detail about employee adaptation to the The impact of digital transformation on their performance, variables that can impact the digital transformation's success can also be studied more broadly. In this study, the employees studied were too broad in their specifications, only a few studies studied sales employees, the rest studied employees in general, so for future research, employee specifications are narrowed down by studying certain employees in detail so that later they can be used as a reference for companies in adopting digital transformation.

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COMPARISON OF ONLINE PURCHASE DECISIONS (MARKETPLACE AND SOCIAL COMMERCE) INFLUENCED BY THE MARKETING MIX (7P) IN GENERATION Z

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Abstract

This study aimed to analyze the influence of the marketing mix (7P) on online purchase decisions by Generation Z in Indonesia and Ato compare online purchase decisions between marketplaces and social commerce. The background of this study was the rapid development of e-commerce, with Generation Z as a significant contributor. The sampling technique in this study used purposive sampling with total of 104 respondents. The research method used was quantitative by distributing questionnaires via Google Form, which had been tested for validity and reliability. Data were analyzed using descriptive analysis, instrument tests including validity and reliability tests, classical assumption tests including normality tests, linearity tests, heteroscedasticity tests, and multicollinearity tests, and multiple linear regression analysis, hypothesis tests including t-tests, F-tests, and independent sample t-tests, as well as coefficients of determination. The results showed that simultaneously the marketing mix (7P) variables including product, price, people, promotion, process, and physical evidence had positive and significant effect on online purchase decisions. In addition, there were significant differences in online purchase decisions between marketplaces and social commerce. Further research could deepen the analysis of other factors that influenced online purchase decisions.

Keywords: marketing mix (7P), online purchase decision.

1. Introduction

The rapid advancement of internet technology has significantly transformed Indonesia's business landscape, shifting traditional face-to-face transactions to digital platforms (Nazar et al., 2023; Hasibuan et al., 2023). According to APJII data, internet penetration reached 79.5% in early 2024, with Generation Z contributing 34.4%—surpassing millennials (Santika, 2024). This digital shift has accelerated the growth of e-commerce, enabling businesses to offer products via websites and social media (Karlina et al., 2020; Siahaan et al., 2023). The transformation has reshaped consumer behavior, allowing for faster decision-making and broader access to product information (Rosmawarni et al., 2024; Gamayanto, 2018).

Indonesia's digital commerce sector shows strong potential, with Harbolnas 2023 generating Rp 25.7 trillion in transactions (Kemendag, 2024). BPS data also indicates a 4.46% growth in e-commerce enterprises in 2022. Two dominant models have emerged: marketplaces (e.g., Shopee, Tokopedia) and social commerce (e.g., TikTok Shop, WhatsApp Commerce), each offering distinct consumer experiences (Gulbasi & Taskin, 2024; Nasution & Indria, 2022). Social commerce integrates social media with e-commerce, enabling real-time interaction and personalized shopping experiences (Ong, 2023; Peng & Lu, 2024). Populix (2022) reports that 86% of Indonesians have made purchases via social commerce platforms, with TikTok Shop leading at 46%. In Southeast Asia, Shopee leads in Gross Merchandise Value (GMV) with Rp 897 trillion, followed by Lazada and TikTok Shop (Meilina, 2025). These figures highlight intense competition among platforms, prompting businesses to adopt strategic marketing approaches (Witarisma, 2021; Nabila et al., 2022).

The marketing mix (7P)—product, price, place, promotion, people, process, and physical evidence—is a critical framework for influencing online purchase decisions (Kotler et al., 2017; Pogorelova et al., 2016). Each element plays a role in shaping consumer perceptions and behavior (Mas'ari et al., 2019; Mulyandi & Sani, 2020; Hendriyanto & Saputro, 2023). Empirical studies show mixed results regarding the impact of each 7P component on purchase decisions across platforms. Some research indicates significant influence (Widyastuti et al., 2020; Wahyuni, 2024), while others report negligible effects (Tilawati et al., 2024; Sudjatmika, 2017).

Given the high online spending ratio among Generation Z—averaging 5.4% of monthly income (Lidwina, 2021)—this study aims to fill a research gap by comparing the influence of the 7P marketing mix on online purchase decisions between marketplace and social commerce platforms among Generation Z in Indonesia.

2. Literature Review

2.1. Marketing Mix (7P)

The marketing mix is a strategic framework comprising seven elements: Product, Price, Place, Promotion, People, Process, and Physical Evidence (Kotler & Keller, 2016; Tjiptono, 2019; Pogorelova et al., 2016). Product includes tangible and intangible offerings that fulfill consumer needs (Firmansyah, 2019; Kotler & Armstrong, 2018). Price represents the value exchanged for a product or service, influenced by market dynamics and consumer perception (Tjiptono & Diana, 2022; Pogorelova et al., 2016). Place refers to distribution channels and platforms that facilitate product accessibility (Kotler & Armstrong, 2018; Siregar, 2022). Promotion encompasses communication strategies to highlight product benefits and stimulate purchase decisions (Kotler & Armstrong, 2018; Khotimah & Jalari, 2021). People involve all individuals contributing to service delivery and customer interaction (Wirtz & Lovelock, 2016; Sunyoto & Susanti, 2015). Process denotes the stages consumers undergo from product awareness to purchase (Khotimah & Jalari, 2021; Solin, 2025). Physical Evidence includes tangible and virtual elements that shape customer perceptions and brand image (Fatihudin & Firmansyah, 2019; Pogorelova et al., 2016).

2.2. Online Purchase Decision

Online purchase decision is a multi-stage process involving problem recognition, information search, alternative evaluation, purchase, and post-purchase behavior (Kotler & Keller, 2016; Jayanti, 2015). It is influenced by various factors including product quality, pricing, platform accessibility, and promotional strategies.

2.3. Hypotheses Development

Empirical evidence confirms that each element of the marketing mix (7Ps) significantly influences online purchase decisions among Generation Z in Indonesia. Product attributes positively affect purchase intention (Khotimah & Jalari, 2021; Wahyuni, 2024; Widyastuti et al., 2020; Mulyandi & Sani, 2020). Pricing strategies and payment flexibility enhance decisions (Tilawati et al., 2024; Akbar et al., 2020; Febindra & Artina, 2024; Primaputra & Sudaryanto, 2023; Wahyuni, 2024; Loo et al., 2023; Nadia, 2023). Distribution channels and accessibility are impactful (Khotimah & Jalari, 2021; Tilawati et al., 2024; Wardani & Manalu, 2021; Kholifah et al., 2023). Promotions significantly influence consumer behavior (Daiman et al., 2023; Primaputra & Sudaryanto, 2023; Khotimah & Jalari, 2021; Tilawati et al., 2024; Ramadhan & Jumhur, 2018). Human interaction and responsiveness are key (Nabila et al., 2022; Muliyana & Suyanto, 2019; Verina et al., 2024). Efficient processes enhance purchase decisions (Muliyana & Suyanto, 2019; Wahyuni, 2024; Khotimah & Jalari, 2021). Physical evidence shapes brand image and decisions (Muliyana & Suyanto, 2019; Wahyuni, 2024; Khotimah & Jalari, 2021; Charastrakool, 2020). Collectively, the 7Ps significantly influence

online purchase decisions (Sari & Kusdiyanto, 2024; Dewi et al., 2023; Kusmayadi & Saraswati, 2022; Barcelona et al., 2019; Muliyana & Suyanto, 2019).
H1: Product has a positive effect on online purchase decisions.
H2: Price has a positive effect on online purchase decision.
H3: Place has a positive effect on online purchase decision.
H4: Promotion has a positive effect on online purchase decision.
H5: People have a positive influence on online purchase decision.
H6: Process has a positive effect on online purchase decision.
H7: Physical evidence has a positive effect on online purchase decisions.
H8: The marketing mix (7P) has positive effect on online purchase decisions simultaneously.

Maulana & Asra (2019) identified that free shipping promotions significantly influence Generation Z's purchasing behavior. In contrast, Wiska et al. (2022) highlighted the importance of content marketing and electronic word of mouth (e-WOM) in shaping purchase decisions on social commerce platforms such as TikTok. Following the closure of TikTok Shop, Qisthi et al. (2024) observed a shift among Generation Z consumers toward marketplace platforms, driven by considerations such as pricing, promotional offers, and platform features. Conversely, Carissa (2024) found that Generation Z continues to favor social commerce due to engaging features like live streaming, hedonic shopping experiences, and attractive price discounts.
H9: It is suspected that there is a difference in online purchase decisions between marketplaces and social commerce in Generation Z.

Based on the theoretical framework, prior research, and formulated hypotheses concerning the marketing mix (7Ps) and online purchase decisions, the conceptual framework of this study is illustrated as follows:

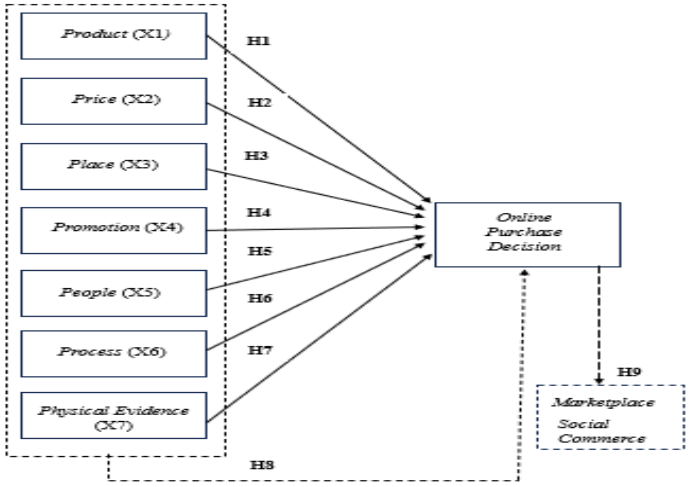

Figure 1 Framework

3. Methodology

This study examines how the marketing mix (7Ps) influences online purchase decisions among Indonesian Generation Z (born 1997–2012), who make up 27.94% of the population. Using purposive sampling and Slovin's formula, 100 respondents with online shopping experience were surveyed through online questionnaires and supported by secondary data.

The research variables include dependent and independent variables. Dependent variable is online purchase decision, measured through indicators such as product choice, brand choice, store choice, purchase quantity, timing, and payment method (Kotler & Keller, 2016). Independent variables is marketing mix (7Ps), comprising product, price, place, promotion, people, process, and physical evidence (Charastrakool, 2020; Ghiffarin, 2019).

Each variable is operationalized with specific indicators and statements to assess respondent perceptions. For instance, product is evaluated based on information availability, trendiness, and after-sales service; price on affordability, ease of comparison, and payment options; and promotion on discounts, sales campaigns, and visit frequency. Data collection utilized a Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree) (Sugiyono, 2022).

The data analysis method used in this research is a quantitative method with the aid of SPSS (Statistical Product and Service Solution) version 30. The regression model in this study is as follows:

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6 + b_7X_7 + \varepsilon$$

Information:

Y = Dependen variable (online purchase decision)
a = Constant number
$b_1, b_2, b_3, b_4, b_5, b_6, b_7$ = Regression coefficient
$X_1, X_2, X_3, X_4, X_5, X_6, X_7$ = Independent variable (marketing mix 7P)
ε = Error

The analytical approach employed in this study is quantitative, utilizing numerical data to test hypotheses and derive generalizable conclusions (Sugiyono, 2022). Data analysis begins with descriptive statistics to summarize respondent demographics, including gender, age, education, employment status, income, and online shopping frequency. Instrument validity is assessed through correlation analysis, comparing calculated r-values against critical values to determine item accuracy (Ghozali, 2021). Reliability is evaluated using Cronbach's alpha, with thresholds indicating acceptable consistency (Qomusuddin & Romlah, 2021). Classical assumption tests are conducted to ensure the robustness of the regression model. Multiple linear regression analysis is applied to examine the influence of the seven marketing mix variables (product, price, place, promotion, people, process, and physical evidence) on online purchase decisions. Hypothesis testing is performed using t-tests for individual variable significance and F-tests for simultaneous effects. Additionally, an independent sample t-test is used to compare online purchase decisions between marketplace and social commerce platforms. The coefficient of determination (R^2) is calculated to measure the explanatory power of the independent variables on the dependent variable.

4. Result and Discussion

4.1. Descriptive Statistics

This study utilizes primary data obtained through questionnaire surveys administered to Generation Z individuals, defined as those born between 1997 and 2012, who have previously engaged in or are currently participating in online shopping via marketplace platforms or social commerce. A total of 104 respondents participated in the survey. The sample was predominantly female (53 respondents, 51.0%), with the majority aged between 19 and 22 years (48 respondents, 46.2%). Most respondents had attained a high school or vocational school education (56 respondents, 53.8%) and were primarily students (59 respondents, 56.7%). In terms of income, a significant portion reported earnings of less than or equal to Rp 1,500,000 (45 respondents, 43.3%). Geographically, the majority resided in Java (72 respondents, 69.2%), and more than half demonstrated frequent online purchasing behavior (57 respondents, 54.8%).

Table 1 Descriptive Statistics

No	Respondents	Characteristics	Total	Percentage
1	Gender	Man	51	49.0%

		Woman	53	51.0%
2	Age	> 13 years - ≤ 16 years	0	0%
		> 16 years - ≤ 19 years	8	7.7%
		> 19 years - ≤ 22 years	48	46.2%
		> 22 years - ≤ 25 years	30	28.8%
		> 25 years - ≤ 28 years	18	17.3%
		> 28 years old	0	0%
3	Education	SMP	0	0%
		SMA/SMK	56	53.8%
		Diploma	9	8.7%
		Masters	39	37.5%
		Magister	0	0%
4	Work	Students	59	56.7%
		Employee	29	27.9%
		Businessman	14	13.5%
		Doesn't work	2	1.9%
5	Income	≤ Rp 1.500.000	45	43.3%
		> Rp 1.500.000 - ≤ Rp 3.000.000	26	25.0%
		> Rp 3.000.000 - ≤ Rp 4.500.000	15	14.4%
		> Rp 4.500.000	18	17.3%
6	Domicile (island)	Papua	0	0%
		NTT	0	0%
		Maluku	0	0%
		Lainnya	0	0%
		Sumatera	11	10.6%
		Jawa	72	69.2%
		Kalimantan	15	14.4%
		Sulawesi	2	1.9%
		Bali	3	2.9%
		NTB	1	1.0%
7	Frequency of online purchase decision	Very Often	37	35.6%
		Often	57	54.8%
		Rarely	10	9.6%

Source: Data Processing

4.2. Classical Assumption

To ensure the validity and reliability of the regression model, this study conducted several classical assumption tests, including normality, linearity, heteroscedasticity, and multicollinearity assessments.

Table 2 Normality Test

One-Sample Kolmogorov-Smirnov Test	**Unstandardized Residual**
N	104
Test Statistic	.077

Asymp. Sig. (2-tailed)[c]	.142

Source: Data Processing

Based on the results presented in Table 2, the Asymptotic Significance (2-tailed) value obtained from the normality test is 0.142, which exceeds the threshold of 0.05. This indicates that the residuals in this study are normally distributed, thereby satisfying the assumption of normality required for regression analysis.

Table 3 Linearity Test

Variables	**Deviation from linearity**	
	F	**Sig**
Product	1,179	0,312
Price	1,441	0,168
Place	1,575	0,119
Promotion	1,132	0,346
People	0,762	0,676
Process	1,155	0,329
Physical evidence	1,603	0,111

Source: Data Processing

All significance values for Deviation from Linearity exceed 0.05, confirming linear relationships between each independent variable and online purchase decisions. Thus, the regression model's linearity assumption is met.

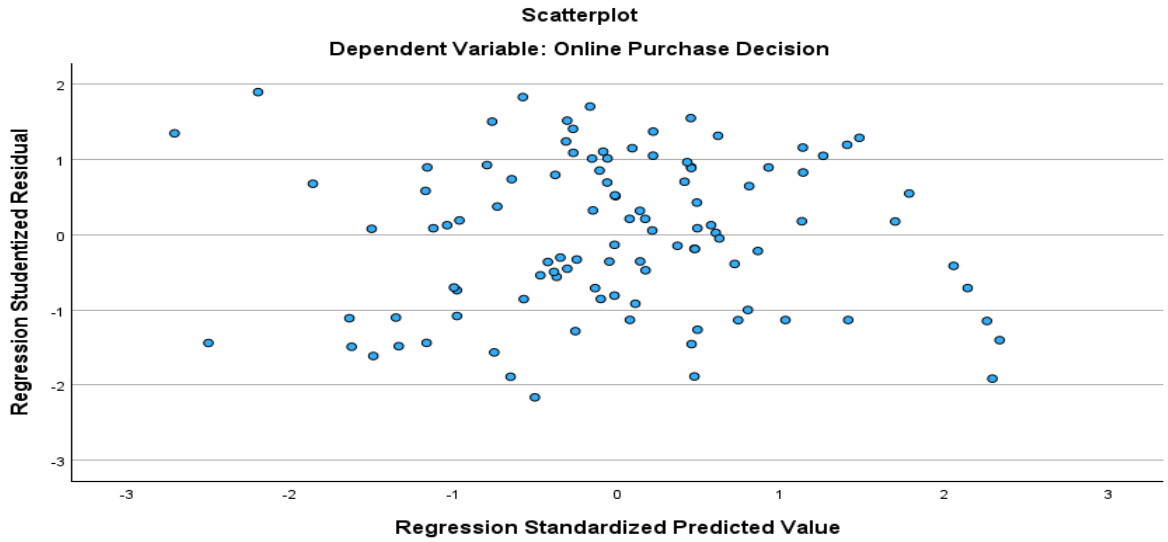

Figure 2 Heteroscedasticity Test

Referring to Figure 2, the scatter plot displays data points that are randomly dispersed and distributed both above and below the zero line on the Y-axis. This pattern suggests the absence of heteroskedasticity in the regression model, thereby confirming that the assumption of homoscedasticity is met in this study.

Table 4 Multicolinearity Test

Coefficients[a]					
Model	Unstandardized Coefficients	Standardized Coefficients	t	Sig.	Collinearity Statistics

		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-1.701	2.125		-.800	.718		
	Product	2.232	.092	.702	24.242	<,001	.939	1.065
	Price	1.349	.083	.468	16.333	<,001	.958	1.044
	Place	1.165	.088	.379	13.252	<,001	.961	1.040
	Promotion	.965	.089	.311	10.790	<,001	.947	1.056
	People	.896	.083	.308	10.762	<,001	.959	1.043
	Process	.521	.082	.182	6.327	<,001	.952	1.050
	Physical evidence	.364	.087	.121	4.177	<,001	.933	1.073
a. Dependent Variable: Online Purchase Decision								

Source: Data Processing

As presented in Table 4, all independent variables exhibit Variance Inflation Factor (VIF) values below 10 and tolerance values above 0.10. These results indicate that multicollinearity is not present in the dataset, thereby confirming that the regression model meets the assumption of independence among predictor variables.

4.3. HypothesisTesting

The t-test assesses each independent variable's effect on online purchase decisions. Results show all seven variables have t-values above the critical value of 1.984 and significance levels below 0.001, indicating strong statistical significance. Therefore, each variable positively influences purchase decisions, and hypotheses H1 through H7 are supported and accepted based on Table 5 below.

Table 5 Individual Parameter Significance Test (t-test)

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-1.701	2.125		-.800	.425
	Product	2.232	.092	.702	24.242	<,001
	Price	1.349	.083	.468	16.333	<,001
	Place	1.165	.088	.379	13.252	<,001
	Promotion	.965	.089	.311	10.790	<,001
	People	.896	.083	.308	10.762	<,001
	Process	.521	.082	.182	6.327	<,001
	Physical Evidence	.364	.087	.121	4.177	<,001
a. Dependent Variable: Online Purchase Decision						

Source: Data Processing

The F-test confirms that the seven independent variables—product, price, place, promotion, people, process, and physical evidence—collectively have a statistically significant and positive impact on online purchase decisions. Based on Table 6, with an F-value of 167.692 (above the critical value of 2.11) and a significance level of 0.001, hypothesis H8 is accepted, indicating strong collective influence at the 95% confidence level.

Table 6 Simultaneous Significance Test (F Test)

ANOVA[a]					
Model	Sum of Squares	df	Mean Square	F	Sig.

1	Regression	11423.016	7	1631.859	167.692	<,001[b]
	Residual	934.206	96	9.731		
	Total	12357.221	103			
a. Dependent Variable: Online purchase decision						
b. Predictors: (Constant), Physical evidence, Price, People, Promotion, Place, Product, Process						

Source: Data Processing

The independent samples t-test shows a significant difference between online purchase decisions via social commerce and marketplaces. Based on Table 7, Levene's test confirms equal variances (F = 3.883, p = 0.051). Under this assumption, the t-test yields a t-value of 10.634 with p < 0.001, indicating a statistically significant difference between the two groups. Thus, H9 is accepted.

Table 7 Independent sample t-test

Independent Samples Test							
		Levene's Test for Equality of Variances		t-test for Equality of Means			
						Significance	
		F	Sig.	t	df	One-Sided p	Two-Sided p
Online purchase decision	Equal variances assumed	3.883	.051	10.634	102	<,001	<,001
	Equal variances not assumed			12.509	79.083	<,001	<,001

Source: Data Processing

4.4. Coefficient of Determination

The coefficient of determination (R^2) is used to assess the extent to which the regression model explains the variance in the dependent variable. As shown in Table 8, the R^2 value of 0.924 indicates that the marketing mix (7Ps) explains 92.4% of the variance in online purchase decisions, showing high model accuracy. The remaining 7.6% is influenced by other factors not included in the study.

Table 8 Coefficient of Determination

Model Summary[b]				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.961[a]	.924	.919	3.120
a. Predictors: (Constant), Physical evidence, Price, People, Promotion, Place, Product, Process				
b. Dependent Variable: Online purchase decision				

Source: Data Processing

4.5. Discussion

This study investigates the influence of the marketing mix (7Ps) on online purchase decisions among Generation Z, defined as individuals born between 1997 and 2012. A total of 104 respondents were selected using purposive sampling, and data were collected via an online questionnaire distributed through Google Forms. The research identifies seven key marketing mix variables—Product, Price, Place, Promotion, People, Process, and Physical Evidence—

and examines their individual and collective impact on Generation Z's online purchasing behavior.

The study reveals that several product-related factors—such as product information, trendiness, and after-sales service—significantly impact online purchase decisions, echoing findings by Mulyandi & Sani (2020), Khotimah & Jalari (2021), Wahyuni (2024), and Widyastuti (2021). Competitive pricing, ease of comparison, and diverse payment options also play a key role (Akbar et al., 2020; Febindra & Artina, 2024; Primaputra & Sudaryanto, 2023; Wahyuni, 2024; Loo et al., 2023; Nadia, 2023). Platform accessibility, fast delivery, and convenience are crucial (Khotimah & Jalari, 2021; Tilawati et al., 2024; Wardani & Manalu, 2021; Kholifah et al., 2023). Promotions and frequent platform visits influence Gen Z behavior (Ramadhan & Jumhur, 2018; Daiman et al., 2023; Khotimah & Jalari, 2021; Primaputra & Sudaryanto, 2023; Tilawati et al., 2024). Seller responsiveness and communication clarity matter (Nabila et al., 2022; Muliyana & Suyanto, 2019; Verina et al., 2024). Efficient purchasing, easy claims, and support services are beneficial (Muliyana & Suyanto, 2019; Khotimah & Jalari, 2021; Wahyuni, 2024). Lastly, website quality, social media presence, and app functionality are influential (Muliyana & Suyanto, 2019; Wahyuni, 2024; Charastrakool, 2020; Khotimah & Jalari, 2021).

Collectively, the 7Ps of the marketing mix are found to have a significant simultaneous effect on online purchase decisions, confirming findings from Sari and Kusdiyanto (2024), Kusmayadi & Saraswati (2022), Dewi et al. (2024), Barcelona et al. (2019), Muliyana & Suyanto (2019), and Santosa et al. (2019). Additionally, the study reveals a significant difference in online purchase decisions between marketplace platforms and social commerce. While some studies (e.g., Maulana & Asra, 2019; Qisthi et al., 2024) suggest a preference for marketplaces due to promotions and features, others (e.g., Wiska et al., 2022; Carissa, 2024) highlight the appeal of social commerce driven by content marketing, live streaming, and hedonic shopping experiences.

5. Conclusion, Limitations, and Suggestions

This study finds that all seven marketing mix components (7Ps) significantly and positively influence Generation Z's online purchase decisions. Collectively, the 7P framework shows strong impact, and a notable difference exists between purchases made via marketplaces and social commerce, highlighting platform-specific consumer preferences.

Despite its findings, the study has limitations. The relatively small and potentially non-representative sample size limits the generalizability of the results to the broader Generation Z population. The study does not compare the strength of influence between marketplace and social commerce platforms, which was intentionally excluded to maintain focus.

Business practitioners are encouraged to develop targeted marketing strategies that emphasize the 7P elements, particularly those most relevant to Generation Z, such as product innovation, competitive pricing, and engaging promotional content. Enhancing customer service and leveraging technology to improve the purchasing experience are also advised. Additionally, future researchers should explore other influencing factors beyond the 7P framework, utilize larger and more representative samples, and conduct detailed comparative analyses of purchasing behavior across different online platforms to enrich the understanding of Generation Z's online decision-making processes.

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THE EFFECT OF CAPITAL INTENSITY, PROFITABILITY, AND COMPANY SIZE ON TAX AVOIDANCE IN ENERGY SECTOR COMPANIES LISTED ON THE INDONESIA STOCK EXCHANGE IN THE 2019-2023 PERIOD

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Abstract

This study aims to determine the effect of capital intensity, profitability, and company size on tax avoidance in Energy sector companies listed on the Indonesia Stock Exchange for the period 2019-2023. To determine the sample in this study, purposive sampling was used. Data analysis was conducted using a panel data regression model with Eviews 12, where the analytical methods in this study included testing classical assumptions, panel data regression analysis, and hypothesis testing. The results of this study indicate that, partially, capital intensity (CIR) and company size (SIZE) have an effect on tax avoidance (ETR). Meanwhile, profitability (ROA) does not have an effect on tax avoidance (ETR). The simultaneous test results show that capital intensity (CIR), profitability (ROA), and company size (SIZE) have an effect on tax avoidance (ETR) in energy sector companies listed on the Indonesia Stock Exchange for the period 2019-2023. The research results imply the importance of supervision and monitoring in implementing efficient corporate tax strategies to reduce the level of tax avoidance.

Keywords: Capital Intensity, Profitability, Company Size, Tax Avoidance

1. Introduction

Taxes play an important role as the main source of state revenue to finance government needs (Farhan et al., 2024). If all taxpayers comply, the country's prosperity can be achieved optimally. However, in reality, there are still many taxpayers who have not fulfilled their obligations. According to Law No. 7 of 2021, taxes are mandatory contributions that are compulsory and used for the benefit of the state for the welfare of the people (Noehafizah, 2023).

However, in reality, there are still many taxpayers who have not fully fulfilled their obligations, including among business entities. Taxes are often seen as a burden that can reduce company profits, triggering the emergence of strategies to legally reduce this burden through tax avoidance practices. Tax avoidance is an effort by taxpayers to reduce their tax obligations without violating tax regulations, by exploiting loopholes or weaknesses in the tax system (Ciptaningrum, 2020). One indicator used to measure tax avoidance is the Effective Tax Rate (ETR). ETR reflects the effective tax rate paid by companies based on accounting profits (Sinaga, 2022).

According to a report by Finance.detik.com written by Sugianto on July 5, 2019, titled "Understanding the Tax Avoidance Allegations Against Adaro," PT Adaro Energy Tbk is accused of engaging in transfer pricing through Coaltrade Services International, its subsidiary in Singapore. This activity is reported to have taken place from 2009 to 2017. It is alleged that Adaro manipulated its financial reports to pay only US$125 million or Rp1.75 trillion (at an exchange rate of Rp14,000) in taxes, which is significantly less than what should have been paid in Indonesia.

According to a report by Katadata.co.id written by Sugianto on February 11, 2019, titled "Wave of Tax Avoidance in the Coal Industry," PT. Multi Sarana Avindo (MSA), a coal

mining company, was once involved in a tax avoidance case. The obligation to pay Value-Added Tax (VAT), which constitutes tax evasion, decreases when mining rights are transferred. The Directorate General of Taxes considers PT. MSA to have engaged in tax evasion practices by exploiting loopholes or gaps in tax regulations. The significant discrepancy between the amount of production and the amount of tax paid raises suspicions of tax evasion. According to a Wartalika.id news article dated February 1, 2023, titled "PT Bumi Borneo Inti Suspected of Being an Illegal Coal Mining Company," PT. Bumi Borneo Inti was involved in tax evasion due to the illegal sale of coal. The company has manipulated data and currently does not hold a Mining Business License (IUP) (wartalika.id, 2023).

Based on the latest data, there are 46 companies in the energy sector, which is the main category. Based on the criteria used by the author, namely energy sector companies listed on the Indonesia Stock Exchange with complete data, no losses during the 2019-2023 period, and using the Indonesian rupiah in their financial reports, seven companies were selected: PT Bukit Asam Tbk (PTBA), PT Batulicin Nusantara Maritim Tbk (BESS), PT Sumber Global Energy Tbk (SGER), PT Betonjaya Manunggal Tbk (BTON), PT Steel Pipe Industry of Indonesia Tbk (ISSP), PT Ifishdeco Tbk (IFSH), and PT Cita Mineral Investindo Tbk (CITA).

Based on IDX Capital Intensity Ratio (CIR) data, which shows a company's investment in fixed assets, there was a significant decline from 30% in 2019 to 24% in 2022, then increased again to 25% in 2023. This indicates either improved efficiency in the use of fixed assets or a decline in long-term investment activities; however, companies began to increase their investments in fixed assets again in 2023. Meanwhile, Return On Asset (ROA) increased from 7% in 2019 to 15% in 2022, indicating the company's ability to efficiently utilize its assets to generate profits, then decreased to 12% in 2023. Company Size, proxied by the natural logarithm of assets, showed a consistent increase from 2.823% in 2019 to 2.874% in 2023. Furthermore, the Effective Tax Rate (ETR), as a measure of tax avoidance, has decreased consistently from 28% in 2019 to 15% in 2022 and 2023. The decrease in tax avoidance reflects efforts to avoid taxes.

Based on this explanation, it is necessary to examine how capital intensity, profitability, and company size affect tax avoidance. This study aims to analyze the relationship between these independent variables and tax avoidance in the energy sector on the Indonesia Stock Exchange.

2. Literature Review And Hypothesis Development

2.1 The Effect of Capital Intensity (CIR) on Tax Avoidance (ETR)

The Capital Intensity Ratio (CIR) is a ratio of Capital Intensity. The capital intensity ratio is a company's investment in the form of fixed assets, and capital intensity is used to measure how much of a company's assets are invested in fixed assets. If a company has more fixed assets, it is likely to pay less tax than a company with fewer fixed assets. Fixed assets have an economic life that can result in depreciation expenses, which can affect tax expenses by reducing profits and tax expenses (Sinaga, 2022).

H1: Capital Intensity (CIR) affects tax avoidance (ETR) in Energy sector companies listed on the Indonesia Stock Exchange for the period 2019-2023.

2.2 The Effect of Profitability (ROA) on Tax Avoidance (ETR)

Return on Assets (ROA) is a ratio that measures how much assets contribute to generating net income. A company's performance is considered good if it has a high profit margin, which is measured by comparing income to the estimated benchmark for the company. By utilizing sufficient resources, a company will be able to achieve its goals and earn large profits. The higher a company's profit, the higher its ROA value, indicating that the company's profitability

is increasing. As ROA increases, taxable income also rises, which should cause the Effective Tax Rate (ETR) to increase as well, due to the higher tax burden (Jecky, 2022).

Return on Assets (ROA) is a ratio that measures the contribution of assets to net profit. A company's performance is considered good if it manages a high level of profit, as measured by the ratio of profit to the estimated amount used as a benchmark. By utilizing sufficient resources, a company can achieve its goals and generate substantial profits. The higher a company's profit, the higher its ROA, indicating greater profitability. A higher ROA also increases taxable income, which should lead to an increase in the Effective Tax Rate (ETR) due to the higher tax burden (Jecky, 2022).

H2: Profitability (ROA) affects tax avoidance (ETR) in Energy sector companies listed on the Indonesia Stock Exchange for the period 2019-2023.

2.3 The Effect of Company Size on Tax Avoidance

Company size is a value that describes how large or small a company is, which can be measured through various factors such as total assets, total sales, or market capitalization. The larger the company size, the greater the assets it controls to drive productivity improvements. These productivity improvements will ultimately result in higher profits, which in turn will have an impact on the amount of tax the company has to pay (Sinaga).

H3: Company size affects tax avoidance (ETR) in energy companies listed on the Indonesia Stock Exchange during the period 2019-2023.

2.4 The Influence of Capital Intensity (CIR), Profitability (ROA), and Company Size (SIZE) on Tax Avoidance (ETR)

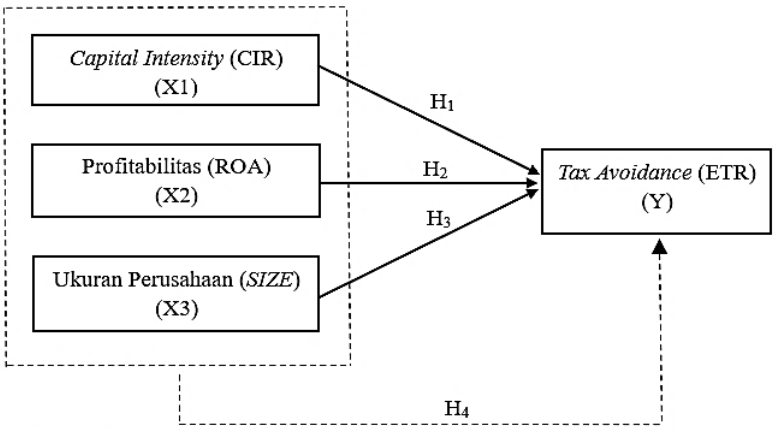
One of the important factors that can influence a company's level of tax avoidance is capital intensity, which reflects the amount of fixed assets allocated in a company's asset structure. The lower the capital intensity, the smaller the depreciation benefits obtained, so companies tend to look for ways to reduce their tax burden through tax avoidance. Profitability shows a company's ability to generate profits. Companies with high profitability have the potential for significant tax burdens, prompting them to adopt tax avoidance strategies to maintain financial efficiency. Meanwhile, company size also plays a role, as larger companies generally have more resources and expertise to design complex tax strategies. However, larger companies are also more closely monitored by the public and tax authorities, so they seek loopholes in tax regulations to avoid damaging their reputation.

H4: Capital Intensity (CIR), Profitability (ROA), and Company Size (SIZE) on Tax Avoidance (ETR)

Based on the above explanation, the author created a conceptual framework with three independent variables, namely capital intensity, profitability, and company size, and one

dependent variable, namely tax avoidance. The following is a diagram of the conceptual framework:

Figure 1. 1 Framework of Thought



Sumber: (diolah oleh penulis, 2024)

3. Research Methods

The type of research used in this study is confirmatory research with an explanatory survey method aimed at testing hypotheses. The unit of analysis used is organizations, namely financial reports of energy sector companies listed on the Indonesia Stock Exchange for the period 2019-2023. The location of the research is energy sector companies listed on the Indonesia Stock Exchange.

The type of data studied is quantitative data, namely net fixed assets, total assets, net income, tax expenses, and income before tax. The source of the research data is secondary data. Secondary data is data obtained indirectly through intermediary media. The data sources are obtained from the Indonesia Stock Exchange website and the websites of the respective companies.

This study used purposive sampling as its sampling method. This sampling method is based on certain characteristics that are considered to be closely related to the characteristics of the population that are already known.

The criteria used to select the sample are as follows: (1) Energy sector companies listed on the Indonesia Stock Exchange (IDX) for the period 2019-2023; (2) Energy sector companies with complete data for the period 2019-2023; (3) Energy sector companies that did not incur losses during the 2019-2023 period; (4) Energy sector companies that use the Indonesian rupiah in their financial statements.

Based on the specified criteria, the sample used in this study is data from companies in the energy sector listed on the Indonesia Stock Exchange, with a population of 46 companies. However, only seven companies met the specified criteria in this study.

The independent variables used in this study are capital intensity, profitability, and company size. The dependent variable is tax avoidance. The operational variables in this study are as follows:

Table 1. 1 Operational Variables

Variables	Sub Variables (Dimensions)	Indicator	Scale Measurement
Capital Intensity (X1)	Capital Intensity Ratio (CIR)	Net Fixed Assets / Total Assets	Ratio

Profitability (X2)	Return on Assets (ROA)	$\frac{\text{Net profit}}{\text{Total Assets}}$	Ratio
Company Size (X3)	SIZE	Natural Logarithm of Total Assets	Ratio
Tax Avoidance (Y)	Effective Tax Rate	$\frac{\text{Tax Burden}}{\text{Profit before tax}}$	Ratio

4. Results And Discussion

4.1 Panel Data Model Selection Results

Based on the Chow test results, a probability value of 0.0531 was obtained in the cross-section chi-square. This value is greater than the significance level of 0.05 (0.0531 > 0.05), so it can be concluded that the selected model is the common effect model.

The Lagrange Multiplier test results show that the p-value for Both is 0.7926, which is greater than the significance value of 0.05 (0.7926 > 0.05). This indicates that the selected model to be used is the common effect model.

4.2 Normality Test

Normality testing on the regression model was conducted to determine whether the residual values produced indicated a normal distribution or not. In this case, the distribution was considered normal if the significance value was greater than 0.05. The following are the results of the normality test processed using Eviews 12.

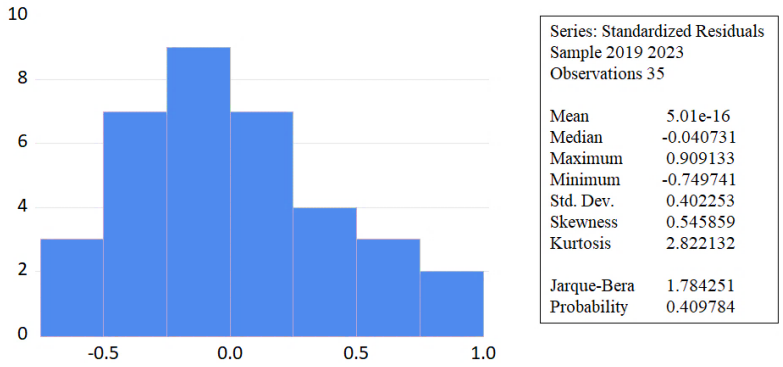


Figure 2. 1 Normality Test Results

Based on Figure 2, it can be seen that the probability value is 0.409784. Since this probability value is greater than 0.05 (0.409784 > 0.05), the residual value has a normal distribution.

4.3 Multicollinearity Test

Table 2. 2 Multicollinearity Test Results

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	23.12001	4559.751	NA
CIR	0.026240	8.735819	1.350014
ROA	0.013610	6.987514	1.153117
SIZE	2.113748	4672.030	1.183931

Based on Table 2, it can be seen that the Variance Inflation Factor (VIF) value is less than 10, so it can be stated that there is no multicollinearity problem.

4.4 Panel Data Regression Test

Table 3.1 Panel Data Regression Test Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	13.75815	4.808327	2.861318	0.0075
CIR	-0.369033	0.161988	-2.278153	0.0298
ROA	0.049066	0.116662	0.420583	0.6770
SIZE	-4.591251	1.453873	-3.157944	0.0035

In this study, the panel data regression model used is the common effect model (CEM) with the following regression equation:

$ETR = \alpha + \beta 1CIR_{it} + \beta 2ROA_{it} + \beta 3SIZE_{it} + \varepsilon_{it}$

$ETR = 13.75815 - 0.369033 + 0.049066 - 4.591251 + \varepsilon_{it}$

Based on the results of the regression analysis, the constant value is 13.775815, which means that if the Capital Intensity Ratio, Return on Assets, and Size values are 0, the Effective Tax Rate will increase by 13.775815. The regression coefficient value of the Capital Intensity Ratio variable has a negative value of -0.369033, which means that for every one-unit increase in the Capital Intensity Ratio, the Effective Tax Rate will decrease by -0.369033, assuming that the values of other independent variables remain constant. Conversely, the regression coefficient value of the Return on Assets variable has a positive value of 0.049066, meaning that for every one-unit increase in Return on Assets, the Effective Tax Rate will increase by 0.049066, assuming that the values of other independent variables remain constant. Meanwhile, the regression coefficient value of the Size variable has a negative value of -4.591251, which means that for every increase in Size, the Effective Tax Rate will decrease by -4.591251, assuming that the values of other independent variables remain constant. This shows that each independent variable has a different contribution in influencing the rate of change in tax avoidance.

4.5 Coefficient of Determination Test

Table 4.1 Results of the Determination Coefficient Test

R-squared	0.267708	Mean dependent var	-1.241612
Adjusted R-squared	0.196841	S.D. dependent var	0.470064
S.E. of regression	0.421267	Akaike info criterion	1.216111
Sum squared resid	5.501443	Schwarz criterion	1.393865
Log likelihood	-17.28194	Hannan-Quinn criter.	1.277472
F-statistic	3.777616	Durbin-Watson stat	1.894320
Prob(F-statistic)	0.020266		

Based on Table 4, it can be seen that the coefficient of determination (R2) value is 0.267708. This result shows that variations in tax avoidance (Effective Tax Rate) can be explained by capital intensity (Capital Intensity Ratio), profitability (Return on Assets), and company size (Size) by 26.77%, while the remaining 73.23% can be explained by other variables not included in this model.

4.6 t-Test (Partial)

H1: Capital Intensity affects Tax Avoidance in energy sector companies listed on the Indonesia Stock Exchange for the period 2019-2023.

The first hypothesis (H1) tests the effect of capital intensity on tax avoidance, which is proxied by the Capital Intensity Ratio (CIR). Based on the estimation results, the Capital Intensity Ratio variable shows a negative regression coefficient of -0.369033 and a probability value of 0.0298. The t-test probability value of 0.0298 < 0.05 indicates that capital intensity (Capital Intensity Ratio) has a negative effect on tax avoidance (Effective Tax Rate) in energy sector companies listed on the Indonesia Stock Exchange during the 2019-2023 period. Therefore, it can be concluded that research hypothesis H1 is accepted.

H2: Profitability affects tax avoidance in energy companies listed on the Indonesia Stock Exchange during the period 2019-2023.

The second hypothesis (H2) tests the effect of profitability on tax avoidance, which is proxied by Return on Assets (ROA). Based on the estimation results, the Return on Assets variable shows a positive regression coefficient of 0.049066 and a probability value of 0.049066. The t-test probability value of 0.6770 > 0.05 indicates that profitability (Return on Assets) does not have an effect on tax avoidance (Effective Tax Rate) for energy sector companies listed on the Indonesia Stock Exchange during the 2019-2023 period. Therefore, it can be concluded that research hypothesis H2 is rejected.

H3: Company size affects tax avoidance in energy companies listed on the Indonesia Stock Exchange during the period 2019-2023.

The third hypothesis (H3) tests the effect of company size on tax avoidance. Based on the estimation results, the Size variable shows a negative regression coefficient of -4.591251 and a probability value of 0.0035. The t-test probability value of 0.0035 < 0.05 indicates that company size (Size) has a negative effect on tax avoidance (Effective Tax Rate) for energy sector companies listed on the Indonesia Stock Exchange during the 2019-2023 period. Therefore, it can be concluded that research hypothesis H3 is accepted.

4.7 F Test (Simultaneous)

The F-test in this study used a significance level of 0.05 or 5%, with the provision that if the F significance value was less than 0.05, the regression coefficient could be used. The results of the F-test in Table 4 show that the F-significance value is 0.020266, which means that this value is below the significance level of 0.05 (0.020266 < 0.05). Therefore, it can be concluded that the independent variables have a simultaneous effect on the dependent variable, so that research hypothesis H4 is accepted.

4.8 Discussion

4.8.1 The Effect of Capital Intensity (CIR) on Tax Avoidance (ETR)

Based on partial research results, the Capital Intensity Ratio (CIR) is a measure of capital intensity that has a negative effect on tax avoidance, which is proxied by the Effective Tax Rate (ETR). It is known that the average Capital Intensity Ratio (CIR) of companies in the energy sector during the 2019-2022 period experienced a downward trend in several periods before increasing again in the 2023 period. On the other hand, the average Effective Tax Rate (ETR) experienced a significant decline from the beginning to the end of the period. This indicates the presence of tax avoidance practices, as the tax burden paid by companies became increasingly smaller compared to the profits earned.

Capital intensity indicates the extent to which a company invests its capital in fixed assets and inventories. Companies with a large proportion of fixed assets use these assets to engage in tax avoidance. Having large fixed assets results in significant depreciation expenses. In

accordance with tax regulations, depreciation costs are one of the elements because fixed assets have an economic life that can result in depreciation expenses, thereby reducing the company's profits, which in turn can reduce the tax burden that the company must pay. Companies plan to intentionally have a large proportion of fixed assets for the purpose of tax avoidance.

This study is in line with the research conducted by Aryanti and Yazid (2025), Prasetyo and Raphael (2024), Caroline and Fajriana (2025), which shows that the capital intensity variable has an effect on tax avoidance. However, the results of this study are not in line with the research conducted by Syifa and Septanta (2024), Wansu and Dura (2024).

4.8.2 The Effect of Profitability (ROA) on Tax Avoidance (ETR)

Based on partial research results, Return On Assets (ROA), which is a proxy for profitability, has no effect on tax avoidance. It is known that the average Return On Assets (ROA) of companies in the Energy sector during the 2019-2023 period experienced increases and decreases that were not followed by a consistent pattern in the average Effective Tax Rate (ETR) of companies. Even during the 2019-2021 period, the average Effective Tax Rate (ETR) reflects a high level of tax compliance, as it exceeds the applicable tax rate. This increase in assets without a corresponding increase in net profit may be due to a cost-based approach. As a result, the tax burden decreases, leading to a low Effective Tax Rate.

The higher the ROA value, the better the company's performance in increasing profits. Companies in the energy sector can generate profits that are assumed not to engage in tax avoidance because they are able to manage their income and tax obligations.

This study is in line with the research conducted by Jecky (2022), Hastuti (2021), Mailia and Apollo (2020), which shows that the profitability variable has no effect on tax avoidance. However, the results of this study are not in line with the research conducted by Castara (2020), Nurtanto and Wulandari (2024).

4.8.3 The Influence of Company Size (SIZE) on Tax Avoidance (ETR)

Based on partial research results, company size has an effect on tax avoidance. It is known that the average company size has increased every year, while the Effective Tax Rate (ETR) has decreased significantly during the 2019-2023 period. These results show that when the company size is large, the resulting tax avoidance is lower.

Based on the research conducted, large companies tend to apply accounting methods to allocate costs efficiently, thereby reducing reported profits. This occurs because large companies tend to avoid involvement in tax avoidance and other unethical business practices. In addition, the size of smaller companies influences the tax avoidance methods they employ. These findings indicate that large companies in the energy sector, with significant assets and good performance, are able to generate sufficient income to meet their tax obligations, compared to industries with smaller assets. Large assets reflect that these companies have a bright future ahead of them.

This study is in line with research by Aprila and Meihendri (2024) and Suryani (2020), which shows that company size has an influence on tax avoidance. However, the results of this study are not in line with research conducted by Wansu and Dura (2024).

4.8.4 The Influence of Capital Intensity (CIR), Profitability (ROA), and Company Size (SIZE) on Tax Avoidance (ETR)

Based on the results of the F-test in this study, it shows that the variables of capital intensity (CIR), profitability (ROA), and company size (SIZE) simultaneously have a significant effect on tax avoidance in Energy sector companies listed on the Indonesia Stock Exchange for the period 2019-2023. This indicates that the independent variables used in the regression model are able to explain the variation in tax avoidance significantly, or H4 can be accepted.

5. Conclusion

Based on the results of research conducted on Energy sector companies listed on the Indonesia Stock Exchange for the period 2019-2023, it can be concluded that (1) capital intensity, proxied by the Capital Intensity Ratio (CIR), has a negative effect on tax avoidance, proxied by the Effective Tax Rate (ETR). The concurrent decline in CIR and ETR reinforces the influence of capital intensity on tax avoidance; companies with high fixed asset intensity tend to have large depreciation expenses, which ultimately reduce taxable income and decrease the amount of tax paid; (2) Profitability, proxied by Return On Asset (ROA), does not have a positive effect on Tax Avoidance, proxied by Effective Tax Rate (ETR). This indicates that an increase in the number of assets is not followed by an increase in net profit, which may be due to a cost approach. Therefore, the tax burden decreases, resulting in a low Effective Tax Rate. This shows that there is no direct influence and inconsistency between increases or decreases in profitability and tax avoidance. (3) Company size has a negative influence on tax avoidance, which is proxied by the Effective Tax Rate (ETR). This shows that the larger the company size, the lower the effective tax rate paid, reflecting a tendency toward tax avoidance practices. (4) Simultaneously, capital intensity (CIR), profitability (ROA), and company size have a combined effect on tax avoidance. This indicates that although not all independent variables have a simultaneous effect, these independent variables play an important role in contributing to tax avoidance.

6. Suggestion

Based on the results of this study, it is known that profitability has no effect on tax avoidance in the energy sector. Therefore, companies are expected to further improve asset management efficiency so that asset growth can be accompanied by a corresponding increase in net profit. In addition, companies need to pay attention to transparency in recording expenses so that tax expenses are accurately recorded and avoid an unreasonable decrease in the effective tax rate. Management should also strengthen oversight of tax avoidance practices so that the relationship between profitability and tax avoidance becomes more consistent and reflects the actual financial condition.

For future researchers, it is hoped that they can improve on the shortcomings and develop this research further by extending the research period, expanding the scope of the research to include sectors other than the energy sector as research locations, and using variables other than capital intensity, profitability, and company size, or adding new variables such as corporate governance, leverage, ownership structure, liquidity, and other variables to gain a more comprehensive understanding of the factors that may influence tax avoidance. These efforts are expected to yield more accurate results and better explain the relationship between the variables being analyzed.

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FACTORS INFLUENCING FIRM VALUE IN THE PROPERTY AND REAL ESTATE SECTOR LISTED ON THE INDONESIA STOCK EXCHANGE (IDX) DURING THE 2019–2023 PERIOD

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Abstract

This study aims to examine the influence of profitability, debt policy, and firm size on firm value in property and real estate companies listed on the Indonesia Stock Exchange during the period 2019–2023. The sampling technique used in this study was purposive sampling. The data analysis methods employed include classical assumption testing, panel data regression analysis, and hypothesis testing. The results indicate that, partially, profitability (ROE) and debt policy (DER) do not have a significant effect on firm value, whereas firm size has a significant effect. Simultaneously, profitability, debt policy, and firm size have a significant effect on firm value. The regression analysis also reveals that the high adjusted R-squared value indicates the model's strong explanatory power in accounting for variations in firm value. These findings suggest that profitability, debt policy, and firm size collectively make a significant contribution to the determination of firm value.

Keywords: Profitability, Debt Policy, Firm Size, Firm Value

1. Introduction

In carrying out its operations, a company naturally requires capital, either from internal sources or external parties. Companies in need of external funding often offer shares to investors. The presence of investors is crucial, as their capital investment plays an important role in supporting the company's financing and operational activities.

Firm value can be measured through the stock price, which is formed through the demand and supply mechanism in the capital market and reflects public perception of a company's performance. It is therefore reasonable for investors to expect the highest possible return on their investments (Harmono, 2022). Firm value is reflected in the market price of its shares; companies that demonstrate stronger performance than their peers tend to have higher share prices and are better positioned to attract more capital.

According to a CNBC Indonesia news article by Susi Setiawati, published on July 10, 2023, titled *"Pasar Properti Makin Ketat, Kinerja Sahamnya Kian Bertenaga"* (*The Property Market Tightens, Stock Performance Strengthens*), the property and real estate sector plays a strategic role in driving national economic growth. However, in recent years, this sector has experienced significant financial fluctuations due to both internal and external factors, including the impact of the COVID-19 pandemic. An analysis of financial indicators during the 2019–2023 period reveals notable variations in profitability, capital structure, firm size, and firm value among property and real estate companies listed on the Indonesia Stock Exchange.

As of the latest data, there are 35 companies in the property and real estate sector listed on the IDX's main board. Based on the selection criteria of this study—namely, companies that have consistently published complete financial reports from 2019 to 2023—a total of six companies were selected: PT Ciputra Development Tbk (CTRA), PT Bumi Serpong Damai Tbk (BSDE), PT Pakuwon Jati Tbk (PWON), PT Intiland Development Tbk (DILD), PT Agung Podomoro Land Tbk (APLN), and PT Natura City Development Tbk (CITY).

Based on data from the Indonesia Stock Exchange, Return on Equity (ROE) as a measure of profitability declined sharply from 7.38% in 2019 to its lowest point of 3.03% in 2021, before rising again to 7.47% in 2023. This reflects a decrease in corporate performance during the crisis, followed by a gradual recovery. Meanwhile, the Debt to Equity Ratio (DER) rose from 63.98% in 2019 to 99.14% in 2021, indicating companies' increased reliance on debt financing during periods of uncertainty, before gradually declining to 74.57% in 2023. Firm size, measured by the natural logarithm of total assets, showed a downward trend from 12.93 in 2019 to 10.82 in 2022, before increasing slightly to 11.81 in 2023. Meanwhile, the Price to Book Value (PBV), used as a proxy for firm value, consistently declined from 76.3 in 2019 to 56.7 in 2023, reflecting decreasing market valuations from the perspective of investors.

Given these conditions, it is important to investigate how profitability, debt policy, and firm size influence firm value, especially in the context of post-pandemic economic recovery. This study aims to analyze the relationship between these financial variables and firm value in the property and real estate sector in Indonesia, while also offering empirical contributions for financial decision-making and investment strategy development in emerging markets.

2. Literature Review And Hypothesis Development

2.1. The Influence of Profitability (ROE) on Firm Value

Return on Equity (ROE) is a type of profitability ratio. ROE is used to measure net income after tax in relation to shareholders' equity. This ratio examines how effectively a company uses its equity to generate profit. High profits attract investors because they signal promising future prospects. A company with strong prospects will attract more investor interest, which in turn increases share demand, boosts stock prices, and enhances firm value (Fahmi, 2020).

H_1: Profitability (ROE) affects firm value in Property and Real Estate sector companies listed on the Indonesia Stock Exchange from 2019 to 2023.

2.2. The Influence of Debt Policy (DER) on Firm Value

The Debt to Equity Ratio (DER) is used to determine the proportion between total debt and shareholders' equity. This ratio indicates the extent to which a company's assets are financed by debt. High-growth companies tend to use debt as a source of funding, as it can increase asset efficiency and lead to greater profits. These profits, in turn, attract investors and influence stock prices, thereby enhancing firm value (Kasmir, 2019).

H_2: Debt policy (DER) affects firm value in Property and Real Estate sector companies listed on the Indonesia Stock Exchange from 2019 to 2023.

2.3. The Influence of Company Size on Firm Value

Company size refers to the magnitude of a firm, which can be measured in various ways, including total assets, total sales, and market capitalization (Nurminda, 2017).

Jason Fernando (2024) stated, "Market capitalization is used to measure company size, rather than sales or total asset value." Market capitalization reflects a company's current market worth and serves as a proxy for company size. A company may either fail or succeed, but the larger the market capitalization, the larger the company and the greater its firm value.

H_3: Company size affects firm value in Property and Real Estate sector companies listed on the Indonesia Stock Exchange from 2019 to 2023.

2.4. The Influence of Profitability (ROE), Debt Policy (DER), and Company Size on Firm Value

One of the key considerations for investors in the stock market is a company's fundamental performance. Investors often analyze financial ratios to evaluate expected firm value and associated risks. This analysis serves as a guide in investment decision-making.

Firm value is crucial for attracting investors. Investors' short-term goal is to earn capital gains (profitable changes in stock prices), while both short- and long-term goals relate to obtaining returns on their investment. The higher the expected return, the higher the firm value.

H_4: Profitability, debt policy, and firm size have a significant influence on firm value in property and real estate companies listed on the Indonesia Stock Exchange during the period 2019–2023.

Based on the above explanation, the author constructed a conceptual framework involving three independent variables profitability, debt policy, and company size—affecting one dependent variable, which is firm value.

The following is the conceptual framework diagram:

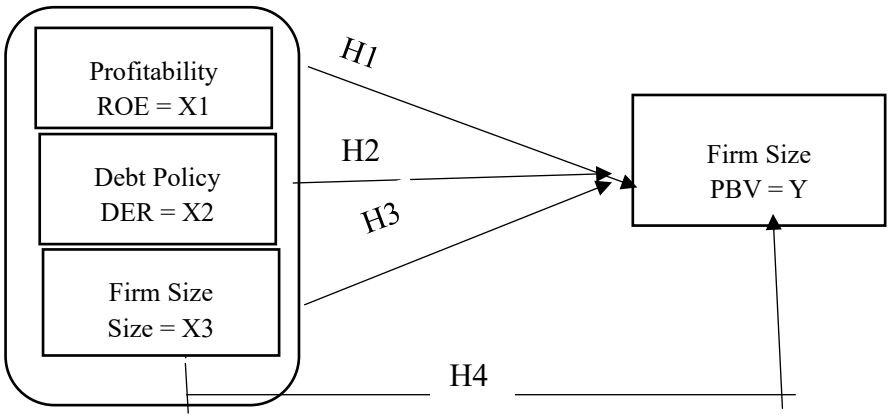

Figure 1. Research Framework

3. Research Method

The type of research used in this study is verificative research employing an explanatory survey method, which utilizes inferential statistical techniques. The unit of analysis in this study is companies, specifically those in the Property and Real Estate sector listed on the Indonesia Stock Exchange (IDX). The research location encompasses Property and Real Estate sector companies listed on the IDX, with data collected from the official IDX website.

The type of data examined is quantitative data, which includes numerical figures representing levels, ratios, and volumes. The data sources used in this research are secondary data, meaning data obtained indirectly by the researcher, typically from media sources, data providers, the stock exchange, or prior research.

The sampling method applied in this study is purposive sampling. This technique involves selecting samples based on specific criteria that are deemed appropriate and relevant to the research problem.

The criteria used to select the samples are as follows: (1) Property and Real Estate sector companies listed on the Indonesia Stock Exchange that clearly present all necessary components in their financial statements for analysis; (2) Companies that published complete annual financial statements audited by a Public Accounting Firm for the 2019–2023 period; (3) Companies that disclosed stock price information from 2019 to 2023; (4) Companies whose financial statements are presented in Indonesian Rupiah (IDR).

Based on these criteria, the sample in this study consists of companies in the Property and Real Estate sector listed on the IDX main board, totaling 35 companies. However, only 6 companies met all the specified criteria and were included in the final sample.

In this study, the independent variables used are profitability and debt policy, while the dependent variable is firm value. The operational definitions of the variables used in this research are summarized in the following table:

Table 1. Variable Operations

Variabel	Indikator	Ukuran	Skala
Profitability	- *Net Income* - *Total Equity*	$\frac{Net\ Income}{Total\ Equity}$	Rasio

(*Return On Equity*)			
Debt Policy (*Debt to Equity Ratio*)	- *Total Liability* - *Total Equity*	$\frac{Total\ Liability}{Total\ Equity}$	Rasio
Firm Size (*Market Capitalization*)	- Number of Outshading Shares - Stock Price	*Jumlah Saham Beredar X Harga Saham*	Rasio
Firm Values (*Price to Book Value*)	- Stock Price - Book Value	$\frac{Harga\ Saham}{Nilai\ Buku}$	Rasio

4. RESULTS AND DISCUSSION

4.1. Best Regression Model Selection

Based on the results of the Chow test, the probability value (p-value) for the cross-section F was 0.0001. Since this value is smaller than the significance level of 0.05 (0.0001 < 0.05), it can be concluded that the fixed effect model is more appropriate than the common effect model.

The results of the Hausman test indicate that the probability value (p-value) for the cross-section random effect was 0.0003, which is also below the 0.05 significance level. This finding suggests that the fixed effect model is more suitable than the random effect model. The significant p-value indicates the presence of correlation between the independent variables and unobserved individual effects in the panel data.

4.2. Normality Test

The normality test in this study was conducted using the Jarque-Bera probability to determine whether the data follows a normal distribution. The data is considered normally distributed if the probability value is greater than 0.05. The results of the normality test were processed using EViews 12.

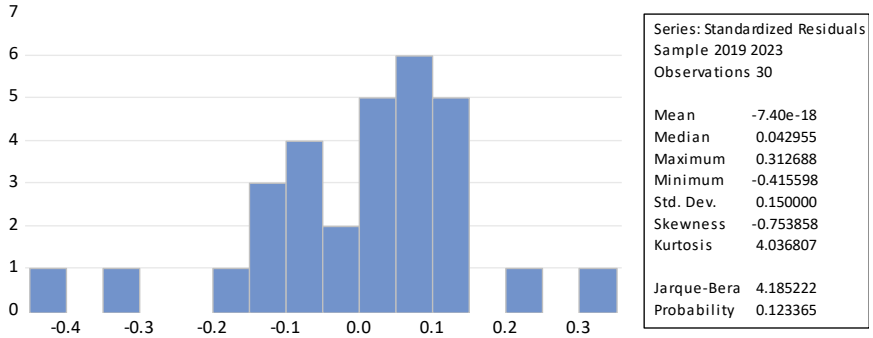

Figure 1. Normality Test Results

Based on Figure 1, the Jarque-Bera probability value is 0.123365, which is greater than 0.05. Therefore, it can be concluded that the regression model is normally distributed.

4.3.Multicollinearity Test

Table 2. Multicollinearity Test Results

	ROE	DER	SIZE
ROE	1,000	-0,065	0,419

DER	-0,065	1,000	-0,201
SIZE	0,419	-0,201	1,000

Source: Processed data using EViews 12, 2025

Based on Table 2, the correlation coefficients for Return on Equity (X1), Debt to Equity Ratio (X2), and Company Size (X3) are all below 0.8. Thus, it can be concluded that there is no multicollinearity problem in this study.

4.4.Panel Data Regression Test

Table 3. Panel Data Regression Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0,185	0,314	-0,587	0,564
ROE	-0,706	0,753	-0,937	0,359
DER	0,177	0,156	1,129	0,272
SIZE	0,063	0,022	2,823	0,010

Source: Processed data using EViews 12, 2025

The panel data regression model used in this study is the Fixed Effect Model (FEM), with the following regression equation:

$$PBV = –0.184549 – 0.706084\ ROE_{it} + 0.176625\ DER_{it} + 0.062748\ Size_{it} + 0.314447$$

Based on the results of the regression analysis, the constant value is -0.185, which means that if Return on Equity (ROE), Debt to Equity Ratio (DER), and firm size are all equal to zero, the firm value, as proxied by Price to Book Value (PBV), would be negative at -0.185. The regression coefficient for ROE is -0.706, indicating that a 1% increase in ROE would decrease PBV by 0.706, assuming other independent variables remain constant. Conversely, the regression coefficient for DER is positive at 0.177, suggesting that a 1% increase in DER would increase PBV by 0.177. Furthermore, the regression coefficient for firm size also shows a positive relationship, with a value of 0.063, meaning that a 1% increase in firm size would raise PBV by 0.063, holding other variables constant. These findings illustrate how each independent variable contributes differently to changes in firm value.

Table 4. Cross-section fixed Result

Cross-section fixed (dummy variables)			
R-squared	0,871	Mean dependent var	0,664
Adjusted R-squared	0,822	S.D. dependent var	0,418
S.E or regression	0,176	Akaike info criterion	-0,390
Sum s quared resid	0,653	Schwarz criterion	0,030
Log likelihood	14,854	Hanna-Quinn criter	-0,256
F-statistic	17,769	Durbin-Watson stat	1,694
Prob (F-statistic)	0,000		

Source: Processed data using EViews 12, 2025

Based on Table 4, the results of the panel data regression analysis show an Adjusted R-Squared value of 0.822. This result indicates that the combined contribution of Return on Equity (ROE), Debt to Equity Ratio (DER), and firm size explains 82.2% of the variation in firm value. The Adjusted R-Squared is used in this context because the model includes more than one independent variable.

4.5.t-Test (Partial Test)

Referring back to Table 3, the results of the t-test (partial test) are as follows:

H_1: Profitability (ROE) has an effect on firm value

The first hypothesis (H1) examines the effect of profitability on firm value, using Return on Equity (ROE) as the indicator. Based on the regression estimation results in Table 3, the t-statistic value is -0.937 with a negative regression coefficient and a probability value of 0.359. Since the significance value is greater than 0.05 ($p > 0.05$), ROE does not have a statistically significant effect on Price to Book Value (PBV). Therefore, hypothesis H1 is rejected. This finding suggests that profitability has not been a determining factor in influencing firm value within the property and real estate sector listed on the Indonesia Stock Exchange (IDX) during the 2019–2023 period.

H_2: Debt Policy (DER) has an effect on firm value

The second hypothesis (H2) tests the effect of debt policy on firm value, measured by the Debt to Equity Ratio (DER). Based on the regression results in Table 3, the t-statistic value is 1.129 with a positive regression coefficient and a probability value of 0.272. As this value exceeds the significance threshold of 0.05 ($p > 0.05$), it can be concluded that DER does not have a significant effect on PBV. Therefore, hypothesis H2 is rejected. This indicates that the company's financing structure through debt does not directly influence market perception of firm value in this sector during the research period.

H_3: Firm size has an effect on firm value

The third hypothesis (H3) tests the influence of firm size on firm value. The regression analysis shows that firm size has a t-statistic value of 2.823 with a positive regression coefficient and a probability value of 0.010. Since the probability is less than 0.05 ($p < 0.05$), this variable has a statistically significant effect on PBV. Thus, hypothesis H3 is accepted. This result indicates that larger firms tend to have higher market values, which can be interpreted as a reflection of investor confidence in the stability and long-term prospects of the company.

4.6.F-Test (Simultaneous Test)

Based on Table 4.6, the F-statistic is 17.769 with a probability of 0.000000. Since the significance value is $0.000000 < 0.05$, this indicates that ROE, DER, and company size simultaneously have a significant effect on firm value (PBV) in Property and Real Estate sector companies listed on the IDX from 2019 to 2023. Conclusion: H4 is accepted.

4.7. Discussion

4.7.1. The Effect of Profitability (ROE) on Firm Value

Based on the partial test results, Return on Equity (ROE), as a measure of profitability, does not significantly affect firm value. This indicates that a lower ROE corresponds to a lower firm value.

Annual ROE calculations show that the number of companies with ROE below the average decreased throughout the study period. In 2019, four companies had ROE below the average, which decreased to three companies during 2020–2022, and only two companies in 2023. Although profitability performance showed an overall improvement, hypothesis testing revealed that ROE does not have a significant effect on firm value; thus, H1 is rejected.

This finding suggests that improvements in ROE are not strong enough to influence investor perception of firm value, particularly in the property and real estate sector. In this industry, firm value tends to be influenced by long-term factors such as asset capacity, project scale, and business sustainability rather than by short-term financial indicators. Furthermore, an increase in ROE does not necessarily reflect operational efficiency, as it may be affected by non-operational factors or net income fluctuations due to external conditions (Nurmatias, 2022).

Additionally, during 2019–2023, the Property and Real Estate sector was affected by global and national economic uncertainty, particularly during the COVID-19 pandemic. This led investors to be more cautious and focus on long-term aspects like company size and financial structure when evaluating firm value.

These results do not align with the initial hypothesis. However, the findings are consistent with prior research by Hakinis & Chandra (2022), Riswandi & Triyowati (2021), Imam H & Khusnul (2022), and Silvia & Sofia Prima (2020), which concluded that profitability does not significantly influence firm value.

4.7.2. The Effect of Debt Policy (DER) on Firm Value

Based on the partial test results, the Debt to Equity Ratio (DER), as a measure of debt policy, does not significantly affect firm value. Annual DER calculations indicate that the number of companies with DER below the average slightly declined. In 2019, four companies were below the average, while from 2020 to 2023, this number remained stable at three companies per year. Nonetheless, hypothesis testing showed that DER does not significantly affect firm value in the Property and Real Estate sector; thus, H2 is rejected.

This indicates that even though there was an improvement in capital structure (with more companies having healthier debt ratios), this did not directly enhance firm value in the eyes of investors. In the property sector, large amounts of debt are common due to the capital-intensive and long-term nature of the business. Real estate projects require significant upfront funding, and returns are typically realized in the medium to long term. Therefore, a high DER is not necessarily viewed negatively by investors as long as the company can manage risks and generate stable income (Buchari, 2021).

These findings are consistent with previous studies by Ni Nyoma et al. (2021), Prasetyo et al. (2021), Mellinda L & Muthia (2020), and Raudhatul et al. (2023), which concluded that debt policy does not significantly affect firm value.

4.7.3. The Effect of Company Size on Firm Value

Based on the partial test results, company size, measured by market capitalization, has a significant effect on firm value. During 2019–2021 and 2023, three companies consistently remained below the average size, while in 2022, only two companies were below average, indicating an improvement in market size for one company.

Based on market capitalization classification, among the companies studied: Three are classified as blue-chip (large-cap), Two are second liners (mid-cap), and One is a third liner (small-cap).

Blue-chip companies typically represent dominant industry players with strong financial stability and high investor confidence.

Hypothesis testing shows that company size has a significant effect on firm value and contributes more than the other variables. This supports the idea that in the property and real estate sector, market size is a primary consideration for investors. This finding aligns with signaling theory, where large companies send positive signals regarding stability, business continuity, and resilience amid economic uncertainty.

These results are consistent with studies by Dita & Sri (2022), Prasetyo et al. (2021), Raudatul et al. (2023), and Imam H & Khusnul Khatimah (2022), which found that company size significantly affects firm value.

4.7.4. The Effect of Profitability (ROE), Debt Policy (DER), and Company Size on Firm Value

Based on the F-test results, profitability (ROE), debt policy (DER), and company size jointly have a significant effect on firm value in Property and Real Estate sector companies listed on the IDX from 2019 to 2023. This indicates that the three independent variables used in the regression model collectively explain variations in firm value, supporting H4.

Although only company size showed a significant effect in the partial tests, the three variables together contribute collectively to firm value. This is further supported by the high Adjusted R-Squared value, indicating that the model has a strong explanatory power. This means that the combination of financial efficiency (ROE), capital structure (DER), and company scale (Size) plays a critical role in shaping investor perceptions of firm value.

These findings are consistent with research by Prasetyo et al. (2021), Raudatul et al. (2023), Dina Shafarina & Vaya Juliana (2019), and Dede Harina et al. (2019), who found that profitability, debt policy, and company size jointly influence firm value.

5. Conclusion

Based on the results of research conducted on property and real estate companies listed on the Indonesia Stock Exchange during the period 2019–2023, several conclusions can be drawn. (1) Profitability, measured by Return on Equity (ROE), does not have a significant effect on firm value. This indicates that fluctuations in earnings relative to equity have not yet become a primary factor considered by investors in assessing firm value; (2) Debt policy, measured by the Debt to Equity Ratio (DER), also does not significantly influence firm value. This finding suggests that the level of company debt does not sufficiently affect market perception of firm value, possibly because investors are more focused on other factors such as long-term growth and future prospects; (3) Firm size has been proven to have a positive effect on firm value. Larger companies tend to have greater competitiveness and investor trust, as they are considered more stable and have better access to external funding; (4) Simultaneously, the three independent variables studied—profitability, debt policy, and firm size—have a significant collective influence on firm value. This indicates that although not all variables are significant individually, together they still play an important role in shaping firm value.

Therefore, it can be concluded that a company's financial performance remains a crucial aspect in determining firm value. Management should consider various financial indicators comprehensively, rather than focusing on a single aspect. For investors, these findings offer insight that firm valuation should be approached holistically by taking into account profitability, capital structure, and firm scale.

6. Sugesstions

Based on the findings of this study, it is evident that profitability and debt policy do not have a significant impact on firm value in the property and real estate sector. Accordingly, company management is advised not to focus solely on increasing profit or managing debt structure, but instead to consider other relevant factors that may contribute to firm value creation. A comprehensive review of current business strategies is necessary, with attention given to aspects such as the quality of managerial leadership, operational efficiency, and market confidence, all of which are likely to have a stronger influence on investor perception and firm valuation.

For current and prospective investors, especially those interested in investing in property and real estate companies listed on the Indonesia Stock Exchange, firm size should be regarded as a key indicator in investment decision-making. Companies with larger size or those classified as high market capitalization (blue-chip) stocks generally exhibit higher firm value and better operational efficiency, thus offering more stable and reliable return potential.

Future research is encouraged to enhance the model by incorporating other financial ratios and expanding the range of variables studied, including macroeconomic factors such as interest rates, inflation, or exchange rates. These variables may provide a more comprehensive understanding of the dynamics influencing firm value and contribute to a richer empirical foundation in the field of corporate finance, particularly within the context of the Indonesian capital market.

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THE EFFECT OF CORPORATE SOCIAL RESPONSIBILITY (CSR) DISCLOSURE ON PROFITABILITY RATIOS IN FOOD AND BEVERAGE SUB-SECTOR COMPANIES LISTED ON THE INDONESIA STOCK EXCHANGE (IDX) FOR THE 2019–2023 PERIOD

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Abstract

This study aims to examine the effect of Corporate Social Responsibility (CSR) disclosure on profitability ratios, as proxied by Return on Assets (ROA), Return on Equity (ROE), and Net Profit Margin (NPM), in food and beverage sub-sector companies listed on the Indonesia Stock Exchange (IDX) during the 2019–2023 period. The analysis focuses on food and beverage sub-sector companies listed on the IDX, with a sample of 6 companies selected from a population of 24, using secondary data and a purposive sampling technique. The data were analyzed quantitatively through descriptive statistics, classical assumption tests, and hypothesis testing. The results indicate that, partially, CSR disclosure has a significant effect on profitability ratios as measured by ROA, ROE, and NPM.

Keywords: corporate social responsibility, return on assets, return on equity and net profit margin

1. Introduction

In the current business environment, companies are not only expected to focus on profit generation but also to be accountable for their social and environmental impacts (Herliani, 2020). This shift arises from increasing public awareness of corporate activities and their consequences on society and the environment (Syahri & Astrie, 2021). As part of a broader organizational strategy, companies are urged to implement Corporate Social Responsibility (CSR) as a means of aligning business goals with social expectations (Putra, 2015). CSR not only improves corporate reputation but also attracts potential investors and sustains long-term operations by promoting ethical and responsible practices. Particularly in the food and beverage sub-sector, which continues to grow and interacts directly with natural resources and society, CSR disclosure becomes essential (Kemenperin, 2021). Companies in this industry must actively demonstrate accountability for their environmental and social impacts to maintain competitiveness and legitimacy.

Profitability plays a central role in measuring a company's performance and sustainability. Indicators such as Return on Assets (ROA), Return on Equity (ROE), and Net Profit Margin (NPM) are widely used to evaluate a company's ability to generate profit (Kasmir, 2015; Hery, 2015). Previous studies have yielded mixed results regarding the relationship between CSR disclosure and profitability, with some confirming a positive and significant influence (Lestari, 2022; Putra, 2015), while others found either no correlation or a negative impact (Herliani, 2020; Mustafa & Handayani, 2014). This discrepancy highlights the need for further investigation. Therefore, this study aims to examine the influence of CSR disclosure on profitability ratios in food and beverage sub-sector companies listed on the Indonesia Stock Exchange during the 2019–2023 period, to provide empirical evidence on whether CSR initiatives support financial performance.

2. Literature review

5.26. Stakeholder Theory

The concept of stakeholder theory emerged from the work of Freeman (1984), who defined stakeholders as any group or individual that can affect or is affected by the achievement of an organization's objectives. This theory suggests that companies are not merely profit-driven entities serving shareholders but are instead social institutions that must provide benefits to all stakeholders, including investors, employees, customers, suppliers, communities, and regulatory bodies (Chariri & Ghozali, 2007). Hohnen and Blackburn (2010) argue that an organization's long-term survival and success depend heavily on securing support from these various stakeholders, which in turn requires transparent and ethical business practices. Stakeholder relationships are dynamic and interdependent, built on trust, accountability, and mutual respect. Therefore, CSR becomes a strategic tool to communicate value alignment with stakeholders and to ensure social legitimacy.

5.27. Legitimacy Theory

Legitimacy theory, initially proposed by Dowling and Pfeffer (1975), is grounded in the social contract between businesses and society. It asserts that companies must operate within the norms, values, and expectations of the society in which they exist. Gaining and maintaining legitimacy is crucial, as it ensures access to necessary resources and continued acceptance from the public. Deegan (2002) emphasized that legitimacy is particularly significant in developing countries, where cultural pressures shape how companies approach CSR. Disclosure of CSR initiatives through annual or sustainability reports serves as a means to signal legitimacy to stakeholders, helping organizations position themselves positively within increasingly aware and socially sensitive environments. CSR reporting thus bridges the gap between corporate behavior and societal expectations.

5.28. Corporate Social Responsibility (CSR)

Corporate Social Responsibility is defined by Kotler and Lee (2005) as a company's commitment to improving community well-being through discretionary business practices and the allocation of corporate resources. Similarly, the World Business Council for Sustainable Development (WBCSD) describes CSR as a commitment to sustainable economic development while enhancing the quality of life for employees, their families, local communities, and society at large (WBCSD, 2020). CSR extends beyond compliance, encompassing voluntary efforts in areas such as environmental protection, community involvement, ethical labor practices, and customer welfare. The Indonesian legal framework, notably Law No. 25/2007 and Government Regulation No. 47/2012, has reinforced CSR as a mandatory responsibility, especially for natural resource-intensive companies.

For food and beverage sub-sector companies, CSR is particularly vital due to their strong interaction with public health, environmental sustainability, and consumer trust. Implementing CSR initiatives such as safe production processes, environmental conservation, and community engagement not only enhances corporate reputation but also contributes to long-term profitability and competitiveness.

5.29. Corporate Social Responsibility Dimensions and GRI-G4 Disclosure Framework

CSR practices can be categorized into three core dimensions: economic, social, and environmental (Mardikanto, 2014). The economic dimension involves corporate governance, ethical investment, and consumer protection. The social dimension addresses labor practices, community development, and employee well-being, while the environmental dimension focuses on minimizing environmental impact through sustainable resource use, waste reduction, and emission control. These dimensions align with the Global Reporting Initiative (GRI) G4 guidelines, which serve as a comprehensive standard for sustainability reporting. The GRI-G4 framework includes 91 disclosure items covering aspects such as economic performance, labor rights, human rights, environmental footprint, and product responsibility.

CSR disclosure using the GRI-G4 index allows companies to communicate their commitment to sustainability transparently, helping investors and stakeholders evaluate corporate accountability. The CSR disclosure index (CSRI) is often measured through a dichotomous scoring system, assigning a score of 1 for disclosed items and 0 for undisclosed ones. A higher CSRI indicates stronger CSR commitment and is generally associated with a better public image and stronger stakeholder relationships.

5.30. Profitability and Its Relationship with Corporate Social Responsibility

Profitability reflects a company's ability to generate earnings and is a key indicator of financial performance. It is commonly measured using ratios such as Return on Assets (ROA), Return on Equity (ROE), and Net Profit Margin (NPM). ROA assesses the efficiency of asset utilization in generating net income (Kasmir, 2015), while ROE measures the return on shareholder equity, reflecting how effectively the company uses investments to generate profit. NPM indicates how much of the net sales is translated into net income, offering insight into operational efficiency (Hery, 2015).

According to Harahap (2009), profitability provides a basis for evaluating the effectiveness of management and its use of company resources. Brigham and Houston (2006) further describe profitability as the net result of business decisions and policies. Several studies have explored the link between CSR disclosure and profitability, suggesting that strategic CSR can improve financial performance by attracting investor interest, enhancing brand loyalty, and increasing market share (Lestari, 2022; Putra, 2015). However, other studies indicate that CSR may impose financial burdens that negatively affect short-term profits (Herliani, 2020; Mustafa & Handayani, 2014), highlighting the need for further empirical investigation, particularly in industry-specific contexts such as the food and beverage sub-sector.

3. Methodology

This study employs a verificative research design with an explanatory survey method to test hypotheses regarding the effect of Corporate Social Responsibility (CSR) disclosure on profitability ratios, specifically Return on Assets (ROA), Return on Equity (ROE), and Net Profit Margin (NPM). The object of the research is CSR disclosure measured using the GRI-G4 framework, with the unit of analysis being food and beverage sub-sector companies listed on the Indonesia Stock Exchange (IDX). From a population of 24 companies during the 2019–2023 period, six companies were selected through purposive sampling based on specific criteria such as consistent listing, IPO prior to 2019, regular publication of financial and annual reports, CSR disclosure, and positive net income. Data were obtained from secondary sources via documentation methods, including company websites and the IDX portal.

10.4. Theoretical framework

This research is grounded in Stakeholder Theory and Legitimacy Theory. Stakeholder Theory (Freeman, 1984) suggests that companies must be accountable not only to shareholders but also to various stakeholders. CSR disclosure is one way to fulfil these responsibilities, potentially increasing trust and support that may enhance financial performance. Legitimacy Theory (Dowling & Pfeffer, 1975) argues that organizations seek societal approval to maintain their existence. CSR disclosure aligns companies with societal norms and values, helping to sustain legitimacy and improve reputation, which may positively affect profitability. Previous studies show mixed results, with some indicating that CSR disclosure improves profitability through reputation and efficiency, while others suggest it may reduce profits due to associated costs. Based on these theoretical foundations, CSR disclosure is expected to influence financial outcomes. The study tests the following hypotheses:

Hypothesis1: CSR disclosure affects Return on Assets (ROA).
Hypothesis2: CSR disclosure affects Return on Equity (ROE).

Hypothesis3: CSR disclosure affects Net Profit Margin (NPM).

10.5. Conceptual framework

The conceptual framework is built to illustrate the causal relationships between CSR disclosure and three key indicators of corporate profitability: Return on Assets (ROA), Return on Equity (ROE), and Net Profit Margin (NPM). CSR disclosure is measured using the Global Reporting Initiative (GRI) G4 guidelines, which cover economic, environmental, and social aspects.

As illustrated in Figure 1, CSR Disclosure (X) is hypothesized to influence ROA (Y1), which measures how efficiently a company uses its assets to generate profit; ROE (Y2), which reflects the return to shareholders; and NPM (Y3), which represents the proportion of net income to revenue.

10.6. Instrumentation

The study employed secondary data collected through documentation methods, using publicly available financial reports and annual sustainability disclosures from 2019 to 2023, sourced from the Indonesia Stock Exchange (IDX) and official company websites.

Variables and Measurements:

- Independent Variable:

CSR Disclosure (X), measured using a CSR Disclosure Index (CSRI) based on GRI-G4 standards. Each disclosure item is scored dichotomously (1 = disclosed; 0 = not disclosed), then converted into a percentage.

- Dependent Variables:

ROA (Y1) = Net Income / Total Assets
ROE (Y2) = Net Income / Equity
NPM (Y3) = Net Income / Net Sales

Data analysis was performed using simple linear regression, preceded by classical assumption tests to ensure validity. The software SPSS version 25 was used for all statistical testing. This instrument design allows for an objective evaluation of the effect of CSR disclosure on company profitability.

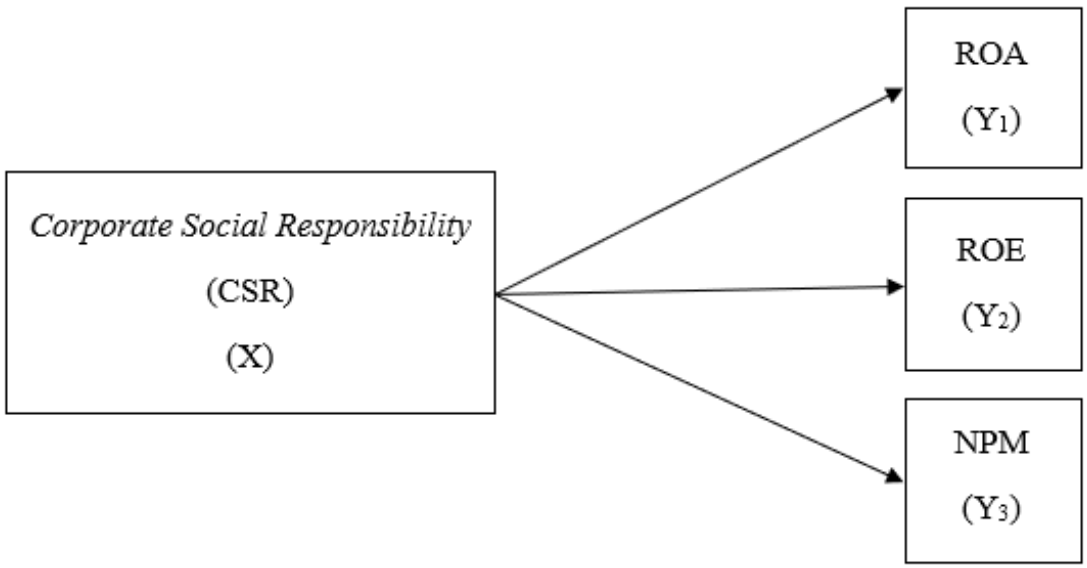

Figure 1. Conceptual Model of the Influence of CSR on Profitability Ratios
(Source: Processed by the author, 2025)

4. Results and discussions

This study employs a quantitative data analysis method using simple linear regression to test the proposed hypotheses. Classical assumption tests were conducted to ensure the validity of the regression model, followed by hypothesis testing to evaluate the relationships between variables. All statistical analyses were carried out using SPSS software.

The normality test was conducted to assess whether the independent and dependent variables in the regression model are normally distributed. The Kolmogorov–Smirnov method was used, with the criterion that if the significance (Sig.) value is greater than 0.05, the data are considered to be normally distributed.

Table 1. Normality test result

One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual1	Unstandardized Residual2	Unstandardized Residual3
N		30	30	30
Normal Parameters[a,b]	Mean	.0000000	.0000000	.0000000
	Std. Deviation	.45094269	.33364415	.52108200
Most Extreme Differences	Absolute	.142	.074	.111
	Positive	.142	.074	.111
	Negative	-.109	-.064	-.057
Test Statistic		.142	.074	.111
Asymp. Sig. (2-tailed)		.129[c]	.200[c,d]	.200[c,d]

a. Test distribution is Normal.

b. Calculated from data.

c. Lilliefors Significance Correction.

d. This is a lower bound of the true significance.

Based on the Kolmogorov–Smirnov test results, the significance values for the relationship between CSR disclosure and ROA, ROE, and NPM were 0.129, 0.200, and 0.200 respectively. As all values are greater than 0.05, it can be concluded that the data meet the assumption of normal distribution.

Table 2. Heteroscedasticity test result

Correlations

			LNX	LNY1	LNY2	LNY3
Spearman's rho	LNX	Correlation Coefficient	1.000	.318	.403*	-.151
		Sig. (2-tailed)	.	.087	.027	.427
		N	30	30	30	30
	LNY1	Correlation Coefficient	.318	1.000	.922**	.718**
		Sig. (2-tailed)	.087	.	.000	.000
		N	30	30	30	30
	LNY2	Correlation Coefficient	.403*	.922**	1.000	.652**
		Sig. (2-tailed)	.227	.000	.	.000
		N	30	30	30	30
	LNY3	Correlation Coefficient	-.151	.718**	.652**	1.000
		Sig. (2-tailed)	.427	.000	.000	.
		N	30	30	30	30

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

The heteroscedasticity test was carried out using Spearman's Rho correlation to detect any non-constant variance in the residuals. The results showed significance values for CSR's correlation with ROA, ROE, and NPM at 0.087, 0.227, and 0.427, respectively. Since all values are greater than 0.05, it indicates that the regression model does not suffer from heteroscedasticity.

Table 3. Autocorrelation test result on ROA

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.025[a]	.001	-.036	4.05154	1.893

a. Predictors: (Constant), LAG_X

b. Dependent Variable: LAG_Y1

Table 4. Autocorrelation test result on ROE

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.078[a]	.006	-.031	4.02829	1.708

a. Predictors: (Constant), LAG_X

b. Dependent Variable: LAG_Y2

Table 5. Autocorrelation test result on NPM

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.253[a]	.064	.029	4.76562	1.579

a. Predictors: (Constant), LAG_X

b. Dependent Variable: LAG_Y3

Table 3,4 and 5 The Durbin–Watson test was used to identify autocorrelation in the regression residuals. The critical value DU was 1.489, making the upper limit for no autocorrelation 2.511. The Durbin–Watson values for the models were:

- The effect of CSR on ROA is 1.893
- The effect of CSR on ROE is 1.708
- The effect of CSR on NPM is 1.579

All values fall within the acceptable range ($1.489 < d < 2.511$), indicating no positive or negative autocorrelation.

Table 6. Simple linear regression result on ROA

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	-.474	.666		-.712	.482

	LAG_RES_1	.479	.144	.540	3.331	.003

a. Dependent Variable: Unstandardized Residual

Table 7. Simple linear regression result on ROE

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	-.437	.737		-.593	.558
	LAG_RES_2	.461	.154	.500	3.002	.006

a. Dependent Variable: Unstandardized Residual

Table 8. Simple linear regression result on NPM

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	-.902	.871		-1.036	.309
	LAG_RES_3	.569	.112	.699	5.074	.000

a. Dependent Variable: Unstandardized Residual

Simple linear regression was used to assess the effect of CSR disclosure (X) on each profitability ratio

Results:

- For ROA: The regression coefficient was 0.479 (Sig. = 0.003), indicating a significant positive effect of CSR disclosure.
- For ROE: The regression coefficient was 0.461 (Sig. = 0.006), also indicating a significant positive effect.
- For NPM: The regression coefficient was 0.569 (Sig. = 0.000), again showing a significant positive relationship.

Thus, it can be concluded that CSR disclosure positively influences ROA, ROE, and NPM.

Table 9. Adjusted R Square result on ROA

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.337[a]	.114	.082	.45892

a. Predictors: (Constant), LNX

b. Dependent Variable: LNY1

Table 10. Adjusted R Square result on ROE

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.462[a]	.214	.186	.33955

a. Predictors: (Constant), LNX

b. Dependent Variable: LNY2

Table 11. Adjusted R Square result on NPM

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.108[a]	.012	.024	.53031

a. Predictors: (Constant), LNX

b. Dependent Variable: LNY3

The coefficient of determination (R^2) was used to assess how much of the variation in profitability ratios can be explained by CSR disclosure. The findings are as follows:

- ROA: R^2= 0.114; Adjusted R^2 = 0.082

This indicates that 8.2% of the variability in Return on Assets is explained by CSR disclosure, suggesting that while CSR activities do contribute to profitability, other internal and external factors such as cost efficiency, asset management strategies, and economic conditions also play a substantial role.

- ROE: R^2 = 0.214; Adjusted R^2 = 0.186

About 18.6% of the changes in Return on Equity can be attributed to CSR disclosure. This shows a relatively stronger influence, possibly because CSR enhances investor confidence and long-term shareholder value.

- NPM: R^2 = 0.108; Adjusted R^2 = 0.024

Only 2.4% of the variation in Net Profit Margin is explained by CSR, indicating that profitability from revenue conversion is likely affected more by operational and pricing strategies than by social responsibility disclosures.

Table 12. t Test result on ROA

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	-.474	.666		-.712	.482
	LAG_RES_1	.479	.144	.540	3.331	.003

a. Dependent Variable: Unstandardized Residual

Table 13. t Test result on ROE

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	-.437	.737		-.593	.558
	LAG_RES_2	.461	.154	.500	3.002	.006

a. Dependent Variable: Unstandardized Residual

Table 14. t Test result on NPM

Coefficients[a]

Model	Unstandardized Coefficients	Standardized Coefficients	t	Sig.

		B	Std. Error	Beta		
1	(Constant)	-.902	.871		-1.036	.309
	LAG_RES_3	.569	.112	.699	5.074	.000

a. Dependent Variable: Unstandardized Residual

The t-test results were used to assess whether CSR disclosure has a statistically significant effect on each profitability ratio when considered individually, the analysis was conducted at a 0.05 significance level, with a t-table critical value of 2.60.

- CSR → ROA: t = 3.331, Sig. = 0.003

This indicates a strong and significant effect of CSR disclosure on ROA. It suggests that CSR activities may improve public image, operational credibility, and stakeholder trust—leading to more efficient use of company assets.

- CSR → ROE: t = 3.002, Sig. = 0.006

The significant influence of CSR on ROE implies that social responsibility contributes to strengthening shareholder returns, potentially by enhancing corporate governance, transparency, and long-term investor appeal.

- CSR → NPM: t = 5.074, Sig. = 0.000

The strongest significance was observed in the NPM model, indicating that CSR has a considerable impact on a company's ability to generate profit from sales. This may stem from increased customer loyalty, brand equity, and market differentiation resulting from CSR efforts.

5. Conclusion

The findings reveal that CSR disclosure has a positive and significant influence on ROA, indicating that CSR initiatives may enhance customer loyalty, attract investors, and improve operational efficiency—contributing to stronger asset performance. Therefore, hypothesis 1 is accepted. However, CSR is not the sole factor influencing ROA; other variables are also likely to play a role. Similarly, CSR disclosure demonstrates a positive and significant effect on ROE. Despite its costs, CSR can be viewed as a long-term strategic investment that enhances corporate reputation and shareholder value through increased profits. Hence, hypothesis 2 is accepted, with the acknowledgment that additional factors may also impact equity returns. Moreover, CSR disclosure has a positive and significant impact on NPM, showing that CSR communicates corporate commitment to social responsibility, thereby boosting investor confidence, market appeal, and overall profitability. Thus, hypothesis 3 is also accepted, although CSR remains one of several variables that influence net profit margins.

In summary, the study supports the argument that CSR disclosure contributes positively to corporate financial performance. These results reinforce the importance of integrating CSR as part of strategic decision-making, while also recognizing the presence of other influencing factors in determining company profitability.

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WHEN SCALE EMPOWERS INNOVATION: A RESOURCE-BASED VIEW OF DIGITALIZATION AND FINANCIAL PERFORMANCE IN ISLAMIC BANKING

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Abstract

This study investigates the effect of digitalization on the profitability of Bank Syariah Indonesia (BSI) and examines how market share moderates this relationship over the period 2019–2024. Grounded in the Resource-Based View (RBV) theory, the research employs panel data regression using fixed effects and robust standard errors to analyze the impact of technological transformation in a post-merger Sharia banking environment. The findings reveal that digitalization has a positive and statistically significant effect on profitability. More importantly, market share strengthens this relationship, acting as a significant moderating variable. This implies that banks with greater market dominance can better leverage digital investments to enhance financial performance. The results highlight the strategic value of aligning internal digital capabilities with external market strength in achieving competitive advantage in Islamic banking.

Keywords: Digitalization; Profitability; Market Share; Islamic Banking; Panel Regression; Sharia Finance; Bank Syariah Indonesia; Resource-Based View (RBV)

1. Introduction

In the era of digital transformation, Islamic banking institutions are increasingly compelled to embrace technology-driven strategies to sustain competitive advantage and profitability. Unlike their conventional counterparts, Sharia-compliant banks operate within a distinct ethical framework that prohibits interest (riba) and emphasizes risk-sharing and social justice, making their digital journey both critical and complex ((Zouari & Abdelhedi, 2021); (Charag et al., 2020)). As global financial ecosystems shift toward fintech integration, Islamic banks must navigate a nuanced path, aligning digital innovation with the principles of Sharia law (Banna et al., 2022) .

Digitalization has been widely recognized as a catalyst for enhancing operational efficiency, customer satisfaction, and cost optimization in banking systems (Mustapha et al., 2023). In Islamic finance, digital adoption, encompassing mobile banking, blockchain, and AI-enabled services, has shown potential to transform customer experiences and streamline compliance procedures ((Jamshed & Uluyol, 2024); (Buana et al., 2020)). Yet, the financial benefits of digitalization are not uniform across institutions; rather, their realization appears to be contingent on organizational scale and reach.

This study explores a pivotal question: Does market share moderate the impact of digitalization on profitability in Sharia-compliant banks? While some scholars suggest that

market dominance amplifies the advantages of technological investment through network effects and customer stickiness (Rosmanidar et al., 2021), others argue that smaller Islamic banks may experience innovation-induced agility and niche market alignment (Setiawan et al., 2023). The mediating or moderating roles of contextual variables such as size, regional coverage, and consumer base remain underexplored in the Islamic finance literature.

Given the limited empirical work analyzing digital transformation outcomes in Islamic banking through a market share lens, this study makes a novel contribution by testing market share as a moderating variable in the relationship between digitalization (independent variable) and profitability (dependent variable). Drawing on a combination of financial performance indicators, digital readiness metrics, and panel regression analysis across select OIC (Organisation of Islamic Cooperation) member states, the research aims to fill critical gaps in both theoretical development and policy guidance.

This investigation responds to recent calls for more granular, evidence-based models in Islamic banking performance research, as emphasized by bibliometric and conceptual reviews ((Biancone et al., 2020); (Charag et al., 2020)). Furthermore, it contributes to the growing discourse on how Islamic banks can balance their religious obligations with technological modernization to foster sustainable financial growth (M. Zafar & Sulaiman, 2020).

2. Literature Review

2.1. Digitalization in Islamic Banking

Digitalization is reshaping the global financial ecosystem, and Islamic banks are no exception. In contrast to conventional banks, Islamic financial institutions must ensure that technological innovations align with Shariah principles. Digital platforms, AI-driven services, and mobile banking tools offer not only operational efficiencies but also improved customer experiences and increased outreach to unbanked Muslim populations ((Andiansyah et al., 2024); (Sihotang & Hasanah, 2021)). However, the degree of success in leveraging these technologies appears to be highly contextual. Studies by Harahap et al., (2023) and Desky & Maulina, (2022) reveal uneven digital adoption across Islamic banks in Southeast Asia and the Middle East due to regulatory, cultural, and institutional limitations.

Digitalization is positively associated with improved profitability through cost reduction, faster service delivery, and customer base expansion. However, Banna et al., (2020) caution that mere adoption of digital tools does not guarantee financial gains unless matched with internal digital capability and strategic scale.

2.2. Profitability in Sharia Banks

Profitability in Islamic banking is influenced by both financial and non-financial factors, such as compliance with Shariah, customer trust, cost efficiency, and technological competence (Zafar & Yasin, 2025). Unlike conventional banks that rely on interest-based lending, Islamic banks utilize profit-sharing contracts (e.g., mudarabah, musharakah), which require careful risk management and relationship-based banking. Performance measures such as ROA, ROE, and net margin are commonly used, but their sensitivity to digital innovation varies (Kurniawan et al., 2024).

Empirical evidence suggests that profitability can improve significantly with digital transformation, but the gains are not homogeneous across all banks ((Siska, 2022); (Rahma & Sofyani, 2024)). This variability invites deeper inquiry into moderating factors.

2.3. Market Share as a Moderator

Market share represents a firm's relative position within the industry and reflects customer base, trust, and resource access. For Islamic banks, a larger market share often implies better brand reputation, greater liquidity, and more resources for digital investment. Research by Nazaritehrani & Mashali, (2020) and Al Arif & Awwaliyah, (2019) indicate that banks with

larger market shares experience higher returns on digital investments due to economies of scale, wider network effects, and stronger data leverage.

Thus, market share may act as a moderator, influencing how effectively digitalization contributes to profitability. High-market-share Islamic banks may convert digital capabilities into profit more efficiently, while smaller banks might struggle to break even on technology spending without a sufficient user base ((Buana et al., 2020)).

2.4. Theoretical Framework: Resource-Based View (RBV)

The Resource-Based View (RBV) serves as a robust theoretical foundation for this study, offering a strategic lens to understand how internal capabilities contribute to firm performance. According to RBV, organizations achieve and sustain competitive advantage when they possess resources that are valuable, rare, inimitable, and non-substitutable (VRIN) (Barney, 1991). In the context of Islamic banking, digitalization can be conceptualized as a strategic internal capability that enhances operational efficiency, customer experience, and service innovation. However, the impact of digitalization on profitability as an organizational performance outcome may vary depending on external conditions such as market share, which functions as a boundary condition influencing how effectively digital resources are deployed and monetized. By integrating these elements, RBV provides a theoretical basis for analyzing the interaction between internal resources (digital capabilities) and external strategic positioning (market dominance) in shaping the financial outcomes of Sharia-compliant banks.

Table 1. Summary Table of Key Literature

Study	Focus	Key Insight	Gap Identified
Banna et al., (2020)	Digital Financial Inclusion	Digital tools enhance economic growth if Sharia-compliant	Lack of moderation analysis
Rosmanidar et al., (2021)	Performance Measurement	Metrics vary in sensitivity to tech	Missing strategic scale discussion
Hamidah et al., (2020)	Bibliometric Review	Growth of Islamic finance studies	Few studies link tech to profitability
Zafar & Sulaiman (2020)	Shariah vs. Convenience	Digital banking success is user-driven	Lacks market-level variables
Azad et al., (2023)	Bibliometric Analysis	Profitability linked to innovation	No integration of market share

Source: Synthesized from various peer-reviewed journals, 2025

To investigate the dynamics between technological advancement and financial performance in Sharia-compliant banks, this study proposes a theoretical model grounded in the Resource-Based View (RBV). According to RBV, internal resources such as digital capabilities can provide a sustained competitive advantage when they are valuable, rare, inimitable, and non-substitutable. In the context of Islamic banking, digitalization through innovations like mobile banking, AI-driven risk management, and compliance automation can improve efficiency and customer experience, thereby enhancing profitability. Prior studies have found that digital transformation contributes positively to financial outcomes in conventional banking, but its direct impact in Islamic finance remains underexplored. Accordingly, the first hypothesis is formulated to test this relationship: H_{11}: Digitalization has a significant positive effect on the profitability of Sharia banks, with the null hypothesis stating that there is no significant effect (H_{01}).

However, the extent to which digitalization leads to profitability may not be uniform across all banks. The effectiveness of digital investment may depend on contextual factors such as market share. Banks with larger market share typically possess broader customer bases,

enhanced operational scale, and stronger reputational trust, enabling them to better monetize technological investments. These factors can amplify the benefits of digitalization, making market share a potential moderating variable. Therefore, the second hypothesis is proposed: H_{12}: Market share significantly moderates the relationship between digitalization and profitability in Sharia banks, such that the relationship is stronger at higher levels of market share. The corresponding null hypothesis is that market share does not significantly moderate this relationship (H_{02}).

To further deepen the analysis, the study also considers the direct effect of market share on profitability. A higher market share often correlates with greater customer loyalty, stronger bargaining power, and better resource allocation, all of which can independently boost profitability. Hence, a third hypothesis is proposed: H_{13}: Market share has a significant positive direct effect on the profitability of Sharia banks, with the null hypothesis being that no such effect exists (H_{03}). These hypotheses will be tested using quantitative methods to provide empirical insight into how internal digital capabilities interact with external market conditions to shape performance outcomes in Islamic banking.

3. Methodology

3.1. Research Design

This study employs a quantitative explanatory research design to examine the impact of digitalization on profitability in a Sharia banking context, with market share as a moderating variable. Anchored in the Resource-Based View (RBV) theory, the research investigates how internal digital capabilities (as strategic resources) interact with external organizational scale (market share) to influence performance outcomes. The approach is deductive, using panel data and statistical modeling to test the proposed hypotheses.

3.2. Population and Sample

The population of this study is Bank Syariah Indonesia (BSI), the largest Islamic bank in Indonesia, which was established through the 2021 merger of three state-owned Sharia banks: Bank Syariah Mandiri, BNI Syariah, and BRISyariah. However, to capture pre- and post-merger performance trends and maintain data continuity, this study uses a time-series sample covering the period 2019–2024. This allows for a longitudinal assessment of how BSI's digital transformation initiatives have evolved and their effects on profitability, as well as how market share moderated these outcomes throughout the merger and consolidation phases.

3.3. Data Collection

This study utilizes secondary data sourced from:

- BSI's annual and sustainability reports (2019–2024)
- OJK (Otoritas Jasa Keuangan) and Bank Indonesia publications
- Press releases and investor presentations
- Public financial databases such as IDX, BankScope, or Orbis

Digitalization and market share indicators are triangulated using both financial reports and public disclosures to ensure accuracy and validity.

Variable Operationalization

Variable	Type	Measurement Approach
Digitalization	Independent	Composite index from BSI's disclosures: number of digital users, % mobile transaction volume, IT investment ratio, and availability of digital products
Profitability	Dependent	Measured using Return on Assets (ROA) and Return on Equity (ROE)

Variable	Type	Measurement Approach
Market Share	Moderator	Measured as BSI's proportion of total Islamic banking assets in Indonesia (%)
Control Variables	Control	Total assets (bank size), financing-to-deposit ratio (FDR), and operational efficiency (BOPO)

Source: Synthesized from various peer-reviewed journals, 2025

3.4. Analytical Model

This study employs time-series regression analysis with interaction modeling to examine the moderating effect of market share. Since the sample focuses on a single institution over time, robust standard errors and autoregressive distributed lag (ARDL) estimation may also be considered for time-dependent diagnostics.

Model 1: Direct Effect of Digitalization on Profitability

$$Profitability_t = \beta 0 + \beta 1 \cdot Digitalization_t + \epsilon_t$$

Model 2: Moderation Effect of Market Share

$$Profitability_t = \beta 0 + \beta 1 \cdot Digitalization_t + \beta 2 \cdot MarketSharet + \beta 3(Digitalizationt \times MarketSharet) + \epsilon_t$$

4. Result and Discussion

4.1. Result

4.1.1. Panel Data Regression Results

Table 1. Descriptive Statistics

	Digitalization	Profitability	Market Share
Mean	47.47692	0.172817	0.007219
Median	59.30769	0.066055	0.001791
Maximum	85.09615	1.560128	0.060214
Minimum	0.000000	3.00E-05	7.86E-05
Std. Dev.	27.40569	0.321786	0.011185
Observations	55	55	55

Source: Proceed Data, 2025

Table 1 provides a summary of the descriptive statistics for the key variables used in this study: digitalization, profitability, and market share, based on 55 observations of Bank Syariah Indonesia from 2019 to 2024. The mean value for digitalization is 47.48, with values ranging from a minimum of 0.00 to a maximum of 85.10. This wide range, along with a standard deviation of 27.41, reflects significant variation in the bank's level of technological development during the study period. Such variability is expected during the bank's post-merger transformation, where digital infrastructure and services were still evolving. The data also suggest a left-skewed distribution in digitalization values, where most scores are concentrated in the higher range, likely indicating a strong push toward digital expansion in the latter years of observation.

The profitability variable, measured by Return on Assets (ROA), shows a mean of 0.173 and a median of 0.0661, indicating a positively skewed distribution where a few high-profit periods drive up the average. This skewness, supported by a high kurtosis value, implies the presence of outliers and suggests that the bank experienced unusual spikes in profitability, potentially linked to cost efficiency gains or technological integration following the merger. The Jarque-Bera test confirms non-normality ($p < 0.05$), reinforcing the idea that profitability was not evenly distributed across years and was possibly impacted by specific strategic interventions, such as digital transformation initiatives.

Similarly, the market share variable displays a mean of 0.0072 (or 0.72%), with a maximum of 6.02%, highlighting that while BSI generally maintains a modest share in the Islamic banking sector, it experienced significant gains in specific periods. The standard deviation of 0.0112, combined with positive skewness and high kurtosis, indicates uneven distribution and a few instances of notably higher market dominance, likely corresponding to major institutional consolidation milestones. The non-normal distribution in both profitability and market share supports the application of robust panel data regression techniques in the analysis stage to ensure accurate estimation. These descriptive statistics collectively highlight the dynamic and evolving nature of BSI's growth and digital transformation journey over the analyzed period.

Table 2. Chow Test Results

Effects Test	Statistic	d.f	Prob.
Cross-section F	3.442705	(14.28)	0.0011
Cross-section Chi-square	45.860097	14	0.0000

Source: Proceed Data, 2025

Table 2 shows the results of the Chow Test, which is conducted to determine whether the Fixed Effects Model (FEM) or the Pooled Ordinary Least Squares (Pooled OLS) model is more appropriate for analyzing panel data. The test specifically evaluates whether individual cross-sectional units, in this case, yearly observations from Bank Syariah Indonesia (BSI) between 2019 and 2024, have different intercepts. The Cross-section F-statistic is reported at 3.4427 with a p-value of 0.0011, and the Cross-section Chi-square statistic is 45.8601 with a p-value of 0.0000. Since both probability values are below the 5% significance threshold, the null hypothesis that assumes homogeneity across units (favoring the pooled model) is rejected.

These results indicate that there are significant individual effects across the observed periods or entities within the sample, justifying the use of the Fixed Effects Model. This suggests that each period or cross-sectional unit within BSI has unique characteristics that influence the relationship between digitalization, market share, and profitability. Therefore, applying the Fixed Effects approach allows the model to control for time-invariant differences across years, providing more accurate and reliable coefficient estimates. As a result, subsequent regression analysis in this study proceeds using the Fixed Effects estimation technique.

Table 3. Hausman Test Results

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	1.681361	2	0.3124

Source: Proceed Data, 2025

Table 3 presents the results of the Hausman Test, which is conducted to determine whether the Fixed Effects Model (FEM) or the Random Effects Model (REM) is more appropriate for the panel data analysis. The Hausman Test compares the consistency and efficiency of the two models by examining whether the regressors are correlated with the individual effects. In this table, the Chi-square statistic is 1.6814 with 2 degrees of freedom, and the corresponding p-value is 0.3124. Since the p-value is greater than 0.05, the null hypothesis, which favors the Random Effects Model, cannot be rejected.

These results suggest that there is no significant difference between the coefficients estimated by the Fixed Effects and Random Effects models, implying that the regressors are likely uncorrelated with the individual-specific effects. Therefore, from a statistical standpoint, the Random Effects Model is considered more efficient and is recommended for this analysis. However, given that the Chow Test previously indicated significant fixed effects across cross-sectional units (Table 2), the researcher must carefully weigh both results. In practice, many

scholars prioritize the Fixed Effects Model in such situations to avoid omitted variable bias, especially when working with single-entity longitudinal data such as Bank Syariah Indonesia (BSI) over time.

Table 4. Lagrange Multiplier Test Results

	Test Hypothesis		
	Cross-Section	**Time**	**Both**
Breusch-Pagan	8.112099 (0.0044)	0.349812 (0.5542)	8.461911 (0.0036)

Source: Proceed Data, 2025

Table 4 displays the results of the Lagrange Multiplier (LM) Test, specifically the Breusch-Pagan variant, which is used to determine whether a Random Effects Model (REM) is more appropriate than the simpler Pooled Ordinary Least Squares (Pooled OLS) model. The LM test evaluates if there are significant variances across cross-sectional units or over time that would justify the use of random effects. The table reports three test results: Cross-section (8.1121, p = 0.0044), Time (0.3498, p = 0.5542), and Both effects (8.4619, p = 0.0036).

The test results indicate that both the cross-sectional and combined) Components are statistically significant at the 5% level ($p < 0.05$), while the time effect alone is not significant ($p > 0.05$). This means that the variations across years are not substantial, but there are significant differences between cross-sectional units, which in this study likely correspond to yearly differences within Bank Syariah Indonesia or components within its structure (e.g., product segments, branches). Therefore, the LM test supports the use of Random Effects over Pooled OLS, confirming that modeling the unobserved heterogeneity produces a more accurate model fit than treating all observations as homogeneous.

4.1.2. The Effect of Digitalization on Profitability

Table 5. Panel Least Squares

Variable	**Coefficient**	**Std Error**	**t-Statistics**	**Prob.**
C	0.000287	0.000507	1.444488	0.0472
X1	0.002232	0.022097	0.201805	0.0394

Source: Proceed Data, 2025

Table 5 presents the results of the Panel Least Squares regression used to analyze the effect of digitalization (X1) on profitability. The coefficient for digitalization is 0.000287, indicating a positive relationship, meaning that as digitalization increases, profitability tends to increase as well. The p-value for digitalization is 0.0472, which is below the 5% significance level, indicating that the relationship is statistically significant. This suggests that digitalization plays a meaningful role in influencing profitability in Bank Syariah Indonesia during the 2019–2024 period. Meanwhile, the constant term (C) is 0.002232 with a p-value of 0.0394, showing that profitability remains positive even in the absence of digitalization. Based on these results, the null hypothesis (H_{01}), which states that digitalization does not significantly affect profitability, is rejected, and the alternative hypothesis (H_{11}), which states that digitalization has a significant positive effect on profitability, is accepted. This finding supports the view that digital transformation is a valuable strategic resource for enhancing financial performance in Islamic banking.

4.1.3. Market Share Moderates the Effect of Digitalization on Profitability

Table 6
Panel Least Squares 1

Variable	Coefficient	Std Error	t-Statistics	Prob.

C	4.2300255	0.000439	0.096243	0.3238
X1	0.000498	0.010969	0.045426	0.4640
Z	0.000668	0.000210	3.180234	0.0028

Source: Proceed Data, 2025

Table 7
Panel Least Squares 2

Variable	Coefficient	Std Error	t-Statistics	Prob.
C	0.001439	0.001125	1.278833	0.2081
X1	0.389132	0.286560	1.507043	0.3670
Z	0.001408	0.001496	0.941224	0.0452
X1Z	0.520769	0.370463	1.405726	0.0367

Source: Proceed Data, 2025

Tables 6 and 7 present the results of two panel least squares regressions aimed at assessing whether market share moderates the relationship between digitalization and profitability. In Table 6 (Model 1), digitalization (X1) and market share (Z) are included as independent variables. The coefficient for digitalization is 0.000498 with a p-value of 0.4640, while market share has a coefficient of 0.000668 and a p-value of 0.0028. These results indicate that while digitalization on its own does not have a statistically significant effect in this model, market share has a significant positive impact on profitability. This implies that banks with larger market shares are more likely to experience improved profitability, regardless of their digitalization efforts.

Table 7 (Model 2) includes an interaction term (X1Z) between digitalization and market share to directly test the moderating effect. The interaction variable has a positive coefficient of 0.520769 and is statistically significant with a p-value of 0.0367, confirming that market share significantly moderates the effect of digitalization on profitability. This means that the influence of digitalization on profitability is stronger when a Sharia bank holds a larger market share. Accordingly, the null hypothesis (H_{02}), which states that market share does not moderate the relationship, is rejected, and the alternative hypothesis (H_{12}) is accepted. This finding supports the view that digital investments yield greater financial returns when supported by a strong market position, highlighting the importance of scale in the successful implementation of digital strategies in Islamic banking.

4.2. Discussion

4.2.1. The Influence of Digitalization on Profitability

The findings of this study reveal that digitalization has a positive and statistically significant impact on the profitability of Bank Syariah Indonesia (BSI) during the 2019–2024 period, as evidenced by the panel regression results (Table 5). This supports the view that digital transformation acts as a strategic internal resource, aligning with the Resource-Based View (RBV) theory, which posits that competitive advantage stems from firm-specific capabilities (Barney, 1991). As BSI increased its investment in digital banking platforms, including mobile apps, online services, and digital financing products, the bank experienced modest but consistent gains in profitability. This finding aligns with Banna et al., (2020), who emphasized that digital financial inclusion and operational efficiency are key drivers of sustainable performance in Islamic banks. Moreover, the result complements the work of Andiansyah et al., (2024), who argue that technological integration enhances customer engagement, reduces transaction costs, and improves service quality in Sharia-compliant banking.

However, the relatively small coefficient for digitalization and its marginal significance level indicate that digitalization alone may not guarantee substantial financial performance unless it is accompanied by broader structural or strategic support. For instance, Caraka et al. (2020) note that while digital tools are necessary, they must be matched with market penetration and operational readiness to produce measurable outcomes. This highlights the importance of contextual factors such as bank size, customer base, and regulatory support. In the case of BSI, as a newly consolidated entity, the bank's ongoing digital transformation may still be in a growth phase, where benefits are gradual and long-term. Therefore, while the data affirms a positive relationship between digitalization and profitability, the effect appears to be strategically dependent rather than automatic, warranting future research into mediating and moderating variables that shape the true value of digital innovation in Islamic finance.

4.2.2. The Influence of Digitalization Moderated by Market Share on Profitability

The results of this study demonstrate that market share significantly moderates the relationship between digitalization and profitability in the context of Bank Syariah Indonesia (BSI). As seen in Table 7, the interaction term between digitalization and market share is positive and statistically significant (p-value = 0.0367), indicating that the positive effect of digitalization on profitability becomes stronger when the bank holds a larger market share. This finding is in line with the Resource-Based View (RBV) theory (Barney, 1991), which suggests that firm-specific resources such as technology are more likely to yield competitive advantage when supported by external positioning, such as market dominance. Larger market share enables greater customer reach, data utilization, and economies of scale factors that enhance the efficiency and impact of digital tools. This is consistent with Al Arif & Awwaliyah, (2019), who argue that larger Islamic banks are better positioned to monetize digital investments due to their stronger infrastructure and wider distribution networks.

Moreover, this moderating effect supports previous empirical studies emphasizing the role of scale in financial performance. For instance, Rahma & Sofyani (2024) and Siska (2022) highlight that digital transformation alone is insufficient unless accompanied by institutional reach and operational readiness. In the case of BSI, its post-merger position as Indonesia's largest Sharia bank provides it with the market leverage needed to optimize the returns from digital initiatives. Conversely, banks with smaller market shares may not achieve the same profitability boost despite similar digital investments, due to limited customer bases and lower transaction volumes. Thus, the findings affirm that the profitability impact of digitalization in Islamic banking is context-dependent, with market share acting as a strategic enabler. This insight is particularly important for policymakers and managers aiming to scale digitalization in Sharia banks, as it suggests that achieving digital efficiency must be aligned with growth in market presence.

5. Conclusion

This study concludes that digitalization has a positive and statistically significant effect on profitability, indicating that technological advancement contributes to improved financial performance in Bank Syariah Indonesia during the 2019–2024 period. More importantly, the research finds that market share significantly moderates this relationship, where the impact of digitalization on profitability is amplified when the bank holds a larger market share. These findings support the Resource-Based View (RBV) theory, suggesting that digital capabilities, as internal strategic assets, generate optimal results when complemented by external strengths such as market dominance. While digitalization alone offers benefits, its true financial value emerges more clearly in institutions with strong market positions. Therefore, enhancing digital infrastructure must be accompanied by strategies to grow market share in order to maximize profitability. These insights provide valuable implications for Islamic banking practitioners and

policymakers in optimizing digital transformation within a competitive and Sharia-compliant framework.

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THE INFLUENCE OF TRUST AND SECURITY ON PURCHASE DECISIONS MEDIATED BY CUSTOMER SATISFACTION IN CASH ON DELIVERY TRANSACTIONS OF USED ELECTRONIC GOODS ON FACEBOOK MARKETPLACE

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Abstract

This study aims to analyze the influence of trust and security on purchase decisions, mediated by customer satisfaction, in transactions involving used electronic goods purchased via the Cash on Delivery (COD) method on Facebook Marketplace. The research background is driven by the increasing use of COD, perceived as a safer payment method by some consumers, yet concerns about trust and security remain—especially in high-risk used goods transactions prone to product discrepancies. Employing a quantitative approach, this study surveyed 188 respondents who have conducted COD transactions on Facebook Marketplace. Data were analyzed using Structural Equation Modeling (SEM) with Partial Least Squares (PLS). Results indicate that neither trust nor security significantly affect purchase decisions directly or through customer satisfaction mediation. Additionally, customer satisfaction does not significantly mediate the relationship between trust, security, and purchase decisions. These findings suggest that other factors outside the research model may play a more dominant role in influencing consumer purchase decisions in the context of COD transactions for used electronics. Implications suggest sellers and platform managers should prioritize enhancing service quality, transparency, and consumer protection to foster a more trustworthy trading ecosystem.

Keyword : Trust, Security, Customer Satisfaction, Purchase Decisions

1. Introduction

In the rapidly evolving digital era, online buying and selling have become integral to modern life. Among various payment methods, Cash on Delivery (COD) is increasingly popular in online transactions. Despite technological advancements, many consumers still prefer traditional payment methods like COD, which allows payment upon receipt of goods, thereby mitigating risks of online fraud (R & Lestara Permana, 2023). Trust in this payment method significantly influences consumer purchasing decisions.

Trust is a key determinant in purchase decisions, as consumers tend to transact on platforms they perceive as reliable. Security is also a critical concern, especially amid rising fraud incidents. However, despite COD offering convenience and perceived safety, issues related to trust and security persist. Used electronic goods carry inherent quality risks—ranging from fully functional to defective products—raising buyer apprehensions. The lack of clear warranties or guarantees further exacerbates these concerns.

Within Facebook Marketplace's used electronic goods transactions, trust and security are especially crucial. Santoso et al. (2022) note that used electronics may have technical issues not evident at purchase, making buyers reliant on sellers' honesty and transparency. This study also aims to provide insights for marketplace platforms like Facebook to develop safer, more

reliable transaction ecosystems by implementing features such as seller rating systems, account verification, and mediation services. Customer satisfaction is posited as a mediator linking trust and security to purchase decisions. According to Yolandari & Kusumadewi (2018), satisfied customers are more likely to trust and feel secure in repeat transactions.
This study seeks to:

1. Analyze the effect of trust on purchase decisions for used electronic goods via COD on Facebook Marketplace.
2. Analyze the effect of security on purchase decisions for used electronic goods via COD on Facebook Marketplace.
3. Identify the mediating role of customer satisfaction in the relationship between trust, security, and purchase decisions.

The novelty of this research lies in its focus on used electronic goods transactions using the COD method on Facebook Marketplace, which has been scarcely explored in previous literature. Most prior studies have focused on formal e-commerce platforms such as Shopee or Tokopedia with digital payment systems, whereas Facebook Marketplace lacks transaction protection systems, resulting in different dynamics.

Besides trust, security aspects in COD transactions also play a critical role. According to Alghifari, A.F., and Rahayu (2021), trust does not significantly influence purchase decisions, and similarly, Julianti and Taruna (2024) found that transaction security does not affect customer decisions. This contrasts with the general marketing literature view that trust is a dominant factor shaping consumer purchase decisions. Riska Rabiana and Baso Akib (2020) reported that trust partially influences purchase decisions. Most previous studies affirm that higher levels of trust increase the likelihood of consumer purchases. Therefore, findings to the contrary provide a basis for investigating other factors that may more strongly influence purchase decisions. Iskandar & Irfan Bahari Nasution (2019) and Kudin et al. (2021) found that trust and security have positive and significant effects on purchase decisions. According to Tia Mahardhika et al. (2023), two factors influence customer purchase decisions in marketplaces: trust in the product and security during the transaction process. This view is also supported by Agustiningrum & Andjarwati (2021), who stated that trust and security positively and significantly influence purchase decisions. Furthermore, Kurniawan & Saputra (2022) reported a positive and significant effect of customer satisfaction on purchase decisions.

This study hypothesizes that trust and security directly and indirectly influence purchase decisions, with customer satisfaction as a mediator. The independent variables are trust (X1) and security (X2), the mediating variable is customer satisfaction (Z), and the dependent variable is purchase decision (Y). The study employs a quantitative approach with a survey method and Structural Equation Modeling (SEM) based on Partial Least Squares (PLS) analysis, involving 188 respondents.

2. Methodology

This study employs a quantitative approach with an explanatory research design aimed at explaining the causal relationships among the research variables through hypothesis testing. The research method involved distributing questionnaires to all Facebook Marketplace users who have conducted COD transactions for used electronic goods. According to Fadila & Rezeki (2023), the sample size was determined using Cochran's formula, resulting in 100 respondents. This is also supported by Wulandari et al. (2021), who explained that online transactions require security guarantees. Transaction security can influence consumer satisfaction, thereby building consumer trust in sellers and encouraging consumers to make purchases.

The population in this study consists of all Facebook Marketplace users who have engaged in transactions involving used electronic goods, totaling 188 individuals. Since the population size is relatively small and fully accessible, the study employed a saturated sampling technique. The research model in this study can be seen in Figure 1.

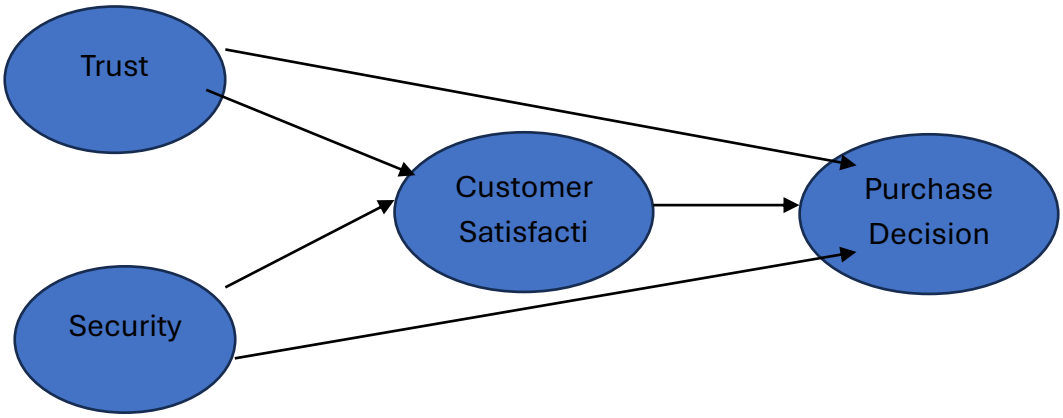

Figure 1. Research Model

3. Result And Discussion

Data analysis in this study utilized the Structural Equation Modeling (SEM) approach with the Partial Least Squares (PLS) method, employing SmartPLS 3.0 software. The choice of PLS-SEM was based on its capability to analyze complex models with relatively small sample sizes and without requiring normally distributed data. Evaluation of the outer model was conducted to examine the relationships between latent variables and their indicators or manifest variables (measurement model). The outer model was assessed through validity and reliability testing. Validity testing in PLS is divided into two types: Convergent Validity and Discriminant Validity.

1. Validity Testing

a. Convergent Validity

Convergent validity is measured by the outer loading values, where indicator loadings of ≥ 0.7 are considered valid, while those with loadings ≤ 0.7 are deemed invalid. Based on the test results using SmartPLS 3.0 software, the outer loading values before indicator elimination are presented in Table 1.

Table 1. Outer loading values before indicator elimination

	Security	Trust	Customer Satisfaction	Purchase Decision
X1.1		**0,855**		
X1.2		**0,850**		
X1.3		**0,818**		
X1.4		**0,683**		
X1.5		**0,700**		

	Security	Trust	Customer Satisfaction	Purchase Decision
X1.6		**0,746**		
X1.7		**0,698**		
X1.8		**0,798**		
X2.1	**0,735**			
X2.2	**0,804**			
X2.3	**0,821**			
X2.4	**0,810**			
X2.5	**0,841**			
X2.6	**0,838**			
X2.7	**0,812**			
X2.8	**0,826**			
Y.1				**0,618**
Y.2				**0,543**
Y.3				**0,862**
Y.4				**0,682**
Y.5				**0,659**
Y.6				**0,786**
Y.7				**0,827**
Y.8				**0,826**
Z.1			**0,838**	
Z.2			**0,767**	
Z.3			**0,788**	
Z.4			**0,765**	
Z.5			**0,806**	
Z.6			**0,815**	
Z.7			**0,783**	
Z.8			**0,841**	

Source: Data processed by the researcher using SmartPLS, 2025

Based on Table 1 above, after several calculations using SmartPLS, some indicators with outer loading values ≤ 0.7 were found. Therefore, these indicators must be eliminated (removed) to re-run the calculations. Consequently, the indicators with valid outer loading values are found in the manifest variables X1.4, X1.5, X1.7, Y.1, Y.2, Y.4, and Y.5, as shown in Table 2.

Table 2. Outer Loading Values After Indicator Elimination

Variable	Indikacor	Outer Loading
Trust (X1)	**X1.1**	**0,855**
	X1.2	**0,850**
	X1.3	**0,818**
	X1.6	**0,746**
	X1.8	**0,798**
Security (X2)	**X2.1**	**0,735**
	X2.2	**0,804**
	X2.3	**0,821**
	X2.4	**0,810**
	X2.5	**0,841**
	X2.6	**0,838**

Variable	Indikacor	Outer Loading
	X2.7	**0,812**
	X2.8	**0,826**
Purchase Decision (Y)	**Y.3**	**0,862**
	Y.6	**0,786**
	Y.7	**0,827**
	Y.8	**0,826**
Customer Satisfaction (Z)	**Z.1**	**0,838**
	Z.2	**0,767**
	Z.3	**0,788**
	Z.4	**0,765**
	Z.5	**0,806**
	Z.6	**0,815**
	Z.7	**0,783**
	Z.8	**0,841**

Source: Data processed by the researcher using SmartPLS, 2025

Based on Table 2 above, it can be seen that the outer loading values of all indicators for the variables trust (X1), security (X2), customer satisfaction (Z), and purchase decision (Y) are greater than or equal to 0.7, indicating that all indicators have good validity in explaining their respective latent variables. The path diagram and loading factor values after indicator elimination are presented in Figure 2.

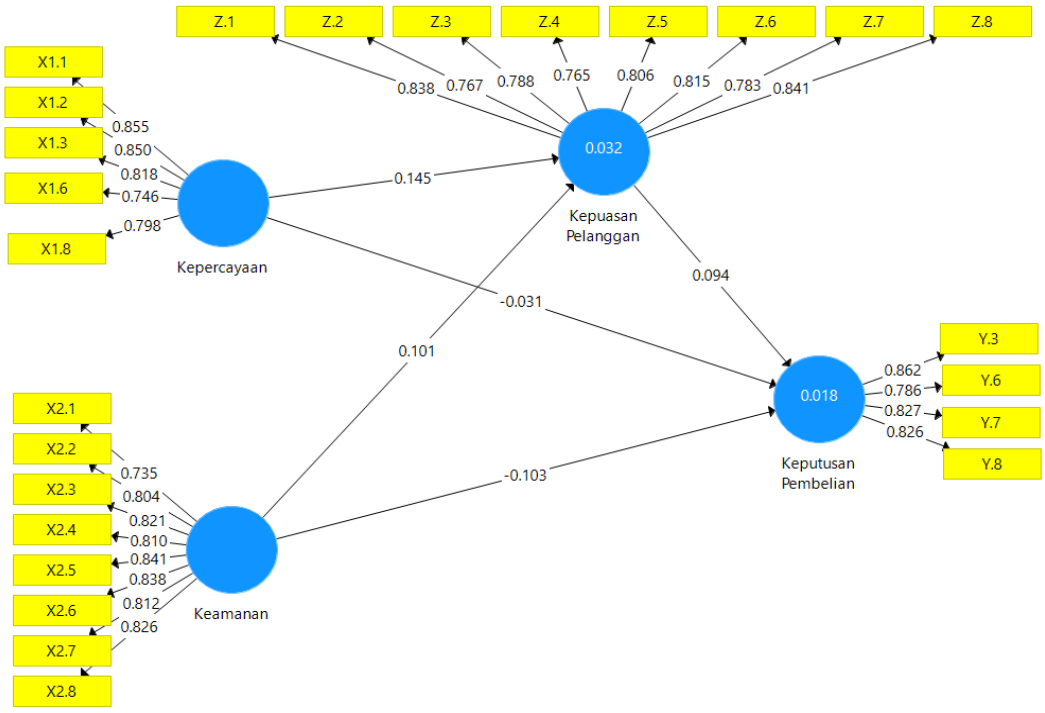

Figure 2. Path Diagram with Loading Factor Values Before Indicator Elimination

Source: Outer model SmartPLS, 2025

Based on the figure above, the SEM-PLS testing was conducted by examining both the measurement model (outer model) and the structural model (inner model) of the studied model..

b. Discriminant Validity

Discriminant validity can be assessed by the Average Variance Extracted (AVE) and the square root of AVE. A good validity measure is indicated by an AVE value of ≥ 0.5, whereas an AVE value ≤ 0.5 is considered invalid. The AVE values are presented in Table 3.

Table 3. AVE Values

	Cronbach's Alpha	**rho_A**	**Composite Reliability**	**Average Variance Extracted (AVE)**
Security	0,928	0,941	0,939	0,659
Trust	0,876	0,912	0,908	0,663
Customer Satisfaction	0,924	0,970	0,935	0,642
Purchase Decision	0,852	0,918	0,895	0,681

Source: Data processed by the researcher using SmartPLS, 2025

Based on the results above, the AVE values for trust (X1) is 0.659, security (X2) is 0.663, purchase decision (Y) is 0.681, and customer satisfaction as the mediating variable (Z) is 0.642, indicating that discriminant validity is fulfilled or good.

The structural model in this study uses the coefficient of determination (R Square). The R^2 value criteria are classified into three categories: 0.67 as strong, 0.33 as moderate, and 0.19 as weak (Chin in Feri, 2021). The R-square test results for this study are shown in Table 4..

Table 4. R Square Test Results

	R Square	**R Square Adjusted**
Customer Satisfaction	0,032	0,021
Purchase Decision	0,018	0,002

Source: Data processed by the researcher using SmartPLS, 2025

Based on the table above, the adjusted R-square value of the model is 0.002, indicating that the exogenous variables explain only 0.2% of the variance in purchase decision (Y), which is considered weak. This means that the influence of trust, security, and customer satisfaction on purchase decisions is weak (0.2%), while the remaining 99.8% is explained by other independent variables not measured in this study.

In this study, model fit was assessed using the Standardized Root Mean Square Residual (SRMR) and Goodness of Fit (GoF). According to Hair et al. (2021), an SRMR value below 0.08 indicates a good fit, while Karin et al. (2003) state that an SRMR between 0.08 and 0.10 indicates an acceptable fit. The SRMR value for this study is shown in Table 5.

Table 5 SRMR Model Fit

	Model Estimate
SRMR	**0,0862**

Source: Data processed by the researcher using SmartPLS, 2025

Based on the table above, the SRMR value is 0.0862, which falls into the category of a good fit. To determine whether the effects of information quality, trust, shopping experience, and purchase decision variables are significant, hypothesis testing was conducted, summarized in Table 6.

Table 6. Hypothesis Testing Results

Variabel	Path Coefficient	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values	Conclusion
Trust -> Purchase Decision	-0,017	-0,026	0,104	0,168	0,867	Rejected

Security -> Purchase Decision	-0,094	-0,098	0,118	0,797	0,426	Rejected
Trust -> Customer Satisfaction	0,145	0,148	0,094	1,544	0,123	Rejected
Keamanan -> Kepuasan Pelanggan	0,101	0,104	0,105	0,962	0,337	Rejected
Customer Satisfaction -> Purchase Decision	0,094	0,087	0,100	0,944	0,345	Rejected
Trust -> Customer Satisfaction -> Purchase Decision	0,014	0,013	0,018	0,771	0,441	Rejected
Security -> Customer Satisfaction -> Purchase Decision	0,009	0,008	0,017	0,556	0,579	Rejected

Source: Data processed by the researcher using SmartPLS, 2025

1. Trust on Purchase Decision

The path coefficient for the first hypothesis is -0.017 (negative), indicating that trust has a negative effect on purchase decision by -0.017. The P-value is 0.867 ≥ 0.05, meaning trust does not significantly affect purchase decisions. This aligns with Alghifari, A.F., and Rahayu (2021), who stated that trust does not influence purchase decisions.

2. Security on Purchase Decision

The path coefficient for the second hypothesis is -0.094 (negative), indicating that security negatively affects purchase decision by -0.094. The P-value is 0.426 ≥ 0.05, meaning security does not significantly affect purchase decisions. This is consistent with Julianti and Taruna (2024), who stated that transaction security does not affect customer decisions.

3. Trust on Customer Satisfaction

The path coefficient for the third hypothesis is 0.145 (positive), indicating that trust positively affects customer satisfaction by 0.145. The P-value is 0.123 ≥ 0.05, meaning trust does not significantly affect customer satisfaction. This suggests trust does not influence customer satisfaction in purchasing used electronic goods via COD on Facebook Marketplace.

4. Security on Customer Satisfaction

The path coefficient for the fourth hypothesis is 0.101 (positive), indicating that security positively affects customer satisfaction by 0.101. The P-value is 0.101 ≥ 0.05, meaning security does not significantly affect customer satisfaction. This suggests that paying via COD does not influence customer satisfaction.

5. Customer Satisfaction on Purchase Decision

The path coefficient for the fifth hypothesis is 0.094 (positive), indicating that customer satisfaction positively affects purchase decisions by 0.094. The P-value is 0.345 ≥ 0.05, meaning customer satisfaction does not significantly affect purchase decisions. This suggests that customer satisfaction does not influence repeat purchases of used electronic goods via COD on Facebook Marketplace.

6. Trust Mediated by Customer Satisfaction on Purchase Decision

The path coefficient for the sixth hypothesis is 0.014 (positive) with a P-value of 0.441 ≥ 0.05, indicating that the indirect effect of trust on purchase decision through customer satisfaction is not significant. This shows that customer satisfaction does not mediate the relationship between trust and purchase decision.

7. Security Mediated by Customer Satisfaction on Purchase Decision

The path coefficient for the seventh hypothesis is 0.009 (positive) with a P-value of 0.579 ≥ 0.05, indicating that the indirect effect of security on purchase decision through customer

satisfaction is not significant. In other words, customer satisfaction does not mediate this relationship.

4. Conclusion

Based on the data analysis and discussion, it can be concluded that trust and security influence customer satisfaction in used electronic goods transactions via Cash on Delivery (COD) on Facebook Marketplace. Although statistical testing shows these effects are not significant on purchase decisions either directly or indirectly, trust and security still play important roles in shaping customer perceptions and experiences. Customer satisfaction, which was expected to act as a mediator, also did not show a significant effect in bridging trust and security with purchase decisions. This indicates that other factors outside the research model may have a more dominant influence on consumer purchase decisions, such as price, brand, or social recommendations. Nevertheless, these findings provide valuable insights that in the context of COD transactions on unofficial platforms like Facebook Marketplace, trust and security must continue to be enhanced to create a safer and more comfortable trading ecosystem, even though they are not yet strong enough to directly drive purchase decisions. Therefore, both sellers and platform providers need to innovate by offering transaction support features that can increase credibility and consumer confidence.

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WORKPLACE CONFLICT AS A PREDICTOR OF EMPLOYEE PERFORMANCE DECLINE: A CORRELATIONAL STUDY ON RELIGION BASED ORGANIZATIONS

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Abstract

Workplace conflict is a common issue frequently encountered in organizations and can adversely affect employee performance if not properly managed. This study aims to examine the relationship between workplace conflict and employee performance within a religious organization. The research employed a quantitative approach using a correlational method, designed to measure the degree of association between two variables without intervention. The entire population of 88 employees was used as the research sample through total sampling technique. Data were collected using an online questionnaire based on a Likert scale and analyzed using SPSS version 24.0. The results of the analysis indicate a significant negative relationship between workplace conflict and employee performance. In other words, the higher the level of conflict in the work environment, the lower the employee performance. Conversely, when conflict is effectively managed, employee performance tends to improve. These findings are supported by previous studies, which suggest that unresolved conflict can lower motivation, disrupt communication, and increase work-related stress, ultimately leading to a decline in productivity.

Keywords**:** *workplace conflict, employee performance, organizational behavior, conflict management, religious organizations.*

1. Introduction

The 4.0 industrial revolution has brought significant changes to organizational dynamics and heightened expectations regarding employee performance. Digital technology, automation, and the integration of information systems have transformed work processes, increased demands for efficiency, and expanded the scope of employee responsibilities. Employee performance is no longer assessed solely through quantitative metrics, but also includes the quality of work, adaptability to change, and effective cross-functional collaboration. However, alongside the growing complexity of the work environment, new challenges have emerged that may hinder performance optimizationone of which is workplace conflict.

Workplace conflict refers to a state of misalignment between interests, goals, values, or expectations among individuals or between units within an organization (Paramita & Suwandana, 2022). Conflicts can arise from differing perceptions, high work pressure, ineffective communication, or imbalances in workload distribution (Isa & Indrayati, 2023). In certain contexts, conflict can serve a constructive role as a catalyst for innovation and process improvement (Converso et al., 2020). However, if not properly managed, conflict can instead lead to decreased productivity, create an unwelcoming work atmosphere, and result in work-related stress that ultimately diminishes employee performance.

Ideally, organizations aspire to cultivate a harmonious, collaborative, and productive work environment, where conflict is either minimized or managed constructively so that it does not negatively impact individual or team performance (Sousa et al., 2020). However, in practice, many organizations continue to struggle with internal conflicts that adversely affect employee

performance. These issues are often exacerbated by the lack of effective conflict management systems and weak leadership in fostering a healthy organizational culture.

Data show that employee performance in Indonesia continues to face serious challenges. According to the Employee Experience 2023 survey by Job Street Indonesia, more than 47% of employees expressed dissatisfaction with their work environment, with one of the main contributing factors being interpersonal conflict and poor communication in the workplace. Additionally, the World Bank's 2022 report revealed that labor productivity in Indonesia remains below the ASEAN average attributed, in part, to managerial inefficiencies and suboptimal workplace conditions.

In response, organizations must develop structured and proactive conflict management strategies. Approaches such as communication skills training, leadership development programs, internal mediation mechanisms, and the promotion of a collaborative work culture may serve as strategic initiatives to reduce the frequency and intensity of workplace conflict while simultaneously enhancing overall employee performance.

This study seeks to examine the relationship between workplace conflict and employee performance. Specifically, it aims to analyze the extent to which conflict levels within organizational settings affect employee performance and to offer strategic recommendations for managing conflict to improve organizational effectiveness.

6. Literature Review

6.1. Employee Performance

Employee performance is a critical aspect of human resource management studies, as it plays a direct role in achieving organizational objectives. According to Mangkunegara (2021), employee performance refers to the quality and quantity of work outcomes achieved by an employee in carrying out their duties in accordance with the responsibilities assigned to them. Performance encompasses not only the final output but also the work process, attitude, and overall contribution to the team and the organization.

Research by Prasetya & Kato (2022) revealed that employee performance is influenced by several factors, including motivation, work environment, leadership style, and job satisfaction. In the context of modern organizations, performance is increasingly shaped by adaptability to change, technological proficiency, and collaborative teamwork. Recent research by Tan et al. (2023) shows that organizations with clear performance measurement systems and consistent feedback mechanisms tend to have employees who are more productive and better aligned with organizational goals.

Furthermore, Haryanto & Sari (2023) emphasize the importance of organizational support through training and career development as a key driver of enhanced performance. Employees who feel supported by their organizations tend to exhibit higher levels of work engagement and are more capable of delivering optimal performance. Therefore, performance management should not be viewed merely as an evaluation process, but rather as an integral component of managing employee potential, motivation, and psychological well-being.

6.2.Workplace Conflict

Workplace conflict is an inevitable dynamic within any organization, given the diversity of backgrounds, interests, values, and job-related pressures faced by individuals and groups. According to Jadmiko & Azliyanti, (2023), workplace conflict refers to a form of disagreement or discord that arises when the goals or actions of one party interfere with or oppose those of another within a work context. Conflicts may occur horizontally—between peers—or vertically, involving supervisors and subordinates.

A study by Karakose et al., (2021) demonstrated that workplace conflict can have detrimental effects on work effectiveness, lower team morale, and increase stress levels if not

properly managed. However, when addressed constructively, conflict—within certain limits—can also serve as a tool for evaluation and innovation. Research by Nourman Adittya et al., (2023), indicated that organizations with effective conflict management systems such as internal mediation or communication training are better equipped to mitigate the adverse impact of conflict on employee productivity.

Unresolved conflicts often lead to interpersonal tension, decreased job satisfaction, and in some cases, employees' intent to leave the organization. These findings are in line with those of Elahi et al., (2022) who noted that persistent and unaddressed workplace conflict is a major trigger for reduced performance and diminished employee loyalty. Therefore, it is essential for organizations to understand the root causes of conflict and develop resolution strategies to ensure that conflict does not obstruct the achievement of shared objectives.

In summary, workplace conflict is a critical variable that must be managed appropriately. In dynamic and competitive organizational environments, conflict management should not be viewed solely as a means of minimizing tension, but also as an opportunity to foster open communication, enhance collaboration, and continuously improve performance.

7. Methodology

The research approach employed in this study is quantitative, using a correlational research method. This method falls under the category of non-experimental research, aimed at identifying and measuring the relationship between two or more variables without introducing any intervention. The unit of analysis in this study is the employees of a company operating in the religious organizational sector, with a total population of 88 employees. The sampling technique used was total sampling, whereby the entire population was included as the research sample. Data collection was conducted through the distribution of online questionnaires using the Google Forms platform. The questionnaire instrument employed a Likert scale ranging from 1 to 5. The collected data were analyzed using assumption testing and simple correlation analysis to examine the relationship between the variables of workplace conflict and employee performance.

8. Results and discussions

4.1. Normality Test

The results of the Model normality test can be seen in Table 1. The normality significance test shows that the model has a Sig work conflict of 0.443, and employee performance of 0.654. both significance values (> 0.05); it can be concluded that the data in the model is normally distributed, so the model is suitable for testing.

Table 1. One-Sample Kolmogorov-Smirnov Test

		Workplace Conflict	**Employee Performance**
N		88	88
Normal Parameters	Mean	78.25	82.70
	Std. Deviation	12.65	14.32
Most Extreme Differences	Absolute	0.092	0.078
	Positive	0.062	0.058
	Negative	-0.092	-0.078
Kolmogorov-Smirnov Z		0.865	0.734
Asymp. Sig. (2-tailed)		0.443	0.654
a. Test distribution is Normal.			

4.2. Linearity Test

Based on the linearity test results between Work Conflict (X) and Employee Performance (Y), the following results are obtained:

Table 2. ANOVA Table

			Sum of Squares	df	Mean Square	F	Sig.
Workplace Conflict * Employee Performance	Between Groups	(combined)	1098.123	7	156.875	4.789	0.000
		Linearity	1050.456	1	1050.456	32.075	0.000
		Deviation from Linearity	47.667	6	7.944	0.683	0.666
	Within Groups		2703.584	80	33.795		
	Total		3801.707	87			

Based on the results of the linearity test between the variables of Work Conflict (as the independent variable) and Employee Performance (as the dependent variable), it is known that the significance value in the Linearity component is 0.000, which means it is smaller than 0.05. This shows that there is a significant and linear relationship between the two variables. This indicates that there is a significant and linear relationship between the two variables. Meanwhile, the significance value in the Deviation from Linearity component is 0.666, which is greater than 0.05. This indicates that there is no significant deviation from the linear relationship between work conflict and employee performance. Thus, it can be concluded that the relationship between the two variables is linear and significant, and fulfils the assumption of linearity.

4.3. Simple Correlation Test

To determine the relationship between the variables of Work Conflict and Employee Performance, the Pearson correlation test was conducted. This test is used because both variables are interval scaled and have fulfilled the assumptions of linearity and normality. The results of the correlation test are presented in the following table:

Table 3. Correlations

		Workplace Conflict	Employee Performance
Workplace Conflict	Pearson Correlation	1.000	-0.642**
	Sig. (2-tailed)	.	0.000
	N	88	
Employee Performance	Pearson Correlation	-0.642**	1.000
	Sig. (2-tailed)	0.000	.
	N	88	
****. Correlation is significant at the 0.01 level (2-tailed).**			

Based on the results of the Pearson correlation test between the Work Conflict and Employee Performance variables, the correlation coefficient value is -0.642 with a significance of 0.000. Because the significance value is smaller than 0.05 ($p < 0.05$), it can be concluded that there is a significant relationship between the two variables. The negative coefficient value indicates that the relationship is negative, meaning that the higher the level of work conflict experienced by employees, the lower their performance level. Conversely, the lower the work conflict, the higher the employee performance. This relationship is in the strong category, as it falls between the range of -0.60 to -0.79.

4.4. The Relationship Between Work Conflict and Employee Performance

The results of this study indicate that there is a significant negative relationship between work conflict and employee performance, with a correlation coefficient of -0.642 and a significance value of 0.000 ($p < 0.05$). This finding suggests that the higher the level of work conflict occurring within the organizational environment, the lower the employee performance tends to be. Conversely, when work conflict can be minimized or managed effectively, employee performance tends to improve.

These results are in line with previous research. Haryanto et al., (2022); Nikbakhsh, (2022); Orellana et al., (2023) state that both personal and structural conflicts within government organizations negatively impact the achievement of performance targets. Meanwhile, Michinov, (2022) found the result in the private sector that conflicts among coworkers disrupt individual focus and motivation, ultimately reducing work effectiveness. also emphasize that unresolved conflicts increase work stress and worsen communication, significantly lowering employee performance.

These findings can be further analyzed using the Basic Organizational Behavior Model developed by Robbins and Judge.

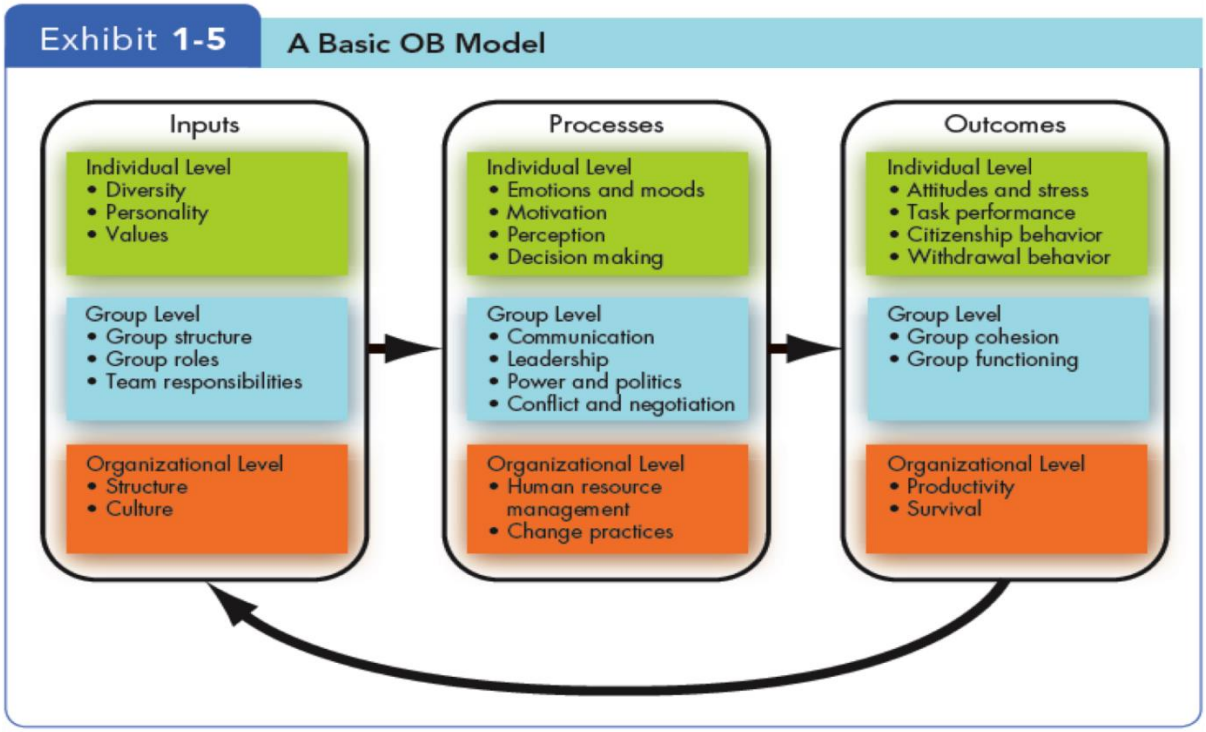

Figure1. Organizational Behavior Model (Robbins, 2001)

This model divides organizational behavior into three main levels: input, process, and outcome. Input includes variables such as organizational structure, culture, and individual characteristics. In the context of this research, work conflict falls under the structural and social elements of the organization, which are important inputs influencing individual behavior (Gomes et al., 2023). The process consists of perception, motivation, communication, decision-making, and leadership (Ardianto et al., 2023, 2024; Park & Kim, 2024; Yusdhika et al., 2023). High levels of conflict affect interpersonal processes such as communication and perception, which then lower work motivation and disrupt teamwork (BowenXue et al., 2024; Zhong et al., 2024). The outcome or final result of this model is employee performance, both individually

and collectively. When conflict increases and organizational processes are disrupted, the final outcome is a decline in performance, as evidenced by the results of this study.

Thus, work conflict acts as a dysfunctional input that hinders healthy work processes, negatively impacting the outcome in the form of decreased employee performance. These findings indicate that organizations need to pay attention to conflict management as a key strategy for improving employee performance. Such strategies may include communication training, conflict mapping, and the active role of leadership in resolving tensions among employees. Furthermore, it is important for organizations to distinguish between functional and dysfunctional conflicts. Within the framework of Robbins and Judge, functional conflict can foster creativity and innovation when managed properly, whereas dysfunctional conflict as observed in this study leads to disorganization and decreased performance output.

Referring to this organizational behavior model, it can be concluded that efforts to enhance employee performance are not sufficient through technical training alone; they also require a systemic approach to the social and psychological factors in the work environment, one of which is work conflict.

9. Conclusion

Based on the research findings, it can be concluded that work conflict has a significant negative relationship with employee performance. The higher the level of conflict occurring in the work environment, the lower the employee performance tends to be. Conversely, when conflict can be minimized or managed effectively, employee performance tends to improve. These findings are consistent with various previous studies that show that unresolved conflict can disrupt communication, lower motivation, and increase work stress, ultimately having a detrimental impact on employee effectiveness and productivity.Within the framework of the Organizational Behavior Model, work conflict is an input element that influences interpersonal processes within the organization and directly impacts the outcome in the form of performance. Therefore, conflict management becomes an important aspect that organizations must pay attention to in order to create a healthy work environment that supports the sustainable improvement of employee performance.

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SPIRITUAL LEADERSHIP AND EMPLOYEE LOYALTY: EVIDENCE FROM FAITH-BASED SOCIAL INSTITUTIONS

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Abstract

This study aims to analyze the influence of spiritual leadership on employee loyalty in religious social institutions. Spiritual leadership is a leadership approach that emphasizes spiritual values such as the meaning of work, trust, shared vision, and life calling within the organizational environment. In the context of religious social institutions, the role of spiritual leadership becomes increasingly relevant as it aligns with the organization's mission, which is oriented towards moral and spiritual values. This research employs a quantitative approach using a survey method with employees from religious social institutions. Data were collected through questionnaires and then analyzed using simple linear regression. The results indicate that spiritual leadership has a positive and significant effect on employee loyalty. Dimensions such as an inspiring vision, a sense of life calling, and the leader's involvement in the spiritual lives of employees have been shown to enhance employees' commitment and loyalty to the institution. These findings suggest that the application of spiritual values in leadership can create a strong emotional bond between employees and the institutions.

Keywords: *spiritual leadership, employee loyalty, religious social institutions*

1. Introduction

In the context of current organizational dynamics, spiritual leadership has emerged as a critical paradigm that bridges managerial aspects and transcendental values (Budiyanto et al., 2020; Saad et al., 2015; Slavik et al., 2015). This approach not only focuses on achieving organizational targets but also on creating meaning in work, developing well-being, and building emotional bonds based on spiritual values such as integrity, compassion, and shared purpose (Siregar et al., 2024). Particularly in religious social institutions and educational organizations whose missions are rooted in moral and spiritual principles, spiritual leadership becomes increasingly relevant as it aligns with the characteristics of organizations that emphasize service and achievement (Polat, 2011). Currently, although many studies have examined its impact in the corporate or healthcare sectors, empirical research on its influence on employee loyalty in religious institutions, especially in Indonesia, remains limited, particularly concerning religious organizations.

In the modern organizational world, the role of leadership is not only confined to managerial aspects but also encompasses the ability to influence, inspire, and build meaningful relationships with organizational members (Wahab et al., 2016). One leadership approach that is gaining attention is spiritual leadership, which focuses on spiritual values such as integrity, vision, life meaning, and service (Saad et al., 2015). Spiritual leadership provides individuals with the space to find meaning in their organizational activities and feel part of something greater than merely achieving organizational targets (Fry et al., 2011). Additionally, spiritual leadership is implemented based on compassion and attentiveness to actions taken to achieve the goals set within any organization or institution (Burmansah et al., 2020; Siregar et al., 2024).

Religious social institutions, as organizations grounded in moral and spiritual values, are highly suitable as subjects of study in the context of spiritual leadership. The characteristics of these institutions demand leaders who are not only technically competent but also capable of providing spiritual exemplification that inspires. In many cases, employee loyalty in religious social institutions is influenced not only by material incentives but also by the extent to which employees feel appreciated, find meaning, and are emotionally and spiritually engaged in their work (Reave, 2005a).

Employee loyalty is a crucial aspect of organizational sustainability (Zhu et al., 2023). Loyal employees tend to demonstrate high dedication, low turnover rates, and increased productivity (Maryati et al., 2019). In religious social institutions, loyalty is also closely related to commitment to the organization's vision and mission, which are often idealistic in nature. Therefore, leaders with a spiritual approach are believed to be able to foster long-term loyalty through empathetic communication, empowerment, and exemplification of religious values (Greasley & Bocârnea, 2014).

Employee loyalty, as a multidimensional construct (McGhee & Grant, 2015; Michalová et al., 2024) is no longer solely influenced by material incentives but also by psychological and spiritual factors such as a sense of meaning, social connectedness, and alignment of personal values (Wang et al., 2023). In the context of religious institutions, where employees are motivated by a life calling, loyalty to the organization is significant (Greasley & Bocârnea, 2014). However, challenges in the digital era, such as the demand for work-life balance and a more pragmatic younger generation (Reave, 2005b) require institutions to reevaluate traditional leadership practices.

Nevertheless, empirical studies on the influence of spiritual leadership on employee loyalty, particularly in the context of religious social institutions, remain limited. Most research has been conducted in business-oriented companies (Jayanti & Wati, 2019). This study is important to fill this gap in the literature and provide a deeper understanding of how spiritual leadership practices can be effectively implemented in organizations based on religious values. Thus, the results of this study are expected to serve as a reference for leaders and managers of religious social institutions in enhancing employee loyalty and performance through a spiritual approach. Additionally, this research aims to analyze the extent to which spiritual leadership can maintain or even increase employee loyalty amid these complexities, while also offering an adaptive implementation framework for religious social institutions in society.

2. Literature Review

2.1.Spiritual Leadership

Spiritual leadership is an approach that combines transcendental values, ethics, and the meaning of life within the organizational context (Yang et al., 2019). Spiritual leadership emphasizes the fulfillment of spiritual needs, self-awareness, and social connection to achieve sustainable performance (Benefiel et al., 2014). According to (Fry et al., 2017) spiritual leadership includes an inspiring vision, altruistic love, and resilience.

Meanwhile, altruistic love is a key factor in building trust and collaboration, as found in the study by Wang et al. (2021) in the healthcare sector, where spiritual leaders were able to reduce employee burnout through an empathetic approach. The third indicator, resilience, refers to the leader's ability to maintain mental and spiritual fortitude in the face of crises (Chiu et al., 2023). These findings are particularly relevant in the post-pandemic era, where high uncertainty requires leadership that is not only technically effective but also psychologically soothing.

Another study (Yang et al., 2019) Hassan et al. (2022) identified mindfulness as an additional indicator of spiritual leadership. Leaders who practice mindfulness tend to be more

reflective, capable of making decisions with full awareness, and reducing workplace conflict. A further study Karakas & Sarigollu (2021) found that work-life balance and holistic well-being are important outcomes of spiritual leadership in today's digital era, where the boundaries between work and personal life are increasingly blurred.

Overall, spiritual leadership contributes not only to organizational performance but also to the holistic development of individuals (Dent et al., 2020). This approach is becoming increasingly relevant in a high-pressure world, where employees seek not only material rewards but also meaning, purpose, and human connection in their work.

2.2.Employee Loyalty

Employee loyalty is a critical factor in achieving organizational sustainability in today's competitive era (Krampe et al., 2025). Employee loyalty can be understood through three main components: emotional attachment, attachment based on perceived benefits, and attachment based on norms (Chaparro & Halcomb, 1990; Lukito et al., 2025). Recent research by (Albrecht et al., 2018; Efrat et al., 2025) indicates that amid changes in the work environment, effective commitment is becoming increasingly important as employees value flexibility and organizational values that align with their needs. Meanwhile, a study by (Citra & Fahmi, 2019) suggests that job satisfaction, transformational leadership, and an inclusive organizational culture significantly contribute to increased loyalty.

Technological advancements also influence the dynamics of employee loyalty. Research by (Albrecht et al., 2018) ound that companies that implement a good digital employee experience (DEX), such as the use of digital collaboration tools, tend to have higher loyalty levels. However, challenges arise regarding work-life balance, as research by (Haar et al., 2024) shows that millennial and Gen-Z employees are more loyal to organizations that support work-life balance through flexible work policies. Additionally, the role of employer branding is reinforced by (Na-Nan et al., 2025) state that companies with a positive image and strong social values are better able to retain talented employees.

3. Methodology

This type of research is associative descriptive research with a quantitative approach. The data obtained in this study is a closed questionnaire. Collecting data with a questionnaire distributed to employees or administrators of Buddhist religious institutions via google form. This research was conducted by Buddhist religious institutions. The population in this study is the total number of administrators and employees at Buddhist religious institutions in Bandar Lampung.

3.1. Sample

Sampling was carried out with a preliminary study in the form of observations conducted in Bandar Lampung with 35 respondent.

3.2. Analysis Method

The analysis was used to describe the data and test the hypothesis, namely inferential analysis to test the hypothesis using multiple regression tests and simple correlation with the help of the SPSS for Windows version 25.0 program.

4. Results and Discussions

4.1. Data Normality

The results of the normality test are carried out to determine that the data is normally distributed so that data testing is eligible.

Table 1. Data normality One-Sample Kolmogorov-Smirnov Test

One-Sample Kolmogorov-Smirnov Test		
		Unstandardized Residual
N		35
Normal Parameters[a]	Mean	.0000000
	Std. Deviation	6.18427403
Most Extreme Differences	Absolute	.199
	Positive	.199
	Negative	-.125
Kolmogorov-Smirnov Z		1.175
Asymp. Sig. (2-tailed)		.126

The results of the normality test analysis show that the Asymp. Sig. (2-tailed) of 0.126, which is greater than the significance level (α) of 0.05. Based on the decision-making criteria in the normality test, if the Asymp. Sig. > α, then the null hypothesis (H_0) which states that the data is normally distributed cannot be rejected. Thus, it can be concluded that the data in this study are normally distributed. These results fulfil the basic parametric assumptions, so statistical analysis techniques that require a normal distribution.

4.2. Descriptive Statistics

Table 2. Descriptive Statistics

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Spiritual Leadership	35	37	55	49.43	4.877
Employee Loyalty	35	71	99	86.77	8.303
Valid N (listwise)	35				

The results of the descriptive statistical analysis show that the spiritual leadership variable among 35 respondents has a value range of 37-55, with a mean score of 49.43 and a standard deviation of 4.877. The mean value, which is close to the midpoint of the scale (46 from the range of 37-55), indicates that the level of spiritual leadership in the organization is categorized as moderate. The standard deviation of 4.877 suggests a significant variation in respondents' perceptions of spiritual leadership practices within the organization.

In the employee loyalty variable, a wider value range (71-99) is observed, with a mean of 86.77 and a standard deviation of 8.303. The mean value, which is close to the maximum score (99), reflects a generally high level of employee loyalty. However, the relatively large standard deviation (8.303) indicates a considerable disparity in loyalty levels among employees, with some employees demonstrating very high loyalty while others exhibit lower levels of loyalty.

4.3. Regression Results

The results of the regression analysis indicate that the multiple regression equation that can be written from the output data is as follows: $Y = 34.037 + .974X$

Table 3. *Coefficients*[a]

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	34.037	4.977		6.839	.000
	X	.974	.011	.998	89.198	.000

a. Dependent Variable: Y

Based on the results of the linear regression analysis presented, it can be interpreted that the independent variable, spiritual leadership (X), has a highly significant effect on the dependent variable, employee loyalty (Y). The resulting regression equation is Y = 34.037 + 0.974X. The constant value of 34.037 indicates that when the variable X equals zero, the predicted value of Y is 34.037. The regression coefficient of 0.974 suggests that each one-unit increase in the spiritual leadership variable (X) will be followed by an increase of 0.974 units in the employee loyalty variable (Y).

The significance test results show a t-value of 89.198 with a significance level of 0.000 ($p < 0.01$), indicating that the influence of variable X on Y is statistically highly significant. The standardized coefficient beta value of 0.998 indicates that variable X contributes greatly to predicting variable Y, with a positive relationship. This means that the higher the value of X, the higher the predicted value of Y.

Table 4. Anova

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	6872983.259	1	6872983.259	7.956E3	.000[a]
	Residual	28506.940	33	863.847		
	Total	6901490.200	34			

Based on the results of the ANOVA analysis presented, it can be concluded that the regression model used is statistically highly significant in predicting the dependent variable. The ANOVA table shows an extremely large F-value of 7,956 (or 7.956E3) with a significance level of 0.000 < 0.05. This indicates that the regression model as a whole is highly significant and suitable for predicting the dependent variable. In other words, considering the significance value, spiritual leadership has a significant effect on employee loyalty. To further examine the magnitude of this effect, one can refer to Table 5.

Table 5. Model Summary

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.998[a]	.996	.996	29.391

The results of the regression analysis presented in the table show that the correlation coefficient (R) is 0.998, indicating a very strong relationship between the independent variable (spiritual leadership, X) and the dependent variable (employee loyalty, Y). This suggests that the independent variable explains a significant portion of the variation in the dependent variable. The R Square value of 0.996 indicates that this regression model explains 99.8% of the variance in employee loyalty (Y).

Discussion

This research confirms that spiritual leadership has a positive and significant influence on employee loyalty within religious social institutions. The regression coefficient of 0.974 ($p < 0.01$) indicates that a one-unit increase in spiritual leadership will result in a 0.974-unit increase in employee loyalty. These findings align with the theory proposed by Fry et al. (2017) which states that spiritual leadership focused on visionary inspiration, unconditional compassion, and spiritual resilience can foster a strong emotional bond between employees and the organization. An R^2 value of 0.996 further indicates that 99.6% of the variation in employee loyalty can be explained by spiritual leadership, emphasizing the dominant role of this variable within the context of faith-based organizations.

However, the relatively high standard deviation observed in the employee loyalty variable (8.303) suggests the existence of other factors outside of spiritual leadership that may influence loyalty, such as organizational culture, reward systems, or work-life balance. This reinforces the argument that, although spiritual leadership plays a role in fostering loyalty, a holistic approach that incorporates both material and non-material aspects remains essential (Jayanti & Wati, 2019). Moreover, the characteristics of the research unit may limit the generalizability of these findings, thereby necessitating further studies with more diverse samples to validate these results.

The practical implications of this study highlight the importance of integrating spiritual values into leadership practices within religious social institutions. Leaders should develop meaningful visions, demonstrate empathy, and create work environments that support employees' spiritual growth. Nonetheless, organizations must also consider other supporting factors such as career development and work-life balance, especially for younger generations who are more sensitive to these issues (Lukito et al., 2025). Thus, a combination of spiritual leadership and inclusive organizational policies will sustainably strengthen employee loyalty.

5. Conclusion

This research provides empirical evidence that spiritual leadership is a key factor in enhancing employee loyalty within religious social institutions. These findings not only enrich the literature on value-based leadership but also offer valuable insights for religious organization managers to strengthen employee commitment through a spiritual approach. For future research, exploring the role of mediator variables such as job satisfaction or employees' spiritual engagement may provide a deeper understanding of the underlying mechanisms of this influence.

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ETHICAL LEADERSHIP, ORGANIZATIONAL CULTURE, AND INNOVATIVE BEHAVIOR: AN INTEGRATED ANALYSIS

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Abstract

This study aims to analyze the influence of ethical leadership on organizational culture and innovative behavior within the Indonesian Buddhayana Council (MBI) of Lampung Province. Using a quantitative approach, data was collected from 100 respondents who are administrators and active members of MBI. The analytical method used is multiple regression analysis to test the effect of ethical leadership, organizational culture on innovative behavior, both simultaneously and partially. The sampling technique used was a total sample because the population members totaled 100 people. Data were collected using a five-point Likert scale questionnaire that had been tested for validity and reliability. Data analysis was carried out using descriptive and inferential statistics through multiple linear regression tests at a significance level of 0.05 with the help of SPSS 24. The results showed that both Ethical Leadership and Organizational Culture had a positive and significant effect on Innovative Behavior. This finding confirms the importance of the role of leaders who uphold moral values and adaptive organizational culture in shaping innovative behavior in the workplace. This research provides practical implications for the development of leadership policies in faith-based organizations to remain relevant and adaptive in the face of changing times.

Keywords: *Ethical leadership, organizational culture, innovative behavior, religious organization, MBI Lampung*

1. Introduction

In the dynamics of modern organizations, leadership has a strategic role in shaping organizational culture and encouraging innovative employee behavior. One leadership approach that has received increasing attention is ethical leadership, which is a leadership style that emphasizes moral values, justice, integrity, and social responsibility (Brown & Treviño, 2006). Ethical leadership not only builds trust between individuals, but also creates a healthy and productive work environment (Yidong & Xinxin, 2013). In addition, ethical leadership provides more meaning in doing every activity in a religious social organization or in the field of education (Gutiérrez-González et al., 2023; Mohammad & Borkoski, 2024; Muadzin & Sunarto, 2025).

Religious organizations such as Majelis Buddhayana Indonesia (MBI) face great challenges in maintaining their existence in the midst of rapid social change. In this context, leadership that upholds ethical values becomes very important to strengthen organizational culture based on noble values, while encouraging innovation in religious and social services (Rompas[l] et al., 2018). Organizational culture itself is a system of values, norms, and beliefs that develop in organizations and influence the attitudes and behaviors of organizational members (Azila-Gbettor et al., 2024; Donaldson & Villalobos, 2024).

Previous research shows that ethical leadership has a positive relationship with innovative behavior, either directly or indirectly through organizational culture (Akanpaadgi et al., 2024). Innovative behavior includes the creation, introduction, and implementation of new ideas that

are useful for increasing organizational effectiveness (Harto et al., 2023) In religious organizations, innovation is not only limited to technological aspects, but also includes methods of counseling, education, and social services based on religious values (Adu-Marfo et al., 2024).

In addition, some studies state that ethical leadership has a significant effect on organizational culture and innovative behavior (Gutiérrez-González et al., 2023). Research by (Depoers et al., 2016) shows that ethical leaders create a work environment that supports creativity and innovation. On the other hand, a healthy organizational culture is an important factor and mediator in strengthening the relationship between leadership and organizational goals (Carey & Haralambous, 2024; Ferdiansyah & Lestari, 2023; Ridho et al., 2018).

However, there are still few studies that specifically examine the relationship between ethical leadership, organizational culture, and innovative behavior in the context of religious organizations in Indonesia, especially Buddhist religious organizations. In fact, a deeper understanding of these factors is very important to formulate relevant and effective leadership strategies in the management of religious organizations. Therefore, this study aims to analyze the influence of ethical leadership on organizational culture and innovative behavior in MBI Lampung. This research is expected to make a theoretical contribution to the development of human resource management and organizational leadership, as well as provide practical implications for leaders of religious organizations in creating an adaptive, ethical, and innovative work culture.

2. Literature Review

2.1 Ethical Leadership

Ethical leadership is defined as leader behavior that demonstrates appropriate personal and professional norms through actions and interpersonal relationships, while promoting ethical behavior among subordinates through communication, reinforcement, and decision-making (Brown & Treviño, 2006; Fischer et al., 2024). Ethical leaders are viewed as possessing high integrity, honesty, fairness, and moral courage (Albarracin & Shavitt, 2018). Studies show that ethical leadership contributes to the creation of a positive and ethical organizational climate (Azila-Gbettor et al., 2024). According to (Gutiérrez-González et al., 2023), ethical leadership can enhance organizational trust and work commitment. In the digital era, ethics in leadership is increasingly important due to the growing complexity of decision-making (Berhanu, 2024; Mer et al., 2024).

2.2 Organizational Culture

Organizational culture is a system of shared values, beliefs, and norms that influence how individuals behave within an organization (Ode, 2019). According to (Maudul et al., 2018) organizational culture not only creates organizational identity but also serves as a mechanism of social control. A strong organizational culture can enhance employee productivity and proactive behavior (Kurniati & Rojuaniah, 2023). Another study on organizational culture by (Maharani, 2019) states that an adaptive organizational culture plays a vital role in organizational sustainability and innovation. An organizational culture built on ethics, trust, and open communication can create a work environment that supports the development of new ideas (Ibrahim, 2022).

2.3. Innovative Behavior

Innovative behavior refers to an individual's efforts to introduce and implement new ideas in the workplace to improve both personal and organizational performance (Firdausiah & Etikariena, 2021). This behavior includes the search for, creation, and implementation of new solutions to organizational problems (Rufaidah & Kodri, 2020). According to (Balven et al., 2018; Masyiatul, 2020), innovative behavior is greatly influenced by contextual factors such

as leadership style, organizational support, and work culture. A study by Carey & Haralambous (Carey & Haralambous, 2024) shows that ethical leadership can foster innovative behavior by enhancing intrinsic motivation and trust among team members.
The following research hypotheses were carried out:

1. There is a significant influence of Ethical Leadership on Innovative Behavior (H1)
2. There is a significant influence of Organizational Culture on Innovative Behavior (H2)
3. There is a significant influence of Ethical Leadership and Organizational Culture on Innovative Behavior (H3)

3. Methodology

This study employs a quantitative approach with an explanatory research design. This approach was chosen to clarify the causal relationships between the variables of ethical leadership, organizational culture, and innovative behavior (Sugiono, 2019). Explanatory research is highly suitable for statistically testing the influence of one variable on another (Creswell, 2015). The population in this study consists of all administrators and active members of the Indonesian Buddhayana Assembly (MBI) in Lampung Province. The sampling technique used is purposive sampling, selecting respondents based on specific criteria, such as active involvement in organizational activities and a minimum membership duration of one year. The sample size determined was 100 individuals. Data were analyzed using multiple regression analysis with the assistance of SPSS version 24.0.

4. Results and Discussions

This study involved 100 active respondents from the Indonesian Buddhayana Assembly (MBI) in Lampung Province. The data collected through questionnaires were analyzed using multiple linear regression to examine the relationships between ethical leadership (X1), organizational culture (X2), and innovative behavior (Y).

4.1. Data Normality Test

In this study, a normality test was conducted to examine the distribution characteristics of the data before proceeding with further analysis. The results of this test served as the basis for subsequent tests. Below are the normality test results using the One-Sample Kolmogorov-Smirnov Test:

Table 1. One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		100
Normal Parameters[a]	Mean	.0000000
	Std. Deviation	6.15854859
Most Extreme Differences	Absolute	.056
	Positive	.035
	Negative	-.056
Kolmogorov-Smirnov Z		.558
Asymp. Sig. (2-tailed)		.915
a. Test distribution is Normal.		

The results of the data analysis (Table 1) show that the Asymp. Sig. (2-tailed) value is 0.915, meaning the significance value is greater than 0.05, which indicates that the data are normally distributed.

4.2. Homogeneity Test

Table 2: Homogeneity Test Results

Test of Homogeneity of Variances				
	Levene Statistic	df1	df2	Sig.
Ethical Leadership	.725	8	88	.669
Organizational Culture	2.455	8	88	.059

The results of the homogeneity test on the Ethical Leadership variable show a Levene Statistic value of 0.725 with a significance of 0.669 ($p > 0.05$). This indicates that the variance of the data between groups is homogeneous, as the significance value exceeds the critical threshold of 0.05. Thus, the assumption of homogeneity for further analysis is met. Furthermore, the Organizational Culture variable obtained a Levene Statistic of 2.455 with a significance of 0.059 ($p \approx 0.05$). Although close to the critical threshold, this value is still above 0.05, so it can be statistically considered to meet the assumption of homogeneity.

4.3. Regression Testing

4.3.1 The Effect of Ethical Leadership on Innovative Behavior

The test results of the effect of Ethical Leadership on Innovative Behavior using regression analysis are as follows:

Table 3. Coefficients[a]

		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	129.603	6.879		18.840	.000
	Ethical Leadership	.641	.081	-.625	-7.934	.000

a. Dependent Variable: Y

The results of the linear regression analysis indicate a statistically significant positive effect of the Ethical Leadership variable on the dependent variable Y ($B = 0.641$; $\beta = 0.625$; $p < 0.01$). This finding suggests that every one-unit increase in the Ethical Leadership score is followed by an increase of 0.641 units in variable Y, assuming all other variables in the model remain constant. The standardized beta coefficient of 0.625 positions Ethical Leadership as a fairly strong predictor of innovative behavior, with approximately 62.5% of the variation in innovative behavior explained by variations in Ethical Leadership.

Table 4. ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3124.747	1	3124.747	62.949	.000[a]
	Residual	4864.643	98	49.639		
	Total	7989.390	99			

Table 4 presents the results of the ANOVA test, confirming that the regression model developed has excellent statistical validity ($p < 0.001$), with the ability to explain approximately 39.1% of the variance in the dependent variable. The Mean Square Residual value of 49.639 indicates the level of error in the model's predictions. These findings support the use of this linear regression model to explain the relationship between Ethical Leadership and innovative behavior.

Table 5. Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.625[a]	.391	.385	7.046

Table 5 presents the results of the regression analysis, showing an R value (correlation coefficient) of 0.625, indicating a strong and positive influence between the independent variable (Ethical Leadership) and the dependent variable (innovative behavior). The R Square (R^2) value of 0.391 means that 39.1% of the variation in innovative behavior can be explained by Ethical Leadership, while the remaining 60.9% is influenced by other factors outside the model.

4.3.2 Effect of Organizational Culture on Innovative Behavior

Tabel 6. Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	128.004	7.611		16.818	.000
	Organizational culture	.615	.088	.575	6.956	.000

The results of the linear regression analysis show a statistically significant positive effect of organizational culture on the dependent variable, innovative behavior ($B = 0.615$; $\beta = 0.575$; $p < 0.01$). This finding indicates that every one-unit increase in the organizational culture score is followed by an increase of 0.615 units in innovative behavior, assuming all other variables in the model remain constant.

Table. 7 ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2640.734	1	2640.734	48.384	.000[a]
	Residual	5348.656	98	54.578		
	Total	7989.390	99			

The analysis results in Table 7 show a significance value of 0.000, which is less than 0.05, indicating that organizational culture has a significant effect on innovative behavior. To further examine the magnitude of this effect, refer to Table 8 (Model Summary).

Table 8. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.575[a]	.331	.324	7.388

The regression analysis results show an R value of 0.575, indicating a moderate relationship between the independent and dependent variables in this model. The R Square (R^2) value of 0.331 indicates that 33.1% of the variation in the dependent variable can be explained by the independent variable in the model, while the remaining 66.9% is influenced by other factors not included in the analysis. The Adjusted R Square value of 0.324 (which is close to the R Square) suggests that the model is not overfitted and is relatively stable when applied to a broader population.

4.3.3 The Influence Of Ethical Leadership And Organizational Culture On Innovation Behavior

Tabel 9. Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	153.627	7.552		20.342	.000
	Ethical Leadership	.492	.077	.480	6.417	.000
	Organizational culture	.428	.080	.400	5.354	.000

This multiple regression model shows that both Ethical Leadership and Organizational Culture have a positive and significant effect on the dependent variable (Y). The constant value (153.627) indicates that when both independent variables are zero, the predicted value of Y is 153.627. Ethical Leadership contributes positively with a regression coefficient (B = 0.492), meaning that every one-unit increase in this variable will increase Y by 0.492 units, with a relatively strong effect (Beta = 0.480) that is statistically significant ($t = 6.417$, $p < 0.001$). Meanwhile, Organizational Culture also has a positive effect (B = 0.428), where each one-unit increase in this variable raises Y by 0.428 units, with a relatively strong effect (Beta = 0.400) that is likewise significant ($t = 5.354$, $p < 0.001$). Together, these two independent variables make a strong contribution to the dependent variable, with a very small significance value ($p < 0.001$), indicating that this relationship is not due to chance. These results reinforce the importance of ethical leadership and organizational culture in enhancing variable Y, while also confirming the validity of the regression model used.

Table. 10 ANOVA[b]

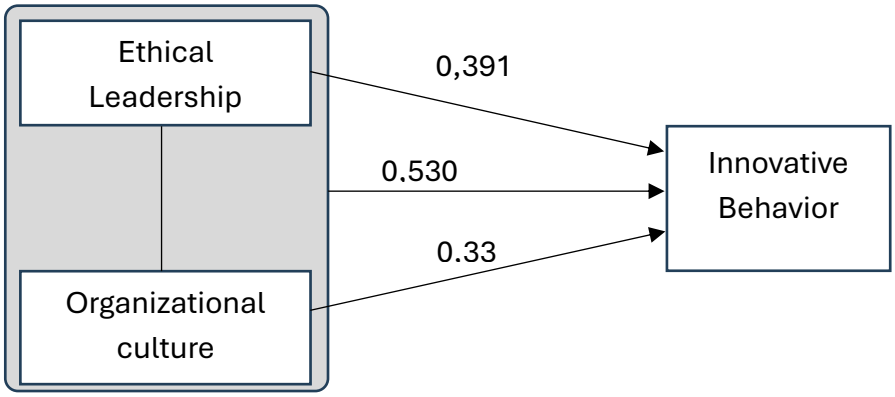
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4234.546	2	2117.273	54.696	.000[a]
	Residual	3754.844	97	38.710		
	Total	7989.390	99			

Based on the ANOVA table presented, it can be concluded that the multiple regression model consisting of the variables Ethical Leadership and Organizational Culture is statistically highly significant in predicting the dependent variable (Y). This is evidenced by the F-statistic value of 54.696, which is significant at the $p < 0.001$ level (Sig. = .000a). The Sum of Squares Regression value of 4234.546 indicates the amount of variation in the dependent variable that can be explained by the regression model, while the Sum of Squares Residual of 3754.844 reflects the variation that cannot be explained by the model. With a total Sum of Squares of 7989.390, we can calculate that this model explains approximately 53% of the variance in the dependent variable (4234.546 / 7989.390 = 0.53). The Mean Square Residual value of 38.710 indicates the level of prediction error in the model. Overall, the ANOVA test results confirm that the regression model involving these two independent variables has excellent statistical validity and is suitable for predicting the dependent variable Y.

Table 11. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.728[a]	.530	.520	6.222

The analysis results show that this multiple regression model has very strong predictive power, with a multiple correlation coefficient (R) of 0.728. This value indicates a strong relationship between the combination of independent variables (Ethical Leadership and Organizational Culture) and the dependent variable (Y). Furthermore, the R Square value of 0.530 reveals that 53% of the variation in variable Y can be jointly explained by the two independent variables in this model.



Source: Data Processing

4.3.4. Discussions

The regression analysis results in this study reveal that ethical leadership and organizational culture significantly influence the innovative behavior of members of the Indonesian Buddhayana Assembly (MBI) in Lampung Province. The coefficient of determination (R^2) of 0.530 indicates that 53% of the variation in innovative behavior can be explained by these two independent variables, with ethical leadership contributing more ($\beta = 0.480$) compared to organizational culture ($\beta = 0.400$). These findings align with the theory of Brown & Treviño (2006), which states that ethical leadership creates a climate of trust that serves as the foundation for innovation. The statistical significance ($p < 0.001$) of both variables strengthens the validity of the model, although there remains 47% of other factors to be explored, such as intrinsic motivation or resource support.

A deeper analysis reveals the role of organizational culture as an effective mediator. The simple regression coefficient between ethical leadership and innovative behavior (B = 0.641) decreases to 0.492 when organizational culture is included in the multiple regression model. This indicates that 23.3% of the influence of ethical leadership on innovation is carried out through the formation of organizational culture, consistent with the findings of Afsar et al. (2019). The organizational culture shaped by the leader's ethical values facilitates members to confidently propose new ideas without fear of making mistakes, as reflected in an increase of 0.428 units in innovative behavior for every one-unit increase in organizational culture.

The practical implications of this study emphasize the importance of developing ethical leadership training programs for MBI administrators, particularly focusing on distributive justice and transparent communication. On the other hand, the finding of a relatively low Standard Error of Estimate (6.222) indicates the accuracy of the predictive model but also suggests the need to integrate other variables, such as reward systems or individual characteristics, in future research. Theoretically, these results enrich the literature on the psychological-organizational mechanisms linking leadership ethics with innovation within the context of religious organizations, an area that has so far been limited.

5. Conclusion

This study reveals that ethical leadership significantly influences the organizational culture and innovative behavior of members of the Indonesian Buddhayana Assembly (MBI) in Lampung Province. The findings indicate that leaders who emphasize honesty, fairness, and integrity play a vital role in shaping an organizational culture that fosters collaboration, trust, and collective values. This organizational culture, in turn, serves as an important foundation for encouraging members to actively demonstrate innovative behaviors, such as generating new ideas, engaging in creative collaboration, and initiating change.

These results support and extend previous literature, which asserts that ethical leadership functions not only as a moral factor but also as a strategic driver in creating an innovative organizational climate (Brown et al., 2005; Afsar et al., 2019; Cameron & Quinn, 2017). Moreover, identifying organizational culture as a mediating variable underscores the importance of collective values in bridging the influence of leadership on member behavior.

Practically, the findings recommend strengthening the capacity for ethical leadership within socio-religious organizations like MBI, as well as fostering an organizational culture that is open to learning and innovation. For future research, it is suggested that this model be tested across different organizational populations using longitudinal or mixed-method approaches to deepen the understanding of the dynamics among ethics, culture, and innovation in a broader context.

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THE EFFECT OF PRODUCT INNOVATION AND DIGITAL MARKETING STRATEGY ON THE SUCCESS OF MICRO, SMALL AND MEDIUM ENTERPRISES (MSMES)

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Abstract

This study aims to analyze the effect of product innovation and digital marketing strategies on the success of Micro, Small, and Medium Enterprises (MSMEs) in Bandar Lampung. The research method employs a quantitative approach, with data collection techniques using questionnaires distributed to 25 MSME owner respondents. The data were analyzed using multiple linear regression to test the relationship between independent variables (product innovation and digital marketing strategies) and the dependent variable (MSME success). The results indicate that both product innovation and digital marketing strategies have a positive and significant impact on MSME success. Product innovation enhances competitiveness and product value, while digital marketing strategies expand market reach and improve customer interaction. The implications of this research emphasize the importance for MSMEs to continuously develop product innovations and leverage digital marketing to enhance business growth.

Keywords: *Product Innovation, Digital Marketing, MSME Success*

1. Introduction

The development of technology and the dynamics of the global market have created both challenges and opportunities for Micro, Small, and Medium Enterprises (MSMEs) (Indrajaya et al., 2022; Kementerian, 2025; Prabowo et al., 2023; Soelton & Ramli, 2017). In Indonesia, MSMEs play a vital role in the economy, contributing approximately 60% of the GDP and absorbing 97% of the workforce (Kemenkop UKM, 2022). However, increasing competition requires MSMEs to adapt through product innovation and effective marketing strategies, especially in the digital era. The growth of MSMEs has been quite rapid, but many still face challenges in increasing sales and market expansion (Jalunggono et al., 2023). Additionally, according to data from the ministry regarding MSMEs, their contribution to national entrepreneurship is 3.47%, a figure that is quite significant when viewed alongside other indicators.

Table 1. Contribution of MSMEs to the National Economy

Indicator	Percentage/Score
Total Employment	99,9%
Contribution to National GDP	60,5%
Total National MSME Investment	60,0%
Partnerships between MSMEs and Large Enterprises (UMB)	7%
Contribution to Non-Oil and Gas Exports	15,6%
Participation in Global Value Chains	4,1%
National Entrepreneurship Ratio	3,47%

Source: MSMEs of the Republic of Indonesia

Given the contribution of MSMEs to entrepreneurship, it is essential to observe the development of the economy, particularly the products created by MSMEs today (Aidhi et al., 2023; Putri & Widadi, 2024). Therefore, the utilization of the digital world and collaboration between the government and society become crucial factors in enhancing product innovation. Product innovation is one of the keys to the competitiveness of MSMEs in meeting the ever-evolving consumer needs. According to (Desi & Tambunan, 2020; Setyowati et al., 2012) product innovation encompasses not only physical changes to products but also value-added improvements such as packaging, quality, and uniqueness. MSMEs that can innovate tend to survive better in the market because they can meet the increasingly dynamic expectations of customers. However, innovation alone is not sufficient without being supported by appropriate marketing strategies, especially in an era where consumers are increasingly active on digital platforms.

Digital marketing strategies have become a fundamental necessity for MSMEs to expand their market reach. Research (Li Pira et al., 2025) shows that the use of social media, e-commerce, and digital advertising significantly enhances business visibility and customer interaction. In other words, although many MSMEs have utilized platforms like Instagram and WhatsApp, not all have maximized the potential of digital marketing optimally. In fact, a study (Brown et al., 2025) demonstrates that MSMEs adopting digital marketing experience increased sales and promotional cost efficiency. The success of MSMEs is not only measured by revenue growth but also by their ability to survive, expand their market, and foster customer loyalty (Ismanu, S., Kusmintarti, A., & Riwajanti, 2021; Suhairi et al., 2024; Zahoor et al., 2023). According to (Astuti et al., 2020; Damayanti et al., 2023; Herlinawati & Machmud, 2020; Lita et al., 2018) the combination of product innovation and digital marketing can create a competitive advantage for MSMEs. Despite the contributions of product innovation and digital marketing strategies being recognized in previous studies, there is still limited research specifically examining the impact of these two factors on the success of MSMEs. Therefore, this study aims to analyze the extent to which product innovation and digital marketing strategies contribute to the success of MSMEs in society.

2. Literature Review

2.1. Product Innovation

Product innovation is a key factor in enhancing the competitiveness of MSMEs. According to (Fuetsch, 2022), product innovation is not limited to the development of new goods or services but also includes improvements in features, quality, packaging, or other value additions that can meet consumer needs. MSMEs that successfully innovate tend to be more capable of surviving in market competition as they can attract new customers while retaining existing ones. Research (Camel et al., 2025; Ismanu, S., Kusmintarti, A., & Riwajanti, 2021) shows that product innovation significantly impacts the increase in MSME sales, especially when supported by good market research. In the context of MSMEs in Indonesia, innovation is often carried out simply, such as modifying flavors, designs, or packaging, yet it has a substantial impact on product differentiation. Another study Rosenbusch et al. (2011) states that despite limited resources, MSMEs focusing on incremental innovation (gradual improvements) can achieve significant business growth.

2.2. Marketing Strategy

Digital marketing strategies have become a primary driver of MSME growth in the modern era. According to (Stawicka, 2021) digital marketing encompasses the use of social media, email marketing, SEO, and e-commerce to reach consumers more effectively and efficiently. For MSMEs, this strategy provides opportunities to compete with larger businesses due to its

relatively low cost and wide reach. A research (Kurnia & Suharjito, 2018) ound that MSMEs adopting digital marketing experienced increases in sales and brand awareness. Social media platforms like Instagram and Facebook have become primary channels due to their ease of access and direct interaction with customers. Additionally, studies Gbandi & Iyamu, (2022); Kyriaki, (2015); Septiani et al., (2024) indicate that MSMEs utilizing marketplaces like Tokopedia and Shopee tend to experience faster growth as they can reach national and even international markets.

2.3. The Success of MSMEs

The success of MSMEs can be measured through various indicators, such as sales growth, market expansion, profitability, and business sustainability. According to (Putri & Widadi, 2024), UMKM successful MSMEs typically have a combination of quality products, appropriate marketing strategies, and good financial management. Furthermore, adaptation to market and technological changes is also a determining factor for success. Research conducted by (Huang et al., 2021) shows that MSMEs that can survive and grow generally have access to financing, government support, and innovation capabilities. Other studies Achmad, (2023); Franco, (2020); Vuchkovski et al., (2023); Ardianto et al., (2024); Taridi et al., (2024) state that entrepreneurial orientation, including innovation and proactivity, has various supporting factors and is positively correlated with MSME performance. Thus, the success of MSMEs does not rely on a single factor but on the integration of various business aspects.

3. Methodology

This study employs a quantitative approach with data collection methods through closed questionnaires distributed to Micro, Small, and Medium Enterprises (MSMEs) in Bandar Lampung. The population for this research consists of all MSMEs in the area, while the sampling was conducted through a preliminary study involving direct observation of 25 MSMEs. The data obtained were analyzed to describe the findings and test hypotheses using inferential analysis, specifically multiple regression and simple correlation using SPSS for Windows version 25.0.

4. Results and Discussions

4.1 Data Normality

The normality test is carried out to determine that the data is normally distributed so that data testing is eligible. The normality test was carried out using the Kolmogorov-Smirnov normality test.

Table 1. *One-Sample Kolmogorov-Smirnov Test*

		Unstandardized Residual
N		25
Normal Parameters[a]	Mean	.0000000
	Std. Deviation	1.64706213
Most Extreme Differences	Absolute	.153
	Positive	.079
	Negative	-.153
Kolmogorov-Smirnov Z		.766
Asymp. Sig. (2-tailed)		.599

Based on the results of the Kolmogorov-Smirnov normality test on unstandardised residuals, it can be concluded that the residuals are normally distributed. This is indicated by

the value of Asymp. Sig. (2-tailed) value of 0.599, which is much greater than the general significance level of 0.05. Thus, the null hypothesis that the residuals are normally distributed cannot be rejected. In addition, the most extreme differences between the empirical and theoretical distributions are relatively small, with a maximum absolute value of 0.153. The Kolmogorov-Smirnov Z value of 0.766 also indicates no significant deviation from normality. With the mean of the residuals close to zero (mean = 0.0000000) and a standard deviation of 1.647, it can be concluded that the model fulfils the assumption of normality of the residuals, so that the results of the regression or statistical analysis used can be considered valid.

4.2 Descriptive statistics

Table 2. Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
MSME Success (Y1)	25	37	56	47.23	4.512
Product Innovation (X^1)	25	37	59	48.72	4.967
Digital Marketing Strategy (X^2)	25	39	58	50.11	4.475
Valid N (listwise)	25				

Based on the data obtained from 25 respondents, it can be seen that MSME success (Y1) has a minimum value of 37 and a maximum of 56, with an average (mean) of 47.23 and a standard deviation (std. deviation) of 4.512. This shows that the level of success of MSMEs in the sample tends to vary, but most are concentrated around the mean value. Product Innovation (X1) has a value range of 37-59, with a mean of 48.72 and a standard deviation of 4.967. The variability of this data indicates that the level of product innovation among MSMEs is quite varied, but most respondents are in the range close to the mean value. Digital Marketing Strategy (X2) has the lowest value of 39 and the highest of 58, with an average of 50.11 and a standard deviation of 4.475. The higher mean value compared to other variables indicates that digital marketing strategies tend to be better implemented by MSMEs in this sample.

4.3 Regression results

The results of the regression analysis show that the multiple regression equation can be seen from the output data of the analysis results as follows:

Table 3. *Coefficients*[a]

		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	3.947	4.038		.977	.339
	Product Innovation (X1)	.618	.219	.680	2.827	.010
	Digital Marketing Strategy (X2)	.263	.243	.261	1.084	.290

Based on the results of linear regression analysis, the regression equation Y = 3.947 + 0.618 (X_1) + 0.263 (X_2) is obtained, which describes the effect of product innovation and digital marketing strategies on the success of MSMEs. The results of the analysis show that product innovation (X_1) has a positive and significant effect on the success of MSMEs with a regression coefficient of 0.618 and a significance value of 0.010 ($p < 0.05$), meaning that every one-point increase in product innovation will increase the success of MSMEs by 0.618 points, assuming other variables remain constant. The standardized beta coefficient of 0.680 indicates that product innovation is a more dominant predictor than other variables.

On the other hand, although the digital marketing strategy (X_2) shows a positive influence with a coefficient of 0.263, it is not statistically significant ($p = 0.290 > 0.05$) so it cannot be said to affect the success of MSMEs meaningfully. The insignificant constant value of 3.947 ($p = 0.339$) indicates that when both independent variables are zero, MSME success is not significantly different from zero. This finding indicates that product innovation plays an important role in driving MSME success, while digital marketing strategy in this study has not shown a significant effect. To strengthen these findings, it is recommended to further examine the classical assumptions of the regression and consider adding other variables that may have an effect.

Table 4. *Anova*

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	423.402	2	211.701	71.534	.000[a]
	Residual	65.108	22	2.959		
	Total	488.509	24			

The anova test results on the regression model show that the model as a whole is significant in predicting the success of MSMEs. This can be seen from the calculated F value of 71.534 with a significance level of 0.000 ($p < 0.05$), which means that this regression model is statistically highly significant. The Sum of Squares Regression value (423,402) illustrates the total variation in the dependent variable (MSME success) that can be explained by the independent variables (product innovation and digital marketing strategy). Thus, it can be concluded that product innovation and digital marketing strategies affect the success of MSMEs. To see the magnitude of the influence can be seen in (Table V. Summary Model*).*

Table 5. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.931[a]	.867	.855	1.720

a. Predictors: (Constant), x2, x1

Based on the results of the regression analysis, an R value of 0.931 was obtained, indicating a very strong relationship between the independent variables (product innovation and digital marketing strategy) and the dependent variable (MSME success). The R Square value (coefficient of determination) of 0.867 indicates that 86.7% of the variation in MSME success can be explained by the two independent variables, while the remaining (13.3%) is influenced by other factors outside the model. Overall, these results reinforce previous findings

that the regression model is significant and feasible, with the ability to explain most of the variation in MSME success through product innovation and digital marketing strategies. However, there are still 13.3% of other factors that have not been measured in this study, so it is recommended to explore additional variables to improve the predictive power of the model.

4.4 Discussion

The results of this study indicate that product innovation has a positive and significant impact on the success of MSMEs, while digital marketing strategies, although positively influential, do not show statistical significance. Nevertheless, both product innovation and marketing strategies collectively influence the success of MSMEs. These findings align with research by (Lorensa & Hidayah, 2022; Ratner et al., 2025; Soekandar & Pratiwi, 2023) which states that product innovation, particularly in the form of quality improvement and differentiation, can enhance the competitiveness of MSMEs. However, the insignificant results of digital marketing strategies may be attributed to imperfections in implementation or limitations in the research sample. As noted by (Clarysse et al., 2022; Nikmah & Magfiroh, 2022), the effectiveness of digital marketing heavily depends on MSMEs' ability to optimally utilize platforms, which may not have been uniformly achieved among the respondents.

The coefficient of determination (R^2) of 0.867 indicates that 86.7% of the variation in MSME success can be explained by product innovation and digital marketing strategies. However, the remaining 13.3% is influenced by other factors such as access to financing, government support, or financial management, as stated by (Desi & Tambunan, 2020). This underscores that the success of MSMEs is multidimensional and does not solely rely on innovation or marketing. Additionally, the high Adjusted R Square value (0.855) suggests that this model has good predictive power, although it could be enhanced by adding other variables such as distribution networks or human resource quality to improve accuracy.

The practical implications of this research highlight the need for MSMEs to prioritize product innovation as a primary strategy, while digital marketing should be enhanced through training and mentoring to be more effective. As expressed by (Harto et al., 2023; Putra et al., 2021; Riaño-Castillo et al., 2021) digital literacy and technology adaptation skills are key to optimizing digital marketing. The government and stakeholders can also design more focused mentoring programs, such as market-based innovation training and strengthening digital platforms, to support MSME growth. Thus, the integration of product innovation and more mature digital marketing strategies is expected to expand the positive impact on MSME success.

5. Conclusion

This study confirms that product innovation is a significant key factor in driving the success of MSMEs in Bandar Lampung, while digital marketing strategies have not yet shown a significant impact in this model. These findings provide important implications for MSME actors to focus their resources on developing innovative products, while also highlighting the need to enhance capacity in implementing digital marketing to be more effective. For the government and stakeholders, the results of this research can serve as a basis for designing more targeted mentoring programs, such as market-driven innovation training and digital literacy, to strengthen the competitiveness of MSMEs in the digital economy era. Therefore, collaborative efforts between MSMEs, the government, and related parties are expected to create a more supportive ecosystem for the sustainable growth of micro, small, and medium enterprises.

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EFFECT OF ENTREPRENEURSHIP TRAINING ON ENTREPRENEURSHIP READINESS OF VOCATIONAL STUDENTS

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Abstract

This study aims to analyze the impact of practice-based entrepreneurship training on the entrepreneurial readiness of Vocational High School (SMK) students. The research background is motivated by the high unemployment rate among SMK graduates, which indicates their lack of preparedness to start independent businesses. The method used is a quasi-experimental design involving two groups: an experimental group that participated in practice-based entrepreneurship training and a control group that did not undergo the training. Data was collected through questionnaires and analyzed using t-tests and multiple linear regression. The results show that practice-based training significantly enhances students' entrepreneurial readiness, covering aspects such as self-preparedness, entrepreneurial personality, and practical skills. These findings reinforce the importance of a practical approach in entrepreneurship education as a strategy to prepare SMK graduates to become competent and self-reliant entrepreneurs. Therefore, practice-based entrepreneurship training should be more systematically integrated into the SMK curriculum to produce graduates who are ready to face business challenges.

Keywords**:** *Entrepreneurship training, entrepreneurial readiness, vocational education, vocational school, practical skills*

1. Introduction

Vocational education in Indonesia, particularly in Vocational High Schools (Sekolah Menengah Kejuruan or SMK), plays a crucial role in preparing graduates to face an increasingly competitive job market (Haerani & Herawati, 2021). In the era of globalization and rapid technological advancement, labor market demands continue to evolve, and SMK education must be able to address these challenges. SMK graduates are expected not only to possess technical skills relevant to their fields but also to have entrepreneurial capabilities, the ability to create jobs, and the competitiveness to thrive in the business world. According to data from the Central Statistics Agency (Badan Pusat Statistik or BPS), the unemployment rate among SMK graduates remains relatively high, indicating a gap between students' acquired skills and the ever-changing demands of the labor market (Statistika, 2021). This high unemployment rate among SMK graduates reflects their lack of readiness to enter either the workforce or the business world, despite having received training in relevant technical skills.

One effective solution to address this unemployment issue is by enhancing students' entrepreneurial readiness (Maranata & Wijaya, 2021). Entrepreneurial readiness encompasses several critical factors, including practical business management skills, the development of a strong entrepreneurial mindset, as well as creative and innovative attitudes along with the mental resilience to take risks (Hisyam et al., 2024; Suleman & Siregar, 2024). Entrepreneurship training in vocational high schools (SMK) can serve as an effective means to equip students with the necessary skills and cultivate the mental attitude required to start their own businesses (Sumarno et al., 2018). Research by (Hidayat et al., 2019) demonstrates that

entrepreneurship education in vocational schools enhances both technical skills and students' mental preparedness, enabling them to better face the challenges of the business world.

However, despite the widespread implementation of entrepreneurship training in vocational high school (SMK) curricula, there remains a gap in understanding its direct impact on students' entrepreneurial readiness (Ariantini & Susila, 2024; Wijayanti et al., 2024). According to (Pratomo Kurnia, 2018), while many students have received entrepreneurship education, they still lack the preparedness to actually launch businesses, particularly in risk management and marketing aspects. Research conducted by (Sianturi & Baroroh, 2024) in Bunyu Regency further revealed that SMK graduates' low entrepreneurial readiness stems from insufficient hands-on business experience and limited access to both startup capital and supportive business networks. These findings underscore the need for more effective practice-based approaches in entrepreneurship education to better prepare students for real-world business challenges (Sucipto, 2025; Wicaksono et al., 2024).

Effective entrepreneurship education should encompass not only business theory but also integrate practical experiences relevant to the business world (Susanto & Astuti, 2025). Research by (Sianturi & Baroroh, 2024) reveals that practice-based approaches, incorporating business simulations and real-world projects, prove highly effective in developing students' entrepreneurial readiness. Such hands-on entrepreneurship training enables students to hone their skills in planning, managing, and developing their own ventures, ultimately enhancing their preparedness to launch and operate successful businesses (Sari et al., 2025).

Despite numerous efforts to enhance entrepreneurship training in vocational high schools (SMKs), its impact on students' entrepreneurial readiness remains incompletely measured. Therefore, this study aims to analyze the effect of entrepreneurship training on SMK students' preparedness for entrepreneurship, with particular focus on how such training can improve practical skills, business knowledge, and entrepreneurial mindset. Additionally, the research seeks to identify key factors influencing students' entrepreneurial readiness following their participation in SMK entrepreneurship training programs.

This study is expected to make significant contributions to the development of entrepreneurship curricula in vocational high schools (SMK), while also serving as a valuable reference for schools, educational institutions, and policymakers in designing more effective entrepreneurship training programs. The research findings are anticipated to not only enhance the quality of entrepreneurship training in SMKs but also provide students with practical experience relevant to the business world. Ultimately, this will better prepare students to become successful entrepreneurs in the future.

2. Literature Review

2.1 Entrepreneurship Education in Vocational Schools

Entrepreneurship education in vocational high schools aims to equip students with the knowledge, skills, and attitudes necessary to start and manage a business. According to the Regulation of the Minister of Education and Culture of the Republic of Indonesia No. 29 of 2014 concerning the Competency Standards for Secondary Education Graduates, entrepreneurship education is an essential part of the vocational high schools curriculum to develop students' potential in the field of entrepreneurship. Entrepreneurship education not only provides theoretical knowledge about business but also offers practical experience that enables students to learn firsthand how to manage a business (Hidayat et al., 2019).

Along with the advancement of the times and rapid globalization, the challenges faced by vocational high school graduates in entering the business world have become increasingly complex. Although many schools have integrated entrepreneurship education into the curriculum, many students still experience difficulties in starting their own businesses. This is

due to a lack of practical experience and skills relevant to the business world (Sianturi & Baroroh, 2024). According to (Sianturi & Baroroh, 2024) practice-based entrepreneurship training, such as business simulations and real case studies, is far more effective in enhancing students' readiness to become entrepreneurs compared to learning that relies solely on theory. Practice-based learning allows students to apply the skills they have acquired, such as business planning, financial management, and facing the challenges of the business world.

Therefore, entrepreneurship education based on hands-on experience is essential for enhancing the entrepreneurial readiness of vocational high school students. This approach not only equips students with technical skills but also prepares them mentally and emotionally to face the risks and uncertainties inherent in the business world.

2.2 Entrepreneurial Readiness

Entrepreneurial readiness is an important indicator in determining whether an individual can successfully run their own business. Entrepreneurial readiness involves three main aspects: self-readiness, entrepreneurial personality, and practical skills in managing a business (Frinces, 2011). Self-readiness refers to an individual's mentality and confidence to start a business, while entrepreneurial personality encompasses the attitudes and characteristics needed for entrepreneurship, such as risk-taking courage, creativity, and perseverance (Rodriguez & Lieber, 2020). ntrepreneurial skills include practical abilities in financial management, marketing, and making appropriate decisions when facing various situations in the business world (Hidayat et al., 2019).

However, although entrepreneurship education provides basic knowledge about the business world, the development of practical skills and the formation of a positive entrepreneurial attitude are crucial in enhancing students' entrepreneurial readiness. Pratomo states that entrepreneurship training focused more on developing practical skills and an entrepreneurial mindset will be more effective in preparing vocational high school students to enter the business world. In this regard, practice-based learning involving business simulations and hands-on experience is essential to create a more holistic readiness (Pratomo Kurnia, 2018).

2.3 Effect of Entrepreneurship Training on Entrepreneurial Readiness

Effective entrepreneurship training can influence students' entrepreneurial readiness by improving technical skills and developing positive entrepreneurial attitudes. Hidayat revealed that practice-based entrepreneurship training can help students be more confident in starting their businesses and provide a deeper understanding of aspects of business management, such as business planning, financial management, and marketing (Hidayat et al., 2019). In addition, entrepreneurship training also provides hands-on experience in dealing with business risks and overcoming the fear of failure (Sianturi & Baroroh, 2024).

Sianturi adds that entrepreneurship learning involving business simulations and hands-on experience in the business world can enhance students' entrepreneurial readiness (Sianturi & Baroroh, 2024). By participating in practice-based entrepreneurship training, students not only learn to manage their own businesses but also identify market opportunities, adapt to changes in the business environment, and make better business decisions. This improves their readiness to face challenges in the workforce or in running their own ventures.

2.4 Theories of Entrepreneurship

To understand the phenomenon of the impact of entrepreneurship training on the entrepreneurial readiness of vocational high school (SMK) students, several entrepreneurship theories can be applied. For example, Shapero's Entrepreneurial Event Theory explains that

entrepreneurial behavior is influenced by an individual's perception of business opportunities, the skills they possess, and their willingness to take risks. Effective entrepreneurship training will develop these three elements, thereby enhancing students' entrepreneurial readiness (Spilling, 1996).

In addition, Ajzen's Theory of Planned Behavior (TPB) is also relevant in this context. TPB states that the intention to perform a behavior (such as starting a business) is influenced by attitudes toward the behavior, subjective norms, and perceived behavioral control. Effective entrepreneurship training will enhance positive attitudes toward entrepreneurship, strengthen social norms that support entrepreneurship, and increase behavioral control by providing the necessary skills to start and manage a business (Ajzen, 1991).

2.5 Related Researches

Several previous studies have shown that entrepreneurship training has a positive effect on the entrepreneurial readiness of vocational high school (SMK) students. According to (Hidayat et al., 2019) business simulation and case study-based entrepreneurship training can enhance students' ability to plan and manage businesses. Research by (Pratomo Kurnia, 2018) also revealed that students who participated in entrepreneurship training exhibited higher entrepreneurial readiness compared to those who did not. Furthermore, (Rodriguez & Lieber, 2020) emphasized that entrepreneurship education at the secondary level significantly shapes students' entrepreneurial mindset and career readiness, especially when learning includes hands-on experience. These findings support the theory that practical skills and a positive entrepreneurial mindset can be developed through experiential learning, which ultimately improves students' entrepreneurial readiness.

3. Methodology

3.1 Research Design

This study employs a quantitative approach with a quasi-experimental research design. This design was chosen because it allows for the direct testing of the effect of entrepreneurship training on the entrepreneurial readiness of vocational high school (SMK) students by using two groups: an experimental group that receives practice-based entrepreneurship training and a control group that does not. The study aims to analyze the impact of entrepreneurship training on three main aspects of entrepreneurial readiness: self-readiness, entrepreneurial personality, and students' practical skills.

3.2 Population and Sample

The population in this study consists of vocational high school (SMK) students who have participated in entrepreneurship training at several schools in Bandar Lampung. In this research, simple random sampling was chosen as the most appropriate sampling method because the population consists of SMK students who have undergone entrepreneurship training. This technique allows every individual in the population an equal chance of being selected as a respondent, ensuring that the research results are more representative and generalizable. The sample used in this study consisted of 200 vocational high school (SMK) students, divided into two groups: an experimental group that participated in practice-based entrepreneurship training and a control group that did not undergo the training. By using simple random sampling, the researcher ensured that the sample accurately reflects the characteristics of all SMK students involved in the entrepreneurship training, without any bias in the selection process.

3.3 Data Collection Technique

Primary data in this study were collected using questionnaires distributed directly to vocational high school (SMK) students who had participated in practice-based entrepreneurship training. The questionnaire was designed using a 5-point Likert scale, measuring students' attitudes and entrepreneurial readiness, with response options ranging from "strongly disagree" to "strongly agree." The questionnaire covered three main aspects that were the focus of the study: self-readiness, entrepreneurial personality, and practical skills in running a business. To ensure valid data, the questionnaire will be distributed through communication channels commonly used by students, such as email and social media platforms utilized by the school or entrepreneurship community. Each selected participant will be asked to complete the questionnaire online. The data collected through this questionnaire will provide quantitative information regarding the impact of entrepreneurship training on the entrepreneurial readiness of vocational high school students. In addition, secondary data were also obtained from relevant scholarly literature, such as journals, books, and articles discussing entrepreneurship education, the development of entrepreneurial skills, and the impact of practice-based training. These secondary sources will be used to deepen the theoretical framework and previous research that support and complement the findings from the primary data collected in this study.

4. Results

4.1 Respondent Description

This study involved 200 vocational high school students who had participated in practice-based entrepreneurship training. The sample consisted of two groups: an experimental group that underwent the practice-based entrepreneurship training (100 students) and a control group that did not participate in the training (100 students). The majority of respondents came from SMKs located in urban areas, with a nearly balanced gender distribution between males and females. The average age of the respondents was 17 years, with most of them in the 11th grade..

4.2 Descriptive Data Analysis

Before conducting further analysis, the questionnaire data collected were analyzed descriptively. The results show that the majority of respondents (80%) feel they are not yet fully prepared to start a real business despite having participated in entrepreneurship training. This indicates a gap between the knowledge gained during the training and their readiness to face the challenges of the business world.

Table 1. Average Entrepreneurial Readiness Score in Experimental and Control Groups

Group Statistics										
Variable	Group	N	Mean	Std. Deviation	Std. Error Mean	t-value	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval
Self-readiness	1	100	4.21	0.000	0.000	1.88×10^{15}	198	0.000	0.70	[0.58, 0.82]
	2	100	3.51	0.000	0.000					
Entrepreneurial Personality	1	100	4.35	0.000	0.000	1.51×10^{15}	198	0.000	0.63	[0.51, 0.75]
	2	100	3.72	0.000	0.000					
Practical Skills	1	100	4.15	0.000	0.000	1.47×10^{15}	198	0.000	0.52	[0.40, 0.64]
	2	100	3.63	0.000	0.000					

From the table above, it can be seen that the experimental group, which participated in practice-based entrepreneurship training, had higher average scores in all aspects of entrepreneurial readiness compared to the control group. This indicates that practice-based entrepreneurship training has a positive effect on improving students' entrepreneurial readiness, especially in terms of entrepreneurial personality and self-readiness. The t-test results show that the differences between the experimental and control groups across the three variables (Self-readiness, Entrepreneurial Personality, and Practical Skills) are statistically significant (p-value < 0.05). Therefore, it can be concluded that practice-based entrepreneurship training not only enhances students' practical skills but also fosters stronger entrepreneurial attitudes, such as risk-taking courage, creativity, and the entrepreneurial mindset necessary to start a business.

4.3 Multiple Linear Regression Analysis

To examine the effect of entrepreneurship training on students' entrepreneurial readiness, a multiple linear regression analysis was conducted. The results show that practice-based entrepreneurship training has a significant impact on students' entrepreneurial readiness (p-value < 0.05). In other words, the entrepreneurship training variable directly enhances students' readiness to manage a business, make decisions, and face risks.

Table 18. Model Summary

Model Summary

					Change Statistics				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	1.000[a]	1.000	1.000	.00000	1.000	.	1	198	.

a. Predictors: (Constant), Keterampilan Praktis

The R value is 1.000, indicating a perfect correlation between the independent variable (Practical Skills) and the dependent variable (Self-readiness). The R-squared value is also 1.000, meaning that 100% of the variation in Self-readiness can be explained by Practical Skills. This demonstrates that Practical Skills have a very strong influence on students' Self-readiness.

Table 3. ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	24.500	1	24.500	.	.[b]
	Residual	.000	198	.000		
	Total	24.500	199			

a. Dependent Variable: Kesiapan Diri (Self-readiness)
b. Predictors: (Constant), Keterampilan Praktis

The very high F-value (24.500) with a very small p-value (0.000) indicates that this regression model is statistically significant. This suggests that Practical Skills contribute significantly to the improvement of students' Self-readiness.

Table 4. Coefficients[a]

		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
Model		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	-1.377	.000		.	.					

Keterampilan Praktis	1.346	.000	1.000	.	.	1.000	1.000	1.000	1.000	1.000

a. Dependent Variable: Self-readiness

Intercept (Constant): The B value for the intercept is -1.377, which means that when Practical Skills are zero, Self-readiness is predicted to be -1.377 (although this is not practically meaningful since Practical Skills cannot be zero in this context). Practical Skills: The B value for Practical Skills is 1.346, indicating that for every one-unit increase in Practical Skills, Self-readiness increases by 1.346 units. The Beta (Standardized Coefficient) is 1.000, suggesting that the influence of Practical Skills on Self-readiness is very large and very strong within this model. The p-value for Practical Skills is 0.000, which is less than 0.05, indicating that Practical Skills have a statistically significant effect on students' Self-readiness.

Based on the results of the multiple linear regression analysis, it was found that the independent variable tested, Practical Skills, has a significant effect on students' Self-readiness. The regression model used has an R-squared value of 1.000, indicating that 100% of the variation in Self-readiness can be explained by Practical Skills. The test results show that the p-value for Practical Skills is 0.000, which is less than 0.05, indicating that the influence of Practical Skills on Self-readiness is statistically significant. Therefore, it can be concluded that practice-based entrepreneurship training, which focuses on enhancing Practical Skills, makes a highly significant contribution to improving the entrepreneurial readiness of vocational high school students, particularly in terms of their self-readiness to face the challenges of the business world.

4.4 Comparison of Pre-test and Post-test Results

To measure the change in students' entrepreneurial readiness after participating in entrepreneurship training, a comparison was made between pre-test and post-test results. The findings show a significant increase in all aspects of entrepreneurial readiness within the experimental group. In the pre-test, the average entrepreneurial readiness score of the experimental group was 3.50, which increased to 4.21 after the training (post-test). This average increase of 0.71 indicates that practice-based entrepreneurship training has a positive effect on improving students' entrepreneurial readiness, with the difference being statistically significant (p-value = 0.000)..

Table 5. Comparison of Pre-test and Post-test (Paired Samples T-Test Results)

Variable	N	Mean Pre-test	Mean Post-test	Mean Difference	t-value	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval
Kesiapan Diri (Self-readiness)	200	3.50	4.21	0.710	10.850	198	0.000	0.70	[0.58, 0.82]
Personalitas Wirausaha	200	3.60	4.35	0.750	10.850	198	0.000	0.63	[0.61, 0.89]
Keterampilan Praktis	200	3.75	4.15	0.400	5.746	198	0.000	0.52	[0.30, 0.50]

Based on the comparison table of pre-test and post-test results, the paired-samples t-test shows that practice-based entrepreneurship training has a significant effect on improving entrepreneurial readiness, entrepreneurial personality, and practical skills of vocational high school (SMK) students. Overall, practice-based entrepreneurship training has proven effective in equipping students with better practical skills, fostering a positive entrepreneurial attitude, and strengthening their readiness to start a business.

4.5. Discussion

The results of this study show that practice-based entrepreneurship training has a significant effect on improving the entrepreneurial readiness of vocational high school (SMK)

students. These findings are consistent with previous research by (Hidayat et al., 2019; Sianturi & Baroroh, 2024) which state that training approaches involving hands-on practice, such as business simulations and real case studies, are more effective in developing entrepreneurial competencies than purely theory-based methods.

Descriptive analysis shows that students in the experimental group scored higher across three aspects of entrepreneurial readiness: self-readiness, entrepreneurial personality, and practical skills. The significant increase in post-test results compared to pre-test results reinforces this finding, with the greatest improvement observed in self-readiness (from 3.50 to 4.21). This indicates that the hands-on experience gained by students during the training effectively builds confidence and mental preparedness to face the challenges of the business world.

Multiple linear regression analysis also supports that the practical skills variable has a highly significant influence on students' self-readiness. An R-squared value of 1.000 indicates that practical skills fully contribute to explaining the self-readiness variable. This suggests that when entrepreneurship training is designed to emphasize tangible skills, such as business planning, financial management, and marketing strategies, students become more prepared to start their own businesses.

Furthermore, the practice-based approach not only equips students with technical skills but also fosters the development of entrepreneurial character and attitudes, such as creativity, risk-taking courage, and perseverance. This aligns with Shapero's Entrepreneurial Event Theory and the Theory of Planned Behavior (Ajzen, 1991) which state that entrepreneurial intention is shaped by attitudes, social norms, and perceived behavioral control-all of which are strengthened through hands-on experiential training.

However, despite the significant improvements, descriptive data also indicate that approximately 80% of respondents still do not feel fully prepared to start a real business. This suggests that, in addition to training, external factors such as capital support, access to business mentors, and the social environment play a crucial role in students' entrepreneurial readiness. Therefore, ongoing support from schools and other stakeholders is needed to create a conducive entrepreneurial ecosystem for students. Thus, practice-based entrepreneurship training has proven to be an effective strategic intervention for enhancing the entrepreneurial readiness of vocational high school (SMK) students, but it also needs to be complemented by a more comprehensive entrepreneurial ecosystem support.

5. Conclusion

This study's results indicate that practice-based entrepreneurship training has a significant impact on the entrepreneurial readiness of vocational high school (SMK) students. Students who participated in the training showed a marked improvement in self-readiness, entrepreneurial personality, and practical skills. Training that emphasizes hands-on experience has proven effective in building confidence, entrepreneurial character, and technical abilities in designing and managing a business. Multiple linear regression analysis reinforces that practical skills are the dominant factor influencing students' readiness to face the business world. Furthermore, comparisons between pre-test and post-test scores reveal a significant increase following the training. Therefore, practice-based entrepreneurship training can serve as an effective strategy to better prepare SMK students to become entrepreneurs. Nevertheless, the success of this training will be optimized if supported by an adequate entrepreneurial ecosystem, such as access to capital, mentorship, and extensive business networks.

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THE ROLE OF SPIRITUAL CAPITAL IN IMPROVING EMPLOYEE PERFORMANCE OF MSMES NUR BAKSO BENGKAYANG

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Abstract

The purpose of this study is to investigate the role of Spiritual Capital in improving the performance of Nur Bakso employees. The term "spiritual capital" refers to the values, beliefs, and goals of people and ethics that are integrated in a business context. Nur Bakso MSMEs is a small, medium, and micro business engaged in the culinary industry, especially meatballs, and was established in 2018. This study uses a qualitative research approach with an ethnographic approach based on the results of observations and interviews. The subjects of this study include the owner of the Nur Bakso company, employees, and consumers. Based on the research findings, it is proven that spiritual capital plays a significant role in improving Nur Bakso's work results. The spiritual values that are raised are able to create a positive work environment, improve service quality and strengthen bonds with customers. This study concludes that the role of spiritual capital contributes positively to improving the performance of Nur Bakso employees.

Keywords: spiritual capital, employee performance, spiritual values, MSMEs (micro small and medium enterprises)

5. Introduction

Micro, Small, and Medium Enterprises (MSMEs) play a strategic role in the Indonesian economy, not only as drivers of economic growth, but also as providers of employment for the community. Amidst the dynamics of increasingly tight business competition, MSMEs face complex challenges in maintaining business continuity and improving operational performance. The success of MSMEs is no longer determined only by conventional factors such as financial capital and product excellence, but also by non-material dimensions that are often overlooked, especially the spiritual aspect in human resource management.(Ame & Sugianto, 2024).

An interesting phenomenon to study is how spiritual values can become capital (spiritual capital) that contributes significantly to improving employee performance in the context of MSMEs. The concept of spiritual capital refers to values, beliefs, and life goals that are integrated in a business context, which includes moral dimensions, integrity, business ethics, and social sensitivity. Unlike conventional capital which is tangible, spiritual capital represents non-material assets that can create competitive advantages through the formation of a positive work culture and increasing employee intrinsic motivation.

Nur Bakso MSME located in Bengkayang, West Kalimantan, presents an ideal context to explore the role of spiritual capital in a small-scale business setting. As a

culinary business that was established in 2018, Nur Bakso has shown consistency in providing services to the local community through an approach that not only focuses on commercial aspects, but also upholds spiritual values in daily operations. Initial observations indicate that there are practices that reflect the application of spiritual capital, but there has been no systematic study analyzing how this spiritual dimension contributes to employee performance.

The identified research gap lies in the lack of empirical studies exploring the relationship between spiritual capital and employee performance in the context of Indonesian MSMEs. The majority of previous studies tend to focus on large-scale organizations or the formal sector, while the unique dynamics that occur in MSMEs—with characteristics of more personal work relationships, flexible organizational structures, and limited resources—have not received adequate attention. In fact, MSMEs have great potential to implement spiritual capital more effectively than large organizations, given the interpersonal closeness and flexibility in implementing spiritual values.

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This research is important to conduct for several strategic reasons. First, from a theoretical perspective, this research will contribute to the development of spiritual capital literature with a specific focus on the context of Indonesian MSMEs (Merdekawati & Rosyanti, 2020).Second, from a practical perspective, the research findings can provide insight for MSME actors in optimizing human resources through an authentic and sustainable spiritual approach. Third, this research can be a reference for the development of MSME empowerment programs that not only focus on technical and financial aspects, but also spiritual dimensions that can strengthen business resilience and sustainability (Febrianti *et al*., 2023).

Specifically, this study aims to identify spiritual values that become spiritual capital in the operations of Nur Bakso MSMEs, analyze the mechanism of how spiritual capital plays a role in improving employee performance, and evaluate the impact of spiritual capital implementation on work dynamics and service quality in the context of small-scale culinary businesses. The expected contribution of this study is the development of a conceptual framework that explains the operationalization of spiritual capital in MSME settings, as well as the identification of best practices that can be adapted by other MSMEs.

In practice, this study will produce strategic recommendations for human resource management in MSMEs that integrate the spiritual dimension as a source of sustainable competitive advantage. Through an ethnographic approach, this study is expected to provide an in-depth understanding of how local and spiritual values can be a strength in building resilient and sustainable MSMEs in the modern economic era (Lestari *et al*., 2023).

6. Literature Review

In the context of economics and business, spiritual capital is a concept that combines moral and spiritual principles. It encourages the use of ethics, spirituality, and religious principles to improve living standards, productivity, and harmony in the workplace and in society. (Sugianto *et al*., 2021). By highlighting the importance of morality, integrity, and meaning in everyday life and work, spiritual capital complements financial or intellectual capital. Here are some of the benefits of spiritual capital that can enhance the understanding and insights gained from spiritual practices to impact everyday business and personal life: Improved performance: Spiritual values can create a more positive work environment, which in turn improves employee productivity and performance. a). Ethical Leadership: Individuals with spiritual strength are more likely to lead in a moral and responsible manner, which can inspire and motivate others. b). Sustainability and social responsibility: Organizations that adopt spiritual capital tend to focus more on sustainable and socially responsible business practices. c). Individual Well-Being: By prioritizing holistic well-being, spiritual capital can contribute to the well-being of individuals and communities as a whole.

Based on the research mentioned above, spiritual capital is a theory that explains how spiritual elements can create wealth for individuals and communities, especially in the context of organizations, and how these elements can strengthen social norms, trust, and teamwork, all of which are essential in building social capital. Spiritual capital is also seen as a form of investment that individuals can make through their own connections, which can serve as a resource for daily workers in the process of developing decisions to achieve common goals. (Neubert et al., 2017).

This theory emphasizes the need for individual spirituality in employee work ethics so as not to interfere with performance, morality, and ethics in building a successful organization. Therefore, it is important to improve employee performance in order to support employee growth and performance. Employee performance refers to the employee's ability to achieve the work that has been offered and do it well and diligently, where certain work targets are set properly and do not waste time that has been set by the company based on ethics and morality. Thus, employee work results can contribute to the company concerned (Prasodjo et al., 2023).

Spiritual capital includes various aspects such as moral principles, integrity, business ethics, tolerance, teamwork, and social sensitivity. These values can be the basis for actions and decisions to be taken by the owner of Nur Bakso MSMEs. The spiritual

dimension includes internal motivation, attitudes, values, and actions needed to provide guidance. Spiritual beliefs can produce emotional stability in a person, which allows for stable mental processes that positively influence creativity and innovation. Spiritual wealth is wealth that covers several aspects of our lives. The source of this wealth consists of an understanding of the nature of our deepest meaning, values, primary goals, and greatest drives together with explaining how to incorporate them into our daily lives and work. Spiritual modality comes from social modality (Shiddiqiyah *et al* ., 2013).

Capital refers to a business's investment in short-term assets, such as savings, inventory, securities, and cash. Spiritual capital is different from other capital, which usually consist of tangible resources. Capital spirituality is a way of thinking that enhances our daily lives. Capital spirituality is essential for individuals and organizations because it influences the way businesses operate, ensuring that businesses operate in accordance with laws and regulations, maintaining financial stability, and other factors that will ultimately enhance business productivity (Eni Cahyani *et al*., 2023).

It is important to improve organizational performance because individual and group performance affects how much they contribute to it (Masturi *et al*., 2021). Performance or work performance, performance can also be interpreted as work achievement or work implementation or work performance results. Performance is an organizational behavior that is directly related to the production of goods or delivery of services. Performance is often defined as the achievement of tasks, where the term "task" comes from the idea of activities required by workers. Performance is a function of a person's motivation and ability to complete tasks or jobs, which must have a certain level of ability. Performance has several dimensions, including the dimensions of performance, as follows: 1). Quality, Each employee has their own tasks. As an employee, the first thing that is assessed in performance is the quality of the work produced. 2). Quantity, One aspect of performance is how much work can be completed. 3). Timeliness, This aspect looks at how short the time used to complete a particular job. The less time used, of course the better for the assessment obtained. 4). Need for a supervisor, One of the basic aspects of determining aspects of performance is how independent you are in working. The less help you get from others, especially superiors, the more you will consider yourself.

Employee performance as the ultimate goal and is a way for various managers to ensure that employee activities and outputs produced are in accordance with organizational goals. This means that employees who work for an organization bring various desires, needs, passions, and past experiences that The performance of an employee will indicate the performance of the organization where they work. Each employee will make a full contribution to the activities of the organization, so the progress of each employee's work must be carefully considered because it greatly helps the company in achieving short-term and long-term goals (Isa & Cahyaningsih, 2021).

As a final goal, employee performance is a method used by various managers to ensure that employee activities and work results are in line with organizational goals. This

shows that employees who work in a company have various needs, desires, and experiences that are included to help them cope with work-related stress.

7. Methodology

Research Approach and Design

This study uses a qualitative approach with an ethnographic design to explore in depth the role of spiritual capital in improving employee performance at MSMEs Nur Bakso Bengkayang. The choice of a qualitative approach is based on the need to understand complex phenomena involving values, beliefs, and spiritual practices integrated into the context of everyday business. This approach allows researchers to capture subjective nuances and deep meanings that cannot be measured quantitatively.

The ethnographic design was chosen because it is in accordance with the characteristics of the study which aims to understand the work culture and value systems that apply in the MSMEs Nur Bakso work community. Ethnography facilitates researchers to observe, participate in, and understand spiritual practices in natural settings through deep immersion. This method allows the identification of behavioral patterns and cultural practices that reflect the operationalization of spiritual capital in everyday business activities.

The ethnographic approach is strengthened by an interpretive orientation that allows researchers to understand the meaning constructed by participants regarding the role of spirituality in their work. This is important to capture the authentic emic perspective dimension of how spiritual capital is understood and implemented in the local context (Widhianningrum & Amah, 2014).

Sampling Strategy and Participants

This study used purposive sampling with selection criteria designed to obtain multi-stakeholder perspectives on the role of spiritual capital. Five participants were selected with the following composition: one business owner, two employees (cashier and operational employee), and two regular consumers who have long-term interaction experience with Nur Bakso MSMEs.

The selection criteria for business owners include: (1) direct involvement in daily operations, (2) role as the main decision maker in the implementation of spiritual values, and (3) experience managing MSMEs for at least two years. For employees, the criteria include: (1) minimum work period of one year to ensure adequate experience, (2) involvement in direct interaction with customers, and (3) willingness to participate in observations and in-depth interviews.

Consumers were selected based on the following criteria: (1) frequency of visits of at least twice per week for the past six months, (2) meaningful interactions with employees

that allow observation of spiritual capital in service, and (3) willingness to provide external perspectives on the impact of spiritual practices on service quality.

The composition of participants involving multiple stakeholders allows for triangulation of perspectives and comprehensive understanding of the implementation and impact of spiritual capital from various relevant perspectives.

Data Collection Method

Ethnographic Participatory Observation

Participatory observation was the primary method of data collection, conducted over a three-month period with a visit intensity of 3-4 times per week to capture situational and temporal variations in the implementation of spiritual capital. The focus of observation included: (1) ritualistic practices that reflect the spiritual dimension, (2) interpersonal interaction patterns that demonstrate the application of spiritual values, (3) decision-making processes influenced by spiritual considerations, and (4) customer service behaviors that reflect spiritual capital.

Observations were conducted with a minimal level of participation to minimize disruption to the natural flow of business activities, but still allow for sufficient immersion to understand cultural nuances. Field notes were made systematically with an observational framework that included descriptive notes, reflective notes, and analytic memos.

Semi-Structured In-depth Interview

In-depth interviews were conducted with all participants using a flexible but focused interview guide on key spiritual capital themes. For business owners and employees, interviews explored: (1) personal spiritual values and how they are integrated into work, (2) concrete practices that reflect spiritual capital, (3) perceptions about the impact of spirituality on performance and job satisfaction, and (4) challenges and opportunities in implementing spiritual values.

For consumers, interviews focused on: (1) perceptions of service quality and business atmosphere, (2) experiences of interactions with employees that reflect spiritual values, and (3) factors that drive loyalty and repeat visits.

Each interview session lasted 45-75 minutes and was recorded with the consent of the participants. Interviews were conducted in Indonesian with the flexibility to use local languages when necessary to capture more authentic nuances of meaning.

Documentation and Artifact Analysis

Data collection was enriched with visual documentation and artifact analysis relevant to spiritual capital, including: (1) documentation of the physical environment that reflects spiritual values, (2) promotional materials or signage containing spiritual messages,

(3) standard operating procedures that integrate spiritual principles, and (4) customer feedback or testimonials that indicate the impact of spiritual capital. Documentation was conducted unobtrusively with attention to ethical considerations and privacy concerns. Artifact analysis aimed to identify tangible manifestations of spiritual capital that may not be verbalized in interviews or observed directly.

Data Analysis Procedure

Data analysis used a thematic analysis approach with a framework that combines inductive and deductive coding. The analysis process began with deep immersion in the data through repeated reading and listening to all the collected material. The initial coding stage used line-by-line analysis to identify emerging concepts and categories from the data.

The coding process was carried out in several stages: (1) open coding to identify initial concepts and phenomena, (2) axial coding to develop relationships between categories, and (3) selective coding to integrate categories into a coherent theoretical framework. The constant comparative method was applied to ensure consistency and precision in the categorization process.

Qualitative analysis software was used to facilitate the data organization and coding process, but substantive interpretation was still done manually to maintain sensitivity to cultural nuances and contextual meanings. The analysis was enriched with thick descriptions that allowed readers to understand the context and transfer lessons learned to similar settings.

The analysis process involved iterative movements between data collection and analysis, allowing for refinement of the research focus and deepening of understanding of the spiritual capital phenomenon based on emerging insights.

Data Validity and Reliability

To ensure methodological rigor, this study employed several strategies to enhance trustworthiness. Credibility was strengthened through: (1) prolonged engagement over three months to build rapport and in-depth understanding, (2) triangulation of sources involving multiple stakeholders, (3) triangulation of methods by combining observation, interviews, and documentation, and (4) member checking to verify interpretations with participants.

Transferability was facilitated through a comprehensive, thick description of the research setting, participant characteristics, and contextual factors influencing the application of spiritual capital. This allowed readers to assess the applicability of the findings to similar contexts. (Sugiyono, 2022).

Dependability was ensured through a detailed audit trail, documenting the entire decision-making process from sampling to interpretation. Peer debriefing was conducted

regularly with other researchers to gain external perspectives and minimize researcher bias. Confirmability was strengthened through the systematic practice of reflexivity, where researchers self-reflected on personal biases, assumptions, and how these may have influenced interpretations. Reflective journals were used to document the evolution of the researcher's understanding of the spiritual capital phenomenon.

Ethical Considerations

This study adhered to ethical research principles by obtaining informed consent from all participants before data collection began. Informed consent included an explanation of the purpose of the study, the methods to be used, voluntary participation, and the right to withdraw without consequence.

Confidentiality and anonymity were ensured through the use of pseudonyms for participants and details that could identify specific individuals or businesses. Data were stored securely with access restricted to the research team.

Special consideration was given to the sensitive nature of spiritual topics, with an approach that was respectful of personal beliefs and practices. The researchers committed to not making judgments about the spiritual practices observed and to reporting findings objectively and balanced.

Research Limitations

This study has several limitations that need to be acknowledged. First, the findings have limited generalizability given the focus on a single case study. Second, the time-consuming ethnographic approach limits the geographic scope that can be covered. Third, there is potential for researcher bias in the interpretation of qualitative data, although it has been mitigated through various validation strategies. Temporal limitations are also acknowledged, given that spiritual capital is a phenomenon that can change over time. The three-month observation period may not capture long-term dynamics or seasonal variations in the application of spiritual capital. Finally, language barriers and cultural differences between researchers and participants may affect the depth and accuracy of the data collected (Pokhrel, 2024).

8. Results and Discussion

Identification of Spiritual Values as Spiritual Capital

The results of ethnographic research reveal five fundamental values that form spiritual capital in the operations of Nur Bakso MSMEs: respect, friendliness, communication, trust, and responsibility. This finding is in line with the conceptualization of spiritual capital put forward by Neubert et al. (2017), where spiritual values function as non-material resources that can create competitive advantage through the formation of a positive work culture.

The Dimension of Appreciation as the Foundation of Spiritual Capital

The value of respect is manifested in daily practice through equal treatment between business owners and employees, regardless of organizational hierarchy. Ethnographic observations show that business owners never use disturbing or intimidating language in interacting with employees, even when operational errors occur. This was expressed by one employee, "Mr. Boss never scolds us in front of customers, always appreciates our efforts even though sometimes the results are not perfect." This practice of respect creates psychological safety that allows employees to maximize creativity and initiative in service. This is in line with the theory of spiritual capital which emphasizes that recognition and appreciation are key elements in building intrinsic motivation (Rivai, 2009). The impact of implementing the value of respect can be seen from the low employee turnover and high job satisfaction reflected in their work dedication.

Hospitality as Spiritual Capital in Customer Service

The value of friendship is operationalized through authentic hospitality that is not only transactional, but reflects genuine concern for the welfare of customers. Observations show that employees not only serve orders, but also ask about the health conditions of regular customers, provide menu recommendations based on individual preferences, and even pay special attention to elderly customers or those with special needs.

This authentic hospitality creates a strong emotional connection between MSMEs and customers, which is reflected in high customer loyalty and word of mouth promotion. This was expressed by a regular customer, "Here we don't just sell meatballs, but we feel like family. They remember our favorite orders and always greet us warmly."

This finding supports the concept of spiritual capital proposed by Alma et al. (2014), where compassion based on spiritual values creates sustainable competitive advantage through the formation of meaningful and long-lasting customer relationships.

Communication as a Medium of Spiritual Capital

Communicative value is manifested in the ability of employees to build relationships with various customer segments, from children to the elderly, from various socio-economic backgrounds. This communication skill is not just a technical skill, but reflects spiritual wisdom in understanding and responding to the emotional needs of customers.

Observations revealed that employees were able to code switch in communication, using formal language for certain customers and informal language for more familiar customers, without losing the essence and respect. This ability to adapt to communication reflects high emotional intelligence, which is one dimension of spiritual capital.

This effective communication practice also plays a role in conflict resolution and complaint handling. When customer dissatisfaction occurs, employees are able to handle

the situation with a calm and empathetic approach, focusing on problem solving rather than defensive behavior.

Operational Mechanism of Spiritual Capital in Employee Performance

An in-depth analysis of the application of spiritual capital reveals complex mechanisms of how spiritual values are translated into improved performance through multiple psychological and behavioral pathways.

Internalization of Values and Intrinsic Motivation

The process of internalizing spiritual values does not occur instantly, but rather through a gradual process facilitated by behavioral modeling from business owners and peer influence among employees. Longitudinal observations show that new employees initially engage in spiritual practices out of external compliance, but gradually develop a genuine appreciation for the values.

Internalization of spiritual values creates sustained intrinsic motivation, where employees perform excellence in service not because of fear of punishment or expectation of reward, but because of alignment with personal values. Similar sentiments were expressed by one employee, "Now I serve customers well not because I am told to, but because I feel it is the right thing to do."

This transformation from external compliance to intrinsic motivation creates sustained performance improvements that do not depend on constant supervision or external reinforcement. This is in line with Self-Determination Theory which emphasizes the importance of value alignment in building autonomous motivation.

Spiritual Capital as an Emotional Regulation Mechanism

Another significant finding is the role of spiritual capital as an emotional regulation mechanism in dealing with work stress and customer interaction challenges. Spiritual values serve as a coping resource that helps employees maintain calm and professionalism even in provocative situations.

Observations show that when faced with customer demands or complaints, employees use spiritual principles as a guide in responding to the situation. They do not take offense and are able to separate customer behavior from personal self-esteem. This emotional regulation ability prevents burnout and maintains job satisfaction in the long term.

Spiritual capital also plays a role in building resilience to adversity. When facing difficult times such as declining sales or operational difficulties, teams use shared spiritual values as a source of strength and motivation to overcome obstacles collectively.

Collective Efficacy through Shared Spiritual Values

The implementation of spiritual capital creates a strong sense of collective efficacy, where team members believe in their collective ability to achieve excellence. Shared spiritual values serve as a unifying force that reduces interpersonal conflict and increases the effectiveness of collaboration. Observational data shows that the decision-making process in time is based on spiritual principles, prioritizing the collective good over individual interests. When there is a dispute, the resolution process uses spiritual wisdom as a framework to find a mutually beneficial solution. The collective efficacy formed through spiritual capital creates a synergistic effect, where team performance exceeds the sum of individual performance. The team is able to handle busy hours with smooth coordination and maintain consistent service quality even in high-pressure situations.

The Impact of Spiritual Capital on Employee Performance Dimensions

A comprehensive evaluation of the impact of spiritual capital revealed significant improvements in all four dimensions of employee performance: quality, quantity, punctuality, and independence in working.Improving Service Quality through Spiritual Excellence

The implementation of spiritual capital resulted in an increase in service quality reflected in attention to detail, consistency in service delivery, and personalization in customer interactions. Employees not only focus on the technical aspects of the service, but also on the emotional experience created for customers.

Observations showed that employees pay attention to small details that make a big difference in the customer experience, such as remembering individual customer preferences, maintaining high standards of cleanliness, and serving food with aesthetic appeal. This awareness of quality is not the result of external monitoring, but an intrinsic drive towards excellence that stems from spiritual values.

The consistency of service quality is maintained even when there is no direct supervision, indicating that spiritual capital has become an internalized standard that guides behavior autonomously. This creates reliable service quality that is a distinctive competency of Nur Bakso MSMEs (Simanjuntak, 2023).

Optimizing Output Quantity through Efficient Teamwork

Spiritual capital contributes to increased output quantity through enhanced teamwork and efficient resource utilization. Shared values create seamless collaboration that minimizes waste in operational processes and maximizes productive capacity.

The team is able to handle increased customer volume without compromising service quality due to efficient division of labor based on mutual understanding and trust.

Employees are willing to take on additional responsibilities when needed and support colleagues who face difficulties, creating a flexible and responsive operational system.

Efficiency improvement is also reflected in reduced time for the customer service cycle, from order taking to food delivery. Streamlined processes based on spiritual principles of respect and responsibility create optimal workflow that benefits both business efficiency and customer satisfaction.

Punctuality as a Manifestation of Spiritual Discipline

Spiritual capital forms discipline and punctuality that are not only related to attendance, but also to commitment to service standards and promises to customers. Employees demonstrate consistent timeliness in work attendance, task completion, and service delivery. Discipline formed through spiritual capital is self-imposed rather than externally enforced, creating sustainable behavioral change that is not dependent on monitoring mechanisms. Employees understand that punctuality and reliability are expressions of respect for customers and colleagues. Punctuality in service delivery becomes a competitive advantage that is appreciated by customers, especially during lunch hour when time efficiency becomes a critical factor in customer satisfaction (Rizaldi, 2020).

Work Independence through Spiritual Empowerment

The implementation of spiritual capital resulted in significant increases in employee autonomy and self-direction. Employees were able to make independent decisions in customer service situations without constant guidance from supervisors, showing confidence and competence based on internalized spiritual principles.

This independence was reflected in proactive problem-solving behavior, where employees anticipated potential issues and took preventive actions without being told. They also showed initiative in suggesting improvements and implementing creative solutions to enhance customer experience.

Spiritual empowerment created a sense of ownership of business success, where employees acted as stakeholders rather than merely employees. This resulted in a higher level of care and commitment to organizational goals and long-term sustainability.

Dynamics of Spiritual Capital in the MSMEs **Ecosystem**

Holistic analysis reveals that spiritual capital in Nur Bakso MSMEs does not operate in isolation, but rather creates a dynamic ecosystem involving multiple stakeholders and reinforcing mechanisms.

Reciprocal Relationship with Customer Loyalty

The implementation of spiritual capital creates a virtuous cycle with customer loyalty, where authentic spiritual practices result in high customer satisfaction, which in turn reinforces employee motivation to maintain spiritual standards. Customers who experience genuine spiritual capital in service become advocates who promote MSMEs through word-of-mouth and repeat visits (Barrimi et al., 2013).

Positive customer feedback serves as external validation of spiritual practices, strengthening employee belief in the effectiveness of the approach they use. This creates a self-reinforcing cycle that is sustainable in the long term.

Relationships with regular customers develop beyond transactional to relational, where spiritual connections create emotional bonds that are resistant to competitive pressures. Customers do not easily switch to competitors even though there are price advantages, because the value they receive goes beyond economic utility.

Integration with Business Sustainability

Spiritual capital contributes to business sustainability through multiple mechanisms: cost reduction from employee retention, revenue enhancement from customer loyalty, and risk mitigation from ethical business practices. This integrated approach shows that spiritual capital is not only a moral imperative, but also a sound business strategy.

The long-term perspective inherent in spiritual values helps MSMEs make sustainable decisions rather than short-term opportunistic ones. This is particularly important for MSMEs that need to build reputation and customer base gradually to achieve long-term success (Alma et al., 2014).

Spiritual capital also functions as a risk management tool, where ethical practices and honest communication with stakeholders prevent potential conflicts or legal issues that can damage business reputation.

Community Impact and Social Capital

The implementation of spiritual capital in Nur Bakso MSMEs creates positive spillover effects on the surrounding community. MSMEs becomes a gathering place that facilitates social interaction and community bonding, contributing to social capital development in the area.

Employment opportunities created by MSMEs, combined with spiritual workplace culture, provide models for other local businesses about alternative approaches to human resource management. This is particularly relevant in the context of Bengkayang as a developing area that requires sustainable economic development models.

Spiritual capital in MSMEs also contributes to the preservation and promotion of local culture and spirituality values, creating a bridge between traditional values and

modern business practices. This is important for maintaining cultural identity while achieving economic progress.

The results of this study indicate that spiritual capital is a viable and effective approach to improving employee performance in the context of MSMEs, with implications that extend beyond individual business success to broader community development and cultural preservation (Rivai, 2009).

9. Conclusion

Based on the results of the study above, it can be concluded that the values upheld in the Nur Bakso business, namely Respect, Friendliness, Communicative, Trust, and Responsibility, can create spiritual capital that will be a very useful tool to increase the productivity of Nur Bakso employees both now and in the future. These principles of Respect, Friendliness, Communicative, Trust, and Responsibility are the basic foundations in supporting Spiritual Capital which is the result of the successful improvement of Nur Bakso Employee performance.

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EXPLORATION OF EMPLOYEE WORK MOTIVATION TO IMPROVE EMPLOYEE PERFORMANCE AT KSP CU PANCUR KASIH LEDO SERVICE PLACE

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Abstract

This study aims to explore employee work motivation in improving performance at KSP CU Pancur Kasih Tempat Pelayanan Ledo. The research method used is qualitative with a phenomenological approach. Data collection techniques include observation, in-depth interviews, and documentation. The research participants consisted of five employees with a work period of more than five years. The results of the study indicate that factors that influence work motivation include recognition, work environment, leadership style, and opportunities for development. Work motivation has been shown to have a positive impact on improving employee performance in terms of discipline, responsibility, and loyalty to the organization. This study provides recommendations for management to develop effective strategies in improving employee motivation and performance in a sustainable manner.

Keywords: *work motivation, employee performance, phenomenological approach*

1. Introduction

Human resources (HR) are an important element in an organization that cannot be separated from achieving institutional goals. In the midst of global competition, the challenge for organizations is not only in the aspects of technology and products, but also how to manage HR effectively. Employee work motivation is one of the main factors in determining the success of an organization. Work motivation is the drive from within an individual to work diligently, enthusiastically, and consistently in order to achieve organizational goals.

Performance plays a crucial role for an organization or company, as well as for the employees themselves. Therefore, employee performance effectiveness can be achieved if supported by work motivation. The current human resources needed are people who are able to adapt quickly, master technology and respond quickly to technological changes. Human resources who are unable to meet the demands of globalization tend to see work as a burden by doing it solely because of obligation, not because of encouragement or commitment, so they can be categorized as human resources with a low work ethic. The development of quality Human Resources (HR) in a company begins with the selection process of individuals who are able to carry out tasks according to their respective expertise with their fields of knowledge in the company. Human Resources, as owners, processors, managers, and users of knowledge, need facilities that can support the achievement of useful information to improve their knowledge. Thus, the development of human resources in an organization is needed, both for leaders and staff, in order to improve the quality of human resources (Hasibuan 2012).

Work motivation plays a very important role for every employee because it can increase their work enthusiasm. With motivation, employees are encouraged to work harder by maximizing all their potential and skills to achieve company goals (Khaeruman 2021). Work

motivation is a factor that drives or arouses enthusiasm for work, or in other words, as a trigger for work enthusiasm. Without motivation, an employee or employee cannot carry out their duties according to the standards set or even exceed those standards, because the driving factors in work are not met.

Employee performance is influenced by various factors such as leadership, work environment, compensation system, and work motivation itself. In the context of KSP CU Pancur Kasih Tempat Pelayanan Ledo, the decline in employee attendance and lack of productivity indicate problems related to work motivation. Based on attendance data in 2021, the average full employee attendance only reached 54.84%. This phenomenon shows the importance of further study of work motivation and its impact on performance.

This study was conducted to understand more deeply how work motivation is formed, the factors that influence it, and its implications for improving performance in the savings and loan cooperative environment, especially at the Ledo Service Center.

2. Literature Review

Work motivation can be defined as a series of forces originating from within and outside the individual that trigger enthusiasm, direction, and persistence in achieving work goals. This motivation shapes a person's work personality through attitudes, traits, mindsets, emotions, and values that are believed in. All of these elements will affect how individuals respond to tasks and responsibilities given by the organization. In other words, motivation is not just a desire to work, but is the energy that directs individuals to act correctly and in accordance with the expectations of the work environment.

According to Diawati, et al (2019) motivation is a series of attitudes related to how to encourage employee work enthusiasm, so that they are willing to work with full dedication and give all their abilities and skills to achieve company goals. According to Hardianto (2011) motivation is a concept that describes the forces within employees that initiate and direct behavior. Employees will be motivated to give their best contribution if the organization is able to meet their needs.

Herzberg (1959) proposed a two-factor theory, namely motivator factors (achievement, recognition, responsibility) and hygiene factors (working conditions, salary, interpersonal relationships). Motivator factors encourage job satisfaction, while hygiene factors prevent dissatisfaction. This theory emphasizes that job satisfaction and dissatisfaction are two separate things, not on the same spectrum. This means that eliminating dissatisfaction does not automatically increase satisfaction, so different approaches are needed to address each of these aspects.

According to Clayton Alderfer (1969) human needs are divided into three categories: Existence, Relatedness, and Growth. This theory states that if high-level needs are not met, individuals will refocus on lower needs (frustration-regression). By recognizing the primary needs in ERG theory, a person can be wiser in designing personal and professional strategies to achieve a more balanced and satisfying life. This theory also provides insight for leaders and managers of organizations in creating a work environment that supports individual growth and builds healthy and productive relationships in the workplace. Thus, ERG theory not only helps

individuals in meeting their needs but also provides benefits to the organization in achieving its long-term goals.

Employee performance is the work results that can be achieved by someone in carrying out their duties according to the responsibilities and roles given. Mangkunegara (2017) states that performance includes indicators such as loyalty, responsibility, work quality, and discipline. According to Brahmasari (2008) Performance is the success in achieving organizational goals, which can be manifested in the form of quantitative and qualitative work results, innovation, adaptability, reliability, and other aspects considered important by the organization. According to Fahmi (2016) in Hadiwijaya & Mintarsih (2021) Employee performance is the achievement obtained by an organization, both profit-oriented and non-profit, within a certain period of time.

Alderfer's ERG theory is also relevant because it divides human needs into three: existence, relatedness, and growth. Previous research shows that work motivation can be influenced by the work environment, leadership style, compensation, and development opportunities. Meanwhile, employee performance is defined as the work results achieved in carrying out their duties and responsibilities. Factors that influence performance include ability, motivation, work environment, and reward systems. Motivated employees will show higher loyalty, responsibility, and quality of work.

From the description above, it can be concluded that employee performance is the achievement of work results obtained by an individual in carrying out their duties and responsibilities in an organization. This performance reflects the effectiveness and efficiency of employees in completing their work within a certain period of time. Previous research by Cahyani & Alamsyah (2024) showed a positive relationship between work motivation and increased performance in the government sector. Similar results were found by Panggabean et al. (2022) in the cooperative environment. However, there is still a lack of in-depth qualitative studies that explore the personal experiences of employees in the context of cooperatives, especially in West Kalimantan.

3. Methodology

This study uses a qualitative method with a phenomenological approach, which focuses on the role of employee work motivation to improve employee performance at KSP CU Pancur Kasih, Ledo service location. According to Creswell, et al (2007) phenomenology is one of the five main methods used in qualitative research to understand an individual's subjective experience of a phenomenon. Phenomenology aims to explore human experience by exploring the meaning they give to an event or incident. So that it can understand the context of work motivation that can affect employee performance at KSP CU Pancur Kasih, Ledo service location. Thus, researchers can dig deeper into how work motivation is very important in an organization. This approach was chosen because it can explore employees' subjective experiences regarding work motivation and its impact on performance.

This research was conducted at CU Pancur Kasih Ledo Service Place, West Kalimantan. This location was chosen because of its relevance to the research topic regarding employee work motivation to improve employee performance and the availability of information needed to analyze employee work motivation at CU Pancur Kasih. The limitations of this study include a scope that is limited to employees at CU Pancur Kasih Ledo Service Place and does not include employees from other service places or other companies in the same group. In addition,

this study only focuses on employee work motivation to improve employee performance during the study.

Participants consisted of five employees with more than five years of service, selected using purposive sampling technique based on work experience criteria and direct involvement in service operations. employees of the CU Pancur Kasih division. These employees consist of one manager, one person in the financial transaction management section, one person working in credit and loan management, one person working in human resource development (HRD) and member education, and one person working in credit worthiness analysis and credit agreement binding. In addition, these participants are employees who have worked for a long time at KSP CU Pancur Kasih. The collection technique is the most important step in the study because it aims to obtain valid and reliable data. Data collection techniques are carried out through in-depth interviews, observations, and documentation. Interviews are conducted directly with semi-structured guidelines to dig deeper into the factors that influence work motivation. The validity of the data is tested using triangulation of sources, techniques, and time. Data analysis techniques include transcription, data reduction, coding, interpretation, presentation, and drawing conclusions.

4. Results and Discussion

The results of the study show that employee work motivation at KSP CU Pancur Kasih Tempat Pelayanan Ledo feels motivated in working when they receive recognition and appreciation from their superiors. Forms of appreciation such as gratitude, praise, or incentives for their contributions can increase self-confidence and work enthusiasm. In fact, employee involvement in the decision-making process and giving greater responsibility are forms of recognition that are highly appreciated, because they create a positive work atmosphere and strengthen a sense of belonging to the organization. In addition, a comfortable work environment and harmonious relationships between employees also support the creation of high work motivation. Open communication, mutual support, and a conducive atmosphere make employees more enthusiastic in carrying out their duties, while reducing stress levels and potential conflicts that can hinder productivity.

Another factor that greatly influences motivation is an open and supportive leadership style. Superiors who are able to be open to suggestions, provide direction with a persuasive approach, and become role models for their subordinates are considered able to create a sense of security, emotional support, and a sense of being involved in the organizational process. This has an impact on increasing employee loyalty and responsibility towards their work. In addition, the opportunity to develop oneself is also an important aspect in maintaining work enthusiasm. Through regular training, job rotation, and a clear career ladder system, employees feel that they are given space to grow and advance. This opportunity makes them feel cared for and increasingly motivated to show their best performance in order to get greater promotion opportunities in the future.

Employees who feel appreciated and have room to grow demonstrate more positive work behaviors, such as increased responsibility, commitment to tasks, and high discipline. They are more enthusiastic in achieving targets, more cooperative in teams, and show loyalty to the institution. In the context of CU Pancur Kasih TP Ledo, motivation has been shown to play a role in reducing absenteeism, improving service quality, and strengthening organizational culture based on SEJATI values (Solider, Empathy, Honest, Accountable, Resilient,

Innovative). This study confirms that an effective HR management strategy must include aspects of intrinsic motivation (recognition, sense of belonging, inner satisfaction) and extrinsic motivation (salary, facilities, career opportunities) in a balanced manner. This holistic approach is important to improve employee performance sustainably. In the context of microfinance institutions such as CU, where excellent service is highly prioritized, maintaining employee motivation is the key to long-term success.

These findings support Herzberg's theory that motivator factors play a major role in improving performance. The application of ERG theory is also reflected in the needs of participants for a decent existence (salary, security), good social relationships (work relationships), and growth (promotion opportunities). The practical implication of these results is the importance of organizations to pay attention to the motivational aspect in HR management. Increasing motivation can be done through training, giving awards, and creating a positive work culture.

5. Conclusion

Based on the results of in-depth interviews with a number of employees at KSP CU Pancur Kasih Tempat Pelayanan Ledo, it can be concluded that work motivation plays an important role in encouraging increased employee performance. This motivation is formed from various aspects that are interrelated and directly affect work enthusiasm and productivity. One important aspect that underlies work motivation is the fulfillment of basic employee needs, such as the provision of decent salaries, the availability of adequate work facilities, and the creation of a sense of security in the work environment. Fulfillment of these needs fosters a feeling of being appreciated and increases the drive to work optimally.

In addition, a harmonious working atmosphere, both in the relationship between co-workers and between employees and superiors, also helps create a comfortable working environment. This harmony creates positive collaboration and encourages employees to be more productive in carrying out their duties. Motivation is also strengthened through the opportunity to develop themselves and climb the career ladder. Employees feel more enthusiastic about working when they see opportunities to improve their skills and obtain better positions in the future. Recognition of work results is also an important element in strengthening work enthusiasm. Forms of appreciation such as selecting exemplary employees have a positive impact on pride and the desire to continue to provide the best contribution to the institution. Satisfaction with management policies is also reflected in the positive attitude of employees towards the institution, indicating that the strategies implemented in motivating have been effective. Even though faced with challenges such as target demands and the possibility of transfer, employees are able to see the situation as an opportunity to learn and develop, not as an obstacle.

Overall, the results of this study indicate that work motivation has a close relationship with increased performance. When employees feel motivated, they will work more optimally, show high loyalty, and behave professionally, so that they are able to support the achievement of organizational goals as a whole. Work motivation plays an important role in improving employee performance at KSP CU Pancur Kasih Tempat Pelayanan Ledo. Internal factors such as the desire to develop and commitment, as well as external factors such as leadership and work environment, are the main determinants. Motivated employees show loyalty, discipline, and high work quality. Cooperative management needs to design strategies to increase

motivation through reward programs, career development, and creating a supportive work environment. These findings also provide theoretical contributions in the context of work motivation research in microfinance cooperatives.

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THE IMPACT OF STORE ATMOSPHERE ON REPURCHASE INTENTION: THE MEDIATING ROLE OF TRUST

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Abstract

This study aims to analyze the influence of store atmosphere dimensions on repurchase intention in modern retail, with customer trust as a mediating variable. A quantitative approach was employed through a survey of 200 Budiman Swalayan consumers in Padang City, selected using purposive sampling. Data were collected using a Likert-scale questionnaire and analyzed using Partial Least Square (PLS)-based Structural Equation Modeling (SEM). The findings indicate that social and store design factors significantly affect customer trust, whereas ambient factors do not have a significant effect. Additionally, only social factors directly influence repurchase intention, while design and ambient factors do not show a direct significant effect. Customer trust significantly influences repurchase intention and mediates the relationship between social and design factors and repurchase intention. However, customer trust does not mediate the relationship between ambient factors and repurchase intention. These findings support the Theory of Planned Behavior (TPB) and Consumer Behavior Theory, emphasizing that customer trust is a key factor in shaping loyalty and repurchase decisions. The practical implications suggest that modern retail managers should focus on enhancing positive social interactions and optimizing store design to strengthen customer trust and increase retention.

Keywords**:** *store atmosphere, customer trust, repurchase intention, modern retail.*

1. Introduction

The retail sector plays a key role in fulfilling various consumer needs. This is closely related to the function of the retail system itself as a supplier of goods and services that are needed, demanded, and desired by society (Indayani et al., 2022). The term *retail* originates from the French word *retaillier*, which means "to cut off" or "to break bulk." In essence, it implies direct sales or services provided to consumers. Retail involves not only direct customer interaction but also encompasses the coordination of business activities from the planning and conceptualization or design of a product or service, through delivery, to post-sale services. The retail sector has made a significant contribution to economic growth in many countries and is considered one of the most dynamic and rapidly changing sectors globally (Sudarma, 2023).

The growth of modern retail stores has created increasingly intense competition among business actors, including in the city of Padang. In recent years, modern retail businesses have grown rapidly in the city. However, unlike many other Indonesian cities, Padang has implemented specific regulations restricting the entry of national retail chains such as Indomaret, Alfamart, and Giant. This policy is outlined in the Mayor of Padang Regulation No. 5 of 1999 concerning Anti-Monopoly Practices and Unfair Business Competition, which aims to protect local entrepreneurs and prevent domination by large-scale modern retailers (Sastra, 2023). As a result, the modern retail sector in Padang is dominated by local business actors,

most of whom operate on an individual or small-scale basis. This has created a more open competitive landscape where no single entity monopolizes the market.

In such a competitive environment, modern retailers must adopt more innovative business strategies to retain customers and enhance their loyalty. One key factor influencing customer loyalty is the store atmosphere. Store atmosphere comprises various elements such as interior design, lighting, cleanliness, scent, music, and product layout, all of which shape the customer's shopping experience (Ndengane et al., 2021). A well-designed store atmosphere can generate a pleasant shopping experience, increase customer comfort, and ultimately stimulate repurchase intentions. An appealing and conducive physical environment creates a positive impression in the minds of customers, making them feel comfortable, welcome, and inclined to return. Conversely, a poorly maintained store atmosphere, such as dim lighting, lack of cleanliness, or disorganized product layout, can undermine customer comfort and negatively influence their purchasing decisions (Aulia et al., 2025).

However, store atmosphere alone is insufficient to guarantee customer return. Another critical factor is customer trust. Trust serves as a fundamental element in building long-term relationships between consumers and retail businesses. It plays an essential role in the modern retail industry, especially in fostering sustainable customer relationships (Cardoso et al., 2022). Customer trust can be built through various factors such as quality of service, price transparency, and positive in-store experiences (Riwu et al., 2024). When customers perceive a retail store as reliable and consistently providing quality service, they are more likely to develop trust and repurchase from the store (Wahyuni, 2024).

Numerous studies have examined the relationship between store atmosphere and repurchase intention, including works by Muzakki & Sari (2023), Situmorang & Kumar (2022), and Soebandhi et al. (2020). However, there remains a research gap in understanding how trust functions as a mechanism within this relationship. Several prior studies indicate that store atmosphere enhances repurchase intention through increased customer comfort and satisfaction (Ali et al., 2022; Nuraeni & Ernawadi, 2024; Prastowo et al., 2023). Yet, trust as a mediating variable has received limited attention in the context of local modern retail. Among the few studies exploring trust as a mediator between store atmosphere and repurchase intention are those by Puspita et al. (2023) and Dinanti & Bharata (2023), though their findings diverge. Furthermore, existing studies have not comprehensively examined the individual dimensions of store atmosphere, such as ambient, design, and social aspects.

Grounded in the Theory of Planned Behavior (TPB) and Consumer Behavior Theory (CBT), this study aims to analyze the influence of store atmosphere dimensions on repurchase intention in modern retail, with trust as a mediating variable. Specifically, this study seeks to identify how components of store atmosphere, such as ambient factors (color, lighting, music, and cleanliness), design (ease of product location and attractive layout), and social elements (employee friendliness and appearance, social ambiance, and security), contribute to building customer trust, which in turn influences repurchase intention. The novelty of this research lies in its focus on the context of local modern retail in the city of Padang, which is governed by unique regulations limiting the presence of national retail chains, and in the use of trust as a mediating variable in the relationship between store atmosphere and repurchase intention. Additionally, this study provides academic contributions by thoroughly examining individual dimensions of store atmosphere, and offers practical insights for retail business actors in designing more effective marketing strategies to foster customer loyalty.

2. Literature review

2.1 Store atmosphere influences customer trust

A clean, aesthetically pleasing, and professionally managed retail environment enhances customers' sense of security and confidence in the quality of services offered (Lyu et al., 2022). According to the Theory of Planned Behavior (Ajzen, 1991), a favorable store atmosphere strengthens consumers' attitudes, shapes supportive subjective norms, and increases perceived behavioral control, which ultimately fosters trust in the store. A consciously managed atmosphere triggers sensory and psychological experiences that lead to positive evaluations of the retail environment (Lyu et al., 2022).

The ambient dimension, which includes lighting, aroma, cleanliness, and music, directly affects customers' emotional states (Ndengane et al., 2021). Efficient and structured store design improves navigability and reinforces impressions of professionalism (Ndengane et al., 2021). Social interactions with courteous and competent staff enhance emotional attachment and interpersonal trust (Saodin, 2021). When these elements are consistently managed, customers are more likely to perceive the store as trustworthy (Octavini & Wardana, 2024). Based on this reasoning, the following hypotheses are proposed:

H1. Ambient dimension has a significant positive effect on customer trust.
H2. Design dimension has a significant positive effect on customer trust.
H3. Social dimension has a significant positive effect on customer trust.

2.2 Store atmosphere influences repurchase intention

A well-maintained and comfortable shopping environment adds value to customers' perceptions and motivates them to return (Bohl, 2012). Within the TPB framework, a positive store atmosphere reinforces consumer attitudes and increases the intention to repeat purchasing behavior (Ajzen, 1991). Ambient elements such as lighting, colors, music, and fragrance create emotionally pleasant experiences (Ndengane et al., 2021). These factors elevate customer satisfaction and perceived value toward the store (Ndengane et al., 2021).

Thoughtful layout and product placement design reduce friction and improve shopping efficiency (Ndengane et al., 2021). Social aspects, including employee friendliness and a welcoming social atmosphere, strengthen emotional connections and foster customer loyalty (Saodin, 2021). When ambient, design, and social dimensions work synergistically, they result in a memorable shopping experience that increases repurchase behavior (Octavini & Wardana, 2024; Takwim et al., 2022). Accordingly, the following hypotheses are developed:

H4. Ambient dimension has a significant positive effect on repurchase intention.
H5. Design dimension has a significant positive effect on repurchase intention.
H6. Social dimension has a significant positive effect on repurchase intention.

2.3 Trust influences repurchase intention

Customers who trust a store are more likely to hold positive expectations regarding product and service quality (Thanki et al., 2022). In the TPB framework, trust enhances positive attitudes and increases perceived behavioral control in consumer decision-making (Ajzen, 1991). This confidence reduces perceived uncertainty and risk during the purchasing process (Ajzen, 1991). Trust also enables customers to feel secure and worry-free when choosing the store's products (Thanki et al., 2022).

Roy et al. (2024) distinguish between interpersonal trust in staff and institutional trust in the retail entity, both of which significantly influence repurchase intention. Hermansyah (2024) emphasizes that customers with high trust levels are more likely to remain loyal and ignore competing offers. Trust fosters emotional attachment, which reinforces the tendency to return and repurchase (Hermansyah, 2024). A long-term customer relationship emerges when

customers perceive that the benefits received are worth the resources spent (Musskopf et al., 2021). Thus, the following hypothesis is proposed:

H7. Trust has a significant positive effect on repurchase intention.

2.4 Trust mediates the influence of store atmosphere on repurchase intention

A positive experience with the store atmosphere establishes trust, which acts as a bridge toward repurchase intention (Vilnai-Yavetz et al., 2021). Within the TPB model, a pleasant shopping environment shapes favorable attitudes and increases the likelihood of trust forming as a basis for consumer decision-making (Ajzen, 1991). Ambient elements such as lighting and music offer calming sensory stimulation (Lyu et al., 2022). Efficient product layout and store design reinforce professionalism and shopping ease (Ndengane et al., 2021).

Social interactions with friendly and competent staff strengthen emotional bonds and customer engagement (Ndengane et al., 2021). Trusting customers are more likely to return and recommend the store to others (Dwivedi et al., 2023). Trust also reinforces subjective norms shaped by positive peer experiences and reduces perceived risks in purchasing decisions (Ajzen, 1991). When store atmosphere is effectively managed, the presence of customer trust significantly strengthens its influence on repurchase intention (Khan et al., 2022). Based on this framework, the following hypotheses are presented:

H8. Trust mediates the effect of the ambient dimension on repurchase intention.
H9. Trust mediates the effect of the design dimension on repurchase intention.
H10. Trust mediates the effect of the social dimension on repurchase intention.

The research model is illustrated as follows.

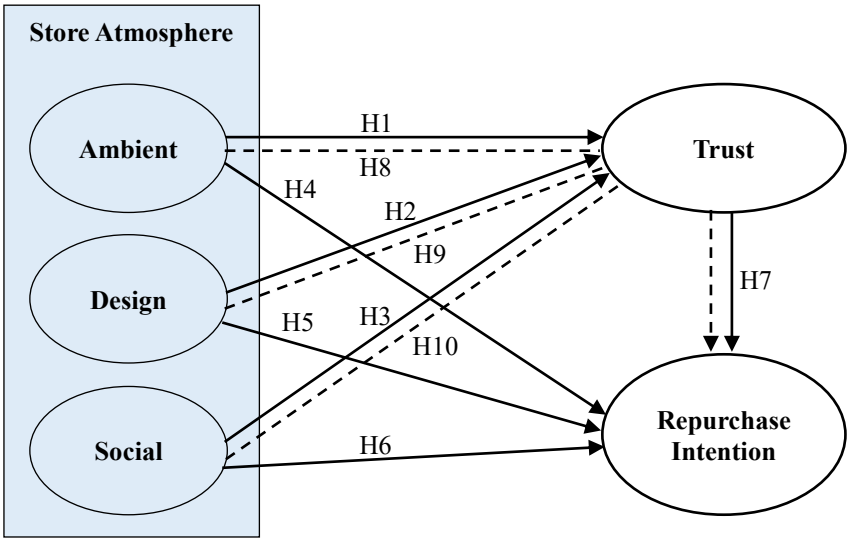

Figure 1. Research Model

3. Methodology

This study employed a positivist approach with a quantitative method to examine the causal relationships between independent and dependent variables. An explanatory approach was applied to explain the causal links among variables. The research was conducted in Padang City, with the unit of analysis being the modern retail store Budiman Swalayan during the period of June to August 2024. The data were collected from 200 Budiman Swalayan consumers selected using purposive sampling, based on the criteria of being over 17 years old,

officially registered as residents of Padang City, and enrolled as members of Budiman Swalayan. Sample distribution was carried out proportionally across each store branch based on the population size of members in each location.

Each research variable was measured using instruments adapted from previous studies, namely Ndengane et al. (2021) for store atmosphere, Cardoso et al. (2022) for customer trust, and Chatzoglou et al. (2022) for repurchase intention. Data were collected using a Likert-scale questionnaire ranging from 1 to 5, which was subsequently converted into numerical data for further analysis. Data collection was conducted through two methods: in-person (offline) with eligible respondents and online via Google Forms. After submission, the responses were verified to ensure alignment with the targeted sample criteria. The data were then analyzed using structural equation modelling (SEM) based on the partial least squares (PLS) approach with the assistance of SmartPLS software.

The data analysis consists of two stages: the evaluation of the measurement model (outer model) and the evaluation of the structural model (inner model). The measurement model evaluation aims to assess the relationship between constructs and their indicators through four main aspects: indicator reliability, convergent validity, discriminant validity, and internal consistency reliability. An indicator is considered reliable if its outer loading exceeds 0.7. Convergent validity is assessed using the average variance extracted (AVE), with a minimum threshold of 0.5. Discriminant validity is tested using the Fornell-Larcker Criterion, where the square root of a construct's AVE must be greater than its correlations with other constructs. Internal consistency reliability is evaluated using Cronbach's alpha and composite reliability (CR), with a reliability threshold of ≥ 0.60. This evaluation ensures that the model has adequate validity and reliability for further analysis, The structural model (inner model) evaluation is conducted to test the hypotheses, specifically to determine the significance of the influence of exogenous constructs on endogenous constructs, either directly or indirectly through mediating constructs (Hair Jr. et al., 2017).

4. Results and discussions

4.1 Results

The results of the measurement model evaluation are presented in the following tables.

Table 2. Results of the measurement model evaluation

Construct	*Outer Loadings*	AVE	*Cronbach's alpha*	CR
Ambient	0,868; 0,797; 0,877; 0,790	0,696	0,853	0,901
Design	0,834; 0,872; 0,882; 0,846	0,737	0,881	0,918
Social	0,918; 0,907; 0,951; 0,894	0,842	0,937	0,955
Trust	0,846; 0,840; 0,844; 0,847; 0,916; 0,867; 0,847	0,747	0,943	0,954
Repurchase Intention	0,901; 0,928; 0,929; 0,871	0,824	0,928	0,949

(Author's own, 2025)

Table 3. *Fornell-Larcker Criterion*

Construct	Ambient	Design	Social	Trust	Repurchase Intention
Ambient	0,834				
Design	0,814	0,859			
Social	0,665	0,649	0,918		
Trust	0,652	0,676	0,737	0,864	

Repurchase Intention	0,609	0,633	0,703	0,807	0,908

(Author's own, 2025)

The results of the measurement model evaluation presented in Table 2 indicate that all indicators within each construct exhibit good reliability, as evidenced by outer loading values exceeding the threshold of 0.70, with the lowest value being 0.790 in the Ambient construct. This suggests that each indicator contributes significantly to its corresponding construct. Convergent validity is also confirmed, with all constructs having AVE values above 0.50 (Ambient = 0.696; Design = 0.737; Customer Trust = 0.747; Repurchase Intention = 0.824; Social = 0.842), indicating that each construct sufficiently explains the variance of its indicators.

Furthermore, internal consistency reliability, as measured by Cronbach's alpha and composite reliability (CR), meets the minimum standard of 0.60: Ambient (α = 0.853; CR = 0.901), Design (α = 0.881; CR = 0.918), Customer Trust (α = 0.943; CR = 0.954), Repurchase Intention (α = 0.928; CR = 0.949), and the highest values are found in the Social construct (α = 0.937; CR = 0.955). According to the Fornell–Larcker criterion (Table 3), the square root of AVE for each construct (Ambient = 0.834; Design = 0.859; Social = 0.918; Customer Trust = 0.864; Repurchase Intention = 0.908) is greater than the correlations between constructs, confirming discriminant validity. Overall, the research model demonstrates adequate validity and reliability to be used for further analysis.

The results of the structural model evaluation are presented in the following tables.

Table 4. Hypothesis Testing Results

	Hypothesis	Correlation Coefficient	*p-values*	Result
H1.	Ambient → Trust	0,103	0,353	Rejected
H2.	Design → Trust	0,275	0,001	Accepted
H3.	Social → Trust	0,490	0,000	Diterima
H4.	Ambient → Repurchase Intention	0,022	0,781	Rejected
H5.	Design → Repurchase Intention	0,091	0,361	Rejected
H6.	Social → Repurchase Intention	0,198	0,015	Diterima
H7.	Trust → Repurchase Intention	0,585	0,000	Diterima
H8.	Ambient → Trust → Repurchase Intention	0,060	0,359	Rejected
H9.	Design → Trust → Repurchase Intention	0,161	0,002	Diterima
H10.	Social → Trust → Repurchase Intention	0,287	0,000	Diterima

(Author's own, 2025)

Based on the hypothesis testing results presented in Table 4, not all aspects of store atmosphere significantly influence customer trust or repurchase intention. The Ambient variable does not have a significant effect on either customer trust (β = 0.103; p = 0.353) or repurchase intention (β = 0.022; p = 0.781), thus hypotheses H1 and H4 are rejected. In contrast, the Design variable has a significant positive effect on customer trust (β = 0.275; p = 0.001), but no direct effect on repurchase intention (β = 0.091; p = 0.361), leading to the acceptance of H2 and the rejection of H5. The Social variable demonstrates a significant positive effect on both customer trust (β = 0.490; p = 0.000) and repurchase intention (β = 0.198; p = 0.015), thus both H3 and H6 are accepted.

Furthermore, customer trust has a significant positive effect on repurchase intention, with a coefficient of β = 0.585 (p = 0.000), confirming H7. In the mediation path testing, customer trust does not mediate the relationship between Ambient and repurchase intention (β = 0.060; p = 0.359), resulting in the rejection of H8. Conversely, customer trust significantly mediates the relationship between Design and repurchase intention (β = 0.161; p = 0.002) as well as

between Social and repurchase intention (β = 0.287; p = 0.000), thus H9 and H10 are accepted. Since Design does not have a significant direct effect on repurchase intention, the mediation is classified as full mediation. Meanwhile, as Social still has a direct effect on repurchase intention, the mediation is considered partial mediation.

4.2 Discussion

The findings of this study indicate that the social factor significantly influences the development of customer trust and encourages their intention to repurchase. Social interactions within the store, whether with staff or fellow customers, have been shown to play a crucial role in fostering trust, which ultimately contributes to customer loyalty. This finding aligns with the Theory of Planned Behavior (Ajzen, 1991), which posits that subjective norms, or the social influences from one's environment, are among the key determinants of an individual's attitudes and behavioral intentions. In the retail context, a positive social atmosphere can create a more enjoyable shopping experience and shape customers' perceptions of store credibility, thereby strengthening their intention to return.

Conversely, the ambient factor, which includes sensory elements such as lighting, fragrance, and background music, was found to have no significant effect on either customer trust or repurchase intention. This finding contrasts with several previous studies that suggested store atmospheric elements enhance shopping experience and encourage repeat purchases (Ali et al., 2022; Muzakki & Sari, 2023; Situmorang & Kumar, 2022; Soebandhi et al., 2020; Sucahoyo et al., 2022). This discrepancy may be attributed to the characteristics of the respondents in this study, the majority of whom were women in the young adult to middle-aged demographic. This group tends to be more influenced by functional and social aspects of the shopping experience rather than purely sensory elements (Muhammad et al., 2014).

In addition to the social factor, the study also found that store design significantly influences customer trust. Good design, including a comfortable layout, appealing aesthetics, and easy in-store navigation, can enhance customers' confidence in the quality of services and products offered. However, design does not directly contribute to repurchase intention. Rather, its influence on repurchase intention occurs through the trust that is first established. This suggests that customers view visual and functional aspects of the store as factors that strengthen their confidence in the store's credibility, which in turn fosters loyalty. This result is consistent with prior studies which stated that retail environment design enhances store image and builds customer trust (Dinanti & Bharata, 2023; Minerva & Kusumowidagdo, 2024; Seong & Kim, 2022; Septiani et al., 2020).

Furthermore, the study confirms that customer trust serves as a mediator in the relationship between both store design and repurchase intention, as well as between social factors and repurchase intention. In other words, trust functions as a key element that bridges the influence of the store environment on customers' decisions to continue shopping at the same place. In Consumer Behavior Theory, trust is one of the primary factors affecting customer loyalty (Hoyer et al., 2021). High levels of trust not only drive repeat purchases but also increase the likelihood that customers will recommend the store to others (Cardoso et al., 2022). However, the study did not find any mediating effect of trust in the relationship between ambient factors and repurchase intention. This further reinforces the conclusion that ambient elements do not play a critical role in building customer loyalty in the context of this study. Customers appear to prioritize social and design aspects over sensory ambiance when evaluating their retail experiences.

Theoretically, these findings strengthen the Theory of Planned Behavior by demonstrating that subjective norms, in the form of social interactions in the store, play a vital role in shaping both trust and customers' intention to repurchase. Additionally, the study contributes to

Consumer Behavior Theory by highlighting that customer trust serves as a mediating factor linking the physical store environment to customer loyalty. This research also enriches the literature on store atmosphere in the modern retail context by demonstrating that not all atmospheric elements, such as ambient factors, directly impact customer loyalty. Moreover, it offers a new perspective on store design by showing that good design not only enhances the shopping experience directly but more importantly builds customer trust that subsequently drives loyalty. Thus, the study provides fresh insight that, in managing the retail environment, social and design aspects contribute more to fostering customer loyalty than ambient elements.

These findings also have several practical implications for modern retail store managers. First, managers should improve the quality of in-store social interactions by ensuring that staff provide friendly, responsive, and professional service. Staff training in communication and customer service can be a crucial investment in building customer trust. Additionally, creating an environment that facilitates positive interactions among customers, such as seating areas or small community spaces, can enhance comfort and loyalty. Second, store design should focus on comfort and functionality. A clear layout, easy accessibility, and appealing aesthetics can boost customers' positive perceptions of the store. The use of color, lighting, and other visual elements should be designed to convey professionalism and trustworthiness. Third, even though ambient factors were not found to significantly impact loyalty, they can still be used as supporting elements to create a pleasant shopping experience. Fourth, retail marketing strategies should emphasize social and design aspects over ambient atmosphere. Marketing campaigns can focus on community-building and in-store social interactions, such as special events, workshops, or customer meetups, which can strengthen brand-customer relationships and increase trust in the store.

5. Conclusion

Based on the findings, social factors play the most influential role in building customer trust and enhancing loyalty in modern retail stores, especially in Padang City. Store managers should focus on improving employee service quality, creating a welcoming environment, and encouraging positive customer interactions. Well-designed store layouts also enhance customer perceptions and trust, while ambient elements like lighting and music were not found to significantly influence loyalty. Thus, store atmosphere can support the shopping experience but should not be the primary focus in building trust and loyalty.

Marketing strategies that highlight social engagement and effective store design are more effective for customer retention than those relying solely on sensory elements. Retailers should enhance customer interaction, optimize store design, and provide meaningful shopping experiences to gain competitive advantage. Future research should involve more diverse demographic samples and consider mixed-method approaches to explore psychological drivers of trust and repurchase intention. Advanced analytical models and external factors like retail digitalization and e-commerce should also be examined to understand their interaction with physical store atmospheres in shaping customer loyalty.

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THE DETERMINANTS OF CASH HOLDING: EVIDENCE FROM PROPERTY AND REAL ESTATE COMPANIES LISTED ON THE INDONESIA STOCK EXCHANGE

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Abstract

This study was conducted to examine the factors that influence cash holding in property and real estate sector companies. These factors include leverage, cash flow, firm size, liquidity, and profitability. The population used by researchers in this study is property and real estate sector companies listed on the Indonesia Stock Exchange for the 2018-2023 period. The sample used by researchers in this study was 174 data using the purposive sampling method. In addition, this study used regression analysis in hypothesis testing. The results of this study show that firm size has a positive effect on cash holding, while other variables (leverage, cash flow, liquidity, and profitability) have no influence on cash holding. This research can be used as input for the firms to consider in optimizing cash holding so that it can increase the value of the firm itself.

Keywords**:** *cash holding, leverage, cash flow, firm size, liquidity, profitability*

1. Introduction

The increasingly competitive business environment demands companies to continuously grow and enhance their operational activities to achieve their main objective–maximizing shareholder wealth (Kusumawati et al., 2020). Financial managers must also understand that the primary goal of a company is to increase its firm value (Maulana et al., 2022).

Determining a company's cash holding level is a critical decision for financial managers to enhance the firm's value in the eyes of investors. Companies must optimize the available cash to avoid financial difficulties in operations (Alicia et al., 2020). Almustafa and Kalash (2022) stated that managing capital structure and cash holdings based on a trade-off between costs and benefits will enhance operating cash flows, which play a crucial role in creating shareholder value.

Keynes, as cited in Simanjuntak and Wahyudi (2017), identified three motives for cash holding. (1) Transaction motive: Holding cash to meet short-term cash inflow and outflow needs. (2) Precautionary motive: Holding cash to cover unforeseen future obligations. (3) Speculative motive: Holding cash to take advantage of potential interest rate increases or investment opportunities.

To determine an ideal level of cash holding, managers can refer to the company's internal factors via financial statements, which serve as the fundamental guide for financial decision-making (Santioso & Daryanto, 2023).

This study replicates Almustafa and Kalash's (2022) work on cash reserves and financial leverage in MENA markets and builds on Maulana et al. (2022), focusing on cash holding in consumer goods companies. However, this research differs in its variables, model, and object of study, targeting IDX-listed property and real estate companies from 2018 to 2023.

2. Literature review

2.1 Trade-off theory

This theory explains that companies tend to use debt as a source of external financing because it is considered the cheapest option to achieve their long-term goals (Gunadhi and Putra, 2019). The use of debt provides benefits in the form of tax savings (tax shield), making it an attractive alternative in the company's financing structure.

However, the greater the use of debt, the higher the risk that the company must bear. Therefore, according to Septiani and Suaryana (2018), companies with high risk should limit their use of debt to reduce the risk of bankruptcy. Companies with high risk tend to have difficulty obtaining loans from creditors because they are considered risky in fulfilling their obligations. In this situation, companies will minimize the use of debt and maintain sufficient cash and cash equivalents to maintain financial stability.

2.2 Pecking order theory

According to this theory, companies prefer internal financing over external funding (Zutter & Smart, 2022). If internal funds are insufficient, they prefer debt issuance over equity, since issuing equity is more costly (Saif-Alyousfi et al., 2020).

Additionally, according to Lestari and Wirawati (2021), companies tend to prioritize funding sources based on risk preference, starting from the lowest to the highest. Internal funds are seen as a lower-risk funding source, making them more preferred than debt, which carries relatively higher risk. This sequence indicates that funding decisions are not solely based on cost but also on the associated risk level.

2.3 Cash holding

Cash holding refers to the cash available to a company that can be used for investments or distributed to shareholders (Margaretha & Dewi, 2020). It indicates a company's ability to meet obligations on time (Romadhoni et al., 2018). Therefore, the existence of cash is an important indicator in maintaining the company's financial stability.

Cash holdings can be measured using the ratio of cash and cash equivalents to total company assets (Almustafa and Kalash, 2022). Thus, it can be concluded that cash holdings describe the proportion of cash and cash equivalents held by a company to finance business activities, such as making investments and meeting financial obligations.

2.4 Leverage and cash holding

Leverage is a tool for measuring the extent to which a company uses debt to finance its assets (Silaen and Prasetiono, 2017). Leverage can be measured using the Debt to Asset Ratio (DAR), which is a ratio that shows the comparison between a company's total debt and total assets (Almustafa and Kalash, 2022).

Thus, it can be concluded that leverage reflects the composition of debt usage as a source of funds used to finance company assets, with the expectation of increasing potential profits for shareholders. However, a high level of debt will also impact cash requirements, as the company must provide funds to pay interest on the debt (Alicia et al., 2020).

H_1: there is an effect of leverage on cash holding in property and real estate companies listed on the Indonesia Stock Exchange for the 2018-2023 period.

2.5 Cash flow and cash holding

Cash flow is the inflow and outflow of cash from a company during a certain period (Mawarti et al., 2020). This cash flow is an important element because it provides information about the company's financial condition, both in terms of revenue and expenditure (Basheer, 2014). To measure cash flow, a formula comparing pre-tax profit plus depreciation to the company's total assets can be used (Almustafa and Kalash, 2022).

Thus, it can be concluded that cash flow reflects the financial condition of a company derived from business activities. Healthy cash flow is an important indicator in supporting operations and investments. According to Powell (2018), companies with investment opportunities are advised to hold large amounts of cash to anticipate future cash flow uncertainties. Thus, effective cash flow management is key for companies to maintain stability and meet investment needs.

H_2: there is an effect of cash flow on cash holding in property and real estate companies listed on the Indonesia Stock Exchange for the 2018-2023 period.

2.6 Firm size and cash holding

Company size is a scale used to indicate the size of a company based on various approaches, such as total assets, sales, and equity value (Elnathan and Susanto, 2020). This size can be grouped into three main categories, namely large, medium, and small companies (Astuti et al., 2020). Company size can be measured using the natural logarithm of total assets (Alicia et al., 2020).

Thus, it can be concluded that company size reflects the scale of a business entity based on internal and external factors. Larger companies tend to have more cash due to their larger assets and higher income from operational activities (Aftab et al., 2018). However, findings from Flugum et al. (2021) show that large companies actually rely more on loans as a source of funding, which can ultimately result in relatively less cash.

H_3: there is an effect of firm size on cash holding in property and real estate companies listed on the Indonesia Stock Exchange for the 2018-2023 period.

2.7 Liquidity and cash holding

Liquidity is a ratio used to measure a company's ability to meet its short-term obligations (Santioso and Daryatno, 2023). These short-term obligations include obligations to external and internal parties (Batuman et al., 2022). Liquidity can be measured by comparing net working capital, which has been reduced by cash and cash equivalents, to the company's total assets (Almustafa and Kalash, 2022). Thus, liquidity reflects a company's ability to meet its obligations using its current assets.

An increase in net working capital can lead to an increase in the company's cash balance, thereby strengthening liquidity (Sari and Hastuti, 2020). However, according to research conducted by (Simanjuntak and Wahyudi, 2017), if a company has low net working capital, the high financing needs from debt to meet working capital requirements can actually lead to an increase in cash due to loan disbursements.

H_4: there is an effect of liquidity on cash holding in property and real estate companies listed on the Indonesia Stock Exchange for the 2018-2023 period.

2.8 Profitability and cash holding

Profitability is a measure of a company's ability to achieve its main objective, which is to generate profits (Aftab et al., 2018). Profitability reflects the relationship between income and costs arising from the use of company assets, both current assets and fixed assets (Flugum et al., 2021). One of the tools used to assess the level of profitability is Return on Assets (ROA), which is a ratio that compares profit before interest and taxes with the total assets owned by the company (Almustafa and Kalash, 2022).

Thus, profitability can be defined as a company's ability to generate profits from the optimal use of assets in its operations. Companies with high profitability tend to have larger cash balances because increased profits will add to the company's cash (Simanjuntak and Wahyudi, 2017). However, high profitability also indicates good company performance and can encourage companies to invest, so companies will not hold large amounts of cash (Aftab et al., 2018).

H_5: there is an effect of profitability on cash holding in property and real estate companies listed on the Indonesia Stock Exchange for the 2018-2023 period

3. Methodology

The population includes property and real estate firms listed on IDX during 2018–2023. Out of 93 listed companies, 29 were selected using purposive sampling, totaling 174 data points.

Table 1

Criteria for Sample Selection

Criteria for Sample Selection	Total
Property and Real Estate companies consistently listed on the IDX during 2018-2023	45
Property and Real Estate companies that released annual reports during 2018-2023	42
Outlier data	(13)
Property and Real Estate sector companies that meet the criteria	29
Period (2018-2023)	6
Data	174

3.1. Cash holding

Cash holding refers to the cash held by a company as available funds for investment in physical assets, with the returns distributed to investors (Fajar and Retno, 2024). According to Almustafa and Kalash (2022), cash holding is measured using the following formula:

$$\textbf{\textit{Cash holding}} = \frac{\textbf{\textit{Cash and equivalents}}}{\textbf{\textit{Total assets}}}$$

3.2. Leverage

Leverage is a tool used to measure the extent to which a company utilizes debt to finance its assets (Silaen and Prasetiono, 2017). According to Almustafa and Kalash (2022), leverage is measured using the debt to asset ratio with the following formula:

$$\textbf{\textit{Leverage}} = \frac{\textbf{\textit{Total liabilities}}}{\textbf{\textit{Total assets}}}$$

3.3. Cash flow

Cash flow refers to the inflow and outflow of cash within a company over a specific period (Kartikahardi et al., 2017). It is an essential element that serves to provide information about a company's financial condition, including both incoming and outgoing cash (Basheer, 2014). According to Gunawan (2016), cash flow can be calculated using the following formula:

$$\textit{Cash flow} = \frac{\textit{EBT} + \textit{Depreciation}}{\textit{Total assets}}$$

3.4. Firm size

Firm size is a scale used to determine the size of a company based on various aspects such as total assets, sales volume, and equity value (Elnathan and Susanto, 2020). It can be classified into three categories: large companies, medium-sized companies, and small companies (Restuwulan, 2013). According to Saniamisha and Jin (2019), firm size can be measured using the following formula:

$$\textit{Firm size} = \textit{Ln (Total assets)}$$

3.5. Liquidity

Liquidity is a ratio that measures a company's ability to meet its short-term obligations (Hanafi and Halim, 2016). These short-term obligations include liabilities to both external and internal parties of the company (Kasmir, 2014). According to Suherman (2017), liquidity can be measured using the following formula:

$$\textit{Liquidity} = \frac{\textit{Net working capital - Cash and equivalents}}{\textit{Total assets}}$$

3.6. Profitability

Profitability is a tool used to measure a company's ability to achieve one of its main objectives, which is to generate profit (Ali et al., 2016). It reflects the relationship between revenue and expenses resulting from the use of the company's assets, including both current and fixed assets (Gitman and Zutter, 2015). According to Almustafa and Kalash (2022), profitability can be measured using the following formula:

$$\textit{Profitability} = \frac{\textit{EBIT}}{\textit{Total assets}}$$

4. Results and discussions

Table 2

Descriptive Statistics

	CASH HOLDING	DEBT TO ASSET RATIO	CASH FLOW	FIRM SIZE	LIKUIDITAS	RETURN ON ASSET
Mean	0.060138	0.355800	0.042505	29.26437	0.151662	0.037390
Maximum	0.224397	0.928737	0.290157	31.83314	0.940564	0.277653
Minimum	0.000246	0.002312	-0.111215	24.67501	-0.47956	-0.143559
Std. Dev.	0.052780	0.219988	0.050334	1.658468	0.223775	0.049509

Source: Results of Data Processing Eviews 10

The cash holding has an average value of 0.60138, a maximum value of 0.224697 which is obtained by PT Duta Pertiwi Tbk., a minimum value of 0.000246 which is obtained by PT

Bumi Benowo Sukses Sejahtera Tbk. The company's DAR has a maximum value of 0.928737 which obtained by PT Repower Asia Indonesia Tbk and a minimum value of 0.002312 which obtained by PT Repower Asia Indonesia Tbk. The company's cash flow has a maximum value of 0.290157 which obtained by PT Indonesian Paradise Property Tbk and a minimum value of -0.111215 which obtained by PT Lippo Karawaci Tbk. The firm size has a maximum value of 31.83314 which obtained by PT Bumi Serpong Damai Tbk and a minimum value of 24.67501 which obtained by PT Repower Asia Indonesia Tbk. The company's liquidity has a maximum value of 0.940564 which obtained by PT Repower Asia Indonesia Tbk and a minimum value of -0.47956 which obtained by PT Modernland Realty Tbk. The ROA shows the firm's profitability which has a maximum value of 0.277653 achieved by PT Indonesian Paradise Property Tbk., and a minimum value of -0.143559 achieved by PT Lippo Karawaci Tbk.

Table 3

Regression Equation

Variable	Coefficient	t-Statistic	Prob.
DEBT_TO_ASSET_RATIO	0.030000	1.271787	0.2056
CASH_FLOW	-1.152483	-1.407962	0.1614
FIRM_SIZE	0.015307	2.477931	0.0144
LIKUIDITAS	-0.005857	-0.303406	0.7620
RETURN_ON_ASSET	1.338570	1.659676	0.0992
C	-0.398673	-2.153075	0.0330

Source: Results of Data Processing Eviews 10

Based on table 3, there is a multiple regression equation from this study, as follows:

CASH HOLDING = -0.398673 + 0.030000DEBT_TO_ASSET_RATIO - 1.152483CASH_FLOW + 0.015307FIRM_SIZE - 0.005857LIKUIDITAS + 1.338570RETURN_ON_ASSET + e

The results of the first hypothesis test indicate that H_1 is rejected. Therefore, leverage has no effect on cash holding. The level of debt held by a company does not influence the amount of cash it holds. A company with a high level of debt tends to rely more on external financing, thus reducing the need to consider how much cash it holds (Octavian et al., 2022). These findings are consistent with the studies of Kusumawati et al. (2020) and Simanjuntak and Wahyudi (2017). However, they are not in line with the findings of Santioso and Daryanto (2023), Maulana et al. (2022), Almustafa and Kalash (2022), Oktafiana and Hidayat (2022), Batuman et al. (2022), Flugum et al. (2021), and Sari and Hastuti (2020).

The results of the second hypothesis test indicate that H_2 is rejected. Therefore, cash flow has no effect on cash holding. Companies with sufficient free cash flow are more likely to distribute dividends to their shareholders, thus opting not to increase their cash holdings (Irawati, 2018). These findings are consistent with the study by Rini et al. (2022). However, they are not consistent with the studies by Aftab et al. (2018), Sethi and Swain (2019), Diaw (2021), and Batuman et al. (2022).

The results of the third hypothesis test indicate that H_3 is accepted. Therefore, there is a positive influence of firm size on cash holding. Larger companies tend to hold more cash because they possess greater assets and generate higher transaction revenues, which in turn increases the amount of cash retained (Aftab et al., 2018). These findings are consistent with the studies conducted by Batuman et al. (2022), Diaw (2021), and Alicia et al. (2020). However, they contradict the findings of Almustafa and Kalash (2022), Flugum et al. (2021), and Sethi and Swain (2019).

The results of the fourth hypothesis test indicate that H_4 is rejected. Therefore, liquidity has no effect on cash holding. Companies with high levels of debt financing do not need to hold large amounts of cash, as debt can serve as a substitute to finance transactions and various business activities (Rahman, 2020). These findings are consistent with the study by Aulia (2020). However, they contradict the findings of Astuti et al. (2020), Aftab et al. (2018), Batuman et al. (2022), Flugum et al. (2021), and Sari and Hastuti (2020).

The results of the fifth hypothesis test indicate that H_5 is rejected. Therefore, profitability has no effect on cash holding. This is because companies tend to prefer using retained earnings as additional capital (Aulia, 2020). These findings are consistent with the studies by Levina and Sha (2021) and Namirah (2022). However, they contradict the findings of Almustafa and Kalash (2022), Oktafiana and Hidayat (2022), Sari and Ardian (2019), Angelia and Dwimulyani (2019), and Simanjuntak and Wahyudi (2017).

5. Conclusion

This study was conducted to obtain empirical evidence regarding the influence of independent variables, including leverage, cash flow, firm size, liquidity, and profitability, on the dependent variable, namely cash holding, in property and real estate companies listed on the Indonesia Stock Exchange during the period 2018–2023. The results of the study show that firm size has a positive effect on cash holding, while the other variables (leverage, cash flow, liquidity, and profitability) have no significant effect on cash holding. This research is expected to provide information to companies regarding the factors that might affect cash holding so that companies can evaluate and improve company performance to achieve the company's main goals. For investors, this study can serve as a consideration in the investment decision-making process. Investors can use the findings of this research to more accurately assess the potential of a company. Recommendations for further studies might focus on cash holding to initiate comparative studies and use other variables, such as growth opportunity and capital expenditure to measure how capable in managing companies' cash holding.

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SUPPLY CHAIN COLLABORATION AND COLLABORATIVE ADVANTAGE DRIVERS OF HOSPITAL PERFORMANCE: THE MODERATING ROLE OF GOVERNMENT SUBSIDIES

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Abstract

This study investigates the interrelationships between supply chain collaboration (SCC), collaborative advantage (CA), and hospital performance (HP) among Class C hospitals in Java, Indonesia, with particular attention to the moderating role of government subsidies (GS). By employing Partial Least Squares Structural Equation Modeling (PLS-SEM), the research evaluates how collaborative practices influence strategic capabilities and organizational outcomes in healthcare institutions. The findings demonstrate that supply chain collaboration contributes significantly to the development of collaborative advantage, particularly through mechanisms such as joint planning, resource sharing, and inter-organizational trust. However, the direct effect of supply chain collaboration on hospital performance is negative, indicating that without proper alignment, collaboration may lead to inefficiencies or fragmented execution. Collaborative advantage emerges as a key driver of hospital performance, underscoring its role as a strategic mediator in enhancing service quality and operational effectiveness. Moderation analysis reveals that government subsidies significantly reinforce the relationship between supply chain collaboration and collaborative advantage. However, the moderating effects of subsidies on the links between supply chain collaboration and hospital performance, and between collaborative advantage and hospital performance, are not statistically significant. These findings highlight that while government support can enhance collaborative capabilities, its impact on performance depends on institutional readiness and governance structures. To improve hospital performance in resource-constrained settings, healthcare leaders must combine financial support with internal capability development, strategic alignment, and consistent policy implementation.

Keywords*: collaborative advantage, hospital performance, supply chain collaboration, government subsidies, PLS-SEM.*

1. Introduction

The COVID-19 pandemic accelerated a fundamental transformation in healthcare systems, compelling hospitals to adopt more collaborative and digital strategies to maintain competitive operational performance (Widodo et al., 2024; Yu et al., 2024). Amid this disruption, the urgency to develop collaborative advantage has become increasingly evident as a strategic source of value creation across Indonesia's healthcare landscape. Collaborative advantage refers to the added value generated through synergy among actors especially via digital service integration, supply chain collaboration, and technological adoption (Liu et al., 2023; Al-Amin et al., 2024).

This study examines six key hypotheses from the structural model: the effect of supply chain collaboration on collaborative advantage (H1), the effect of supply chain collaboration on hospital performance (H2), the effect of collaborative advantage on hospital performance (H3). Additionally, it investigates the moderating effect of government subsidies on three strategic pathways: between supply chain collaboration and collaborative advantage (H4),

supply chain collaboration and hospital performance (H5), and collaborative advantage and hospital performance (H6).

Before assessing the structural model, the study tested the validity and reliability of the measurement model. All constructs demonstrated acceptable internal consistency, with composite reliability values above 0.70 and AVE values exceeding 0.50 confirming convergent validity (Hair et al., 2021). Discriminant validity was also established using Fornell-Larcker and HTMT criteria, ensuring the distinctiveness of each construct.

The structural model was tested using Partial Least Squares Structural Equation Modeling (PLS-SEM), which revealed the strength and statistical significance of each hypothesized relationship. Results show that collaborative advantage plays a pivotal mediating and outcome role, significantly impacting hospital performance consistent with the findings of Widodo et al. (2024) and Shen et al. (2024). The path from Supply Chain Collaboration (SCC) to Collaborative Advantage (CA) (H1) aligns with the view that inter-organizational coordination enables hospitals to build mutual trust, share knowledge, and develop joint capabilities that are essential for achieving collaborative advantage (Cao & Zhang, 2011; Liu et al., 2023). Furthermore, the relationship between SCC and Hospital Performance (HP) (H2) reflects the operational reality in resource-constrained hospitals, where collaboration enhances supply availability, process integration, and service responsiveness factors that significantly impact hospital outcomes (Widodo et al., 2024; Shen et al., 2024). Lastly, the positive effect of collaborative advantage on hospital performance (H3) supports the argument that hospitals with high levels of collaboration are better positioned to implement innovation, improve care quality, and strengthen institutional reputation (Al-Amin et al., 2024; Liu et al., 2023).

Moderation analysis provides additional insights: government subsidies do not exert a uniform influence. Instead, their effects depend on the organizational context, selectively amplifying or dampening key relationships (Zhou, 2022; Liu et al., 2023). In public hospitals, subsidies often act as compensation for bureaucratic rigidity and limited institutional flexibility but may not lead to improved performance unless accompanied by adaptive managerial strategies.

In sum, this analysis supports the hypotheses that collaborative strategies enabled by supply chain collaboration and properly designed subsidy mechanisms can significantly enhance competitive advantage and long-term performance across Indonesian hospitals.

2. Literature review

2.1 Supply Chain Collaboration and Collaborative Advantage

Supply chain collaboration (SCC) is foundational for service continuity, particularly in resource-constrained healthcare systems. SCC involves inter-organizational coordination to ensure effective resource flows, information transparency, and synchronized service delivery (Cao & Zhang, 2011). In Indonesian hospitals, SCC supports joint procurement processes, real-time inventory monitoring, and responsive emergency logistics especially vital for Class C hospitals with limited internal resources. Such collaborative practices reduce redundancies and operational delays, thereby laying the groundwork for the emergence of collaborative advantage (CA).

The development of CA through SCC is closely linked to relational mechanisms such as mutual trust, shared accountability, and aligned goals. According to Shen et al. (2024), hospitals that engage in joint planning and cross-institutional performance tracking are more likely to cultivate durable partnerships and improve knowledge exchange across boundaries.

Widodo et al. (2024) emphasize that trust-based collaboration strengthens integration between internal departments and external suppliers, which in turn accelerates innovation and process improvement within hospital operations. When SCC is effectively institutionalized, hospitals can transition from transactional supplier relationships to strategic alliances that generate shared value.

Additionally, SCC nurtures an environment conducive to joint learning and adaptive capabilities. Hospitals involved in long-term collaborative supply chain practices often benefit from increased agility, resource optimization, and better alignment with evolving healthcare demands. Liu et al. (2023) argue that CA emerges when structural collaboration is supported by digital integration and learning routines between partners. In Indonesia, SCC has allowed smaller hospitals to leverage the logistical strength of partners and external platforms to co-create innovations, thus reinforcing competitive positioning. Therefore, SCC acts as both an enabler and a prerequisite for collaborative advantage in achieving sustainable healthcare excellence.

2.2 Supply Chain Collaboration and Hospital Performance

Supply Chain Collaboration (SCC) has emerged as a critical component of hospital strategic management, particularly in enhancing operational efficiency and service quality. SCC refers to the coordinated efforts among hospitals, suppliers, and other healthcare stakeholders to align supply and demand, share critical information, and integrate logistics functions (Cao & Zhang, 2011). In the healthcare context, SCC supports accurate forecasting of medical supplies, streamlined procurement, and timely distribution of essential resources all of which directly affect hospital performance outcomes such as service availability, patient satisfaction, and cost control (Widodo et al., 2024; Shen et al., 2024).

The effectiveness of SCC depends on trust, transparency, and the level of information sharing between collaborating entities. Hospitals that establish strong collaborative ties with external partners tend to reduce redundancy, eliminate bottlenecks, and enhance service responsiveness. Studies by Liu et al. (2023) and Yu et al. (2024) confirm that SCC improves decision making accuracy and reduces the risk of supply disruption, particularly during emergencies like the COVID-19 pandemic. These benefits contribute directly to hospital performance by improving service continuity, supporting patient safety and optimizing resource utilization.

Moreover, SCC facilitates long-term strategic benefits through integration with digital platforms and performance monitoring systems. Hospitals leveraging digital tools to manage collaborative supply networks have demonstrated higher agility, faster adaptation to demand shifts, and improved stakeholder coordination (Alabdaly et al., 2024). In developing healthcare systems like Indonesia, SCC is instrumental in bridging systemic resource gaps, particularly in Class C hospitals that often face logistical and financial constraints. Therefore, strong supply chain collaboration is not merely operational, but a strategic driver of sustained hospital performance.

2.3 Collaborative Advantage and Hospital Performance

Collaborative advantage (CA) in the healthcare sector refers to the value generated through strategic alliances and resource integration across stakeholders. As posited by Liu et al. (2023), CA plays a pivotal role in enhancing service innovation, information sharing, and patient-centered outcomes. In Indonesia, where fragmentation in healthcare provision is common, achieving CA leads to better hospital agility, responsiveness, and performance metrics (Widodo et al., 2024). Al-Amin et al. (2024) emphasized that CA significantly correlates with competitive positioning and hospital reputation.

CA facilitates joint problem solving, learning, and innovation capacity, which positively influences hospital performance across dimensions such as operational efficiency, care quality, and stakeholder satisfaction (Shen et al., 2024). Hospitals that adopt CA principles benefit from enhanced coordination among departments, external medical networks, and suppliers. This synergy leads to quicker problem resolution, reduced redundancy in services, and the ability to adapt to dynamic patient needs and regulatory demands. Additionally, CA supports the development of knowledge-sharing cultures that contribute to continuous improvement and adaptive learning. From a strategic management perspective, embedding collaborative advantage into hospital operations strengthens institutional resilience and creates long-term value. The integration of relational capabilities with digital platforms enables real-time data access and joint decision-making, further aligning efforts across the care continuum. In the Indonesian context, where disparities in resource access remain prominent, hospitals that cultivate strong CA are more likely to meet service benchmarks and outperform competitors, especially in patient-centered care, innovation speed, and network responsiveness (Yu et al., 2024; Teece, 2018). Therefore, CA is not only a relational outcome but a strategic enabler of hospital performance

2.4 Moderating Role of Government Subsidies: Supply Chain Collaboration → Collaborative Advantage

Government subsidies (GS) are strategic instruments employed to reduce disparities in resource access between public and private healthcare institutions. Subsidies enable hospitals to improve infrastructure, invest in digital platforms, and enhance human resources necessary for cross-institutional collaboration. Zhou (2022) emphasized that GS can amplify the effectiveness of supply chain collaboration (SCC) by increasing operational readiness, reducing transaction costs, and enabling smaller hospitals to participate in inter-organizational networks. In line with this, Liu et al. (2023) found that in highly regulated environments, subsidies help underfunded hospitals reach baseline standards for technology integration and collaborative capacity.

However, the moderation effect of government subsidies is not unconditional. Yu et al. (2024) suggest that if subsidy allocations are misaligned with institutional needs or poorly monitored, they may produce dependency without sustainable value creation. In such cases, SCC may proceed nominally but fail to produce real collaborative advantage (CA). In the Indonesian context, Widodo et al. (2024) reported that some public hospitals receive financial support without corresponding improvements in integration, transparency, or joint decision-making with supply partners. This misalignment can weaken the intended impact of SCC and hinder the emergence of sustainable CA.

In this study, GS is hypothesized to moderate the relationship between SCC and CA by alleviating resource limitations, enhancing trust, and strengthening organizational capacity for joint innovation. Especially among Class C public hospitals, subsidies serve as external enablers that allow collaboration to go beyond transactional exchanges and foster deeper relational integration. When well-targeted, subsidies reduce structural asymmetries that typically prevent public hospitals from engaging equally in supply chain ecosystems (Shen et al., 2024; Al-Amin et al., 2024). Thus, GS functions not only as financial input but as a lever that shapes the institutional environment where collaboration can flourish into a strategic advantage.

2.5 Moderating Role of Government Subsidies: Supply Chain Collaboration → Hospital Performance

The effectiveness of supply chain collaboration (SCC) in enhancing hospital performance is significantly influenced by the availability of government subsidies (GS), particularly in resource-constrained public hospitals. Targeted subsidies that address systemic gaps such as outdated logistics infrastructure, limited human capital, or technology shortages can unlock the full potential of collaborative networks. According to Widodo et al. (2024), hospitals receiving consistent government support demonstrated better performance outcomes through SCC driven efficiencies, including reduced lead times, increased availability of medical supplies, and improved interdepartmental coordination.

However, the moderating role of GS is complex and contingent on hospital specific factors such as leadership capacity, institutional culture, and readiness for change. Wang et al. (2022) observed that while financial subsidies can create favorable conditions for collaboration, their actual impact depends on the hospital's internal innovation capability and willingness to institutionalize collaborative practices. In other words, subsidies may support SCC structures, but without strong governance and execution mechanisms, performance gains may be limited. Similarly, Shen et al. (2024) argued that subsidy efficacy is highest in environments where managerial accountability and data driven decision making are embedded. In this study, GS is hypothesized to moderate the positive relationship between SCC and hospital performance by acting as a catalyst for systemic integration. In many Class C hospitals in Indonesia, limited funding often leads to fragmented procurement, siloed operations, and inefficient supply chains. When subsidies are well-targeted, they not only alleviate these structural deficiencies but also enable hospitals to scale up collaborative initiatives and invest in digital solutions that boost performance (Al-Amin et al., 2024; Liu et al., 2023). As such, government subsidies play a strategic role in transforming SCC from a logistical function into a performance oriented capability.

2.6 Moderating Role of Government Subsidies: Collaborative Advantage → Hospital Performance

Collaborative advantage (CA) enhances hospital performance through mechanisms such as integrated service delivery, innovation capacity, and stakeholder alignment. However, the degree to which CA contributes to performance outcomes often depends on external enabling factors particularly financial support. Liu et al. (2023) observed that hospitals with strong collaborative networks but insufficient funding often struggle to implement or scale their initiatives effectively. Collaborative practices alone may not be sufficient to drive meaningful change without adequate infrastructure, human capital, and technological support.

In this study, GS is hypothesized to moderate the positive effect of CA on hospital performance by addressing resource gaps that limit the impact of collaborative strategies. This is particularly relevant for hospitals in rural or underdeveloped regions where disparities in infrastructure and access to capital are more pronounced. When financial resources are available to support collaborative ventures such as multi-hospital networks, cross-training programs, or public–private partnerships the performance gains from CA become more sustainable and inclusive (Al-Amin et al., 2024; Shen et al., 2024). Therefore, GS serves not only as a financial lever but as a strategic amplifier of CA's contribution to hospital excellence. Despite the growing literature on healthcare supply chains, limited studies have explored the moderating role of government subsidies in the Indonesian public hospital context.

3. Methodology

This study adopts a quantitative, cross-sectional research design using a descriptive and explanatory approach to examine the structural relationships among Supply Chain Collaboration (SCC), Collaborative Advantage (CA), and Hospital Performance (HP), and to

evaluate the moderating role of Government Subsidies (GS) within Indonesian Class C hospitals. The analysis focuses on testing six hypotheses (H1, H2, H3, H4, H5, and H6) using Partial Least Squares Structural Equation Modeling (PLS-SEM), which is particularly appropriate for complex predictive models with latent constructs, small-to-medium sample sizes, and non-normal data distributions (Hair et al., 2021). A structured questionnaire was developed based on validated constructs adapted from prior research and expert consultation, targeting high-level management personnel in 48 Class C hospitals across the island of Java. A total of 168 valid responses were collected using purposive and stratified sampling, ensuring a balanced representation between public and private hospitals. The instrument contained 31 indicators representing the core constructs (SCC, CA, HP, and GS), all measured on a 5-point Likert scale ranging from strongly disagree (1) to strongly agree (5). Data analysis was conducted using SmartPLS 4 software. The measurement model was evaluated for construct validity through outer loading analysis, internal consistency reliability via Composite Reliability and Cronbach's Alpha, and convergent validity using Average Variance Extracted (AVE). The structural model was tested using bootstrapping with 5000 subsamples, assessing the significance of path coefficients, t-values, and p-values. Multi-group analysis (MGA) was also employed to assess the moderating effects of government subsidies across hospital groups. The use of PLS-SEM aligns with the study's aim to prioritize prediction and explanation over model fit, especially in healthcare research contexts involving formative indicators and limited sample sizes.

10.7. Theoretical framework

This study is anchored in the integration of the Resource-Based View (RBV), Dynamic Capabilities Theory, and the Relational View, which together offer a robust explanation for how healthcare organizations achieve superior performance through inter-organizational collaboration and strategic resource utilization. The Resource-Based View posits that organizations gain competitive advantage by leveraging valuable, rare, inimitable, and non-substitutable (VRIN) resources (Barney, 1991; Wernerfelt, 1984). In the context of healthcare, Supply Chain Collaboration (SCC) and Collaborative Advantage (CA) are considered strategic intangible resources that support hospitals in enhancing operational efficiency and patient-centered care (Liu et al., 2023; Widodo et al., 2024). The Dynamic Capabilities Theory further extends this view by emphasizing the organization's capacity to integrate, build, and reconfigure internal and external competencies in response to a rapidly changing environment (Teece et al., 1997). Hospitals that develop dynamic capabilities such as joint innovation, real-time information sharing, and adaptive logistics can generate Collaborative Advantage that significantly improves Hospital Performance (HP) (Shen et al., 2024; Al-Amin et al., 2024). As healthcare systems face uncertainty and complexity, particularly during health crises or policy shifts, these capabilities become critical for maintaining service continuity and quality. In addition, this framework incorporates Institutional Theory, which explains the role of external pressures, such as government policies, in shaping organizational behavior. Government Subsidies (GS) function as institutional supports that help hospitals especially Class C public hospitals in developing regions overcome structural limitations and participate more effectively in collaborative ecosystems. When GS are aligned with SCC and CA initiatives, they enable hospitals to pursue more ambitious integration strategies and resource commitments, thereby amplifying the positive effect of CA on performance (Zhou, 2022; Wang et al., 2022). Accordingly, this study hypothesizes that SCC influences CA, which then enhances HP, and that GS positively moderates the relationships SCC → CA, SCC → HP, and CA → HP by reducing institutional and operational constraints

10.8. Conceptual framework

The conceptual framework in this study integrates key latent variables drawn from contemporary healthcare management literature to investigate the factors influencing hospital performance. It emphasizes the role of Supply Chain Collaboration (SCC) and Collaborative Advantage (CA) as strategic antecedents to Hospital Performance (HP). The model proposes three direct hypotheses: (H1) Supply Chain Collaboration positively affects Collaborative Advantage, (H2) Supply Chain Collaboration directly influences Hospital Performance, and (H3) Collaborative Advantage enhances Hospital Performance. These hypotheses reflect the growing recognition that both operational collaboration and relational synergy are crucial drivers of organizational outcomes in hospital settings.

In addition to direct effects, the model incorporates Government Subsidies (GS) as a moderating variable to examine how external financial support alters the strength of the proposed relationships. Specifically, it tests whether government subsidies moderate the influence of SCC on CA (H4), SCC on HP (H5), and CA on HP (H6). This moderating mechanism allows for the assessment of contingent effects and policy relevance, providing insights into how funding environments may amplify or weaken the strategic benefits of collaboration. Overall, the framework contributes to theory and practice by demonstrating how internal collaborative capabilities interact with external institutional factors to shape performance outcomes in healthcare organizations.

10.9. Instrumentation

The study used a structured questionnaire developed based on validated constructs from previous literature. The instrument measured 3 constructs: supply chain collaboration (15 items), collaborative advantage (13 items), and hospital performance (3 items). The questionnaire underwent expert review and back-to-back translation. Reliability and validity were evaluated using Composite Reliability (CR) and Cronbach's Alpha, with all constructs exceeding the threshold of 0.70 (Hair et al., 2021), as shown in Table 1. Average Variance Extracted (AVE) values were all above 0.50, confirming convergent validity, while Fornell-Larcker and HTMT tests confirmed discriminant validity. These metrics indicate that the instrument is psychometrically sound and suitable for further SEM-PLS analysis of the structural model and moderation effects.

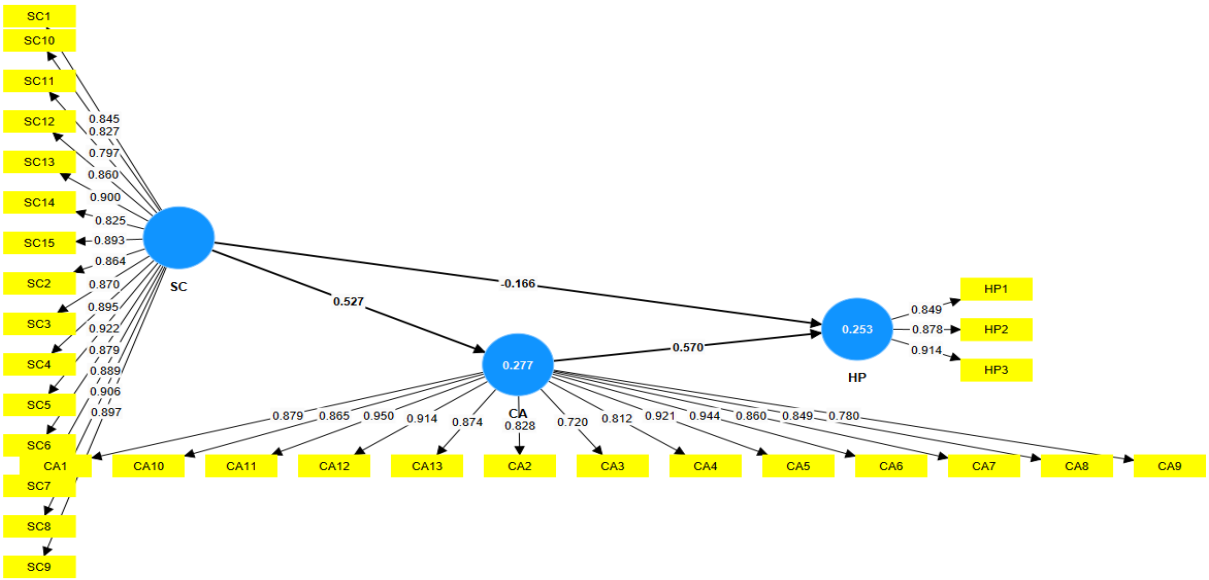

Figure 1. PLS Model

4. Results and discussions

This study tested six hypotheses (H1–H6) involving direct and moderating relationships among supply chain collaboration (SCC), collaborative advantage (CA), hospital performance (HP), and government subsidies (GS). The analysis was conducted using Partial Least Squares Structural Equation Modeling (PLS-SEM) through SmartPLS 4. PLS-SEM was selected due to its suitability for predictive modeling, small to medium sample sizes, and exploratory model testing involving latent constructs (Hair et al., 2021), as shown in Table 2.

Table 1. Instrument's Validity and Reliability Test

Construct	Cronbach's Alpha	Composite Reliability	AVE
Supply Chain Collaboration	0.978	0.982	0.760
Collaborative Advantage	0.971	0.973	0.746
Hospital Performance	0.856	0.867	0.775

All constructs meet minimum standards for convergent validity and internal consistency, suggesting the measurement model is acceptable for hypothesis testing.

Table 2. Path Coefficients and Hypothesis Testing

Hypothesis	Path	Coefficient (β)	t-value	p-value	Result
H1	Supply Chain Collaboration → Collaborative Advantage	0.527	9.650	0.000	Supported
H2	Supply Chain Collaboration → Hospital Performance	-0.166	2.469	0.014	Supported
H3	Collaborative Advantage → Hospital Performance	0.570	7.920	0.000	Supported

The findings revealed that all three direct relationships tested were statistically significant. Collaborative Advantage had the strongest effect on Hospital Performance, supporting its mediating role. Supply Chain Collaboration significantly influenced both Hospital Performance and Collaborative Advantage, indicating its dual pathway impact.

Moderating Effect of Government Subsidies

To evaluate the moderating effect of Government Subsidies, a multigroup analysis (MGA) was performed by grouping hospitals into "high-subsidy" and "low-subsidy" categories, as shown in Table 3.

Table 3. Multigroup Analysis (MGA) – Government Subsidies as Moderator

	β (non subsidies)	β (subsidies)	Difference	P value	Moderation
CA -> HP (H4)	0.535	0.593	0.057	0.357	Not sig
SCC -> CA (H5)	0.482	0.655	0.173	0.039	Signifikan
SCC -> HP (H6)	-0.172	0.051	0.223	0.096	Not sig

Based on the multigroup analysis (MGA), the relationship between Collaborative Advantage (CA) and Hospital Performance (HP) [H4] shows a path coefficient of 0.535 for the non-subsidized group and 0.593 for the subsidized group, with a difference of 0.057 and a p-value of 0.357. Since the p-value is greater than 0.05, this difference is not statistically significant, indicating that government subsidies do not significantly moderate the relationship between Collaborative Advantage and Hospital Performance. In contrast, the relationship between Supply Chain Collaboration (SCC) and Collaborative Advantage (CA) [H5] reveals a coefficient of 0.482 for the non-subsidized group and 0.655 for the subsidized group. The difference of 0.173 is statistically significant ($p = 0.039$), suggesting that government subsidies significantly moderate this relationship. This finding implies that the positive impact of supply chain collaboration on collaborative advantage is stronger in hospitals that receive government subsidies.

For the relationship between Supply Chain Collaboration and Hospital Performance [H6], the coefficient is -0.172 for the non-subsidized group and 0.051 for the subsidized group, with a difference of 0.223 and a p-value of 0.096. Although the magnitude and direction differ noticeably between groups, the p-value exceeds the threshold of 0.05, indicating that the moderating effect of government subsidies on this relationship is not statistically significant. In summary, out of the three paths tested for moderation, only the path from Supply Chain Collaboration to Collaborative Advantage is significantly moderated by government subsidies.

Discussion

These results align with previous findings in health management literature (Yu et al., 2024; Widodo et al., 2024; Liu et al., 2023), which suggest that collaboration and shared innovation significantly enhance performance outcomes. The significant path from supply chain collaboration (SCC) to collaborative advantage (CA) confirms the relational view theory, which emphasizes that inter-organizational relationships when built on trust, joint planning, and shared knowledge become strategic assets that generate synergistic benefits (Cao & Zhang, 2011; Liu et al., 2023). Hospitals that actively engage in supply chain partnerships are more capable of building capabilities that lead to higher levels of collaboration and innovation, ultimately resulting in improved hospital agility and responsiveness. Moreover, the strength of the CA → hospital performance (HP) relationship supports the resource-based and dynamic capability perspectives, which hold that organizational advantages gained through

collaborative ecosystems can be transformed into measurable institutional outcomes such as better service quality, increased patient satisfaction, and operational efficiency (Shen et al., 2024; Al-Amin et al., 2024). Collaborative advantage not only facilitates internal coordination but also amplifies external value through innovation diffusion and alignment with stakeholder needs, both of which are crucial in enhancing hospital competitiveness, particularly in a resource-limited context. The moderation role of government subsidies (GS) in these relationships further highlights the importance of institutional support and policy alignment. While GS significantly strengthens the SCC → CA link, it weakens the SCC → HP direct relationship, implying that subsidy effectiveness depends on how well hospitals internalize collaborative routines. Institutions that rely on public subsidies but lack internal governance or coordination may not realize performance benefits. This nuanced finding emphasizes that subsidies must not only be allocated but also integrated strategically to enable innovation and sustainability in collaborative practices across hospitals in developing regions (Zhou, 2022; Liu et al., 2023).

5. Conclusion

It can be concluded that inter-organizational collaboration, particularly through supply chain collaboration (SCC), plays a critical role in shaping hospital performance outcomes. Hospitals that engage in strategic partnerships and resource sharing are more likely to generate collaborative advantage, which in turn significantly enhances performance in terms of service efficiency, patient satisfaction, and institutional competitiveness. The findings also revealed that government subsidies serve as a double-edged sword: while they are intended to support hospitals, especially in the public sector, the moderation analysis showed that such subsidies may dampen the direct effect of SCC on performance if not strategically governed. This reinforces the view that public financial support should be accompanied by accountability and capability development to translate external inputs into internal performance gains. Furthermore, the positive influence of collaborative advantage on hospital performance confirms the theoretical premise that intangible resources such as trust, synergy, and innovation within collaborations are vital assets in healthcare management. The mediating role of collaborative advantage underscores its importance as a strategic capability. From a managerial perspective, this study recommends that healthcare organizations continuously invest in strengthening their collaboration frameworks, digital infrastructure, and innovation ecosystems to maintain performance sustainability. Moreover, policymakers must consider designing subsidy policies that incentivize not just compliance, but collaboration, innovation, and patient centric outcomes. Moving forward, future research may further explore the dynamics between government interventions and organizational learning in healthcare, particularly in a post-pandemic and digitalized context.

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THE MEDIATING ROLE OF E-SERVICE QUALITY IN THE RELATIONSHIP BETWEEN MOBILE APP USAGE AND E-SATISFACTION: EVIDENCE FROM PLN JAYAPURA, INDONESIA

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Abstract

This study investigates how e-service quality mediates the influence of PLN Mobile App usage on customer e-satisfaction at PT. PLN (Persero) ULP Jayapura. Grounded in the Technology Acceptance Model (TAM) and e-service quality theory, the study employs a quantitative SEM-PLS approach with 160 app users as respondents. Findings reveal that while app usage directly influences perceived e-service quality, it is this perceived quality that significantly drives e-satisfaction. The study contributes to digital service literature in public utilities and offers practical insights for enhancing digital transformation in state-owned enterprises.

Keywords: PLN Mobile, E-Service Quality, E-Satisfaction, Digital Public Service, SEM-PLS

1. Introduction

Digital transformation in public service delivery has become a critical agenda in developing economies, particularly in sectors providing essential utilities such as electricity. PT. PLN (Perusahaan Listrik Negara), Indonesia's state-owned electricity provider, has responded to these challenges through the launch of PLN Mobile, a mobile application aimed at enhancing service accessibility, efficiency, and responsiveness for its 80 million customers. However, while technological deployment is expanding, customer satisfaction has not always followed suit, especially in underdeveloped or geographically remote regions such as Jayapura, Papua.

In Jayapura, complaints regarding app accessibility, unresolved service issues, and system glitches continue to surface across customer feedback platforms, despite high growth in user acquisition. This presents a paradox: digital tools are being used, yet digital satisfaction is lagging. The PLN Mobile app, although technically rich—with features including electricity token purchases, real-time outage updates, chatbot assistants, and self-meter recording—is not delivering the expected customer experience outcomes. This disjunction raises a fundamental question: what explains the gap between technology usage and user satisfaction in public digital platforms?

This study explores e-service quality as the potential missing link in this equation. Drawing from the Technology Acceptance Model (TAM) and e-service quality frameworks, we argue that digital satisfaction does not emerge solely from usage or access, but from perceived service performance—how well the app responds, fulfills, and supports the customer journey. While the TAM model emphasizes perceived usefulness and ease of use, this study brings service quality into the forefront as a mediating factor that translates usage into meaningful satisfaction.

The context of this study—Jayapura, the administrative and economic capital of Papua—adds an additional layer of significance. With electricity demand rising alongside infrastructure growth, PLN's service performance has wide-reaching implications for household stability, business continuity, and government trust. Furthermore, in a digital divide setting,

understanding what drives satisfaction with digital utilities is critical for equitable public service innovation.

Therefore, this study aims to examine the mediating role of e-service quality in the relationship between PLN Mobile usage and e-satisfaction, using empirical evidence from PT PLN (Persero) ULP Jayapura. In doing so, the study contributes to the growing literature on public sector digitalization by emphasizing quality perceptions as a necessary condition for satisfaction in mobile-enabled service environments. It also provides grounded insights for practitioners on where to focus service improvements in regions where infrastructure and user readiness may vary widely.

Digital transformation has been increasingly recognized as a key enabler of improved public sector performance (OECD, 2018). Particularly in utility sectors, digital platforms offer scalable solutions to service coverage and administrative efficiency (Affairs, 2022). In Indonesia, the role of mobile applications in delivering government-related services has grown significantly, aligning with national digital transformation agendas such as SPBE (Sistem Pemerintahan Berbasis Elektronik) (Kementerian Pendayagunaan Aparatur Negara dan Reformasi Birokrasi, 2024). However, research also shows that technology implementation without parallel investment in service quality can result in weak adoption and low user satisfaction (Duan et al., 2019; Linders, 2012).

Statement of Contribution

This study contributes to the literature on digital public service innovation by positioning e-service quality not merely as an output of system design but as a critical mediator between technology adoption and user outcomes in the public utility context. While prior studies often assume a direct path from mobile app usage to satisfaction, our model highlights the conditional nature of that relationship—dependent on how users perceive the performance of the system along multiple quality dimensions such as responsiveness, efficiency, and reliability. This approach extends the TAM framework by integrating service quality as a behavioral bridge that connects system use to emotional and attitudinal user responses.

In methodological terms, the study applies Structural Equation Modeling – PLS to empirically test the strength and significance of the mediating pathway. The analysis, based on real users of PLN Mobile in a critical service delivery setting in Papua, Indonesia, provides both conceptual refinement and practical clarity in understanding what drives satisfaction in mobile-based public services.

Research Significance

The findings of this study hold practical significance for state-owned enterprises and public service managers aiming to implement digital service platforms, particularly in geographically marginalized and infrastructure-challenged regions. The research offers actionable insight: enhancing app usage alone is insufficient unless it is coupled with improvements in perceived service quality. As such, PLN and similar providers should invest not only in feature expansion, but also in interface usability, error reduction, complaint handling, and customer support responsiveness to ensure that the digital transformation efforts truly deliver citizen-centric value.

2. Literature Review

Prior studies have significantly shaped the understanding of digital service adoption and satisfaction. Davis (1989) laid the foundation with the Technology Acceptance Model (TAM), which has since been extended to include additional variables such as trust, perceived risk, and system quality in e-government contexts (Hidayat, 2024; Venkatesh et al., 2012). Zeithaml et al. (2002) advanced the e-service quality model, highlighting the multi-dimensional nature of online service delivery, which has been empirically tested across various sectors including banking, healthcare, and public utilities (Santos, 2003; Zavareh et al., 2012). However, few have focused specifically on its mediating role in government-mandated mobile applications, especially in underserved regions like Papua. This study aims to fill that theoretical and contextual gap.

This study is grounded in two key theoretical frameworks: the Technology Acceptance Model (TAM) and the e-service quality model. The TAM framework, introduced by Davis, (1989), emphasizes two primary drivers of user technology adoption: perceived usefulness and perceived ease of use. In the context of mobile public service applications, these dimensions remain crucial, yet they do not fully capture the experience quality once adoption occurs.

To address this gap, we incorporate the e-service quality model, as defined by Kementerian Pendayagunaan Aparatur Negara dan Reformasi Birokrasi (2024), which highlights seven core dimensions: efficiency, system availability, fulfillment, privacy, responsiveness, compensation, and contact. These dimensions move beyond adoption and into user evaluation of service performance, enabling us to understand why users remain satisfied—or not—after engaging with digital systems like PLN Mobile.

Empirical studies reinforce the relevance of these constructs. Revi et al. (2025) found that e-service quality significantly predicts customer satisfaction in state utility contexts. Dewi & Praswati (2024) emphasized that responsiveness and perceived system reliability directly enhance satisfaction with mobile apps in BUMN services. However, some researchers (e.g., A. S. Dewi et al., 2023; M. K. Dewi & Praswati, 2024; Rita et al., 2019) argue that not all dimensions are equally important across different regions, suggesting contextual mediation effects are worth exploring.

Despite this growing literature, few studies have examined the mediating role of e-service quality between app usage and customer satisfaction in developing, infrastructure-challenged regions like Papua. Our study addresses this gap by examining how e-service quality functions as a bridge between user interaction and emotional/attitudinal outcomes.

3. Methodology

This study employs a quantitative approach using Structural Equation Modeling with Partial Least Squares (SEM-PLS) to examine the mediating role of e-service quality between PLN Mobile usage and e-satisfaction. This method is well-suited for exploratory research involving latent variables and complex inter-variable relationships.

The research was conducted at PT PLN (Persero) ULP Jayapura, with data collection carried out between February and March 2025. The target population comprised active users of the

PLN Mobile application within the Jayapura service area. Using simple random sampling, 160 respondents were selected to ensure generalizability and statistical power.

Measurement instruments were adapted from validated previous studies. App usage was measured via indicators of ease of use, access speed, feature completeness, and information clarity. E-service quality was measured based on seven dimensions: efficiency, fulfillment, system availability, privacy, responsiveness, compensation, and contact. E-satisfaction was assessed through indicators of convenience, merchandising, site design, security, and serviceability.

Each item was measured using a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The reliability of the instruments was tested using Cronbach's alpha and composite reliability, while validity was assessed via convergent and discriminant validity. SEM-PLS analysis was conducted using SmartPLS 4.0 to estimate direct and indirect effects, including mediation testing.

This methodology enables a robust evaluation of the hypothesized relationships and offers nuanced insights into how perceived digital service quality can influence satisfaction in utility service contexts.

4. Results and Discussion

The structural model was analyzed using SEM-PLS based on responses from 160 PLN Mobile users in Jayapura. The model demonstrated good fit indices, with all factor loadings exceeding the recommended threshold of 0.70 (Hair et al., 2022), indicating high convergent validity across constructs. Composite reliability values ranged from 0.82 to 0.91, confirming internal consistency of the latent variables.

The results show a significant positive relationship between PLN Mobile usage and e-service quality ($\beta = 0.601$, $p < 0.001$). This suggests that better app design, usability, and functional completeness enhance users' perception of service quality, corroborating prior findings by A. S. Dewi et al. (2023); Hidayatullah & Hidayah (2023).

Moreover, e-service quality had a strong positive effect on e-satisfaction ($\beta = 0.654$, $p < 0.001$), aligning with Zeithaml et al. (2000), who emphasized responsiveness and reliability as key drivers of perceived digital service excellence. This finding is also in line with the study by M. K. Dewi & Praswati (2024), who found that perceived responsiveness, availability, and system stability increase digital satisfaction in state-owned utility services.

Notably, the direct effect of PLN Mobile usage on e-satisfaction was insignificant when the mediating variable was introduced ($p > 0.05$), while the indirect effect via e-service quality remained significant (Sobel $z = 4.12$, $p < 0.001$). This supports a full mediation model, highlighting the role of perceived quality as the primary pathway to customer satisfaction.

These results emphasize that even in technologically underdeveloped regions such as Papua, users are able to form clear evaluations of service quality based on their digital interactions. Where the technical infrastructure is constrained, perceived responsiveness and reliability may even outweigh feature-richness as sources of satisfaction (Hidayat, 2024; Utama et al., 2024).

In practice, these findings suggest that investments in user education, interface improvement, and more robust complaint resolution mechanisms are likely to yield greater satisfaction gains than merely expanding technical features. Furthermore, ensuring app uptime, minimizing bugs, and streamlining processes will directly influence service perception and retention in digitally transforming public utilities (Ananda & Hapsari, 2024; Nasri, 2019; Revi et al., 2025).

5. Conclusion and Implications

This study confirms the central mediating role of e-service quality in the relationship between mobile application usage and customer e-satisfaction within the context of public utilities. While the widespread adoption of apps like PLN Mobile marks a positive step in Indonesia's digital service agenda, user satisfaction is ultimately shaped by perceived performance dimensions—especially responsiveness, reliability, and usability.

From a theoretical standpoint, the study extends the Technology Acceptance Model (TAM) by showing that actual satisfaction is not guaranteed by technology use alone. E-service quality acts as a behavioral bridge between system usage and value perception. The research also deepens our understanding of the multidimensionality of digital service experiences, incorporating critical dimensions such as fulfillment, privacy, system availability, and user interaction.

Importantly, the research contextualizes digital service transformation within a geographically constrained environment. This offers a significant contribution to the literature on digital government by revealing how socio-technical conditions—like infrastructure readiness and digital literacy—moderate service outcomes.

From a managerial perspective, digital transformation strategies in state-owned enterprises such as PLN must be accompanied by targeted efforts to enhance service reliability, interface design, and problem resolution workflows. These are the aspects of service that users tangibly experience and which directly shape trust and satisfaction.

Furthermore, investment in customer education and digital onboarding should be prioritized in regions with lower digital penetration. A technologically advanced platform is insufficient if the users are ill-prepared to navigate it confidently. Therefore, human-centered design and inclusive service planning must complement technical rollouts.

Future research should explore longitudinal designs to track the evolution of service perceptions over time, especially during key rollout phases of new features. Comparative studies across different regions and demographic profiles will also enrich the theory by accounting for heterogeneous expectations and barriers in digital service adoption.

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THE INFLUENCE *OF* FOMO (*FEAR OF MISSING OUT*) ON IMPULSIVE PURCHASE DECISIONS IN GENERATION Z

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Abstract

Fear of Missing Out (FoMO) referring to anxiety that an exciting or interesting event may currently be happening elsewhere motivates consumers to buy or try a viral thing for not to miss out on it. FoMO relates highly to the use of social media. This study aims to analyze the extent to which FoMO influences impulsive purchase decisions on Generation Z in Semarang City, The respondents are individuals born between 1995 and 2010, are active on social media, and have previously engaged in impulsive purchases. Data was collected using an Google Form questionnaire distributed via WhatsApp and Instagram to 97 persons. The 4-point Likert scale questionnaire was tested for its validity and reliability before the data collection. The collected data was tested for normality prior to being analyzed using simple linear regression with the help of SPSS 16.0. The result demonstrates a positive and significant influence of FoMO on impulsive purchase decisions among Generation Z in Semarang City. The result expectedly provides Generation Z with an understanding on the importance of managing their FoMO tendencies to prevent negative impacts on their shopping behavior.

Keywords*: fear of missing out, FoMO, impulse buying, purchase decision, generation Z*

1. Introduction

Fear of Missing Out or FoMO is a term that is widely recognized today among Generation Z. FoMO refers to a person's feeling of fear or anxiety when they miss or are afraid of missing out on a valuable moment in an event that is trending in the environment (Ghinarahima & Idulfilastri, 2024) so they tend to worry when someone else knows more or gets the information early or first (Syamer & Setyawati, 2024). This phenomenon often occurs on social media, where consumers are encouraged to join the bandwagon of buying or trying things that are going viral so as not to feel left behind. With the existence of FoMO, it will encourage Generation Z to make impulse purchases on products that are viral or being talked about on social media (Ulfa, 2024). The development of social media allows a person to connect with other people's lives, so FoMO is closely related to the use of social media because it will have an impact on society (Aji et al., 2025).

FoMO affects a person's psychological condition triggered by factors that are not only internal, but also external and social pressure (coercion) (Maysitoh et al., 2020). These three factors make individuals who experience FoMO tend to have a desire to always improve themselves so as not to lose to others.

FoMO is closely related to Generation Z, which was born in 1995-2010 because this generation is a generation that grew up in the digital era. The rapid development of information technology and affects the behavior and personality of Generation Z (Nurhalim, 2022). Generation Z was born in an environment that is fully integrated with technology, which makes the boundaries between the virtual world and the real world increasingly faint (Cahyadi, 2021). With technology, communication between people in various cities and countries can be done more easily than 10 years ago through various existing social media platforms, such as Facebook, Instagram, X, WhatsApp, Line, Tiktok, and others. Not only is communication much easier, but in accessing information, doing activities in their daily lives, playing games

online or offline, making transactions, shopping online, and other activities using cellphones (Widiayanti et al., 2024).

Generation Z is always connected to social media, so they are always exposed to various information, activities, or trends carried out by others. This is one of the triggers for the emergence of FoMO in Generation Z and encourages them to always be up-to-date and not be left behind by others. Social media and digital technology make Generation Z more adaptable to change, influencing the way they communicate, think, and live their lifestyles, as well as making it easier for them to choose the products or brands they want.

High curiosity about what is happening, the desire to try new things, and being easily influenced by the environment (Ayuningtyas & Wiyono, 2020) are characteristics of Generation Z that result in Generation Z having a fear of being left behind by important information or moments. This is what always drives Generation Z to want to always know and follow what is happening.

The digital lifestyle makes FoMO a phenomenon that is very relevant to Generation Z and a driver for impulsive puchase decisions. The fear of being left behind by existing trends can encourage them to buy products quickly, without any real consideration or what is called impulse buying (Harahap & Amanah, 2022). So, it can be concluded that impulsive purchase decisions make consumers become influenced and motivated in a particular product for a consumer in consumer activities in buying a product (Martianto et al., 2023).

This research was conducted by looking at the relationship between Generation Z and the FoMO phenomenon which will encourage a person to behave consumptively and impulsively. Therefore, this study aims to analyze the influence of FoMO on impulsive purchase decisions in Generation Z. Thus, the results of this study will provide insights to Generation Z regarding how they manage their FoMO impulses. Thus, the results of this study will provide results in the form of insights to Generation Z regarding how they manage the FoMO impulse properly, so that it does not have a negative impact on their purchasing decisions.

2. Literature Review

Purchasing decisions are consumer behavior carried out by purchasing products that are triggered by various factors that influence and motivate a person to buy certain products (Martianto et al., 2023). There are 4 (four) factors that influence a consumer's purchasing decisions, namely cultural factors, social factors, personality factors, and psychological factors (Suhartini & Maharani, 2023). The first factor is cultural factors. Here, cultural factors play an important role in influencing society by shaping a person's perceptions, preferences, and behavior on a product or brand which can be seen through culture (values), sub-culture (nationality, religion, race), and social class (homogeneous, permanent, hierarchical). The second factor is social factors which can be seen from interactions between individuals and groups so that they can influence a person's behavior towards certain products and brands, usually coming from family, friends, and their social environment. The third factor is personality factors. Personality factors consist of a person's age, a person's job, a person's income, a person's level of education, and others that will become a person's decision to buy a product and brand. The last factor is psychological factors which include the level of emotion, motivation, and individual perceptions that play a role in determining a person's view of a product and brand so that they get a motivational push to own certain products and brands (Utami, 2021).

Of the four factors that influence purchasing decisions above, psychological factors play a major role in encouraging a person's impulsive purchase decisions when facing certain situations that stimulate spontaneous emotional responses (Sholawati et al., 2022) Impulsive purchase decisions are purchasing decisions that occur without a plan from a person, causing

consumers to have an urgent desire to buy certain products that are trending in the environment (Rahayu et al., 2025).

Impulsive purchase decisions will occur in Generation Z when influenced from the outside, namely the existence of emotional conditions such as not being able to think maturely, situational, and social that make Generation Z have to conform to the behavior of their friends (Sholawati et al., 2022). These conditions greatly influence Generation Z in impulse buying because of products that attract one's attention or even influence from someone to encourage buying certain products (Ghinarahima & Idulfilastri, 2024). Impulsive purchase decisions that occur in Generation Z are usually due to attractive products so that impulsive puchase decisions are considered that the product purchases made are actually not really needed. This is because Generation Z grew up in the development of technology, making Generation Z involved in using technology in their lives (Mudjiyanto et al., 2025). The four factors of purchasing decisions and the three factors of impulse buying are external and internal factors to see a person's behavior so that these two things become stronger to shape a person's behavior on a brand and encourage someone to buy a product without a plan. Thus, the indicators of impulsive purchase decisions are spontaneity, namely sudden desire, out of control, namely it is difficult to refuse satisfaction, psychological conflict, namely the consideration of the benefits of satisfaction with long-term consequences, and non-cognitive evaluation, namely reducing cognitive evaluation of something that is viral (Sandra & Anjaningrum, 2021).

Impulsive purchase decisions are often triggered by momentary emotional impulses, and one of the factors that trigger these impulses is the feeling of FoMO (Maruapey et al., 2025). FoMO occurs because of the feeling of someone who does not want to be left behind for something and has high curiosity and even tends to be dissatisfied with something (Utami, 2022). Thus, FoMO indicators are fear, worry, feelings of annoyance, feelings of inadequacy, and low self-confidence (Lim et al., 2024). The existence of this FoMO phenomenon will encourage Generation Z to have impulsive purchase decisions without a long thought of one's purchasing actions that prioritize fulfillment of their emotions rather than urgent needs (Maruapey et al., 2025).

Thus, the behavior of Generation Z affected by the FoMO phenomenon can be classified into 2 (two) dimensions, namely self, which is a feeling of anxiety that is possessed when it is difficult to communicate, and relatedness, which is the state of a person who must be tied to another environment, even usually has an unequal feeling and feels excluded (Rahayu et al., 2025). The FoMO condition that occurs is also reinforced by the influence of social media and rapidly developing trends that make Generation Z feel the need to immediately keep up with the current developments so as not to feel left behind by something that is happening. In this case, FoMO greatly influences Generation Z in impulsive purchase decisions because in this context, external and internal factors of impulsive purchase decisions play a role in encouraging one's behavior in making impulsive purchases for a person and it is necessary to control so that impulsive purchasing behavior does not occur in one's life (Ghinarahima & Idulfilastri, 2024). In addition, Generation Z affected by FoMO will be more easily influenced and more prone to impulsive purchase decisions on products that are going viral which aims to avoid feelings of anxiety (Kartika et al., 2025).

Research conducted by (Kartika et al., 2025); (Anggraini et al., 2025); (Khafidah et al., 2025); (Maruapey et al., 2025); and (Mudjiyanto et al., 2025) which examines the attachment of FoMO to impulsive purchase decisions by Generation Z has the same results, namely FoMO has a positive and significant influence on impulsive purchase decisions made by Generation Z. Thusstudy will prove whether it is true that FoMO has a positive and significant effect on impulsive purchase decisions made by Generation Z. Thus, this study will prove whether it is

true that FoMO has a positive and significant effect on impulsive purchase decisions in Generation Z.

3. Research Methods

This study was conducted with the aim of knowing the effect of Fear of Missing Out (FoMO) on impulsive purchase decisions in Generation Z. The research was conducted on Generation Z in Semarang City. The reason is because Generation Z in Semarang City has a lifestyle that is easily influenced by trends due to the development of the creative economy so it is very relevant to examine the influence of FoMO on impulsive purchase decisions (Widiastuti et al., 2023). However, the exact population of Generation Z in Semarang City is unknown, so in collecting data, 96.04 respondents were needed, rounded up to 97 respondents taken from the Cochran formula with a sample error rate (e) of 10%, a true chance (p) of 50%, and a false chance (q) of 50% (Sugiyono, 2024).

This research is a survey and data is collected using an online questionnaire (Anugraheni et al., 2023) (Google Form) to be more effective in the use of time and the questionnaire will be distributed via WhatsApp and Instagram to get respondents according to the criteria for active use of social media. In searching for data, questions related to FoMO and impulsive purchase will be given in the form of a Likert Scale 1-4. The Likert scale is a tool for measuring individual behavior by giving 4 options for each question given to avoid indecision, such as strongly agree (4), agree (3), disagree (2), and strongly disagree (1) (Sugiyono, 2024b).

To ensure the feasibility of the instrument, validity and reliability tests are carried out so that the data is suitable for further analysis (Janna & Herianto, 2021). The validity test is carried out using the Pearson Bivariate correlation and is declared valid if r count > r table, and if it is invalid, it must remove the invalid statement (Anggraini et al., 2022). Meanwhile, the reliability test is seen from the Cronbach's Alpha value and the instrument is said to be reliable if it is greater than 0.6 (Kartika et al., 2025). Thus, the following are the results of the validity test and reliability test that have been processed:

Table 3.1. Validity Test Result

Dimension	Statement	r count	Description
FoMO or *Fear of Missing Out* (X)			
Fear	Fear of missing out on trends if you don't buy something	0,664	Valid
	Fear of not being able to keep up with friends	0,677	Valid
Concern	Worry for fear of being considered not "updated"	0,806	Valid
	Worry and rush to buy something for fear of running out	0,796	Valid
Feeling of annoyance	Annoyed if you don't buy something	0,679	Valid
Feeling of lack	There is always something missing if you don't buy	0,852	Valid
Low self-confidence	More confident when following trends	0,735	Valid
Impulsive Purchase Decision (Y)			
Spontaneity	Buying suddenly	0,776	Valid

Out of Control	It's hard to refrain from buying a product even though you don't need it	0,816	Valid
	Buying without thinking about the consequences	0,846	Valid
Psychological conflict	Guilt after an unplanned purchase	0,716	Valid
Non Cognitive Evaluation	Buying without considering quality and benefits	0,766	Valid
	Buying based on temporary feelings and impulses	0,774	Valid

Table 3.1 shows that there are 7 statements on the FoMO or Fear of Missing Out (X) variable and 6 statements on the Impulsive Purchase Decisions (Y) variable, all of which have a value of r count > r table of 0.197 so that the 13 instruments above are declared valid and can proceed to the reliability test.

Table 3.2. Reliability Test Result

	Cronbach's Alpha	**Description**
FoMO (X)	0,947	Reliable
Impulse Buying Decision (Y)	0,873	Reliable

Table 3.2 shows that the FoMO (X) has a Cronbach's Alpha value of 0.947 and the Impulsive Purchase Decisions (Y) has a Cronbach's Alpha value of 0.87 so that this questionnaire is declared reliable because the Cronbach's Alpha value is > 0.6.

The data that has been collected will then be tested for normality using the Kolmogorov-Smirnov method because the sample to be used is a large sample whose respondents are more than 40 people (Ahadi & Zain, 2023). The provisions of this normality test to determine whether the data will be normally distributed if the p value > 0.05 (Kartika et al., 2025).

Data that has been normally distributed will be tested for linearity with the F test which aims to determine whether there is a simultaneous influence between variable X on variable Y with a significant standard < 0.05 or can also be seen through F count > F table (Yusuf et al., 2024). After the linearity test was carried out, the research continued with the coefficient of determination (R^2) test which aims to assess the magnitude of the influence of the independent variable on the dependent variable (Sonya & Saputra, 2025). When associated with the F test, the greater the coefficient of determination (R^2), the better the model fit (Marita & Hermanto, 2021).

After that, it is continued with a correlation test using Pearson Product Moment (r) to see the relationship between one variable and another with the standard interpretation of the correlation coefficient: (1) 0.00 - 0.199 = very low; (2) 0.20 - 0.399 = low; (3) 0.40 - 0.599 = medium; (4) 0.60 - 0.799 = strong; and (5) 0.80 - 1.000 = very strong (Sugiyono, 2024c).

Furthermore, it can continue to conduct a simple regression analysis which aims to test the direction of the positive and significant influence of FoMO (X) on the impulsive purchase decision variable (Y) in Generation Z (Nurhaswinda et al., 2025). The criterion for determining the significance of the effect will be the t test with an assessment measure of p < 0.05 (Iba & Wardhana, 2024). All data processing was done with the help of SPSS 16.0.

4. Results and Discussion

Profile of the Respondents

Table 4.1, shows that the majority respondents (65 persons) were women. The respondents have the highest average age, which is around 20-24 years old as many as 62 respondents, followed by 20 respondents aged 15-19 years, and 25-30 years old as many as 15 respondents. The number of respondents aged 20-24 years shows that their last education is at the SHS/Vocational school level by 56 respondents and the last education is then followed by S1, JHS, S2, and Elementary school. Thus, the majority of their occupations are as students with 67 respondents and followed by private employees, entrepreneurs, housewives, not working, and civil servants. Furthermore, the highest monthly income is < IDR 1,000,000 filled in by 45 which shows that most respondents have a low income, which is likely to still depend on parents or not yet working fully. In the expenditure per month section, the highest result is also the expenditure of < Rp 1,000,000 per month because the majority of their employment status is as students.

Table 4.1. The Respondents Profile

No	Profile	Description	Frequency	Percentage (%)
1.	Gender	Female	65	67
		Male	32	33
2.	Age	20-24 y.o.	62	63,9
		15-19 y.o.	20	20,6
		25-30 y.o.	15	15,5
3.	Education	SHS/Vocational School	56	57,7
		S1	32	33
		JHS	6	6,2
		S2	2	2,1
		Elementary School	1	1
4.	Occupation	Student	67	69,1
		Private employee	17	17,5
		Self-employed	6	6,2
		Housewife	3	3,1
		Unemployed	2	2,1
		Civil servant	2	2,1
5.	Income per month	<Rp 1.000.000	45	46,4
		Rp 1.000.000 – Rp 3.000.000	29	29,9
		Rp 3.000.001 – Rp 5.000.000	13	13,4
		>Rp 5.000.000	10	10,3
6.	Expenses per month	<Rp 1.000.000	49	50,5
		Rp 1.000.000 – Rp 3.000.000	37	38,1
		Rp 3.000.001 – Rp 5.000.000	8	8,2
		>Rp 5.000.000	3	3,1
7.	Knowledge of FoMO	Yes	94	96,9
		No	3	3,1
8.	Understanding of FoMO	Fear of being left behind	47	-
		Social pressure	39	-
		Recent needs	2	-
		Pleasure	6	-
		Yes	67	69,1

9.	Follow popular/trendy things	No	30	30,9
10.	Social media as a popular/trendy information source	Instagram	87	89,7
		Tiktok	84	86,6
		X/Twitter	31	32
		WhatsApp	30	30,9
		YouTube	29	29,9
		Telegram	11	11,3
		Facebook	10	10,3
		Others	5	5,2

To get into the core of the research, 94 respondents already knew the concept of FoMO. In their understanding of FoMO, it can be divided into 4 (four) themes and various keywords and the number of each keyword. The following is the data:

Table 4.2. Understanding of FoMO

Keyword	Theme	Number	Percentage (%)
Fear of not following the trend	Fear of being left behind	1	48,4
Fear of missing out		32	
Worry		3	
Anxious		11	
TOTAL		**47**	
Follow the trend	Social pressure	32	40,2
Immitate others		2	
Action		3	
Jealous		1	
Trend		1	
TOTAL		**39**	
Update	Recent needs	1	2,1
Curious		1	
TOTAL		**2**	
Crowded/Congested/Busy	Pleasure	3	6,2
Public		1	
Interesting		1	
Fun		1	
TOTAL		**6**	
No answer		3	3,1
TOTAL		**97**	**100**

The majority of respondents described FoMO as the fear of being left behind in a trend that occurs, be it information, goods, activities, and so on with a total of 47 respondents. Furthermore, social pressure and environmental influences, current needs, and fun were also mentioned by respondents according to their understanding of FoMO.

Back in Table 4.1, the majority of respondents answered yes. This shows that most Generation Z respondents in Semarang City keep up with current trends. Here, respondents can choose more than 1 social media to get trending/popular information. The highest social media used by respondents to find out what is popular/trendy is Instagram, which is then followed by Tiktok, X/Twitter, WhatsApp, YouTube, Telegram, Facebook, and other categories as platforms to get information that is currently popular/trendy.

Normality Test

The following are the results and their interpretation:

Table 4.3. Normality Test Results

One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		97
Normal Parameters[a]	Mean	.0000000
	Std. Deviation	2.80798690
Most Extreme Differences	Absolute	.054
	Positive	.054
	Negative	-.044
Kolmogorov-Smirnov Z		.532
Asymp. Sig. (2-tailed)		.940

a. Test distribution is Normal.

Table 4.3 shows that the significance value (Asymp. Sig. 2-tailed) is 0.940. Based on the requirements of the Kolmogorov-Smirnov method, the p value is > 0.05 so that the data can be normally distributed. Thus, this research data is declared normally distributed which is an important requirement before proceeding to the linearity test and regression test.

Linearity Test

Furthermore, the linearity test is carried out as follows:

Table 4.4. Linearity Test Results

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	744.380	1	744.380	93.424	.000[a]
	Residual	756.940	95	7.968		
	Total	1501.320	96			

a. Predictors: (Constant), SKOR_FOMO

b. Dependent Variable: SKOR_IMPULSIVEPURCHASEDECISIONS

In the linearity test, using the F test, the significance value is 0.000 while the requirement for the instrument to be declared linear is the significance value < 0.05. In addition, it can also be seen from the calculated F value is 93.424 > F table of 3.940 which is calculated from F table = (1; 97-1). Thus, the instrument above is declared linear because there is a simultaneous influence and the model is considered fit between FoMO (X) on Impulsive Purchase Decisions (Y).

Test of the Coefficient of Determination

The following are the test results of the coefficient of determination between FoMO (X) on Impulsive Purchase Decisions (Y):

Table 4.5. Test Results of the Coefficient of Determination

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.704[a]	.496	.491	2.823

a. Predictors: (Constant), SKOR_FOMO

The results in Table 4.5 show that the Adjusted R Square value is 0.491. Thus the FoMO (X) variable affects the Impulsive Purchase Decisions (Y) variable by 49.1%, which means that almost half of the variation in impulsive purchase decisions is due to FoMO, while the remaining 50.9% has been influenced by other variables or factors outside FoMO which are not examined in this study. The implication is that FoMO is an important factor, but not the only determinant of impulsive purchase decisions.

Correlation Test

After the linearity test is carried out, proceed with testing the correlation as follows:

Table 4.6. Correlation Test Results

Correlations

		SKOR_FOMO	SKOR_IMPULSIVEPURCHASEDECISIONS
SKOR_FOMO	Pearson Correlation	1	.704**
	Sig. (2-tailed)		.000
	N	97	97
SKOR_IMPULSIVEPURCHASEDECISIONS	Pearson Correlation	.704**	1
	Sig. (2-tailed)	.000	
	N	97	97

**. Correlation is significant at the 0.01 level (2-tailed).

From table 4.6, it shows that the significance value is 0.704 of the two variables, namely FoMO (X) and Impulsive Purchase Decisions (Y) so that the coefficient of the level of relationship found is that there is a strong relationship between FoMO and impulsive purchase decisions because 0.704 is between 0.60 - 0.799. In other words, if one variable changes, then changes will also be followed in other variables.

Simple Regression Analysis

After testing the coefficient of determination, a simple regression analysis can be carried out as follows:

Table 4.7. Simple Regression Results

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	6.475	1.186		5.460	.000
	SKOR_FOMO	.610	.063	.704	9.666	.000

a. Dependent Variable: SKOR_IMPULSIVEPURCHASEDECISIONS

From the results above, SKOR X is the score of FoMO and SKOR Y is the score of the Impulsive Purchase Decisions. Table 4.7 shows that the Constant (a) value is 6.475 with a regression coefficient (b) value of 0.610. In the sense that the constant value indicates that if FoMO is 0 or not at all, then the value of the Impulsive Purchase Decisions (Y) is 6.475. In the regression coefficient, FoMO has a positive effect on Impulsive Purchase Decisions (Y) because the regression coefficient is plus (+).

After it is known that FoMO has a positive effect on Impulsive Purchase Decisions, then to test its significance value, a t test can be done by looking at the t value on FoMO (X) of 9.666 which is greater than the t table, namely 1.661 with a significant value of 0.000 < 0.05

so that the result is that FoMO (X) has a positive and significant effect on Impulsive Purchase Decisions (Y).

The results of this study indicate a positive and significant influence of FoMO on Impulsive Purchase Decisions made by Generation Z which is in line with the results of the previous research. FoMO encourages Generation Z to purchases impulsively because they are fear of being left behind by the current trend.

5. Conclusion

The research concludes that FoMO has a positive and significant influence on impulsive purchase decisions among Generation Z in Semarang City. The results also show that there is a simultaneous influence between FoMO and Impulsive Purchase Decisions. This means that the higher the level of concern that a person will be left behind from a trend or activity that is currently popular, the greater the tendency of Generation Z to make sudden purchases without prior planning. This phenomenon shows that Generation Z's consumptive behavior is often triggered by an emotional drive for having connected feeling and being recognized in their environment. Impulsive purchase is not only for fulfilling needs, but also maintaining existence and social identity in the midst of fast-changing trends.

In relation to these findings, it is suggested that Generation Z can increase their self-awareness in using social media, especially filtering information and trends so that they are not easily influenced by the contents that may triggers impulsive behavior. It is also important for Generation Z to build their skills in self-control, digital and financial literacy in order to be more rational in their purchasing decisions, and not just considering social pressure or following a momentary trend. Better self-control, can expectedly minimize consumptive behavior that possibly cause negative impacts such as waste or personal financial instability.

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THE EFFECTIVENESS OF SOCIAL MEDIA PROMOTION ON PURCHASING DECISIONS OF DAVIENA COSMETICS: BRAND IMAGE AS A BRIDGE OF INFLUENCE (CASE STUDY ON FEB UNISMA STUDENTS)

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Abstract

The purpose of this study was to determine the effect of Social Media Promotion on Purchasing Decisions for Daviena Cosmetic Products through Brand Image as an intervening variable. Data was collected using purposive sampling from 95 respondents through questionnaires with a Likert Scale. Data analysis was performed using path analysis, Sobel test, and hypothesis testing (t-test) with the IBM SPSS 25 program. The results showed that partially, Social Media Promotion had a positive and significant effect on Purchasing Decisions (significance 0.000 < 0.05), Brand Image had no effect on Purchasing Decisions (significance 0.323 > 0.05), and Social Media Promotion had a positive and significant effect on Brand Image (significance 0.000 < 0.05). Meanwhile, from the Sobel test results, Brand Image was not able to mediate between the Social Media Promotion and Purchasing Decision variables (Two-tailed probability value 0.32212151 > 0.05).

Keywords: Social Media Promotion, Purchasing Decisions, Brand Image, Intervening Variable

1. Introduction

In recent years, Indonesia's cosmetics industry has experienced significant growth, due to increasing public awareness of the importance of self-care and appearance. Along with increasing per capita income, urbanization, and increasingly modern consumer lifestyles, the cosmetics market in Indonesia is expected to continue growing rapidly, according to data from Euromonitor International. In addition, globalization and social media culture are impacting users' preferences in choosing cosmetics. Many cosmetic brands, both local and international, are struggling to meet the increasingly diverse needs and wants of consumers.

Daviena is a fairly well-known cosmetic brand in Indonesia that has managed to capture the attention of the market, offering a variety of beauty products that are tailored to different skin types and customer appearances. The brand is known for beauty products that cater to diverse skincare and beauty needs. In the highly competitive cosmetic industry in Indonesia, Daviena has strived to build a reputation as a brand that prioritizes quality, safety, and innovation in every product it makes. Daviena's product collection includes face, body and decorative cosmetics. Daviena is a brand that is currently becoming more selective in choosing cosmetics. Cosmetic products that focus on natural and eco-friendly ingredients have become a more popular trend in recent years.

Social media promotion is a marketing strategy carried out through a third party, namely a social media-based website. Social media promotion is not always related to buying

and selling directly, it can also be done through website posts, images, and videos. Brands should also be talked about when talking about image because brands serve as a characteristic that distinguishes one company from another. Brand images are designed to influence customers' perceptions, so that the brand can be remembered in their minds with a name or symbol that distinguishes the brand from other goods or services.

The reason researchers chose this title "**The Effectiveness of Social Media Promotion on Purchasing Decisions of Daviena Cosmetics: Brand Image as a Bridge of Influence**" is because this research is important in providing strategic insights for Daviena as a new cosmetic brand to understand how social media promotion affects consumer purchasing decisions. In addition, this research also provides a broader understanding of how new cosmetic brands can build image, increase competitiveness, and gain a stronger position in the highly competitive cosmetics market.

2. Literature Review

Social media promotion is one of the digital marketing media that uses social media platforms through website links in the network, for the purpose of promoting a product. The existence of social media promotion makes it very easy in terms of information for potential customers who want to buy certain products. An effective way to promote in the media is to determine target consumers, be consistent in promotion, and be responsive in serving consumers. Social media promotion is one part of the type of marketing through internet media, with the aim of achieving the goals of those participating in the social media network. (Calistarahma & Saputro, 2020)

In choosing goods, consumers prioritize brand image over other things (Andika & Prisanto, 2019). So that producers brand their products so that consumers can always remember the product brands they have. Brand image can be defined as a person's belief, idea or impression of a brand, because brands influence consumer choices to determine which products they will buy and use (Kotler & Armstrong, 2018).

Purchasing decisions are very important to pay attention to because a company's success in influencing consumers in buyer decisions to be supported by building trust communication with consumers. Purchasing decisions have the meaning of a return decision that involves determining a choice of purchasing a product or service that appears to be a process of a stage in a problem-solving approach process consisting of problem recognition, searching for information, several alternative values, making buying decisions, and behavior after buying that consumers go through (Calistarahma & Saputro, 2020).

3. Metodology

The method used in this research is quantitative. Data collection is done with research instruments and data analysis is done quantitatively or statistically to test the hypothesis that has been made (Sugiyono, 2016). This research was conducted on students of the Faculty of Economics and Business, Islamic University of Malang Jl Mayjen Haryono No.193, Dinoyo, Kec.Lowokwaru, Malang City, East Java 65144. Research time: This research was conducted from December 2024 to April 2025.

The population of this study were FEB students at the Islamic University of Malang. The purposive sampling technique was used to determine the characteristics of the sample. The

research will later conduct sampling on FEB students at the Islamic University of Malang, this study uses the Slovin formula, based on the calculation results, the number of samples that can be used is 95.29 respondents rounded up to 95 respondents. This study uses the type of primary data directly obtained from the main source of research, namely from the results of distributing questionnaires to all students of the Faculty of Economics and Business, UNISMA. The data collection technique in this study is by distributing questionnaires to FEB Unisma students.

4. Result and Discussion

Tabel 1 Validity Test Results

Variable	Indicators	r Count	r Tabel	Result
Social Media Promotion (X1)	X1.1	0,782	0,2017	Valid
	X1.2	0,764	0,2017	Valid
	X1.3	0,820	0,2017	Valid
	X1.4	0,799	0,2017	Valid
	X1.5	0,770	0,2017	Valid
Purchasing Decision (Y)	Y.1	0,842	0,2017	Valid
	Y.2	0,824	0,2017	Valid
	Y.3	0,863	0,2017	Valid
	Y.4	0,777	0,2017	Valid
	Y.5	0,751	0,2017	Valid
Brand Image (Z)	Z.1	0,798	0,2017	Valid
	Z.2	0,823	0,2017	Valid
	Z.3	0,763	0,2017	Valid
	Z.4	0,852	0,2017	Valid

Based on the results of the r table, it is known that it is 0.2017, so referring to the results of the validity test that all instruments starting from the Social Media Promotion variable (X1), Purchasing Decisions (Y) and Brand Image (Z) also produce an r value greater than r table. So the statement items in this research questionnaire are significantly correlated with the total score so it can be said that the data is valid.

Tabel 2 Reability Test Results

X 1	**Reliability Statistics**	**Y**	**Reliability Statistics**

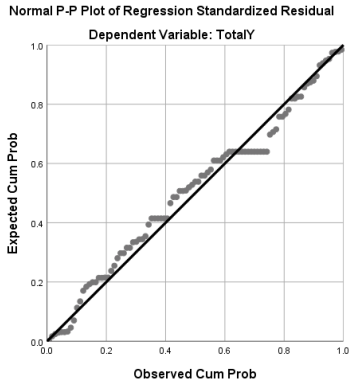
	Cronbach's Alpha	N of Items
	.846	5

Cronbach's Alpha	N of Items
.867	5

Z

Reliability Statistics	
Cronbach's Alpha	N of Items
.823	4

Based on table 2 above, it can be concluded that all indicators used have an Alpha Cronbach value> 0.6. This shows that all instruments in this study can be considered reliable.



Based on the probability graph above, it can be seen that the residual points are spread around the diagonal line. This indicates that the residuals are normally distributed. Therefore, the assumption of normality can be said to be fulfilled.

Tabel 3 Path Analysis Results

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.384	1.067		-.360	.720
	TotalX1	.773	.049	.855	15.875	.000

a. Dependent Variable: TotalZ

Tabel 4 Results of Path Analysis Model Summary

Model Summary[b]				
5rd Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.855[a]	.730	.728	1.309
a. Predictors: (Constant), TotalX1				
b. Dependent Variable: TotalZ				

Referring to the output of Regression Model I in the "Coefficients" table, it can be seen that the significance value of the variable X1 = 0.000 is smaller than 0.05. These results provide the conclusion that Regression Model I, namely variable X1, has a significant effect on Z. The magnitude of the R Square value contained in the Model Summary table is 0.730, this indicates that the contribution of the influence of X1 on Z is 73% while the remaining 27% is the contribution of other variables not included in the study. Meanwhile, the value of e1 can be found with the formula e1 = (1-0.730)=0.519. Thus, the structure model I path diagram is obtained as follows:

Figure Model I Path Analysis Diagram

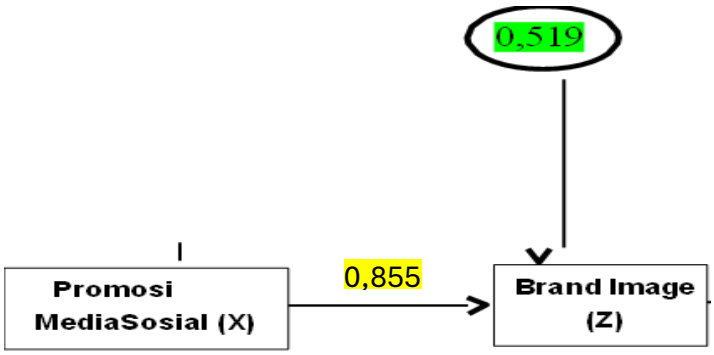


Table 5 Path Analysis Results

Coefficients[a]				
Model	Unstandardized Coefficients	Standardized Coefficients	t	Sig.

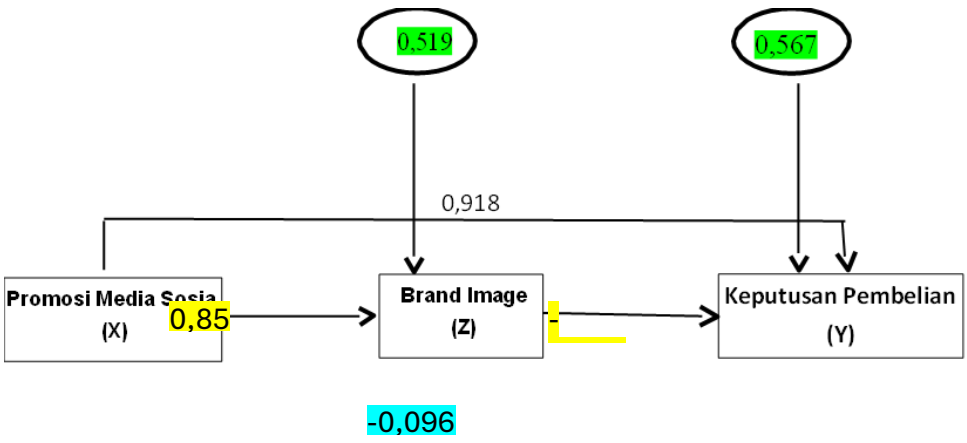
		B	Std. Error	Beta		
1	(Constant)	3.990	1.296		3.078	.003
	TotalX1	.918	.114	.918	8.058	.000
	TotalZ	-.125	.126	-.113	-.993	.323
a. Dependent Variable: TotalY						

Table 6 Path Analysis Results Model Summary

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.823[a]	.678	.671	1.589
a. Predictors: (Constant), TotalZ, TotalX1				

Based on the Regression Model II output in the "Coefficients" table section, it can be seen that the significance value of the variable X1 = 0.000 is smaller than 0.05 and Z = 0.323 is greater than 0.05. This result gives the conclusion that Regression Model II, namely variable X1 has a significant effect on Y, while variable Z has no significant effect on Y. The magnitude of the R Square value contained in the Model Summary table is 0.678, this indicates that the contribution of the influence of X1 and Z on Y is 67.8% while the remaining 32.2% is the contribution of other variables not included in the study. Meanwhile, the value of e2 can be found with the formula e2 = √(1-0.678)=0.567. Thus, the path diagram of structure model II is obtained as follows:

Figure Diagram of Model II Path Analysis



Description:

Direct influence

Indirect influence

Total effect

Table 7 Result of t test (partial)

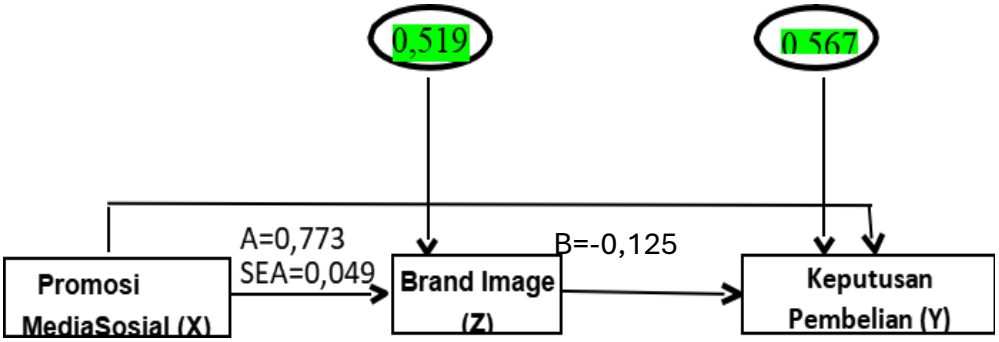
Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.990	1.296		3.078	.003
	TotalX1	.918	.114	.918	8.058	.000
	TotalZ	-.125	.126	-.113	-.993	.323
a. Dependent Variable: TotalY						

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.384	1.067		-.360	.720
	TotalX1	.773	.049	.855	15.875	.000
a. Dependent Variable: TotalZ						

The Social Media Promotion variable shows the t value of 8.058 and the t table value of 1.661 with a significance value of 0.000 smaller than 0.05, thus this test shows that H1 is accepted, so it can be concluded that the Social Media Promotion variable (X1) has a positive and significant effect on Purchasing Decisions. the Brand Image variable shows the t value of

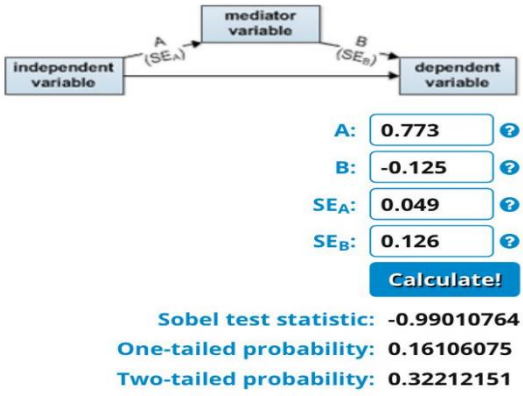
-0.993 and the t table value of 1.661 with a significance value of 0.323 higher than 0.05, thus this test shows that H2 is rejected, so it can be concluded that the Brand Image variable (Z) has no positive and significant effect on purchasing decisions (Y). The Social Media Promotion variable shows the t value of 15.875 and the t table value of 1.661 with a significance value of 0.000 less than 0.05, thus this test shows that H1 is accepted so it can be concluded that the Social Media Promotion variable (X1) has a positive and significant effect on Brand Image (Z).

Figure Sobel test analysis



From the results of the t test analysis (partial) above, it shows that it is known that the value of A = 0.773, the value of B = 0.125, the value of SEA = 0.049 and the value of SEB = 0.126. Furthermore, to find out whether the Brand Image variable (Z) mediates between the Social Media Promotion variable (X1) and the Purchasing Decision (Y) can be calculated using the Sobel Test Calculator, shown in the following figure:

Sobel Test Calculation Figure



From the picture above, it can be seen that the Two-tailed probability value of 0.32212151 is greater than 0.05, so the Brand Image variable (Z) is unable to mediate between the Social Media Promotion variable (X1) and the Purchasing Decision (Y).

Table 8 R2 Determination Test Results

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.821[a]	.675	.671	1.589
a. Predictors: (Constant), TotalX1				

Based on the table above, the Adjusted R square number is 0.671 or 67.1%. Thus the ability of the Social Media Promotion variable to explain the Purchasing Decision variable is 67.1%, while the other 32.9% value is influenced by variables not included in the study.

5. Conclusion

From the results of the above research, it shows that Social Media Promotion partially has a significant effect on Purchasing Decisions on Daviena cosmetics, which means H1 is accepted. Specifically, the results of this study indicate that promotions carried out through social media are not only a tool to increase sales or awareness, but also have a very large role in building a positive brand image. By using social media effectively, companies can convey a consistent message about the values, quality, and uniqueness of their brand, which in turn shapes consumers' perceptions and views of the brand. The results of this study are in line with research conducted by Sulistyo et al (2020) on the effect of Instagram social media marketing on the brand image of The Bunker Café, Tangerang. The results showed that The Bunker Café's ability to carry out marketing through Instagram with good interactions had a positive and significant effect on The Bunker Café's brand image.

Based on the results of this study, it shows that the relationship between Brand Image and purchasing decisions partially has an insignificant effect, which means that the second hypothesis (H2) is rejected. This shows that, although brand image plays an important role in shaping customer perceptions of a brand, other factors besides brand image may be more dominant in influencing purchasing decisions for Daviena cosmetic products. This can be due to various factors, such as product price, product quality, user experience, or the influence of other people's recommendations and social media, which often have a slow effect. Daviena should re-evaluate their marketing and branding strategies, noting that while brand image plays an important role in attracting customers' attention, other factors may influence customers' final purchase decisions more. Therefore, Daviena should focus more on other elements that can improve purchasing decisions, such as improving product quality, increasing communication about product benefits and advantages, and optimizing sales stratification. This research is not in line with previous research researched by Anam, Agama, et al. (2021) examining the Effect of Product Quality, Price and Brand Image on Purchasing Decisions for Citra Brand Hand and Body Lotion Products. The target audience of this survey is consumers of Citra Brand Hand and Body Lotion products who are students of IAIN.

The results of this study indicate that Social Media Promotion has a significant effect on purchasing decisions for Daviena cosmetic products, meaning that H3 is accepted. this research confirms that promotions carried out through social media can be a very effective tool in influencing purchasing decisions. Social media, as a channel that allows direct interaction between brands and consumers, provides space for Daviena to build more personalized and

authentic relationships with their audience. This allows the company to convey information about the product, its benefits and advantages in a more engaging and understandable way, which in turn drives consumer interest and purchase intent. Daviena needs to focus and allocate more resources to maximize its promotional strategy on social media, paying attention to factors that can increase the effectiveness of promotions. This includes choosing the right platform according to the target audience, creating relevant and engaging content, and using influencers or endorsements from users who have experienced the benefits of the product. This approach can be more convincing to potential consumers and help them make faster and more confident purchasing decisions. With the significant influence between social media promotion and purchase decisions, Daviena cosmetic products also need to regularly evaluate the success of their promotional campaigns to ensure their effectiveness.

Based on the results of this study, it shows that the relationship between Social Media Promotion and Purchasing Decisions with Brand Image as an Intervening Variable has an insignificant effect, which means that H4 is rejected. This shows that even though consumers are exposed to promotions on social media, the brand image factor is not strong enough to strengthen consumer decisions in purchasing Daviena cosmetic products. It could be that consumers prioritize other factors, such as product quality, price, or direct recommendations from friends or family, rather than relying solely on the brand image built on social media. One of the main causes of the decline in Daviena's brand image, which resulted in brand image not being able to mediate social media promotions on purchasing decisions, is the controversy related to product content claims. A doctor on TikTok, known as “Doctor Detective,” conducted laboratory tests on Daviena's HB Dosting product and found that the niacinamide content in the product was not detected in significant amounts. This contradicts Daviena's claim that the product can brighten the skin and treat hyperpigmentation. Daviena's owner, Melvina Husyanti, disputed the test results and sent the product to the factory for retesting, which showed different results. The difference in test results caused confusion among consumers and decreased trust in the Daviena brand. Although promotion through social media has become one of the dominant marketing strategies, it turns out that not all types of promotion are able to significantly influence consumer purchasing decisions. This indicates that promotions on social media, whether in the form of advertisements, influencer marketing, or other content, may not be effective enough to build a strong perception of the brand image and ultimately increase purchasing decisions. Cosmetics consumers' purchasing decisions are strongly influenced by various factors, not just social media promotion or brand image. For example, factors such as product diversity, competitive pricing, product effectiveness, as well as other direct user experiences can play a greater role in determining consumer choice. This indicates that Daviena cosmetics needs to pay attention to other more in-depth factors in building emotional relationships with consumers, apart from relying solely on social media. This research is not in line with previous research researched by Monica & Bahrun (2020) proving that social media promotion variables have a positive and significant effect on purchasing decisions. As well as research by Fatmaningrum et al, (2020) resulted in brand image variables having a positive and significant effect on purchasing decisions.

Based on the results of research and discussion related to the influence of Social Media Promotion on Purchasing Decisions on Daviena Cosmetic Products with Brand Image as an Intervening Variable, it can be concluded:

Social Media Promotion has a positive and significant effect on Purchasing Decisions for Daviena cosmetic products for FEB Unisma students. If Daviena cosmetic products often involve relatable content and direct interaction, this can create an emotional connection that increases trust and triggers impulsive buying decisions.

Brand Image does not have a positive and significant effect on purchasing decisions for Daviena cosmetic products for Unisma FEB students. Daviena's brand image was negatively affected by issues of product authenticity or effectiveness. This reduces trust in the brand, although some consumers still buy because of attractive promotions or influencer recommendations, not because of the brand image.

Social Media Promotion has a significant effect on purchasing decisions for Daviena cosmetic products for FEB Unisma students. If Daviena cosmetic products can utilize social media to market products, consumers will feel closer and trust because they see the faces and voices of people who provide testimonials directly. This creates a strong emotional connection and builds trust instantly.

Brand Image is unable to mediate the effect of Social Media Promotion on Purchasing Decisions for Daviena cosmetic products for Unisma FEB students. Daviena cosmetic products use social media promotions such as live TikTok, limited discounts, and influencer testimonials that directly influence purchasing decisions without the need for a strong brand image. This means: Consumers buy because they are interested in promotional content (price, testimonials, instant results), not because the Daviena brand already has a solid image. Although brand image exists, it is not the main intermediary factor in the consumer's buying decision process.

Based on the above conclusions, this researcher tries to provide the following suggestions:

For Daviena cosmetic products To increase consumer decisions to buy Daviena cosmetic products, the company must concentrate on strengthening its social media promotion strategy. It is very important for Daviena to build a strong brand image that can build customer loyalty in the long term, even though this does not directly affect current purchasing decisions. And Daviena should utilize social media more to increase visibility and engagement with customers while maintaining a positive brand image to build strong customer relationships.

Future researchers are expected to consider variables such as perceived value, trust, or emotional connection that are more relevant to consumer purchasing decisions. In addition, researchers are also advised to further explore the dimensions of brand image that can influence consumer perceptions, as well as conduct research with a wider and more diverse sample to ensure consistency of research results across various demographics. Research on the influence of the timing and frequency of social media promotions can also provide deeper insight into the dynamics of promotions in influencing purchasing decisions.

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ANALYSIS OF THE INFLUENCE OF CAPITAL ADEQUACY RATIO, NON PERFORMING FINANCING, FINANCING TO DEPOSIT RATIO, ZAKAT PERFORMANCE RATIO ON RETURN ON ASSETS OF ISLAMIC COMMERCIAL BANKS IN INDONESIA (2021-2023)

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Abstract

The banking sector is directly related to various institutions involved in corporate activities and society as a whole, therefore it has a very strategic position in promoting economic growth. As part of the Indonesian banking system, Islamic Banks manage their business based on Sharia rules and offer a variety of Sharia banking products and services. The purpose of this study is to analyze the effect of capital adequacy ratio (CAR), non-performing loans (NPF), funding ratio (FDR) and zakat performance ratio (ZPR) on return on assets (ROA) of Islamic banking in Indonesia from 2021 to 2023. The methodology used is quantitative causality through panel data regression analysis techniques based on quarterly data of Islamic commercial banks. The results show that CAR has a positive and significant effect on ROA while NPF and FDR have no significant effect. Meanwhile, ZPR has a negative and significant effect on the return on assets of Islamic commercial banks in Indonesia (2021-2023).

Keywords: *CAR, NPF, FDR, ZPR, ROA*

1. INTRODUCTION

Sharia-based banking in Indonesia has grown rapidly in the last decade, both in terms of structure and regulation (Bonita & Anggreyani, 2024) . Since its introduction in 1992, this growth has been reflected in the increasing number of sharia banks, the variety of products offered, and public awareness of the importance of financial services in accordance with sharia principles. According to Tuzzuhro et al., (2023) , efforts to increase public understanding of sharia banking have also driven demand for sharia financial products and services.

Banking financial performance is a crucial aspect for stakeholders (Susilowati & Tiningrum, 2019) . Given that there are also authorized parties, accurate and transparent bank performance assessments are essential to maintain public trust, comply with regulations, and support strategic decisions. One of the ways to measure financial performance is to analyze profitability, with the main indicator being Return on Asset (ROA), which reflects the bank's ability to make a profit from its total assets. Financial ratio analysis, including ROA, serves to assess the stability, condition, performance, and risk of the bank as a whole (Hasibuan et al., 2023) .

ROA Islamic Commercial Banks in Indonesia increased from 1.55% (2021) to 2.00% (2022), then decreased to 1.88% (2023) due to efficient risk management, operational improvements, and optimal portfolio diversification strategies (Kuncoro & Anwar, 2021) . Meanwhile, ROA at Conventional Commercial Banks continues to show a consistent increase, from 1.84 in 2021 to 2.43 in 2022, and reaching 2.74 in 2023. This comparison proves that,

although Islamic Commercial Banks increased in 2022, the trend did not continue, while Conventional Commercial Banks showed a stable increase in profitability every year (Anggadini et al., 2022) .

Capital Adequacy Ratio (CAR) is a key indicator that assesses the adequacy of bank assets and its financial condition (Kuncoro & Anwar, 2021) . High CAR tends to increase ROA, because CAR reflects the bank's efficiency in generating profits and its ability to take higher investment risks. Conversely, low CAR tends to make banks more cautious, which can reduce profit potential (Wibisono & Wahyuni, 2017) . According to BI, CAR is optimal if it is above 8%, reflecting the health of the bank based on ATMR (Ibrahim, 2019). Data from 2021-2023 shows that CAR increased by 0.57% (2021-2022), then decreased by 0.87% (2022-2023).

Non Performing Financing (NPF) is a ratio that functions to describe loans that have not been paid by debtors according to the agreed agreement (Wibisono & Wahyuni, 2017) . It can be seen that the decline in non-performing loans has improved in Islamic Commercial Banks, from 2.59% in 2021 to 2.10% in 2023. The consistent decline in NPF reflects the increasing ability of Islamic banks to manage credit risk and asset quality, in line with the study of Izzah et al. (2019) which states that the lower the NPF, the higher the ROA and profitability. This trend indicates the implementation of better risk management and prudent financing policies.

Financing to Deposit Ratio (FDR) is an indicator of cash flow that plays an important role in the banking sector, including in Islamic banking. FDR functions as a measure of a bank's ability to fund customer withdrawals and utilize these funds as a source of liquidity (Muchtar & Setiawan, 2021) . The FDR trend for Islamic Commercial Banks in Indonesia shows an increase from 70.12% in 2021 to 79.06% in 2023, approaching the safe limit but still below the tolerance threshold.

Zakat Performance Ratio (ZPR) is an indicator that assesses the level of effectiveness of Islamic banking institutions in carrying out their responsibilities (Iman & Umiyati, 2022) . ZPR also shows the commitment of Islamic banks to their social responsibility. Zakat is considered a moral obligation that can improve the reputation and trust of customers, potentially having a positive impact on bank profitability. Several studies, such as those conducted by Iman & Umiyati, (2022) and (Aeny et al., 2023) , explain that ZPR significantly increases ROA, supporting the argument that social responsibility through zakat can contribute to the profitability of Islamic banks.

Based on previous findings, it is important to review the variability that impacts Return on Assets (ROA) and limitations in research related to Zakat Performance Ratio (ZPR). Considering that not all Islamic Commercial Banks publish zakat data, this study applies panel data with purposive sampling technique to select only banks that consistently provide zakat data. This approach allows for in-depth exploration of differences between banks as well as dynamic aspects from 2021 to 2023.

2. LITERATURE REVIEW

Stakeholder Theory

According to Freeman, (1984), the concept of stakeholders includes all individuals or groups related to the achievement of a company's targets. They are not only affected by

decisions made by the company, but also have the ability to influence the decision-making process (Freeman & Phillips, 2002) .

Return On Assets

Return on Assets is an instrument used to determine how much an institution or bank can generate net profit from all their assets (Sholahudin, (2013) .

Capital Adequacy Ratio

Capital Adequacy Ratio is a percentage value that analyzes the level of financial institution's ability to prepare funds based on its capital to support its business expansion. In addition, this value also reflects the bank's capacity to overcome potential risk of loss arising from its operational activities (Muhammad, (2011) .

Non Performing Financing

Non Performing Financing is a situation where the proportion of credit experiencing payment problems is greater than the total funding distributed by the bank (Sugiono, 2009) .

Financing to Deposit Ratio

The Financing to Deposit Ratio functions to measure how easily banks can provide credit to clients with financial resources obtained from third parties (Bonita & Anggreyani, 2024) .

Zakat Performance Ratio

Zakat Performance Ratio is an important indicator in assessing the effectiveness of zakat and the financial performance of Islamic banks and provides information on how well banks distribute zakat from their net assets (Hatta et al., 2024)

Based on a theoretical review of the study findings logically, the hypothesis can be formulated as follows:

H1 : Capital Adequacy Ratio, Non Performing Financing, Financing to Deposit Ratio, and Zakat Performance Ratio have a joint effect on Islamic Commercial Banks 2021-2023

H2 : Capital Adequacy Ratio influences Return on Assets (ROA) in Islamic Commercial Banks 2021-2023

H3 : Non Performing Financing has an effect on Return on Assets (ROA) at Islamic Commercial Banks 2021-2023

H4 : Financing to Deposit Ratio has an effect on Return on Assets (ROA) in Islamic Commercial Banks 2021-2023

H5: Zakat Performance Ratio has an effect on Return on Assets (ROA) in Islamic Commercial Banks 2021-2023

3. METHODOLOGY

This study uses a quantitative method that emphasizes causal relationships, with the aim of analyzing the relationship between independent and dependent variables. This study

utilizes secondary data in panel format, which means that the information is collected indirectly from existing sources or documents. (Sugiyono, 2017) . According to Sugiyono (2020), Panel Data is a collection of cross-section and time-series data that allows further analysis of the variables studied. This study focuses on Islamic Commercial Banks (BUS), with data collection methods sourced from the official OJK website. The research population includes Islamic Commercial Banks that have been validated by OJK with a period spanning 2021 to 2023. This study conducted sampling based on certain and specific considerations that were relevant to the research objectives. Data collection was carried out through documentation methods to collect data from several official and trusted sources (Novianto, 2021) .

4. RESULTS AND DISCUSSION

Selecting a Regression Estimation Method for Panel Data

Common Effect Model

First, the common effect model or (CEM) is used. The results of this model analysis are as follows:

Table 1. Common Effect Model (CEM)

Variables	Coefficient	Std. Error	t-Statistic	Prob.
C	-6.496664	3.257648	-1.994281	0.0511
LOG(X1)	-0.793240	0.324831	-2.442006	0.0178
LOG(X2)	-0.058754	0.117577	-0.499704	0.6193
LOG(X3)	2.037704	0.702676	2.899918	0.0054
LOG(X4)	-0.419419	0.096975	-4.325033	0.0001

Source: Eviews Output 13, 2025

Fixed Effect Model

In the next step, the data is processed using the Fixed Effect Model (FEM) methodology to compare it with the general effect model (CEM) strategy. The results of the fixed effect (FEM) analysis are as follows:

Table 2. Fixed Effect Model (FEM)

Variables	Coefficient	Std. Error	t-Statistic	Prob.
C	-1.722681	1.575208	-1.093621	0.2793
LOG(CAR)	0.380737	0.219008	1.738457	0.0882
LOG(NPF)	-0.094974	0.087404	-1.086606	0.2823
LOG(FDR)	-0.036195	0.376411	-0.096159	0.9238

LOG(ZPR)	-0.403619	0.104582	-3.859369	0.0003
Effects Specification				

Source: Eviews Output 13, 2025

Chow Test

The Chow test is implemented in order to validate the more effective type of common effect (CEM) or fixed effect (FEM):

Table 3. Chow Test Results

Redundant Fixed Effects Tests

Equation: Untitled

Cross-section fixed effects test

Effects Test	Statistics	df	Prob.
Cross-section F	77.002890	(4.51)	0.0000
Cross-section Chi-square	117.091737	4	0.0000

Source: Eviews Output 13, 2025

The significance value of chi-square and F is 0.0000 (below 5%), and F-count 77.002890 is higher than F-table 2.539688635. The results conclude that the fixed effect model is the best for panel data regression.

Random Effect Model

The approach using the Random Effect Model (REM) is carried out as a type of comparison with the Fixed Effect Model (FEM):

Table 4. Random Effect Model (REM)

Variables	Coefficient	Std. Error	t-Statistic	Prob.
C	-6.496664	1.275062	-5.095176	0.0000
LOG(CAR)	-0.793240	0.127141	-6.239065	0.0000
LOG(NPF)	-0.058754	0.046020	-1.276691	0.2071
LOG(FDR)	2.037704	0.275032	7.408984	0.0000
LOG(ZPR)	-0.419419	0.037956	-11.05000	0.0000

Source: Eviews Output 13, 2025

Hausman test

This test is adopted in order to choose which type of regression is relevant between the random model (REM) and the fixed model (FEM):

Table 5. Hausman Test Results

Correlated Random Effects - Hausman Test

Equation: Untitled

Cross-section random effects test

Test Summary	Chi-Sq. Statistic	Chi-Sq. df	Prob.
Random cross section	308.011560	4	0.0000

Source: Eviews Output 13, 2025

output shows the random cross-section significance figure with a value of (0.0000 < 0.05). The fixed effect type is the right estimation model for panel data regression.

Panel Data Regression Analysis

Fixed Effects Model was selected as the most appropriate regression based on CEM, FEM, and REM analysis using E-Views:

Table 6. Fixed Effect Model

Variables	Coefficient	Std. Error	t-Statistic	Prob.
C	-1.722681	1.575208	-1.093621	0.2793
LOG(CAR)	0.380737	0.219008	1.738457	0.0882
LOG(NPF)	-0.094974	0.087404	-1.086606	0.2823
LOG(FDR)	-0.036195	0.376411	-0.096159	0.9238
LOG(ZPR)	-0.403619	0.104582	-3.859369	0.0003

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.935230	Mean dependent variable	-0.211258

Adjusted R-squared	0.925070SD dependent var	1.535735
SE of regression	0.420382Akaike information criterion	1.242174
Sum squared residual	9.012765Black criterion	1.556326
Log likelihood	-28.26523Hannan-Quinn critter.	1.365056
F-statistic	92.05036Durbin-Watson stat	1.111184
Prob(F-statistic)	0.000000	

Source: Eviews Output 13, 2025

The above equation can be interpreted below:

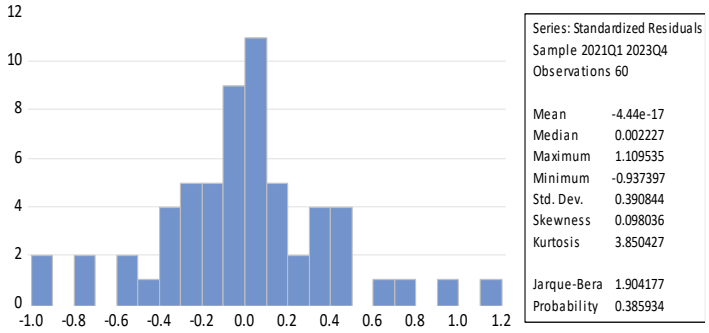
(ROA)= -1.72 + 0.38(CAR) - 0.09(NPF) - 0.04(FDR) - 0.40 (ZPR) + εit

1. Based on the results of the equation, it can be stated that the constant for ROA is -1.72, which states that without the influence of the independent variables (CAR, NPF, FDR, ZPR), ROA will be -1.72, which means that bank profitability is not achieved.
2. The regression coefficient for the Capital Adequacy Ratio (X1) is 0.38, which means that a 1% increase in CAR will increase ROA by 38%.
3. The regression coefficient for Non Performing Financing (X2) is -0.09, which means that a 1% increase in NPF will decrease ROA by 9%.
4. The regression coefficient for Financing To Deposit Ratio (X3) is -0.04, which indicates that every 1% increase in FDR will decrease ROA by 4%.
5. The regression coefficient for Zakat Performance Ratio (X4) is -0.40, which means that if it increases by 1%, ROA will decrease by 40%.

Normality Test Results

This study uses the Jarque-Bera normality test to examine the residual distribution in panel regression, where the regression model is considered normal if the probability value is above 0.05.

Table 7. Normality Test Results



Source: Eviews Output 13, 2025

It can be seen from the results of the Jarque-Bera normality test that has been carried out that there are symptoms of data not being normally distributed. So the data is transformed into log data. And based on the results of the normality test that has been transformed with log data as shown in the image above, it states that the probability level is 0.385934> 0.05, so the development of the log data transformation of the regression model is normal.

Classical Assumption Test Results
Multicollinearity Test

Table 8. Multicollinearity Test Results

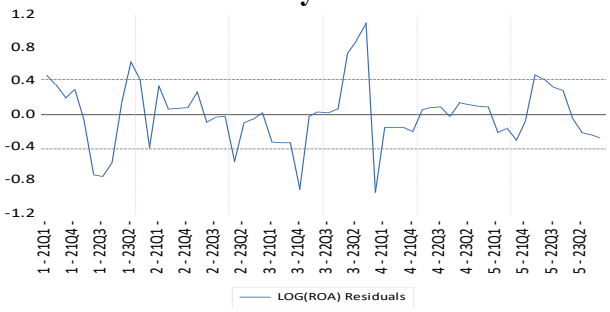
	LOG(CAR)	LOG(NPF)	LOG(FDR)	LOG(ZPR)
LOG(CAR)	1,000,000	0.125043	0.048204	-0.321854
LOG(NPF)	0.125043	1,000,000	-0.100035	0.256046
LOG(FDR)	0.048204	-0.100035	1,000,000	-0.535232
LOG(ZPR)	-0.321854	0.256046	-0.535232	1,000,000

Source: Eviews Output 13, 2025

It can be stated that there is no multicollinearity problem because all data values are less than 0.80 (<0.80) (Napitupulu et al., 2021: 141) .

Heteroscedasticity test

Table 9.
Heteroscedasticity Test Results



Source: Eviews Output 13, 2025

The residual values seen in the residual graph do not exceed the limits of 500 and -500, indicating that the residual variance is constant. Thus, no symptoms of heteroscedasticity were found or test results indicating the presence of this problem (Napitupulu et al, 2021) .

Autocorrelation Test

In autocorrelation testing, researchers apply the Durbin-Watson (DW) test to identify the presence of autocorrelation in a model.

Table 10. Autocorrelation Test Results

R-squared	0.935230Mean dependent variable	-0.211258
Adjusted R-squared	0.925070SD dependent var	1.535735
SE of regression	0.420382Akaike information criterion	1.242174
Sum squared residual	9.012765Black criterion	1.556326
Log likelihood	-28.26523Hannan-Quinn critter.	1.365056
F-statistic	92.05036Durbin-Watson stat	1.111184
Prob(F-statistic)	0.000000	

Source: Eviews Output 13, 2025

When viewed, the results of the autocorrelation test (DW) found the DW value to be 1.111184. Referring to the decision-making criteria according to Meiryani, (2021) , if the DW value is in the middle of -2 to +2, it can be stated that there is no autocorrelation in the model being tested.

Hypothesis Testing

F Test

Table 11. F Test Results

R-squared	0.935230
Adjusted R-squared	0.925070
SE of regression	0.420382
Sum squared residual	9.012765
Log likelihood	-28.26523
F-statistic	92.05036
Prob(F-statistic)	0.000000

Source: Eviews Output 13, 2025

Referring to the table, probability (F-statistic) 0.000000 < 0.05, this result states that the CAR, NPF, FDR, and ZPR elements together can significantly influence ROA.

Coefficient of Determination (R2)

Coefficient of Determination (R2) is a method with the function of assessing how well the effect on the dependent variable can be explained by the independent variable.

Table 12. F Test Results

R-squared	0.935230
Adjusted R-squared	0.925070
SE of regression	0.420382
Sum squared residual	9.012765
Log likelihood	-28.26523
F-statistic	92.05036
Prob(F-statistic)	0.000000

Source: Eviews Output 13, 2025

According to the results of the test (R2) with Adjusted R2 of 0.925070, it shows that the value of 92.50% of the ROA variable can be influenced by CAR, NPF, FDR, and ZPR, while 7.50% is given by other aspects that were not studied.

Result of t-Test (Partial Test)

To analyze the partial impact of each independent variable, such as CAR, NPF, FDR, and ZPR, on ROA individually.

Table 13. t-Test Results

Variables	Coefficient	Std. Error	t-Statistic	Prob.
C	-1.722681	1.575208	-1.093621	.2793
LOG(CAR)	0.380737	0.219008	1.738457	0.0882 *
LOG(NPF)	-0.094974	0.087404	-1.086606	0.2823
LOG(FDR)	-0.036195	0.376411	-0.096159	0.9238
LOG(ZPR)	-0.403619	0.104582	-3.859369	0.0003 **

Source: Eviews Output 13, 2025

According to Table 14, it can be interpreted:

CAR : Has a significant positive effect on ROA (T value = 1.738457; Significance 0.0882* < 0.010).

NPF : No Effect on ROA (T Value = -1.086606; Significance 0.2823 > 0.05).

FDR : No Effect on ROA (T Value = -0.096159; Significance 0.9238> 0.05).

ZPR : Negative Influence on ROA (T Value = -3.859369; Significance 0.0003** > 0.05)

The Influence of Capital Adequacy Ratio (CAR), Non Performing Financing (NPF), Financing to Deposit Ratio (FDR), Zakat Performance Ratio (ZPR) on Return on Assets (ROA) of Islamic Commercial Banks

The first hypothesis (H1) can be stated that CAR, NPF, FDR, and ZPR have a substantial impact on the ROA of Islamic Commercial Banks in 2021-2023. The findings of the F test produce a significance value with a value of 0.000 which is <0.05, which indicates a significant effect of these variables on ROA simultaneously. This finding is in line with existing studies such as the studies of Raharjo et al., (2020), Moorcy et al., (2020) , Iman & Umiyati, (2022) , and Hatta et al., (2024) which prove that the Capital Adequacy Ratio (CAR), Non Performing Financing (NPF), Financing to Deposit Ratio (FDR), and Zakat Performance Ratio (ZPR) have an effect on the ROA of Islamic Commercial Banks (2021-2023).

The Influence of Capital Adequacy Ratio on Return on Assets (ROA) of Islamic Commercial Banks

The findings reveal that the t-statistic for the CAR variable is 1.738457, with a probability of 0.0882, which is less than 0.10. This value indicates that CAR has a positive and substantial effect on ROA at a significance level of 0.10. Therefore, H2 is accepted, which states that the capital adequacy ratio has a good and quite high impact on the level of investment returns of Indonesian Islamic commercial banks in 2021-2023. CAR assesses the adequacy of a bank's capital to support and mitigate risks which in turn can affect financial performance. A higher CAR figure indicates a stronger bank financial performance.

These results are reinforced by research conducted by Moorcy et al., (2020) & Tami & Dewi, (2022) which revealed that the Capital Adequacy Ratio has a positive and significant impact on Return On Assets .

The Influence of Non Performing Financing (NPF) on Return on Assets (ROA) of Islamic Commercial Banks

According to the findings of this study, the NPF variable has a t-statistic value of -1.086606 and a probability of 0.2823 > 0.05. With this, it is proven that NPF has no impact on ROA. Therefore, H3 is rejected which assesses that Return on Assets at Islamic Commercial Banks in Indonesia during the 2021-2023 period is not influenced by Non-Performing Financing. This conclusion reveals that the financial performance of Islamic institutions is more significantly influenced by other variables. Although NPF is an important indicator of problematic financing, NPF is not the only factor that determines the success of ROA. Adhianto (2022) stated that Islamic banks can continue to implement problematic financing even though its prevalence is increasing. The results of this study are reinforced by research conducted by Raharjo et al. (2020), which shows that Return on Assets is not affected by Problematic Financing.

However, this is contrary to previous studies conducted by Raharjo et al., (2020) which prove that the ratio of non-performing financing does not affect Return On Assets . However, this is contrary to previous studies conducted by Moorcy et al., (2020) , and Hasanah & Riyadi, (2021) which state that Non -Performing Financing has an effect on ROA.

The Influence of Financing to Deposit Ratio on Return on Assets (ROA) of Islamic Commercial Banks

The findings of this study show that the FDR variable exceeds the threshold of 0.05 with a t-statistic of -0.096159 and a probability of 0.9238. Therefore, it can be said that the FDR variable does not have a substantial effect on Return on Assets (ROA). As a result, H4 is rejected, which concludes that the Financing to Deposit Ratio has no impact on ROA at Islamic Banks in Indonesia during the 2021-2023 period. The impact of this conclusion is that the profitability of Islamic banks does not necessarily increase with an increase in the FDR ratio, indicating that there are other factors that can have a more dominant impact on influencing financial performance.

The study conducted by Hasanah & Riyadi (2021) supports the findings of this study, showing that the Financing to Deposit Ratio has no effect on Return on Assets. However, this is in contrast to the findings of other studies conducted by Moorcy et al. (2020), Iman & Umiyati (2022), and Kharazi (2022) which revealed that the Financing to Deposit Ratio has an effect on ROA.

The Influence of Zakat Performance Ratio on Return on Assets (ROA) of Islamic Commercial Banks

The research findings state that the ZPR variable with a t-statistic of -3.859369 and a probability of 0.0003 is less than 0.05, so that ZPR plays a significant role in ROA. Thus, H5 is accepted, which indicates that Zakat Performance Ratio has a negative impact on ROA. Islamic Commercial Banks in Indonesia in 2021-2023. ZPR shows bank compliance with sharia principles and social duties, although it has the potential to reduce ROA, the importance of zakat as a mechanism for wealth redistribution is very important. (Hidayah et al., 2023)

Zakat has a significant role in helping the less fortunate and encouraging social development (Aroof et al., 2023) . Although zakat allocation can reduce net profit, its beneficial impact on society and the economy needs to be considered (Wardiwiyono et al., 2021) . In addition, effective zakat administration can improve public reputation and trust, thereby facilitating the sustainable growth of Islamic institutions (Alrasyid et al., 2021) . Zakat not only includes financial benefits, but also social responsibility and compliance with sharia norms (Arisandi, 2021).

The findings of this study are supported by Nasution et al. (2018) , who claim that the zakat performance ratio has a negative effect on Return on Assets.

5. CONCLUSION

Referring to the results of the studies that have been conducted, the research objectives can be formulated as follows:

1. Capital Adequacy Ratio, Non Performing Financing, Financing to Deposit Ratio, and Zakat Performance Ratio together have a significant effect on the Return on Assets of Islamic Commercial Banks in Indonesia (2021-2023).
2. Capital Adequacy Ratio has a significant positive effect on the Return on Assets of Islamic Commercial Banks in 2020-2023.
3. Non Performing Financing has no effect on the Return on Assets (ROA) of Islamic Commercial Banks in Indonesia (2021-2023).
4. Financing to Deposit Ratio has no effect on Return on Assets (ROA) of Islamic Commercial Banks in Indonesia (2021-2023).
5. Zakat Performance Ratio has a negative and significant effect on the Return on Assets of Islamic Commercial Banks in Indonesia (2021-2023).

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THE EFFECT OF BI RATE, CAPITAL ADEQUACY RATIO AND OPERATING EXPENSES OPERATING INCOME ON THE PROFITABILITY OF ISLAMIC COMMERCIAL BANKS IN 2020-2023

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Abstract

The banking sector plays an important role in supporting economic growth, acting as a mediator between parties with excess funds and parties in need of funds. Islamic banks, as one type of banking in Indonesia, operate based on sharia principles that avoid usury and replace it with a profit-sharing system. This study aims to determine the BI Rate, Capital Adequacy Ratio, and BOPO on the Profitability of Islamic Commercial Banks in the 2020-2023 period. Through quantitative methods, this study will answer the influence between variables, both partially. This study offers a new perspective by combining the latest data for the 2020-2023 period to comprehensively evaluate the financial performance of Islamic Commercial Banks. The results of this study found that partially, the BI Rate and BOPO did not have a significant effect on ROA. Since ROA is not affected by BI Rate, Islamic banks need to focus on diversifying financial products that are not too dependent on market interest rates, such as financing based on Islamic contracts (mudharabah, musyarakah, and others) and BOPO does not have a significant effect on ROA indicating that operational efficiency (BOPO) alone is not enough to increase profitability. While CAR shows a significant positive effect on ROA. Thus, high CAR, banks have the capacity to face credit, operational, and market risks better. This can improve financial stability, customer confidence, and long-term profitability.

Keywords: *BI Rate, CAR, BOPO, Profitability, Sharia Bank*

1. INTRODUCTION

The banking sector is an integral part of the development of every country in this era of rapid technological advancement, so it is impossible to isolate it from other financial sectors. The financial sector is very important for every field that drives rapid economic expansion. Banks must be able to continue to operate in the financial sector in order to continue to gain public trust. One of the many criteria used to evaluate the financial success of a bank is the bank's financial statements. (Meliana et al., 2024:174).

One of the parameters of Islamic banks to be able to increase public trust is through positive bank performance (Murtadha & Kornitasari, 2024:127). This is the perception of the general public regarding the bank's ability to carry out banking operations effectively, which can increase public trust in the use of financial services in the banking sector (Putera, 2020:134). Thus, public trust in using financial services is based on bank performance. The positive and negative performance of an Islamic bank can be indicated by how much profit or gain is obtained from its operational activities. One of the existing parameters is the profitability ratio to measure the company's financial performance. Islamic banks in Indonesia compete with each other to maximize profits, to achieve the highest possible profit margin

along with improving financial performance in the Islamic banking sector with increasing profitability.

Therefore, when assessing a bank's financial performance, Bank Indonesia (BI) prioritizes Return on Assets (ROA) over Return on Equity (ROE). Bank Indonesia pays more attention to ROA than ROE because Bank Indonesia analyzes bank profitability based on the assets used to obtain funds (Dendawijaya, 2005:29). ROA is more relevant than ROE in determining bank profitability because ROA is based on assets that are partly funded by public deposits (Elfadhli, 2022:25).

Mustabsyirah et al. (2024:61) stated that in general, the financial performance of Islamic banks shows better results compared to conventional banks in terms of liquidity. However, there are several ratios that show lower numbers in Islamic banks, such as the capital ratio, namely the Capital Adequacy Ratio (CAR) and the profitability ratio, namely ROA. These results indicate that Islamic banks need to improve their performance in terms of capital and profitability in order to compete effectively with conventional banks (Tang et al., 2024:43).

Zareta et al. (2024:352) shows that the analysis of financial ratios showed substantial differences between conventional and Islamic banks, especially in the ROA and ROE ratios, where conventional banks performed better. In addition, there were significant differences in the CAR and Operating Expenses to Operating Income (BOPO) ratios, where conventional banks had a higher CAR ratio and a lower BOPO ratio. However, this shows that the performance of conventional banks is better than Islamic banks in certain ratios, such as ROA, ROE, and BOPO. This study is in line with Eka Rimba (2022:72) the results showing differences in financial performance between conventional commercial banks and Islamic commercial banks, as measured by the ROA, ROE, Net Interest Margin / Net Operating Margin (NIM/NOM), BOPO and Non-Performing Loan / Non-Performing Financing (NPL/NPF) ratios. Overall, the financial performance of conventional commercial banks is superior to that of Islamic commercial banks. Thus, to improve competitiveness and performance, Islamic banks need to make improvements, especially in managing operational costs and improving asset quality. These steps are very important to increase the profitability and competitiveness of Islamic banks in the future.

Thus, this study aims to conduct a comprehensive analysis of the financial performance of Islamic banks in comparison with conventional banks, which focuses on measuring profitability using ROA as the main indicator. Considering the results of the study that have been presented above, previous performance reports indicate that the profitability of Islamic banks is generally lower than that of conventional banks, this study explores the influence of internal factors, namely and external factors that are the main determinants in the financial performance of Islamic banks. In the internal aspect, this study considers CAR and BOPO. Meanwhile, the external factor uses the BI Rate variable. Therefore, this study is expected to produce empirical insights that describe the comparative performance of Islamic banks.

External and internal factors are factors that influence profitability on banking performance. Herawati & Surya (2023:164)said that internal factors are factors related to the company, so they can be controlled by the company. Meanwhile, external factors are factors that refer to the environment outside the company, so they cannot be controlled by the company. Internal factors that will be discussed in this study include CAR and BOPO, while

external factors that will be studied are the BI Rate to measure the influence of external and internal factors on BUS profitability.

According to BI, BI Rate is a reference interest rate policy issued every month to represent the monetary policy adopted by BI since 1970. Research by Hasyim et al. (2023:179), Himma & Jaya (2024:24)and Sasmita & Anindyntha (2024:9)conducted the same research on BI Rate which resulted in BI Rate having a positive and significant effect on the profitability of Islamic banking. This is in contrast to the results of research by Anindya et al. (2022:134)and Syah (2018:133)which resulted in BI Rate having a significant negative effect on the profitability of Islamic Commercial Banks.

Based on the summary above, it is clear that the findings of the five studies are contradictory or inconsistent. The novelty of this study is combining external factors, namely the BI Rate and internal factors, namely CAR and BOPO to measure the profitability of Islamic Commercial Banks and using the most recent and latest data, namely 2020-2023.

2. LITERATURE REVIEW

Agency Theory

Agency theory, as explained Jensen & Meckling (1976), refers to the contractual relationship between two parties, namely the principal (shareholder) and the agent (manager). In this context, the agent is responsible for carrying out tasks that have been delegated by the principal, with the aim of acting in accordance with the interests of the principal , especially in decision making.

Profitability

According to Kasmir (2018)the profitability ratio is a ratio that assesses the company's capacity to create profit. The profitability ratio is used to assess the company's ability to create profit. This ratio also determines the success of the company's management. This is indicated by profit from sales and investment income. Overall, the use of this ratio shows the company's efficiency.

BI Rate

According to Rompas (2021:206)BI Rate is the amount of rupiah paid in return for the use of previous funds. When there is a change in interest rates, this reflects a change in the demand for money.

CAR

Capital Adequacy Ratio (CAR) is a measure that relates the amount of capital held by a bank to Risk-Weighted Assets. CAR is an important indicator in assessing the adequacy of a bank's capital. This capital adequacy is very crucial for banks to support business growth and to accommodate potential risks of losses that may occur (Pandia, 2012:31).

BOPO

BOPO is an efficiency ratio, which is used to assess the ability of bank management

to control operational costs against operational income. (Pandia, 2012:72).

Research Hypothesis

Based on a theoretical review of the results of the empirical study, the hypothesis that can be formulated is as follows:

H1 : BI Rate has a significant effect on the Profitability of Islamic Commercial Banks in 2020-2023.

H2 : CAR has a significant impact on the Profitability of Islamic Commercial Banks in 2020-2023.

H3 : BOPO has a significant effect on the Profitability of Islamic Commercial Banks in 2020-2023.

3. METHODOLOGY

In the context of this research, the characteristics it has indicate that this is a correlational study. In general, the term correlation refers to the existence of a relationship between two or more variables. However, the understanding of correlation can be expanded further. Correlational research is a method of quantitative data analysis in which two or more variables are considered correlated if one variable changes consistently followed by changes in the other variable, either in the same direction (positive correlation) or in the opposite direction (negative correlation).

This study is a quantitative method and focuses on Islamic Commercial Banks (BUS), with data collection conducted through the official OJK (Novianto et al, 2023). The time span of this study was from November 2024 to January 2025. The population studied included Islamic Commercial Banks registered with the OJK during the period 2020 to 2023. The data collection method used in this study was documentation, where data was collected from various official and trusted sites. The data collected included the BI Rate, Capital Adequacy Ratio (CAR), and data on the ratio of Operating Costs to Operating Income (BOPO).

4. RESULTS AND DISCUSSION

Multicollinearity Test

Multicollinearity tests were conducted to analyze tolerance and variance inflation factor (VIF) values.

Table 1. Multicollinearity Test Results
Coefficients [a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	3,124	1,210		2,583	,013		
	BI Rate	-,039	,038	-,147	-1,043	,303	,546	1,832
	CAR	,053	,018	,400	2,902	,006	,571	1,751

	BOPO	-,029	,010	-,482	-2,825	,007	,373	2,685
a. Dependent Variable: ROA								

Data source: SPSS Output Results 27, 2024

Based on the information from table 4, it can be concluded that there is no multicollinearity between each independent variable, because the tolerance value is above 0.01 and the VIF value is less than 10.

Autocorrelation Test

In autocorrelation testing, researchers apply the Durbin-Watson test . The Durbin-Watson (DW) test is used to test for autocorrelation in the residuals of a linear regression model.

Table 2. Durbin-Watson Test Results
Model Summary [b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,569 [a]	,324	,309	,14541802	1,854

a. Predictors: (Constant), LAG_RES

b. Dependent Variable: Unstandardized Residual

Data source: SPSS Output Results 27, 2024

Based on the model analysis presented in table 5 above, it can be seen that the Durbin-Watson value shows a value of dU < DW < 4 – dU (1.6692 < 1.854 < 2.3308), so it can be concluded that there is no autocorrelation.

Heteroscedasticity Test

The heteroscedasticity test aims to determine whether there is inequality in residual variance between observations. In this study, the test used is the Park Test.

Table 3. Heteroscedasticity Test Results
Coefficients [a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-12,337	9,473		-1,302	,200
	LAG_X1	-,251	,787	-,052	-,319	,751
	LAG_X2	-,327	,371	-,151	-,881	,383
	LAG_X3	,295	,175	,316	1,687	,099

a. Dependent Variable: LN_RES

Data source: SPSS Output Results 27, 2024

Based on table 6, the results of the heteroscedasticity test show that the significance value for each variable is greater than α > 0.05. The significance value for the BI Rate is recorded at 0.751, for CAR at 0.383, and for BOPO at 0.099. Thus, it can be concluded that the regression equation model does not experience heteroscedasticity problems.

Results of Multiple Linear Regression Analysis

The purpose of this test is to identify the influence of independent variables (BI Rate, CAR and BOPO) on the dependent variable (ROA), both individually and as a whole.

Table 4. Results of Multiple Linear Regression Analysis
Coefficients [a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	,519	,645		,805	,425
	LAG_X1	,011	,054	,034	,208	,836
	LAG_X2	,051	,025	,348	2,014	,050
	LAG_X3	-,007	,012	-,111	-,586	,561

a. Dependent Variable: LAG_Y

Data source: SPSS Output Results 27, 2024

ROA = α + β1X1+ β2X2+ β3X3 + ε

ROA = ROA = 0.519 + 0.011 X1 + 0.051 X2 – 0.007 X3 + ε

Sig 0.0836 0.050 0.561

Model Test Results

Model testing is an estimation process that determines whether the independent variables in a regression model have a significant effect on the dependent variable.

Table 5. Model Test Results
ANOVA [a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	,206	3	,069	3,446	,025 [b]

	Residual	,857	43	,020		
	Total	1,063	46			

a. Dependent Variable: LAG_Y

b. Predictors: (Constant), LAG_X3, LAG_X1, LAG_X2

Data source: SPSS Output Results 27, 2024

Based on table 8, it can be concluded that the F value is 3.446 with a significance value of 0.025, which is smaller than 0.05. Because the significance value is below α <0.05, it can be concluded that testing this model has a significant effect on ROA.

Results of the Determination Coefficient (R2)

The coefficient of determination (R Square) is an estimation method used to measure how much variation in the dependent variable can be explained by the independent variables.

Table 6. Results of the Determination Coefficient Test (R2)
Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,440 [a]	,194	,138	,14119

a. Predictors: (Constant), LAG_X3, LAG_X1, LAG_X2

Data source: SPSS Output Results 27, 2024

Based on table 9, the R Square value is recorded at 0.194. This figure shows that 19.4% of the ROA variable is influenced by the BI Rate, CAR and BOPO variables. Meanwhile, the rest is influenced by other variables outside the analyzed model.

t-Test Results

The t-test is used to analyze the influence of each independent variable, namely BI Rate, Capital Adequacy Ratio (CAR), and Operating Expenses Operating Income (BOPO), on Return on Assets (ROA) partially.

Table 7. t-Test Results
Coefficients [a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	,519	,645		,805	,425
	LAG_X1	,011	,054	,034	,208	,836
	LAG_X2	,051	,025	,348	2,014	,050

LAG_X3	-,007	,012	-,111	-,586	,561

a. Dependent Variable: LAG_Y

Data source: SPSS Output Results, 2024

Based on Table 10 it can be concluded:

BI Rate : Does not have a significant effect on ROA (t value = 0.208; significance 0.836 > 0.05).

CAR : Has a significant positive effect on ROA (t value = 2.014; significance 0.050 = 0.05).

BOPO : No significant effect on ROA (t value = -0.586; significance 0.561 > 0.05).

The Influence of BI Rate, Capital Adequacy Ratio (CAR) and Operating Expenses Operating Income (BOPO) on Return on Assets (ROA) of Islamic Commercial Banks in 2020-2023

The first hypothesis (H1) in this study states that BI Rate, CAR and BOPO have a significant effect on ROA of Islamic Commercial Banks during 2020 to 2023. This study shows a significance value of the F test of 0.025, which is smaller than 0.05, which indicates that BI Rate, CAR and BOPO have a significant effect on ROA simultaneously. The results of this study are in line with research by Sholichatunnisa & Mariana (2022), which states that BI Rate, CAR and BOPO simultaneously have a significant effect on the ROA of Islamic Commercial Banks. ROA functions as an indicator to assess the ability of Islamic banks to generate overall profits. A higher ROA value indicates that the Islamic bank is able to obtain a higher level of profit (Yuliana & Listari, 2021).

The Influence of BI Rate on Return on Assets (ROA) of Islamic Commercial Banks in 2020-2023

The results of the study show that the BI Rate variable has a significance value of 0.836, which is greater than 0.05, it can be concluded that the BI Rate has no effect on Return on Assets (ROA) and indicates that any increase in the BI Rate does not contribute to an increase in Return on Assets (ROA). These results indicate that H1 is rejected and H0 is accepted. accepted, which states that the BI Rate variable has no effect on ROA. This study is supported by research Imaduddin & Nursito (2023)stating that although the BI Rate fluctuates, either an increase or a decrease, the performance of Return on Assets (ROA) does not show significant changes due to the movement of the BI Rate . One reason that can explain this condition is that Islamic bank customers tend to be loyal and have principles that are oriented towards profit and falah (happiness in the world and the hereafter). Therefore, even though the BI Rate increases, customers are not interested in moving their funds because they already have a strong commitment to sharia principles. This result is reinforced by research Istan & Fahlevi (2020)and Muhammad Irsyad et al. (2024)which shows that the BI Rate has no effect on BUS ROA.

The Influence of Capital Adequacy Ratio (CAR) on Return on Assets (ROA) of Islamic Commercial Banks in 2020-2023

The results of the study show that the CAR variable has a significance value of 0.050, which is equivalent to 0.05, it can be concluded that CAR has a significant positive effect on ROA and every one unit increase in the CAR ratio can contribute to an increase in ROA. This shows that H2 is accepted and H0 is rejected. rejected, which states that the CAR variable has a significant positive effect on ROA. This study is in line with Salsabila et al. (2023)the one that shows that a high CAR ratio will cause an increase in the ROA ratio. The greater the CAR value, the higher the profit obtained by the bank. This shows a relationship between the level of capital adequacy and the rate of return on assets, which in turn can generate the expected profit. The results of this study are also supported by Nura et al. (2023)and Putra (2020)which states that the CAR variable has a significant positive effect on the ROA of Islamic Commercial Banks.

The Influence of Operating Expenses on Operating Income (BOPO) on Return on Assets (ROA) of Islamic Commercial Banks in 2020-2023

The results of the study show that the BOPO variable has a significance value of 0.561, which is greater than 0.05, it can be concluded that BOPO has no effect on ROA and shows that every one unit increase in the BOPO ratio does not contribute to an increase in ROA. This shows that H3 is rejected and H0 is accepted, which states that the BOPO variable has no significant effect on ROA. In this research period, namely 2020-2023, which includes the COVID-19 pandemic, the results show that BOPO has no effect on ROA. The pandemic has created uncertain economic conditions, where the banking sector faces great pressure in maintaining operations (Siska et al., 2021). BOPO does not always have a significant effect on ROA because both measure different aspects of performance and are not always directly related. BOPO emphasizes more on operational efficiency, while ROA is a profitability indicator that measures the extent to which a bank is able to optimize assets to generate net income (Budiansyah, 2023). In practice, a bank can have a low BOPO (efficient) but still generate low ROA if the bank's assets are not productive or do not generate sufficient income, such as in the case of high Non-Performing Loans (NPL) (Ahmad & Puspitasari, 2020). Thus, it cannot be concluded that BOPO always has a significant effect on ROA, because both measure different aspects of performance and are influenced by various other factors in the banking industry.(Ramadhan & Amalia, 2023). Antika et al. (2024)explains that BOPO is an important measure in assessing the operational efficiency of a bank . According to Kasmir (2019)Banks that record large profits are not always considered efficient, because the operational efficiency of banks is measured through the BOPO ratio. High BOPO indicates that most of the bank's income is used to cover its operational costs. As a result, even though the bank is able to generate significant profits, its operational performance is not necessarily optimal or efficient. Hery (2015)explains that in the banking world, the efficiency ratio has a strong relationship with BOPO, which is the main indicator for measuring the operational efficiency of a bank. The smaller the BOPO value, the better the bank's ability to manage its resources. However, operational efficiency is not always directly proportional to the level of profitability. The results of this study are supported by Qhotimah et al. (2023)and Gunawan et al. (2020)which explain the results that BOPO has no effect on Return on Assets (ROA).

5. CONCLUSION

The objectives of the research from the results of the research that has been carried out, can be concluded as follows:

1. BI Rate has no significant effect on Return on Assets (ROA) of Islamic Commercial Banks in 2020-2023.
2. Capital Adequacy Ratio (CAR) has a significant positive effect on Return on Assets (ROA) of Islamic Commercial Banks in 2020-2023.
3. Operating Expenses Operating Income (BOPO) does not have a significant effect on the Return on Assets (ROA) of Islamic Commercial Banks in 2020-2023.

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THE EFFECT OF E-REGISTRATION AND E-FILING SYSTEM IMPLEMENTATION ON INDIVIDUAL TAXPAYER COMPLIANCE WITH INTERNET LITERACY AS A MODERATING VARIABLE IN RANDUAGUNG VILLAGE

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Abstract

This study aims to determine the effect of the implementation of the e-registration and e-filing systems on individual taxpayer compliance in Randuagung village, Singosari, Malang. with internet understanding as a moderating variable. A total of 100 respondents were selected as the research sample using the Slovin formula, but only 99 questionnaires were eligible for processing. The sampling technique employed in this study was purposive sampling. This study is categorized as quantitative research, with data collected through a survey method by distributing questionnaires. The data analysis technique used in this study is Moderated Regression Analysis (MRA). The results indicate that the implementation of the e-registration system has a negative effect on taxpayer compliance. The implementation of the e-filing system has a positive effect on taxpayer compliance. Internet understanding can moderate the effect of the implementation of the e-registration and e-filing systems on taxpayer compliance.

***Keywords**: E-registration, e-filing, internet understanding, taxpayer compliance.*

1. INTRODUCTION

Taxes are one of the main sources of state revenue, with about two-thirds of state revenue coming from taxes. Among the various types of taxes in Indonesia, income tax has the largest contribution in increasing tax revenue which continues to increase every year (Ozbalkan et al., 2004). The ratio of total tax revenue to Gross Domestic Product (GDP) or tax ratio in Indonesia tends to increase, except for 2020 which has decreased due to Covid-19. In 2023 the tax ratio experienced a slight decrease of 0.7% from 2022. As for the tax ratio as of the end of October 2024, Minister of Finance Sri Mulyani said it had reached 10.02%. Based on the following graph, the tax ratio level is still relatively low when compared to the tax ratio in 2023 which reached 10.31%. However, the target is still in line with the government's target this year which is in the range of 9.92% to 10.2% (Kompas.com, 2024). This shows that there is still an opportunity to increase the tax ratio in Indonesia.

Tax according to KUP Law No. 28 of 2007 Article 1 paragraph 1 is a mandatory contribution imposed by the government on each individual or entity that is compelling in nature by providing indirect rewards. This contribution is used for state functions aimed at improving the welfare and prosperity of the people. Over time, taxes have undergone various changes and adjustments to keep up with economic and social dynamics. The form of these changes and adjustments is tax digitalization, which brings various innovations in the tax administration system. Tax digitalization has brought various significant benefits to the tax

system in Indonesia. One of the main benefits is the increased efficiency of tax administration. In addition, digitization also increases transparency and accountability, thereby reducing the potential for fraud and tax evasion. With information technology, tax authorities can conduct more effective monitoring of taxpayer compliance. With this, it is expected that the queue of taxpayers coming to the Tax Office can be minimized.

Taxpayer compliance is defined as the actions of a taxpayer who fulfills all his tax obligations and utilizes all his rights in accordance with applicable tax regulations (Ersania & Merkusiwati, 2018). Internal and external factors affect taxpayer compliance. Internal factors come from the taxpayer himself and are related to individual characteristics that trigger him to carry out his tax obligations. Meanwhile, factors that come from outside the taxpayer, such as conditions and the surrounding environment, are called external factors (Jotopurnomo & Mangoting, 2013).

The implementation of e-registration and e-filing systems is an important factor in improving taxpayer compliance in the digital era. E-filing enables online tax return reporting through the DGT portal, while e-registration facilitates the registration of taxpayers and the confirmation of taxable entrepreneurs digitally. E-registration and e-filing were developed by DGT with the hope of making it easier for taxpayers to fulfill their tax obligations, particularly to register and report their taxes. This system is private without going through other parties and can be accessed free of charge (Pradnyana & Prena, 2019).

Urban communities benefit from Information and Communication Technology (ICT) infrastructure development earlier than rural communities, which has triggered the digital divide (Subiakto, 2013). Initially, the digital divide was only related to access to technology (first-tier divide), but then evolved into a gap in the ability to use it (second-tier). Furthermore, a new gap emerged related to the perception of the need to continue using digital technology (Putri, 2023). Therefore, internet understanding also plays a role in increasing taxpayer compliance. This factor functions as a moderating variable that can strengthen or weaken the effect of tax digitalization. A good understanding of the internet allows taxpayers to access and utilize tax features optimally, keep abreast of regulatory developments, and increase efficiency in implementing tax obligations, which ultimately encourages overall tax compliance.

2. LITERATURE REVIEW

Technology Acceptance Model (TAM)

TAM is a concept used to describe and predict the extent to which users accept technology. This model was first introduced by Fred Davis in 1986 and is the result of the development of the Theory of Reasoned Action (TRA). This model is commonly used to analyze factors that influence whether or not an information system is accepted.

According to Davis 1986 in (Gupta et.al, 2015) technology acceptance model states that technology acceptance depends on two main factors, namely Perceived Ease of Use (PEoU), namely how much effort users think is needed to operate a new information system and

Perceived Usefulness (PU), namely users' beliefs that using a new system will improve their task performance.

Compliance Theory

Compliance theory, introduced by Stanley Miligram in 1963, is a theoretical concept that aims to understand why and how individuals or groups comply with certain rules, laws, or policies.

In sociological studies, there are two main approaches used to understand compliance with the law, namely the instrumental perspective and the normative perspective. The instrumental perspective assumes that individuals are driven by self-interest and will adjust their behavior based on changes relevant to those interests. In contrast, the normative perspective focuses on moral values that transcend personal interests (Marlinah, 2018).

Taxpayer Compliance

In general, taxpayer compliance is an action that shows awareness and obedience to tax payment and reporting obligations (Agun et.al, 2022). There are two types of tax compliance, namely formal compliance, where taxpayers fulfill obligations according to formal rules in tax regulations, and material compliance, where taxpayers comply with the substance stipulated in the tax law (Pratama et al., 2020).

According to the Minister of Finance Regulation Number 192/PMK.03/2007, the criteria for taxpayers who are said to be obedient taxpayers if they submit tax returns on time, do not have tax arrears for all types of taxes, except for arrears that have received permission to be paid in installments or postponed payment, financial reports audited by a Public Accountant or government financial supervision institution with an unqualified opinion for three consecutive years and have never been convicted of a tax crime based on a court decision that has permanent legal force in the last five years.

E-registration

Based on Directorate General of Taxes Regulation Number Per-20/PJ/2013 e-registration is a facility for taxpayer registration or business reporting to be recognized as a Taxable Entrepreneur (PKP), changes in taxpayer or PKP data, taxpayer transfer, NPWP removal, and revocation of PKP confirmation that can be accessed via the internet that is directly connected online with the Directorate General of Taxes.

E-registration serves to assist the tax administration process efficiently without the need to visit the tax office directly. The system also supports data accuracy, and accelerates the registration and data change process. The implementation of e-registration is expected to support more inclusive tax digitalization efforts and improve tax compliance among taxpayers.

E-filing

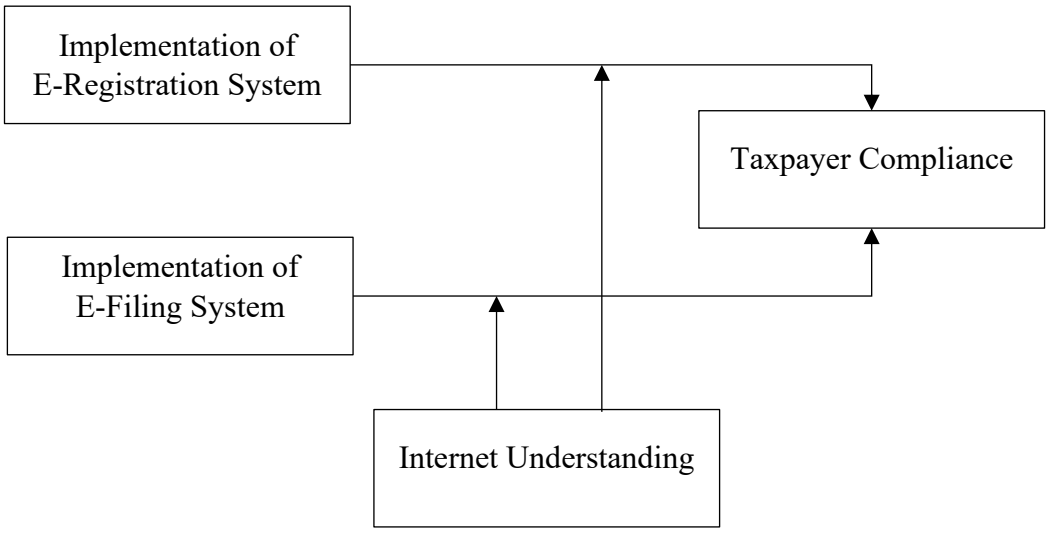
E-filing is an online tax reporting system that allows taxpayers to report their taxes via the internet without being limited by place and time.

Based on Directorate General of Taxes Regulation Number Per-01/PJ/2014, e-filing is defined as a means used to submit annual tax returns electronically which is done online and real-time via the internet. This process can be done through the official website service of the Directorate General of Taxes (DGT) or through an application service provider (ASP).

Internet Understanding

The internet is a form of modern information that is a communication medium that is widely used throughout the world, through interconnection between computer networks connected through internet access providers (Rachmawati et.al, 2022).

According to the KBBI, understanding comes from the word paham, which means clever or understanding something well. Based on this explanation, internet understanding is the ability to really understand and comprehend how the internet works and uses.



3. RESEARCH METHODS

This research is quantitative research with survey data collection techniques through distributing questionnaires. According to Sugiyono (2013) quantitative methods, which are based on the philosophy of positivism, are known as traditional methods because they fulfill scientific rules such as objectivity, measurable, and systematic.

In this study, the data source used is using primary data. This data is obtained directly by researchers during the research process in the field (Syafnidawaty, 2020). Primary data in this study were obtained by distributing questionnaires directly to people who have worked and have livelihoods as employees and self-employed in Randuagung Village, Singosari.

4. RESEARCH RESULTS AND DISCUSSION

Research Result

Overview

This research was conducted in Randuagung Village, Singosari Subdistrict. Respondents in the study were Randuagung villagers who had worked and had livelihoods as employees and self-employed. The population of respondents was 4,173 people, and by calculating using the Slovin formula, a research sample of 100 respondents was obtained. Data was obtained by distributing questionnaires directly to respondents. The questionnaire that can be processed is only 99 respondents.

Table 1. Questionnaire Distribution

No.	Describption	Total	Percentage
1	Questionnaires distribted	100	100%
2	Questionnaires not returned	(0)	0%
3	Incomplate questionnaiere filling	(1)	(1%)
3	Questionnaires that can be processed	99	99%

Source: primary data processed, 2025

Based on the data obtained, the largest number of respondents who filled out the questionnaire were male respondents, namely 69 or 69.70% and the remaining 30 or 30.30% were female respondents. Based on the age of the respondents who filled out the questionnaire, most of them were 31-40 years old, namely 36 people or 36.37%. While the age of 20-30 years as many as 32. people or 32.32%, aged 41-50 years as many as 18 people or 18.18%, aged 51-60 years. 11 people or 11.11%, and age> 60 years as many as 2 people or 2.02%.

Validity Test

The validity of the instrument in this study was assessed by comparing the calculated r value with the r table value. Terms are said to be valid an instrument if the value of r count table. In this study r table df (99-2)=0.197. The validity test results can be seen in the following table:

Table 2. Validity Test

Variables	R count	R table	Descriptions
Implementation of e-registration system	0,896	0, 197	Valid
Implementation of e-filing system	0,758	0, 197	Valid
Taxpayer Compliance	0,869	0, 197	Valid
Internet Understanding	0,769	0, 197	Valid

Source: primary data processed, 2025

Based on table 2, it can be seen that the results of the validity test of the variable Implementation of e-registration system (X1), the Implementation of e-filing system (X2), taxpayer compliance (Y) and internet understanding (Z) state that the value of r count r table, it can be concluded that the data in the study is declared valid.

Reliability Test

In this study, the reliability test used the Cronbach's Alpha analysis technique. The Cronbach's Alpha value is acceptable or said to be reliable if the value is 0.60. The results of the Reliability test can be seen in the following table:

Table 3. Reability Test

Variables	*Cronbach's Alpha*	Reliability Criteria	Description
Implementation of e-registration system	0,835	> 0,60	Reliabel
Implementation of e-filing system	0,911	> 0,60	Reliabel
Taxpayer Compliance	0,863	> 0,60	Reliabel
Internet Understanding	0,842	> 0,60	Reliablel

Source: primary data processed, 2025

Based on table 3, it can be seen that the results of the Reliability test of the variable Implementation of e-registration system (X1), the Implementation of e-filing system (X2), taxpayer compliance (Y) and internet understanding (Z) state that the Cronbach's Alpha value 0.60, it can be concluded that the data in this study are declared reliable.

Normality Test

The normality test in this study can be said to be normally distributed if the significance value is 0.05. This research test uses the Kolmogorov Smirnov statistical test. The test results can be seen in the following table;

Table 4. Normality Test

One-Sample Kolmogorov-Smirnov Test					
		Implementation of e-registration system	Implementation of e-filing system	Taxpayer Compliance	Internet Understanding
N		99	99	99	99
Normal Parameters[a,b]	Mean	16.84	62.84	21.19	24.30
	Std. Deviation	2.113	6.022	2.506	2.690
Most Extreme Differences	Absolute	.077	.109	.156	.112
	Positive	.077	.109	.147	.112
	Negative	-.063	-.062	-.156	-.062
Test Statistic		.077	.109	.156	.112
Asymp. Sig. (2-tailed)[c]		.165	.057	.064	.072

Source: primary data processed, 2025

Based on the test results in table 4, it shows that the asymp.sig (2-tailed) value of the variable e-registration system implementation (X1), e-filing system implementation (X2),

taxpayer compliance (Y) and internet understanding (2.) is greater than 0.05, so it can be concluded that the data in this study is normally distributed.

Multikolinierity Test

In this study, to detect the presence of multicollinearity, the correlation matrix analysis of the independent variables was evaluated through the Variance Influation Factor (VIF). VIF value <10 or tolerance value> 0.10 then it can be stated that there is no multicollinearity. The multicollinearity test results can be seen in the following table:

Table 5. Multikolinearity Test

Coefficients[a]								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	9.070	1.495		6.066	.000		
	Implementation of e-registration system	-.848	.067	-.715	-12.707	.000	.722	1.385
	Implementation of e-filing system	.426	.025	.937	17.376	.000	.657	1.521
	Internet Understanding	-.016	.047	.102	-.346	.730	.892	1.120
a. Dependent Variable: Taxpayer Compliance								

Source: primary data processed, 2025

Based on the multicollinearity test results in table 5, it can be seen that the variables of the Implementation of e-registration system (X1), the Implementation of e-filing system (X2), understanding the internet (Z) show a VIF value of less than 10 and a tolerance value of more than 0.10, so it can be concluded that in this study there is no multicollinearity.

Heteroskedasticity Test

The heteroscedasticity test is carried out by statistical testing using the Glejser test. The results of the heteroscedasticity test can be seen in the following table:

Table 6. Heteroskedasticity Test

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.940	.854		2.271	.025
	Implementation of e-registration system	.027	.038	.083	.698	.487
	Implementation of e-filing system	-.010	.014	-.091	-.728	.468

	Internet Understanding	-.033	.027	-.131	-1.222	.225
a. Dependent Variable: ABS_RES						

Source: primary data processed, 2025

Based on the test results in table 6, it can be seen that the variables of Implementation of e-registration system (X1), Implementation of e-filing system (X2) and understanding the internet (2) have a Sig, value greater than 0.05, it can be concluded that this study does not occur heteroscedasticit.

Multiple Linear Analysis Test

Multiple regression is a test conducted to determine the effect of the independent variable on the dependent variable. In this test, regression equation 1 is obtained as follows:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + e \ldots\ldots\ldots (1)$$

Description:

Y = Taxpayer compliance

a = Constant coefficient

β = Regression coefficient

X_1 = Implementation of e-registration system

X_2 = Implementation of e-filing system

e = Error, nuisance variable

The results of multiple linear tests can be seen in the following table:

Table 7. Equation 1: Multiple Linear Regression

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	8.817	1.298		6.794	.000
	Implementation of e-registration system	-.847	.066	-.714	-12.763	.000
	Implementation of e-filing system	.424	.023	1.019	18.203	.000
a. Dependent Variable: Taxpayer Compliance						

Source: primary data processed, 2025

The equation can be described as follows:

1. The coefficient value of the Implementation of e-registration system (X1) of -0.847 indicates that any increase in the Implementation of e-registration system (XI) will reduce taxpayer compliance.

2. The coefficient value of the Implementation of e-filing system (X2) of 0.424 indicates that each increase in the Implementation of e-filing system (X2) will increase taxpayer compliance by 0.424.
3. The calculated F value is 172.714 and a significant value of 0.000. It can be concluded that the significant value of 0.000 <0.05, which means that there is a simultaneous influence between the variables of the Implementation of e-registration system (XI) and the Implementation of e-filing system (X2) on the taxpayer compliance variable (Y).
4. The Adjusted R square value is 0.778 or 77.8%. This value is close to 1, which means that the variable Implementation of e-registration system (X1) and the Implementation of e-filing system (X2) are able to explain the variation in the taxpayer compliance variable (Y) by 77.8% and the remaining 22.2% is explained by other predictors not examined.
5. The t test value of the e-registration system application variable (X1) is -12.763 and a significant value of 0.000 <0.05, then H1 is accepted, meaning that the Implementation of e-registration system (X1) affects the taxpayer compliance variable (Y) with a negative coefficient direction. The t test value of the e-filing system application variable (X2) is 18.203 and a significant value of 0.000 <0.05, then H2 is accepted, meaning that the Implementation of e-registration system (X1) affects the taxpayer compliance variable (Y) with a positive coefficient direction.

Moderated Regression Analysis Test (MRA)

This regression analysis is used to see whether the moderating variable can moderate or not moderate the effect of the independent variable on the dependent variable. In this test, the regression equation 2 is obtained as follows:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 Z + \beta_4 X_1 * Z + \beta_5 X_2 * Z + e \ldots\ldots\ldots (2)$$

Description:

Y = Taxpayer compliance

a = Constant coefficient

β = Regression coefficient

X_1 = Implementation of e-registration system

X_2 = Implementation of e-filing system

Z = Internet Understanding

e = Error, nuisance variable

The results of the moderated regression analysis test can be seen in the following table:

Table 8. Equation 2: MRA

Coefficients[a]				
Model	Unstandardized Coefficients	Standardized Coefficients	t	Sig.

		B	Std. Error	Beta		
1	(Constant)	41.684	2.428		17.170	.000
	Implementation of e-registration system	-1.959	.221	-1.652	-8.851	.000
	Implementation of e-filing system	.199	.085	.479	2.343	.021
	Internet Understanding	-1.452	.103	-1.559	-14.129	.000
	Penerapan sistem e-registration*Internet Understanding	.053	.009	1.483	5.621	.000
	Penerapan sistem efiling*Internet Understanding	.009	.004	.911	2.513	.014
a. Dependent Variable: Taxpayer Compliance						

Source: primary data processed, 2025

The equation can be described as follows:

1. The constant value (a) of 41.684 indicates that without the application of the e-registration and e-filing system, the value of taxpayer compliance is 41.684.
2. The coefficient value of the Implementation of e-registration system (X1) of -1.959 indicates that any increase in the Implementation of e-registration system (X1) will reduce taxpayer compliance.
3. The coefficient value of the Implementation of e-filing system (X2) of 0.199 indicates that each increase in the value of the Implementation of e-filing system (X2) will increase taxpayer compliance by 0.199.
4. The coefficient value of the interaction of the Implementation of e-registration system (X1) with internet understanding (Z) of 0.053 indicates that each increase in the Implementation of e-registration system (X1) with internet understanding (Z) will increase taxpayer compliance by 0.053.
5. The coefficient value of the interaction of the Implementation of e-filing system (X2) with internet understanding (Z) of 0.009 indicates that every increase in the Implementation of e-filing system (X2) with internet understanding (Z) will increase taxpayer compliance by 0.009.
6. The calculated F value is 443.780 and a significant value of 0.000. It can be concluded that the significant value of 0.000 <0.05, which means that there is a simultaneous influence between the variables of the Implementation of e-registration system (X1), the Implementation of e-filing system (X2), the Implementation of e-registration system (X1) internet understanding (Z), the Implementation of e-filing system (X2) internet understanding (Z) on the taxpayer compliance variable (Y).
7. The Adjusted R square value is 0.958 or 95.8%. This value is close to 1, which means that the variables of the Implementation of e-registration system (X1), the Implementation of e-filing system (X2), the Implementation of e-registration system (X1) internet understanding (2), the Implementation of e-filing system (X2) internet understanding (Z) are able to explain variations in the taxpayer compliance variable (Y) by 95.8% and the remaining 4.2% is explained by other predictors not examined.

8. The t test value of the e-registration system application variable (XI) is -8.851 and a significant value of 0.000 0.05, then **H1 is accepted**, meaning that the Implementation of e-registration system (X1) has an effect on the taxpayer compliance variable (Y) with a negative coefficient direction. The t-test value of the e-filing system application variable (X2) is 2.343 and a significant value of 0.000 0.05, then **H2 is accepted**, meaning that the Implementation of e-registration system (XI) affects the taxpayer compliance variable (Y) with a positive coefficient direction. The t test value of the variable Implementation of e-registration system (X1)* internet understanding (Z) is 5.621 with a significant value of 0.000 0.05, then **H3 is accepted**, meaning that internet understanding (Z) can moderate the relationship between the Implementation of e-registration system (X1) on taxpayer compliance (Y). The t test value of the variable e-filing system application (X2) internet understanding (Z) is 2.513 with a significant value of 0.014 0.05, then **H4 is accepted**, meaning that internet understanding (Z) can moderate the relationship between the Implementation of e-filing system (X2) on taxpayer compliance (Y).

Discussion

1. The effect of implementing an e-registration system on taxpayer compliance

Based on the test results, the variable Implementation of e-registration system (X1) has a t-count of -8.851 and a significant value of 0.000 smaller than 0.05, so HO is rejected and HI is accepted, meaning that the variable Implementation of e-registration system affects the taxpayer compliance variable (Y) with a negative coefficient direction. Thus the first hypothesis (H1) is accepted.

Based on the Technology Acceptance Model (TAM) theory and compliance theory, the effect of the implementation of the e-registration system on taxpayer compliance with a negative coefficient direction can be explained because the taxpayer factor feels that the e-registration system is not easy (Perseived Ease of Use-PEoP) and does not see any direct benefits from the system (Perseived Usefulness-PU), this can be caused by the lack of efficiency of the system and a system that is difficult to access. Another factor based on a normative perspective on compliance theory, namely the lack of taxpayer trust in the e-registration system and the legitimacy of tax authorities which can make taxpayers reluctant to comply with the rules and reduce taxpayer compliance.

The results of this study are in line with research by Rohmadani (2021) and Tomy & Fatchan. (2025) and inversely proportional to the research of Hasan et.al (2018) and Safitri et.al (2021), which state that the Implementation of e-registration system has a positive effect on taxpayer compliance.

2. The effect of implementing an e-filing system on taxpayer compliance

Based on the test results, the variable Implementation of e-filing system (X2) has a t count of 2.343 and a significant value of 0.021 smaller than 0.05, so HO is rejected and H2 is accepted, meaning that the variable Implementation of e-registration system has an effect on the taxpayer compliance variable (Y) with a positive coefficient direction. Thus the second hypothesis (H2) is accepted.

The effect of the e-filing system implementation variable on taxpayer compliance with a positive coefficient direction can be explained by the Technology Acceptance Model (TAM) theory and compliance theory. Based on this theory, taxpayer compliance through the e-filing

system can be explained by the convenience factor (Perseived Ease of Use-PEoP) and consider the practical benefits obtained (Perseived Usefulness-PU), meaning that people feel that the existence of e-filing makes it easier for them to carry out tax obligations, such as tax calculations being faster and more accurate. Another factor is based on a normative perspective in compliance theory, namely a sense of trust in the system and the legitimacy of the tax authority which can encourage taxpayers to comply with the rules and can increase taxpayer compliance.

The results of this study are in line with research by Hasan et al (2018), Pratama et al (2020) and Novimilldwiningrum & Hidayat (2022) and inversely proportional to Syuhada's research (2023), which states that the Implementation of e-registration system has no effect on taxpayer compliance.

3. The effect of implementing an e-registration system on taxpayer compliance moderated by internet understanding

Based on the test results, the interaction variable of the Implementation of e-registration system (X1) internet understanding (Z) has a t-test value of 5.621 and a significant value of 0.000 smaller than 0.05, so HO is accepted and H3 is rejected, meaning that the internet understanding variable can moderate the variable Implementation of e-registration system on the taxpayer compliance variable.(Y). Thus the third hypothesis (H3) is accepted. This moderation interaction is strengthens and changes the direction of the relationship between the Implementation of e-registration system on taxpayer compliance, this is because the t-test value of the e-registration system application variable was initially negative, amounting to -8.851.

Based on the Technology Acceptance Model (TAM) theory and compliance theory, the moderation of the internet understanding variable in the relationship between the effect of Implementation of e-registration system on taxpayer compliance can be explained because with a good understanding of the internet, taxpayers feel that the e-registration system is easy to operate (Perseived Ease of Use-PEoP) and helps speed up their performance (Perseived Usefulness-PU). Other factors based on the normative perspective in compliance theory, the existence of a sense of trust in the e-registration system and the legitimacy of tax authorities can also affect taxpayer compliance.

The results of this study are in line with research by Lestari (2024) and inversely proportional to the results of research by Rohmadani (2021) and Amiliasari & Setiawan (2021) which state that internet understanding cannot moderate the Implementation of e-registration system to taxpayer compliance

4. The effect of implementing an e-filing system on taxpayer compliance moderated by internet understanding

Based on the test results, the interaction variable of the Implementation of e-filing system (X2)" internet understanding (Z) has a test t value of 2.513 and a significant value of 0.014 smaller than 0.05, so H0 is rejected and H4 is accepted, meaning that the internet understanding variable can moderate the variable Implementation of e-registration system on the taxpayer compliance variable (Y). Thus the fourth hypothesis (H4) is accepted. This moderation interaction strengthens the relationship between the Implementation of e-registration system and taxpayer compliance, this is because the t-test value of the e-filing system application variable is initially positive, which is 2.343.

Based on the Technology Acceptance Model (TAM) theory and compliance theory, the moderation of the internet understanding variable in the relationship between the effect of e-filing system implementation on taxpayer compliance can be explained because with a good understanding of the internet, taxpayers feel that the e-filing system is easy to operate (Perseived Ease of Use-PEoP) and helps speed up their performance (Perseived Usefulness-PU). Other factors based on the normative perspective in compliance theory, a lack of trust in the e-filing system and the legitimacy of the tax authority can also affect taxpayer compliance.

The results of this study are in line with research by Lestari (2024) and inversely proportional to the results of research by Rohmadani (2021) and Amiliasari & Setiawan (2021) which state that internet understanding cannot moderate the Implementation of e-registration system to taxpayer compliance

5. CONCLUSIONS AND SUGGESTIONS

Conclusions

Based on the test results that have been carried out, the following conclusions can be drawn:

1. The variable Implementation of e-registration system (X1) affects taxpayer compliance (Y) with a negative coefficient direction.
2. The variable Implementation of e-filing system (X2) affects taxpayer compliance (Y) with a positive coefficient direction.
3. Understanding the internet (Z) moderates the effect of Implementation of e-registration system. (X1) on taxpayer compliance (Y).
4. Understanding the internet (2) moderates the effect of Implementation of e-filing system (X2) on taxpayer compliance (Y).

Limitations

The limitations of this study are as follows:

1. In this study using the Slovin formula with a tolerable error rate of 10 percent, so it is only limited to 100 respondents and only on individual taxpayers in Randuagung Village.

2. This study only examines the effect of Implementation of e-registration system and implementing e-filing.

3. The moderating variable used in this study only uses internet understanding.

Sugestions

Based on the limitations that have been described, the researcher provides the following suggestions:

1. This study uses the Slovin formula with an error tolerance level of 10%, so the number of respondents is limited to 100 people. Further research is recommended to use a larger number of respondents in order to obtain more accurate and representative results. This research also only focuses on individual taxpayers in Randuagung Village Future research can expand the coverage area or consider corporate taxpayers to obtain more comprehensive results.

2. This study only examines the effect of implementing the e-registration and e-filing systems on taxpayer compliance. It is recommended for future research to add other relevant variables, such as the application of the e-billing system (Safitri et al., 2021), tax transparency (Rohmadani, 2021), taxpayer awareness, tax sanctions (Syuhada, 2023), tax knowledge (Lestari, 2024) and risk preferences (Tomy & Fatchan, 2025).

3. The moderating variable in this study only uses internet understanding. Therefore, further research can consider other moderating variables, such as tax understanding and taxpayer risk preferences (Novimilldwiningrum & Hidayat, 2022) to see the extent to which these factors can strengthen or weaken the relationship between variables.

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ANALYSIS OF THE PHYSICAL WORK ENVIRONMENT AND COMPETENCE ON EMPLOYEE PERFORMANCE IN THE MOTORCYCLE INSTRUCTOR SECTION OF THE CIANJUR PRIMA WORK TRAINING INSTITUTE

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Abstract

Every company must be able to face various local challenges arising from intense competition and economic uncertainty. Therefore, strength is needed to confront these challenges, and the strength of any organization lies in its human resources. If human resources are adequately attended to by valuing their talents, developing their skills, and using them appropriately, it can be assured that the organization will become dynamic and grow rapidly. Thus, it is very important to prepare strong and competent human resources, one way to achieve this is through training programs held at training centers. The purpose of this research is to analyze employee performance based on the physical work environment and competencies in the motorcycle instructor section of the Prima Cianjur Vocational Training Institute. The research method used in this study is qualitative, with data collection methods including interviews, observations, and documentation. The data validity test used in this study is through triangulation. The results of the research using the triangulation process show that, based on the informants' responses, the physical work environment and competencies in the company fall into the inadequate category, and employee performance falls into the category that needs attention. This indicates that the physical work environment and competencies have a significant impact on employee performance in the motorcycle instructor section. This means that the more supportive the work facilities are, along with adequate competencies, the better the performance will be.

Keywords:

1. Introduction

Unemployment is one of the crucial problems faced by the Indonesian nation. Based on data from the Central Statistics Agency (BPS) until February 2024, the open unemployment rate in February 2024 was 4.82%. The Open Unemployment Rate (TPT) is an indicator that can be used to measure the level of labor supply that is not used or not absorbed by the labor market. The TPT from the National Labor Force Survey in February 2024 was 4.82%, this means that out of 100 people in the workforce, there are around 5 unemployed people. Based on information obtained from the Central Statistics Agency (BPS) regarding Indonesia's TPT based on the highest level of education completed is as follows:

Table 33. Indonesia's Open Unemployment Rate (TPT) According to Highest Level of Education Completed, February 2022-2024

NO	HIGHEST EDUCATION ATTENDED	FEBRUARY 2022 (%)	FEBRUARY 2023 (%)	FEBRUARY 2024 (%)
1	≤ ELEMENTARY SCHOOL	3.09	3.02	2.38
2	JUNIOR HIGH SCHOOL	5.61	5.41	4.28

3	SENIOR HIGH SCHOOL	8.35	7.69	6.73
4	VOCATIONAL HIGHSCHOOL	10.38	9.60	8.62

Source: www.bps.go.id

Although national data shows a decline in unemployment rates, a different situation occurs in a district or city. In the city, according to the Central Statistics Agency (BPS), until 2023, there were 107,219 unemployed workers. To overcome this problem, the Manpower and Transmigration Office in the city took the initiative to hold skills courses to reduce the increasing unemployment rate. Through the Productivity Training and Transmigration Institutional sector, the local government is trying to provide training that can create job opportunities. The requirements for entering the workforce are getting stricter, so relying on school diplomas is no longer sufficient. To support the community in facing the increasingly competitive world of work, the Manpower and Transmigration Office is trying to provide various training facilities such as sewing, automotive, mechanical, make-up, and culinary.

One sector that has the potential to absorb labor is the automotive industry which continues to grow in Indonesia. Rapid growth in motorcycle production and technological innovation create many job opportunities that require special skills. Therefore, appropriate education and training must be provided to prospective workers so that they are ready to face challenges in the world of work. The implementation of training to improve these competencies, there are facilities that can be utilized by the community to improve their knowledge and skills, namely through job training institutions. According to the Regulation of the Minister of Manpower Number 17 of 2016 in Article 1 Paragraph 7, it states that Job Training Institutions are government agencies, legal entities, or individuals who meet the requirements to organize job training.

There are institutions that often hold training for the community and students who want to improve their knowledge and skills. In addition to students, there are also human resources who act as instructors to guide the implementation of the training. The main task of the instructor is to transfer knowledge and practical skills to others through effective learning methods. It can be concluded that instructors have an important role in facilitating training participants to get jobs more easily. Therefore, the institution pays close attention to the performance of each instructor who works to achieve the company's goals. Good performance from human resources contributes to the achievement of the company's overall goals. Well-performing human resources can create a productive environment.

Employee performance is the work results in terms of quality and quantity achieved by an employee in carrying out his duties in accordance with the responsibilities given to him. **(Mangkunegara, 2011).**Therefore, by creating good employee performance, it will produce work results above the standards expected by the company.

Table 34. Employee Performance Data for Motorcycle Instructor Section of Prima Cianjur Work Training Institute

Employee Name	Performance
Instructor 1	80%
Instructor 2	82%
Instructor 3	75%
Instructor 4	85%

Source: Prima Cianjur Job Training Institute

The company sets a target for each employee's performance achievement of above 85%, but this does not match the actual situation. Judging from the data above, there is only one employee whose performance is in accordance with the target. This data not only provides an overview of individual effectiveness, but also functions as an evaluation tool to assess employee performance as a whole. With this analysis, management can identify areas that need to be improved and formulate focused development strategies to improve employee performance. According to the head of the training institution, the decline in employee performance was caused by a lack of competence, especially in the mechanical section. In addition to competence, there is a lack of support for the physical work environment at the training institution, so that employees experience discomfort when doing their work.

In achieving good employee performance, companies need to pay attention to several factors that affect employee performance, such as the physical work environment and competence. A comfortable and safe physical work environment can improve employee performance. This is in line with the statement put forward by **(Rastana & Mahayasa, 2021)** states that the work environment is a measuring tool that will affect employee performance if the work environment in the agency is comfortable then employee performance will increase. This is supported by research from **(Wangi et al., 2020)** which states that the physical work environment has a positive effect on employee performance. In addition to physical work environment factors, competence also plays an important role in employee performance. According to **Rivai, (2015)** defines that competence is a person's ability that can be observed such as including knowledge, skills and attitudes in completing a job or task according to the specified abilities. In this case, competence with the basic word, namely competent which means capable, able, skilled. Competence refers to the traits / characteristics that enable him to succeed in his work.

Table 35. Employee Certificate Data for Motorcycle Instrutor Section of Cianjur Prima Work Training Institute

NO	NAME	LAST EDUCATION	CERTIFICATE
1	Instructor 1	Master	• Injection Motorcycle Service (BNSP) • Methodology Instructor (BNSP)
2	Instructor 2	Vocational School	• Injection Motorcycle Service (BNSP) • Methodology Instructor (BNSP)
3	Instructor 3	Vocational School	• Injection Motorcycle Service (BNSP) • Methodology Instructor (BNSP)
4	Instructor 4	Bachelor	• Injection Motorcycle Service (BNSP)

NO	NAME	LAST EDUCATION	CERTIFICATE
			• Methodology Instructor (BNSP)

Source: Prima Cianjur Job Training Institute

Of the four instructors who have National Professional Certification Agency (BNSP) certificates, some of them have not achieved every given work target. This shows the need for more attention to developing employee skills. Therefore, it is important to ensure that all instructors achieve the set level of competency in order to succeed in their jobs. Based on the description that has been presented, the phenomena and facts in the field regarding the performance issues of motorcycle instructor employees at the training institution are caused by the physical work environment and competence.

2. Literature review

2.1 Work environment

In carrying out company activities, the work environment is all conditions that are around the workers, so that both directly and indirectly can affect them in carrying out the tasks assigned. A good and pleasant environment will be able to generate enthusiasm and passion for work, and vice versa if the unpleasant work environment will be able to reduce enthusiasm and passion for work.

In general, the work environment is divided into two, namely the work environment physical work and non-physical work environment (Serdamayati: 2009). The physical work environment is all physical existence, which is found around the employee's workplace, which can influence the employee directly. directly or indirectly. The physical work environment is either direct or indirect. directly related to employees, but there are also those who are related with an intermediary or general environment, which can also be called the general environment work that affects human conditions, such as temperature, humidity, and air circulation. Meanwhile, a non-physical work environment is a condition that occurs and is related to work relationships, both relationships with superiors, fellow co-workers, as well as subordinates. The company should be able to provide conducive working conditions and support cooperation between employees. work in it both at the top and bottom levels, with an atmosphere family, good communication, and also self-control. Good.

According to **(Atmaja & Maryatni, 2019),** There are several factors that influence the physical work environment, namely: (1) Lighting/light in the workplace, (2) Air temperature in the workplace, (3) Humidity in the workplace, (4) Air circulation in the workplace, (5) Noise in the workplace, (6) Mechanical vibrations in the workplace, (7) Smells in the workplace, (8) Color scheme in the workplace, (9) Decoration in the workplace, (10) Music in the workplace, and finally (10) Safety in the workplace.

2.2 Competence

According to **Miftahul et al (2017)**, competence is a characteristic that underlies a person in relation to the effectiveness of individual performance in their work or the basic characteristics of an individual that have a causal relationship with the criteria used as a reference, effective or performing excellently or superiorly in the workplace or in certain situations.Based on the opinions of experts, it can be concluded that competence is the ability that involves knowledge, skills, and performance needed to carry out tasks in the workplace. This competence must be measurable and observable, and in accordance with the established performance standards. Thus, competence includes not only technical aspects, but also aspects of attitudes that support good job implementation.

Thus, competence includes not only technical aspects, but also attitudinal aspects that support good job execution. According to **(Sutrisno, 2014:135)** Several aspects contained in the concept of competency indicators, including:

a. Knowledge, namely a person's awareness in the cognitive field.
b. Understanding, namely the cognitive and affective depth possessed by an individual.
c. Ability (skill) is something that an individual has to carry out the tasks or work assigned to him.
d. Attitude, namely feelings (happy or unhappy, like or dislike) or reactions to stimuli that come from outside.
e. Interest is a person's tendency to carry out an action.

2.3 Employee performance

According to **Mangkunegara (2011:67)**Employee performance is the work results in terms of quality and quantity achieved by an employee in carrying out his duties in accordance with the responsibilities given to him.

The performance must be in accordance with the authority held and aims to achieve the organization's goals in a legal and ethical manner. According to Mangkunegara (2012:67), there are several indicators used by a company in determining an employee's performance, namely as follows:

a. Quality of Work, refers to the extent to which an employee carries out the tasks that are supposed to be done in the company. This includes such things as accuracy, precision, and skill in the job.
b. Work Quantity, refers to the length of time an employee works in a day. This aspect can be measured from the work speed of each employee and the results achieved.
c. Task Execution, how far employees are able to carry out their work with accuracy or without errors.
d. Responsibility is an employee's awareness of their obligation to carry out the work assigned by the company.
e. Initiative, the ability from within to solve problems and do work without waiting for orders from superiors.

3. Methodology

The method used in this study is a method with a qualitative approach because this study aims to present data in accordance with the reality in the analysis of the physical work environment and the competence and performance of motorcycle instructor employees at the Prima Cianjur Job Training Institute. The type of research used in this study is descriptive research. This descriptive research is a research method that attempts to describe and interpret objects according to what they are. The informants taken from this study were motorcycle instructor employees at the Prima Cianjur Job Training Institute. The primary data used by the researcher were the results of interviews with 1 direct superior of the Prima Cianjur Job Training Institute and 4 instructors with the criteria of having a certificate from the National Professional Certification Agency (BNSP), and also secondary data used by the researcher were employee performance data and certificate data owned by the instructor.

3.1 Theoretical framework

In achieving good employee performance, companies need to pay attention to various factors that can affect employee productivity and work effectiveness such as the physical work environment and competence. A comfortable, safe, and supportive work environment for each

job will play a major role in improving employee performance. This is in line with the statement in **(Rastana & Mahayasa, 2021)** states that the work environment is a measuring tool that will affect employee performance if the work environment in the agency is good. This is supported by research from **(Wangi et al., 2020)** which states that the physical work environment has a positive effect on employee performance. In addition to physical work environment factors, competence is also one of the factors that will affect employee performance.

Competence refers to the traits/characteristics of a person that enable him/her to succeed in his/her job. This is supported by research **(Fathiyah, Masnun, & Syekh, 2022)** showing that there is a positive influence from both competency variables on employee performance. In other words, the higher the level of competency of an employee, the higher the level of employee performance in an organization.

3.2 Conceptual framework

According to **(Sugiyono, 2018:26)** states that "A research variable is an attribute or characteristic or value of a person, object or activity that has certain variations that are determined by the author to be studied and then conclusions drawn."

In this study, there are three variables, namely physical work environment variables, competence, and employee performance. These variables will be developed into variable concepts, subvariables, and measurement scales, which will be the basis or guidelines in interviews conducted by the author to data sources or informants in this study. The following is a table of variable operationalization.

Table 36. Variable Operationalization

VARIABLES	VARIABLE CONCEPT	SUB VARIABLE
Physical Work Environment (X1)	Physical conditions that exist around the workplace that can affect employees either directly or indirectly.	Lighting/light in the workplace
		Comfort
		Odors in the workplace
		Color scheme in the workplace
		Decoration in the workplace
Competence (X2)	A person's observable abilities include knowledge, skills and attitudes in completing a job or task according to the specified performance.	knowledge
		Understanding
		Ability (skill)
		Attitude
		Interest (interesting)

Employee Performance (Y)	The work results in terms of quality and quantity achieved by an employee in carrying out his duties in accordance with the responsibilities given to him.	Quality of Work
		Quantity of Work
		Execution of Tasks
		Responsibility
		Initiative

3.3 Instrumentation

According to **Firdaus & Zamzam (2018:106)**: "Triangulation is an effort to check the accuracy of data or information obtained by the author from various different points of view by reducing bias that occurs during data collection and analysis."

Some data triangulation techniques according to **Denzin & Lincoln (1998:141)** includes source triangulation, technical triangulation, and theoretical triangulation. Source triangulation tests the credibility of data by comparing information from various sources. Technical triangulation examines data from the same source using different methods. While theoretical triangulation compares the information obtained with relevant theories.

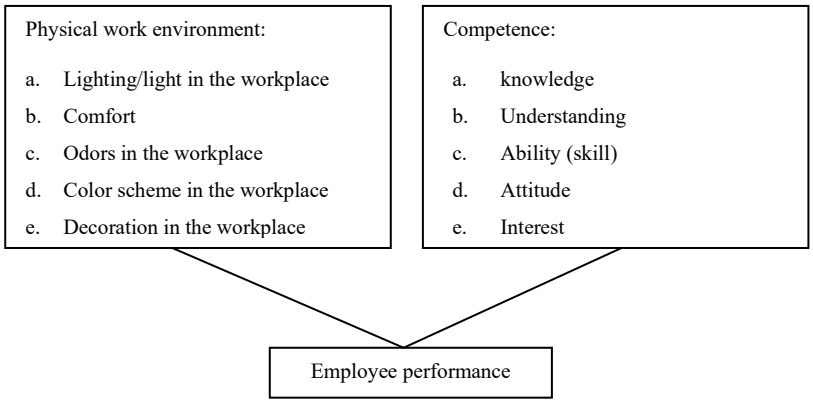

Figure 7. Paradigm of Physical Work Environment Analysus and Competence on Employee Performance in the Motorcycle Instructor Section of the Cianjur Prima Work Training Institute

4. Results and discussions

4.1 Physical Work Environment

Table 37. Results of Observation on Physical Work Environment Variables

NO	SUB VARIABLE	INFORMANT
1	Lighting/light in the workplace	4 informants
2	Comfort	4 informants
3	Odors in the workplace	4 informants
4	Color scheme in the workplace	4 informants
5	Decoration in the workplace	4 informants

Based on the results of the researcher's observations, it was found that the lighting or light in the practice/work room was inadequate due to the lack of lights in one room so that the informant was less able to see every detail of the practice media used.

Based on the results of the researcher's observations, it was found that the practice room used was not large enough to carry out the training program with 40 students and also the equipment used for practice still needed to be repaired or upgraded.

Based on the results of the researcher's observations, it was found that the smells of fuel and oil from the practice media can disrupt the concentration and focus of the instructors, because the smell is so pungent that it causes headaches.

Based on the results of the researcher's observations, it was found that the colors in each room seemed monotonous and could not improve the mood when doing work. A workspace dominated by neutral or monotonous colors can create a boring and less inspiring atmosphere, which in turn can reduce work enthusiasm and creativity. The researchers also observed that an unsupportive environment can hinder collaboration and social interaction between employees, which are important for building good working relationships and improving teamwork.

Based on the results of the researcher's observations, it was found that the storage of equipment and spare parts was not neatly arranged and was not in its place. This condition can have a negative impact on various operational aspects. Untidiness in the storage of equipment and spare parts can make it difficult for employees to find the necessary tools when needed, which in turn can slow down the work process. In addition, irregular storage can also increase the risk of work accidents. Equipment that is not stored properly can cause the danger of tripping or falling, which can endanger employee safety.

4.2 Competence

Table 38. Results of Observations on Competency Variables

NO	SUB VARIABLE	INFORMANT
1	Knowledge	4 informants
2	Understanding	4 informants
3	Skill	4 informants
4	Attitude	4 informants
5	Interest	4 informants

Knowledge gained from work experience covers various aspects, such as problem solving, decision making, and implementing the right strategy in different situations. Informants who have been involved in a particular field for a long time tend to have broader and deeper insights. Thus, the knowledge possessed by informants is not only based on formal education, but also an accumulation of every practical experience gained over the years.

By adjusting the work environment to be more conducive, and trying to create an atmosphere that supports collaboration and interaction with students. In a dynamic and often stressful work environment, employees who are unable to manage stress well will pose a risk of decreased performance and will also be a challenge that is often faced in managing work conditions.

Based on the results of the interview, the researcher obtained a statement that the abilities that must be possessed as an instructor must be closely related to education and expertise in the automotive field. Although the instructors have adequate knowledge and experience, there are indications that their performance may decline. With several possibilities such as lack of

updates in knowledge and skills in the automotive world and lack of resources provided by the company. The instructors also choose to work collaboratively to lighten the workload so that the work process is more effective. In addition, the instructors accept feedback openly and try to improve themselves from the feedback given.

Based on the interview results, researchers obtained statements that the attitudes given to changes in work were different, some considered it a challenge because it would create additional pressure and raise concerns about the abilities possessed for the new situation. Therefore, it will affect individual performance.

Based on the interview results, researchers obtained statements that their interest in this job was because they enjoyed the activity of exchanging experiences and insights. This shows that the instructors' awareness to share experiences not only enriches individual knowledge, but will also create a collaborative environment that supports mutual growth. In addition, there are also instructors who experience changes in interest in working which may be caused by boredom or dissatisfaction with the work environment.

4.3 Employee performance

Table 39. Results of Observations on Employee Performance Variables

NO	SUB VARIABLE	INFORMANT
1	Quality of Work	1 informant
2	Quantity of Work	1 informant
3	Implementation of Task	1 informant
4	Responsibility	1 informant
5	Initiative	1 informant

The criteria given by informants to their employees are in the form of target achievement where instructors successfully train many students and achieve high graduation rates. Punctuality is also very important where instructors are present on time and start training sessions according to the schedule that has been set. Discipline reflects where instructors comply with the rules and ensure safety before training is carried out. Finally, the appreciation given is like praise or awards for good performance.

In assessing the quantity of work, the informant employees monitored the number of students who successfully completed training by each instructor in a certain period, and also analyzed the completeness and regularity of the training plan prepared, which reflects the instructor's ability to organize the workload. Although focusing on the quantity aspect, direct observation of the implementation of training is still needed to ensure that the quantity achieved does not sacrifice quality.

In assessing the implementation of employee tasks, informants conduct periodic evaluations to monitor employee progress in carrying out tasks. This evaluation not only serves as an assessment tool, but also as an opportunity to provide constructive feedback and set clear development goals. In this way, informants strive to create an environment that supports continuous growth and improvement, where employees feel motivated to improve their performance.

In assessing employee responsibility, informants analyze the relationship between employee engagement and responsibility in completing tasks. Superiors need to use a systematic approach that includes analysis of emotional engagement, internal communication effectiveness, and work environment conditions. By identifying factors that influence these two aspects, superiors can design appropriate interventions. Periodic evaluation is also

important to ensure that the strategies implemented remain effective in improving employee performance. Increased engagement is expected to contribute to the overall responsibility and performance of the organization.

In assessing employee initiatives, informants need to pay more attention to other employees with a more balanced approach between individual development and team collaboration, informants can identify employees who are not only able to work independently, but also who can contribute to achieving common goals through cooperation. This approach encourages the development of interpersonal and communication skills among employees, which are very important in a dynamic work environment.

4.4 Impact of Physical Work Environment on Employee Performance

The physical work environment is very important for an organization to pay attention to. A safe and pleasant physical work environment can affect the comfort of employees at work. A comfortable environment for employees creates a supportive atmosphere in completing tasks, which in turn can improve overall working conditions and help reduce boredom and fatigue. Comfortable working conditions will trigger increased worker productivity, while poor environmental conditions can reduce employee productivity **(Febriani & Indrawati, 2013)**. The physical condition of the work environment can play a role in making employees work more effectively **(Agastia, 2014)**. The importance of improving the physical work environment is because each worker has different needs, including different movement space, light intensity, air ventilation, sense of security, and cleanliness. Improving these conditions in the work environment is expected to positively affect employee performance **(Hasan et al., 2017).** The physical work environment plays a role in increasing work enthusiasm and passion, making it safe and comfortable, and can also make it easier for employees to complete their work. **(Suwardi.LK, Limgiani, Klemens Mere, 2023)**

4.5 Impact of Competence on Employee Performance

Based on the results of interviews conducted with 4 employees in the motorcycle instructor section, it was found that the competencies possessed by these employees were obtained from work experience that can improve employees' abilities in completing each task more effectively, in addition, good stress management skills will help employees maintain focus and maintain optimal performance. A positive attitude towards change also contributes to employees' ability to adapt, so that all of these factors contribute to improving employee performance.

5. Conclusion

Based on research on the analysis of the physical work environment and competence on employee performance. The results showed that the physical work environment has a greater impact on employee performance compared to competence. The conclusions of the sub-variables studied in this study include the following:

a. The results of this study indicate that the physical work environment affects the performance of motorcycle instructor employees. Therefore, training institutions are advised to improve several aspects to increase employee productivity. First, increasing lighting in the practice room is needed so that employees can work comfortably. Second, expanding the practice room will provide comfort during training and increase the effectiveness of work equipment. Third, adding larger air vents is important to facilitate circulation and reduce fuel odor. Fourth, changing the color scheme of the practice room to be brighter can help avoid boredom. Finally, improving the decoration

in the equipment storage area will make it easier for employees to find the equipment they need.

b. The results of this study state that competence has an impact on the performance of motorcycle instructor employees. The difference in work experience of each employee is one of the factors that affects the competence of each instructor. Where there are still some instructors who feel they cannot work collaboratively so that it can hinder the achievement of the organization. In addition, there are also some employees who feel they cannot receive feedback well, and also have changes in interest in the work they do.
c. The level of employee performance based on information from direct superiors shows that there are several motorcycle instructor employees who are still below the company's target. This is based on the inadequacy of the physical work environment in the company and the competence based on the work experience of the motorcycle instructor employees.
d. The results of this study show that the physical work environment and competencies in the company are in the poor category, so that employee performance in the company is in the category that needs attention.

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THE EFFECT OF CARBON EMISSION DISCLOSURE, GREEN INNOVATION AND INTELLECTUAL CAPITAL ON FIRM VALUE

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Abstract

In energy companies listed on the Indonesia Stock Exchange, the period 2019-2023 experienced a decrease in company value. This study aims to test partial and simultaneous results on firm value, as in this study, as many as 83 companies using Carbon Emission Disclosure, Green Innovation, and Intellectual Capital variables, while for the dependent variable, Firm Value. This research uses a descriptive approach, with quantitative data types from secondary data sources. The data analysis technique used in this research is literature study and documentation study, and the sample population used in Non-Probability Sampling using Purposive Sampling technique and produces a sample of 16 companies. The findings of this study are partially and simultaneously Carbon Emission Disclosure has a significant positive effect on Firm Value, Green Innovation has a significant negative effect on Firm Value, and Intellectual Capital has no significant effect on Firm Value.

Keywords**:** *Carbon Emission Disclosure, Green Innovation, Intellectual Capital and Firm Value.*

1. Introduction

One of the company's objectives in carrying out its business activities is to make a profit and provide welfare for shareholders. In this era of the Industrial Revolution 4.0, the good or bad assessment of a company can be seen from the value of the company. This company value is based on the total value of the company's shares, therefore, it is one indicator of the company's success (Trisakti et al., 2024). Various aspects can be a benchmark for assessing the value of the company, for example, the company's stock market price which illustrates the value of investors from all aspects for each existing equity (Hardiyansah et al., 2021).

As for the phenomenon of the decline in the value of energy sector companies showing in 2023, reported by the news https://www.cnbcindonesia.com Composite Stock Price Index (JCI) at the close of session 1 dropped 0.54%. JCI corrected even though global market sentiment tends to be positive, especially from the United States (US). From the US, positive sentiment came from inflation, which returned to a slope. Based on records from the Indonesia Stock Exchange (IDX) via Refinitiv, most sectors weakened. The energy sector was the weakest, down 1.65%. One piece of bad news came from the price of coal, which has weakened three days in a row with a 5% decline. The decline in coal prices could weigh on the shares of coal issuers such as PT Bukit Asam (PTBA), PT Bayan Resources (BYAN) to PT Adaro Energy Indonesia (ADRO).

The following is company value data on energy companies listed on the Indonesia Stock Exchange:

Table 1 Tobins'Q Energy Company

Year	Company Code			
	BUMI	**ABMM**	**ADRO**	**PTBA**
2019	0.946	1.068	0.923	0.427
2020	1.063	0.985	0.891	0.389
2021	0.930	0.920	1.078	1.184
2022	1.218	0.979	1.122	0.422
2023	0.811	0.930	0.765	0.491

Based on Table 1 above, which illustrates the condition of the decline in company value, how many energy companies tend to fluctuate. Among them at PT Bumi Recosurces (BUMI) in 2019-2020 indicated an increase in company value, in 2020-2021 indicated an increase in company value, in 2021-2022 experienced a decrease in company value, and in 2022-202n experienced a decrease in company value. PT ABM Investama Tbk (ABMM) indicated a decrease in company value in 2020 and 2023. Likewise, PT. Adaro Energy (ADRO) and PT.Bukit Asam (PTBA) which experienced a decrease in company value for five consecutive years with Tobins'Q value increasing at PT. ADRO in 2021-2022 and PTBA in 2021.

If a tobins'Q value illustrates that the company can be said to be successful in creating company value and the position of the shares is in an overvalued position if the Q value is high Q > 1, then the company's shares are considered overvalued and the company has the potential to generate a greater rate of return than the cost of assets issued. Conversely, if the Tobins'Q of a company is low if Q < 1, then the company's shares are considered undervalued and its bad value is higher than its market value.

Based on the above, a high market value may indicate high growth expectations, which may encourage the business to invest in capacity building or innovation. Consequently a high Q ratio may indicate that the business has room for expansion and is profitable (Hardiyansah et al., 2021).

2. Literature review

Legitimacy Theory

Legitimacy theory was first proposed by Dowling & Pfeffer, (1975) explains that legitimacy theory is a theory that focuses on how organizations seek to obtain and maintain social legitimacy. In this context, legitimacy refers to the acceptance and recognition of an organization by society or a wider group. Concerning voluntary disclosure, there are two main reasons why this might apply. First, legitimacy theory provides a complementary perspective to stakeholder and legitimacy theories on voluntary disclosure. (Ananda & Salma, 2024)

Signaling Theory

Signaling theory was first proposed by Michael Spence (1973), who states that the sender (owner of information) provides a signal or signal in the form of information that signal theory is information that reflects the condition of a company that is beneficial to the recipient (investor). Therefore, it conveys signals or signals that contain information about the state of the company that is useful for the decision-making of shareholders (the receiving party) (Kusumaningrum & Astuti, 2024).

Carbon Emission Disclosure

Carbon Emission Disclosure (CED) is environmental reporting on the quality and quantity of a company's carbon emissions, both past and future (Dian Rahmawati Putri & Murtanto, 2023). Carbon emission itself is the event of increasing atmospheric carbon, and greenhouse gas emissions as one of the drivers of climate change. Through carbon emission disclosure, companies are expected to be able to prevent and reduce carbon emissions, and stakeholders such as the government and society can monitor. However, carbon emission disclosure is voluntary disclosure for companies in Indonesia so not all companies report it. The Carbon Disclosure Project (CDP) query method can be used to calculate the carbon emissions disclosure index. (Dian Rahmawati Putri & Murtanto, 2023).

$$\frac{Number\ Of\ Items\ Disclosed}{Number\ Od\ Disclosure\ Items}\ x\ 100\%$$

Green Innovation

Green innovation is one of the environmental approaches in integrating its environmental elements in the company's operations from production to distribution (Fanda & Dwijayanti, 2024). This includes developing new methods that are more environmentally friendly, such as more efficient use of resources, reduced use of hazardous materials, and preventing pollution and other negative effects on the environment (Damas et al., 2021). Green innovation focuses on competitive advantage by reducing environmental impact, the company's response to today's growing social and environmental problems is the development of green innovation. Green innovation can be understood as innovation related to environmentally friendly processes or products (Handoko *et al*., 2024). According to (Fanda & Dwijayanti, 2024) the formula for measuring green innovation variables using CSR Environmental Costs with the formulation formulated as follows:

$$BL = \frac{\text{CSR Activity Cost}}{\text{Net Profit Before Tax}}$$

Intellectual Capital

Intellectual Capital is wealth and competitive advantage through the use of intangible assets known as intellectual capital which serves to drive company value (Alveno Prakoo Nugroho et al., 2023). Intellectual Capital is the three main elements of the organization (human capital, structural capital, value added capital) related to knowledge and technology that can provide more value to the company how much the organization's competitive advantage (Wulandari & Purbawati, 2021). Intellectual Capital in the company allows the company to use its resources more efficiently and economically. Companies can also optimize their assets better which allows them to produce products that excel in competition and are expected to, this research will be measured using the VAICTM (Value Added Intellectual Capital Coefficient) method created by Pulic (1998), consisting of a combination of three

components namely Value Added Capital Employed (VACA), Value Added Human Capital (VAHU), and Structural Capital Value Added (STVA) (Wulandari & Purbawati, 2021).

$$VAIC^{TM} = VACA + VAHU + STVA$$

Diformulasikan :

VA = OUT-IN

VACA = VA/CE

VAHU = VA/HC

STVA = SC/VA

$VAIC^{TM}$ = VACA + VAHU + STVA

Keterangan:

VA : *Value Added*

VACA : *Value Added of Capital Employed*

VAHU : *Value Added Human Capital*

STVA : *Structutal Capital Value Added*

$VAIC^{TM}$: *Value Added Intellectual Capital Coefficient*

OUT : *Output*

IN : *Input*

CE : *Capital Employed*

HC : *Human Capital*

SC : *Structural Capital*

Firm Value

According to (Mardiana et al., 2023) Firm value is the market value of a company's debt and equity. Firm value is the view of investors or the market of a company which is often reflected in its share price. Measuring the value of the company through the stock price will also affect shareholders' confidence in the company's business potential and performance, both now and in the future. Therefore, the company must maintain or increase the stability of its share price (Al-amin & Herawaty, 2024). formula to measure the company value variable using the Tobin's Q scale (Mardiana et al., 2023).

$$\frac{\text{MVS} + \text{D}}{\text{TA}}$$

Keterangan:

Tobin’s Q : Firm Value

Mvs : Market value of shares (closing share price x total shares outstanding at the end of the year)

Debt : Total Liabilities

TA : Total Assets

3. Research Method

This research was conducted at Energy Companies listed on the Indonesia Stock Exchange (IDX) for the 2019-2023 period. This research is a quantitative study with secondary data obtained from www.idx.co.id and the company's website. The sample was taken using purposive sampling method with a sample of 16 companies during the 5-year observation period. The data analysis used in this study used IBM SPSS 27 for windows statistical software, with the classical assumption test used, namely normality test, multicollinearity test, heteroscedasticity test and autocorrelation test, then multiple linear regression, correlation coefficient, coefficient of determination and finally hypothesis testing, namely partial test (t test) and simultaneous test (f test).

4. Results and Discussion

Normality Test

Normality tests are performed to determine and test whether the residual values are distributed normally or not using the Kolmogorov-Smirnov statistical test with decisionmaking when the significant values have values above 0.05 then the stated data have been distributed normal and vice versa. The results of the normality test are as follows:

Table 2

Results of Kolmogrov Smrinov's Normality Test Before Outlier

One-Sample Kolmogorov-Smirnov Test

			Unstandardized Residual
N			80
Normal Parameters[a,b]	Mean		.0000000
	Std. Deviation		.17826410
Most Extreme Differences	Absolute		.325
	Positive		.325
	Negative		-.237
Test Statistic			.325
Asymp. Sig. (2-tailed)[c]			<,001
Monte Carlo Sig. (2-tailed)[d]	Sig.		.000
	99% Confidence Interval	Lower Bound	.000
		Upper Bound	.000

a. Test distribution is Normal.

b. Calculated from data.

c. Lilliefors Significance Correction.

d. Lilliefors' method based on 10000 Monte Carlo samples with starting seed 2000000.

Source : Data processing results using SPSS

Based on table 2 above, shows the results of the Kolmogorov-Smirnov test which is seen from the Asymp.Sig (2-tailed) results resulting in a value of 000. This figure is smaller than $\alpha = 0.05$, which means that the residual data is not normally distributed. So, it is necessary to repair or treat the data by eliminating extreme data (outliers).

Table 3

Results of Kolmogrov Smrinov's Normality Test After Outlier

One-Sample Kolmogorov-Smirnov Test

			Unstandardized Residual
N			80
Normal Parameters[a,b]	Mean		.0000000
	Std. Deviation		.17826410
Most Extreme Differences	Absolute		.325
	Positive		.325
	Negative		-.237
Test Statistic			.325
Asymp. Sig. (2-tailed)[c]			<,001
Monte Carlo Sig. (2-tailed)[d]	Sig.		.000
	99% Confidence Interval	Lower Bound	.000
		Upper Bound	.000

a. Test distribution is Normal.

b. Calculated from data.

c. Lilliefors Significance Correction.

d. Lilliefors' method based on 10000 Monte Carlo samples with starting seed 2000000.

Source : Data processing results using SPSS

Based on table 4.7 above, it shows that the Kolmogorov-Smirnov test results seen from the Asymp. Sig. (2-tailed) has a value of 200 or this value is greater than α = 0.05. so that the residual data in this study is normally distributed.

Multicollinearity Test

The next classic assumption test is the multicollinearity test. This test aims to test whether the regression model found a correlation between independent variables (independent). A good regression model is a regression model in which there is no correlation between independent variables. To determine the presence or absence of multicollinearity in the regression model, it can be done by assessing the amount of VIF (Variance Inflation Factor) and tolerance value. If the tolerance value> 0.10 or VIF value < 10 then there is no multicollinearity and if the tolerance value < 0.10 or VIF value> 10 then there is multicollinearity in the regression model. The multicollinearity test results in this study are as follows:

Table 4

Multicollinearity Test Results

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.652	.047		13.830	<,001		
	Carbon Emission Disclosure	.012	.001	.875	18.386	<,001	.972	1.029
	Green Innovation	-1.602E-6	.000	-.139	-2.966	.004	.997	1.003
	Intellectual Capital	.005	.002	.094	1.974	.052	.975	1.025

a. Dependent Variable: Nilai Perusahaan

Source : Data processing results using SPSS

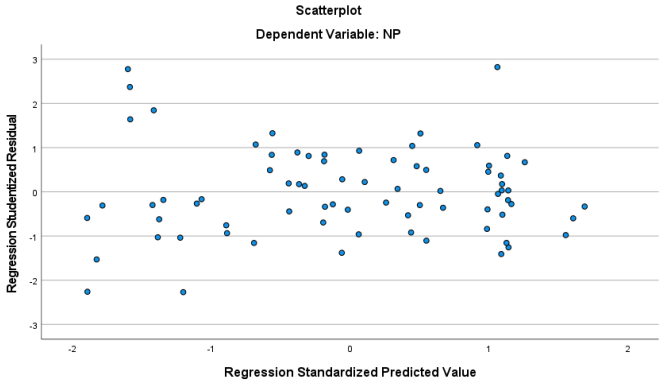
Based on table 4 above, it is known that the toletance value on the Carbon Emission Disclosure variable is 0.972, Green Innovation is 0.997, and Intellectual Capital is 0.975. Then the results of the Tolerance value show> 0.1. In addition, the Variance Inflation Factor (VIF) value on the carbon emission disclosure variable is 1,029, the green innovation variable is 1,003, and the intellectual capital variable is 1,025, so that overall it shows that VIF < 10 from each of these variables. It can be concluded that carbon emission disclosure, green innovation, and intellectual capital in this study do not have multicollinearity.

Heteroscedasticiy Test

The third test of classical assumptions is the heteroscedasticity test. The heteroscedasticity test is that the explanatory variables in the regression equation have error variances that are not constant and cause the estimator to be inefficient. In this test, it can be observed by looking at the results of the scatterlot test if the points on the scatterlot graph spread above and below the number 0, then it shows that there is no heteroscedasticity. The following are the results of the heteroscedasticity test using IBM SPSS 27 can be seen as follows:

Figure 1

Heteroscedasticity Test Results



Source : Data processing results using SPSS

Autocorrelation Test

The autocorrelation test is the last step test carried out which aims to test confounding errors in period t with confounding errors in period t-1 that arise due to consecutive observations to find whether there is autocorrelation or not which is carried out by means of the Durbin-Watson test (WD-test) using IBM SPSS 27 software.

Table 5

Autocorrelation Test Results

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.913[a]	.833	.826	.18175	1.833

a. Predictors: (Constant), Intellectual Capital, Green Innovation, Carbon Emission Disclosure

b. Dependent Variable: Nilai Perusahaan

Source : Data processing results using SPSS

Based on table 4.8 above shows the results of the autocorrelation test of 1,833 (DW), the value is compared with the Durbin-Watson table with a significance of 5%. The total data in this study were 82 (n) and a total of 3 (k) independent variables. so that the fair limit value or lower board (dL) is 1,560 and the limit value or upper lowe board (dU) is 1,715. Then the Durbin-Watson value is obtained which is explained as follows:

= dU < d < 4 - dU

= 1,715 < 1,833 < (4 - 1,715)

= 1,715 < 1,124 < 2,285

The above calculation concludes that this study can reject (H0) which states that there is no positive and negative autocorrelation between all independent variables, so there are no symptoms of autocorrelation.

Multiple Linear Regression Analysis

This study uses multiple linear regression tests which aim to test the independent variables, namely carbon emission disclosure, green innovation, and intellectual capital on the dependent variable, namely firm value. The data processing used to analyze this uses IBM SPSS 27 software, the following are the results of the processed data:

Table 6

Multiple Linear Regression Test Results

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	.652	.047		13.830	<,001		
	Carbon Emission Disclosure	.012	.001	.875	18.386	<,001	.972	1.029
	Green Innovation	-1.602E-6	.000	-.139	-2.966	.004	.997	1.003
	Intellectual Capital	.005	.002	.094	1.974	.052	.975	1.025

a. Dependent Variable: Nilai Perusahaan

Source : Data processing results using SPSS

Based on table 6 above, it can be concluded that the multiple linear regression equation in this study is as follows:

Y = 0.652 + 0.012X1 +-1.602X2 + 0.005X3

1. The constant value of 0.652 which indicates that the value of Carbon Emission Disclosure (X1), Green Innovation (X2), and Firm Value (X3) is 0, then the value of Firm Value (Y) is 0.652.

2. The regression coefficient value of Carbon Emission Disclosure (X1) is 0.012 which shows that the Carbon Emission Disclosure (X1) variable has a positive influence on Firm Value (Y). If Carbon Emission Disclosure (X1) increases by 1%, it will be followed by an increase in Firm Value (Y) of 0.012.

3. The Green Innovation (X2) regression coefficient value of -1.602 which shows the Green Innovation (X2) variable has a positive influence on Firm Value (Y). If Green Innovation (X2) increases by 1%, it will be followed by an increase in Company Value (Y) of -1.602.

4. The Intellectual Capital (X3) regression coefficient value is 0.005 which indicates the Intellectual Capital (X3) variable has a negative effect on Firm Value (Y). If Intellectual Capital (X3) increases by 1%, it will be followed by a decrease in Company Value (Y) of 0.005.

Correlation Coefficient Analysis

Correlation analysis is used to find out how close the relationship between two independent variables is together (simultaneous) and one dependent variable. The correlation number ranges from -1 to 1. The closer to the number 1, the higher the relationship between the independent variables together and the dependent variables. Positive and negative values indicate the direction of the relationship, if the value is positive then the relationship is unidirectional and vice versa if the value is negative then the relationship is not unidirectional. The following are the results of the correlation test as follows:

Table 7

Results of Correlation Coefficient Analysis Test

Correlations

		Carbon Emission Disclosure	Green Innovation	Intellectual Capital	Nilai Perusahaan
Carbon Emission Disclosure	Pearson Correlation	1	-.056	.147	.141
	Sig. (2-tailed)		.621	.192	.212
	N	80	80	80	80
Green Innovation	Pearson Correlation	-.056	1	-.004	-.029
	Sig. (2-tailed)	.621		.972	.799
	N	80	80	80	80
Intellectual Capital	Pearson Correlation	.147	-.004	1	.047
	Sig. (2-tailed)	.192	.972		.676
	N	80	80	80	80
Nilai Perusahaan	Pearson Correlation	.141	-.029	.047	1
	Sig. (2-tailed)	.212	.799	.676	
	N	80	80	80	80

Source : Data processing results using SPSS

It is known that the relationship between the Carbon Emission Disclosure variable and Firm Value has a very low relationship, the correlation coefficient value produces a negative number, which means that any increase in Carbon Emission Disclosure will be accompanied by a decrease in Firm Value. Furthermore, the relationship between the Green Innovation variable and the Company Value variable has a very low relationship, the correlation coefficient value shows a negative number. This shows that any increase in Green Innovation will be accompanied by a decrease in Company Value. Furthermore, the relationship between the Green Innovation variable and the Company Value variable has a very low relationship, the correlation coefficient value shows a negative number. This shows that any increase in Green Innovation will be accompanied by a decrease in Company Value.

Determination Coefficient Analysis

The coefficient of determination test is used to assess the extent to which the independent variable affects the dependent variable as a whole, the measurement refers to the Adjusted R Square value resulting from multiple linear regression analysis. The following are the results of the coefficient of determination test which can be seen in the following table:

Table 8

Results of Determination Coefficient Analysis Test

Correlations

		Carbon Emission Disclosure	Green Innovation	Intellectual Capital	Nilai Perusahaan
Carbon Emission Disclosure	Pearson Correlation	1	-.056	.147	.141
	Sig. (2-tailed)		.621	.192	.212
	N	80	80	80	80
Green Innovation	Pearson Correlation	-.056	1	-.004	-.029
	Sig. (2-tailed)	.621		.972	.799
	N	80	80	80	80
Intellectual Capital	Pearson Correlation	.147	-.004	1	.047
	Sig. (2-tailed)	.192	.972		.676
	N	80	80	80	80
Nilai Perusahaan	Pearson Correlation	.141	-.029	.047	1
	Sig. (2-tailed)	.212	.799	.676	
	N	80	80	80	80

Source : Data processing results using SPSS

Kd = R^2 x 100%

= $(0, 913)^2$ x 100%

= 83,3%

Based on table 8 and the calculation of Kd, it can be seen that the coefficient of determination is 83.3%, this value concludes that 83.3% of Firm Value is influenced by the independent variables in this study, namely Carbon Emission Disclosure, Green Innovation, and Intellectual Capital. Meanwhile, the remaining 16.7% is influenced by other factors or variables outside of the study.

Drawing Conclusions

Drawing conclusions The conclusion is drawn to find out whether the hypothesis presented is accepted or not, by testing the hypothesis, namely partial test (t-test) and simultaneous test (f-test).

Partial Test (t-Test)

Partial tests or t tests are carried out to draw conclusions about whether the proposed hypothesis is accepted or rejected. The t test illustrates the extent to which the influence of each independent variable can explain the dependent variable. The t test is done by comparing Thitung with Ttabel. H0 is rejected and Ha is accepted if Thitung> Ttabel or - Thitung < Ttabel and a significant level <0.05, this indicates that the independent variable has a partial and significant effect on the dependent variable. Conversely, if Ha is rejected and H0 if Thitung < Ttabel or - Thitung > - Ttabel and a significant level> 0.05, this indicates that the independent variable partially has no effect on the dependent variable. The following are the partial test results (t test) as follows:

Table 9

Partial Test Results (t- Test)

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	.652	.047		13.830	<,001
	Carbon Emission Disclosure	.012	.001	.875	18.386	<,001
	Green Innovation	-1.602E-6	.000	-.139	-2.966	.004
	Intellectual Capital	.005	.002	.094	1.974	.052

a. Dependent Variable: Nilai Perusahaan

Source : Data processing results using SPSS

Carbon Emission Disclosure shows a Thitung result of 18.386 and a Ttable value of 1.991, which means that H0 is rejected and Ha is accepted. With a significance result of 0.000 <0.05, it can be concluded that the Carbon Emission Disclosure variable has a positive and significant effect on Firm Value. Green Innovation shows the Thitung result of -2.966 and the Ttabel value of -1.991 which means that -Thitung> -Ttabel, it shows that H0 is rejected and H1 is accepted. So that the significance result is 0.004 <0.05, it can be concluded that the Green Innovation variable has a negative and significant effect on firm value. Intellectual Capital shows the results of the Thitung value of 1.974 and the Ttabel value of 1.9971 which means that Thitung < Ttabel, it shows that H0 is accepted and H1 is rejected. So that the significance result is 0.052> 0.05, it can be concluded that the intellectual capital variable has no positive and insignificant effect on firm value.

Simultaneous Test (F- Test)

The Statistical Test F was carried out to find out whether independent variables together could affect the dependent variables. The decision making is that if the significance value < 0.05 and the value of fCalculate > FTable, it can be declared H0 rejected and Ha accepted. The following are the results of the F test.

Table 10

Simultaneous Test Results (f- Test)

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	.652	.047		13.830	<,001
	Carbon Emission Disclosure	.012	.001	.875	18.386	<,001
	Green Innovation	-1.602E-6	.000	-.139	-2.966	.004
	Intellectual Capital	.005	.002	.094	1.974	.052

a. Dependent Variable: Nilai Perusahaan

Source : Data processing results using SPSS

The F statistical test in table 4.14 above shows the results of simultaneous hypothesis testing (f test), it can be seen that the Fcount value is 126.183. So it can be concluded that Ftable> Fcount, namely 126.183 < 2.72. The f test results also show a significance level of <0.000, so that the value is smaller than 0.05, namely (0.000> 0.05). Therefore, it can be concluded that simultaneously the Carbon Emission Disclosure, Green Innovation, and Intellectual Capital variables have a significant effect on Firm Value in energy companies listed on the Indonesia Stock Exchange (IDX) in 2019-2023.

The Effect of Carbon Emission Disclosure on Firm Value

The results of this study indicate that Carbon Emission Disclosure has a positive and significant effect on Firm Value. This is indicated by the value of the Carbon Emission

Disclosure variable 18.386> 1.991 or the value of Thitung> Ttabel with a significance of 0.000 <0.05, then H0 is rejected and Ha is accepted, which means that there is a significant positive effect between Carbon Emission Disclosure on Firm Value. This shows that any increase in Carbon Emission Disclosure reduces the reputational risk of compliance with environmental regulations, which has a positive impact on firm value.

The Effect of Green Innovation on Firm Value

The results of this study indicate that Green Innovation has a negative and significant effect on firm value, this is because the value of the Green Innovation variable is -2.966 and the Ttable value is -1.991 which means that -Thitung> -Ttabel, it shows that H0 is rejected and H1 is accepted. So that the significance result is 0.004 <0.05, it can be concluded that the Green Innovation variable has a negative and significant effect on firm value.

The Effect of Intellectual Capital on Firm Value

The results of this study indicate that Intellectual Capital has no negative and insignificant effect on Firm Value, this is because the value of the Intellectual Capital variable is 1.974 < 1.991 or Thitung < Ttabel with a significance of 0.052> 0.05, so H0 is rejected and H1 is accepted, which means that there is no negative and insignificant effect between Intellectual Capital on Firm Value.

5. Conclusion and Suggestion

Conclusion

Based on the results of data analysis through hypothesis testing that has been carried out by research entitled The Effect of Carbon Emission Disclosure, Green Innovation, and Intellectual Capital on Firm Value in Energy Companies Listed on the Indonesia Stock Exchange (IDX) for the 2019-2023 Period, it can be concluded that this research is as follows:

1. Carbon Emission Disclosure partially has a significant positive effect on Firm Value.

2. Green Innovation partially has a significant negative effect on Company Value.

3. Intellectual Capital partially has no effect and is not significant to the Company's Value.

Suggestion

This study is expected to provide an overview of the effect of Carbon Emission Disclosure, Green Innovation funds Intellectual Capital on Company Value in Energy Companies Listed on the Indonesia Stock Exchange for the 2019-2022 Period. Based on several research limitations, the researcher intends to provide suggestions for future researchers, namely as follows: a). It is expected to increase the observation period and expand the sample population so that the research results are more accurate for future research. b). It is expected to use moderating variables in order to analyze the factors that influence the independent variable on the dependent variable. c). It is expected to add variables that can strengthen the influence of the independent variable on the dependent variable. d). It is hoped that it can expand the sector under study so that the range of information generated is more.

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ANALYSIS OF THE USE OF ARTIFICIAL INTELLIGENCE (AI) ON PRODUCTION EFFECTIVENESS AND EMPLOYEE PERFORMANCE

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Abstract

The development of artificial intelligence (AI) technology has driven digital transformation across various sectors, including human resource management (HRM) and business operations. This study aims to analyse the impact of AI implementation on production effectiveness and employee performance through a systematic literature review of 12 previous studies. The research method employs a descriptive qualitative approach with content analysis of relevant literature sources. The findings indicate that AI significantly contributes to enhancing operational efficiency, such as automating routine tasks, reducing machine downtime (up to 25%), improving production defect detection (95%), and accelerating decision-making. Additionally, AI supports human resource performance evaluation and employee productivity, with work efficiency improvements ranging from 55% to 68.9% across various sectors. However, AI implementation also presents challenges, including psychological stress on employees (77% experienced stress) due to changes in work systems. The conclusion of this study emphasises that AI is a strategic tool for improving production effectiveness and employee performance, provided it is balanced with an adaptive management approach and adequate human resource training. Recommendations for further research include a more in-depth exploration of the impact of AI in various industrial contexts and the development of psychosocial risk mitigation strategies.

Keywords**:** *Artificial Intelligence (AI), Production Effectiveness, Employee Performance, Literature Review, Digital Transformation*

1. Introduction

The development of technology, particularly in the field of artificial intelligence (AI), has become one of the driving factors in digital transformation across various sectors, including human resource management (HRM). Currently, AI serves as a tool to enhance operational efficiency, improve production effectiveness, and boost employee performance.

AI has the ability to receive commands and visualise them. The emergence of AI in information technology offers numerous benefits. AI complements information technology, which consists of infrastructure, hardware, software, and automated services supported by technology, enabling companies to operate more effectively and efficiently (Siska et al, 2023).

In addition to the competence of human resources (HR), the presence of technology is considered capable of boosting production effectiveness and employee performance. This is because technology can help employees, particularly in improving their performance in the series of processes, policies, and procedures undertaken by the organisation to achieve its goals (Muzakir et al, 2023).

Through the application of Artificial Intelligence, companies can improve productivity, as AI makes employees' work easier, allowing them to quickly and efficiently complete the tasks assigned by the company (Raihan Saputra, 2023:91). AI can be implemented in a company by utilising various applications that can boost production effectiveness and

employee performance. This process is evident from the automation of routine tasks to the personalisation of work experiences, as well as the analysis and management of human resources by identifying the potential for collaboration that can be achieved. All these processes have a significant impact on enhancing production efficiency and optimising employee performance.

The positive assessment of AI's presence is reflected in its potential and capabilities. However, to align this perspective with reality on the ground, a thorough analysis is needed to ensure that AI's presence can enhance production efficiency and employee performance. In the modern era, the use of AI in companies has become commonplace and is already implemented by many companies and organisations.

Based on the above explanation, the problems addressed in this paper are as follows: 1. How can artificial intelligence (AI) be applied to improve production efficiency and employee performance?; 2. How does AI solve problems related to production efficiency and employee performance?; 3. What are the positive impacts of applying AI to production efficiency and employee performance?

2. Literature review

2.1 Artificial Intelligence (AI)

Artificial Intelligence can be defined as artificial intelligence, which in the process means creating or preparing machines such as computers to have intelligence based on human behaviour. Artificial Intelligence basically aims to make computers carry out commands that can be performed by humans. One part of artificial intelligence is expert systems (Turban, 1995, p. 422).

According to John McCarthy, artificial intelligence (AI) is the science and technique of creating intelligent machines, particularly in the creation of intelligent computer programs or applications. AI is a step towards creating computers, robots, or applications or programs that work intelligently, just like humans (McCarthy, 2007).

The purpose of creating AI itself is to: a. Create an expert system, i.e. a system that can perform intelligent behaviour, learn, demonstrate, explain, and advise users. b. Implement human intelligence into machines, creating a system that can understand, think, learn, and behave like humans. The fields that contribute to AI include Computer Science, Biology, Psychology, Linguistics, Mathematics, and Engineering. One of the major steps in creating computers related to artificial intelligence is thinking logically, learning, and solving problems. The techniques used by AI to solve problems involve organising information and knowledge so that it can be easily accessed and understood by users, can be easily modified to correct errors, and can be useful in various situations, even though it is still not perfect or accurate.

AI has capabilities that can support three areas of business functions (Davenport & Ronanki, 2018). First, AI can improve business automation processes by adding cognitive capabilities to software. For example, organisations use AI to make automatic decisions such as loan processes at banks and automate business processes by providing cognitive capabilities in software. For example, organisations use AI to add automated decision-intensive tasks such as loan processing and supply chain management to understand customer purchasing behaviour. The National Aeronautics and Space Administration (NASA) states that the use of AI technology in HR processes allows them to complete 86% of HR tasks without human intervention (Davenport & Ronanki, 2018). This means that AI enables automation processes using software algorithms that can make and implement decisions without human intervention. The application of AI in eHRM is not only a tool for providing recommendations on the benefits each employee will receive but also a tool that can determine the benefits each employee will receive and automatically register them (Johnson et al., 2020).

Secondly, AI can provide input or options that will assist in the decision-making process. This AI capability uses algorithms and machine learning that are useful as translators of large amounts of data, searching for hidden patterns that were previously unknown to an organisation. By using AI, an organisation can predict the purchasing behaviour of its customers, prevent and identify fraud, and customise advertising. AI also functions as a diagnostic tool for patients in the medical field, for example, predicting cancer patients (Davenport & Ronanki, 2018).

Thirdly, the use of intelligent agents and chatbots. For example, many e-commerce vendors have implemented intelligent agents to help customers decide what to buy (Johnson et al., 2020). Meanwhile, chatbots can assist customers and employees. For example, SEBank uses chatbots to support employees who have questions related to IT (Davenport & Ronanki, 2018).

2.2 Effectiveness

Effectiveness can be defined as an effort made by a group of people or an organisation to achieve predetermined targets or objectives, so that the effort can be considered successful. According to Adibowo et al. (2014) in Mahmudi (2005:92), effectiveness is defined as follows: 'Effectiveness is the implementation of a series of tasks that have been set out in a plan, carried out in accordance with applicable guidelines and procedures so that the desired objectives can be achieved.' (Mahmudi, 2005:92).

Based on the above opinions, it can be understood that effectiveness is a strategy to achieve success that has been set by individuals, groups, or organisations in carrying out an activity that is expected to achieve objectives in accordance with applicable guidelines and procedures. In general, effectiveness is a state that indicates the level of success measured by quality, quantity, and time in accordance with what has been planned. In other words, the more plans that are achieved or have been successful, the more effective the activity is considered to be.

There are also those who explain that effectiveness is a level of success achieved by an individual or organisation in a certain way in accordance with the objectives to be achieved. In other words, the more plans that are successfully achieved, the more effective an activity is considered to be. Measuring the effectiveness of a programme is not a simple matter, because effectiveness can be assessed from various perspectives and depends on who is assessing and interpreting it. From an information system perspective, those who implement it and those who use it provide an understanding of how the input-process-output of the programme works

Measuring effectiveness according to S.P Siagian in his book Modern Management (1982:30-33) includes: 1. Clarity of the objectives to be achieved so that employees can achieve their goals and objectives in carrying out their duties; 2. Clarity of the strategy for achieving objectives; this strategy is the method used in the effort to achieve a goal; 3. The process of analysing and formulating policies related to the objectives to be achieved and the strategies to be used, meaning that policies must be able to bridge the gap between objectives and operational activities; 4. Thorough planning, which essentially involves deciding now what will be done in the future; 5. Proper programme formulation. If implementation lacks guidelines for action, it is because the plan has not been properly outlined in the implementation programme; 6. Productive work capacity with available facilities and infrastructure; 7. Effective and efficient implementation; if a programme is not implemented effectively and efficiently, the organisation will not achieve success in line with its objectives; 8. An educational monitoring and control system, given the imperfect nature of humans, effectiveness requires a monitoring and control system. (Siagian, 1982:30-33).

Based on the benchmarks according to S.P Siagian in his book Modern Management (1982:30-33) above, the effectiveness of a program is measured using eight indicators to assess whether the work is effective or not.

Furthermore, according to Budiani, measuring the effectiveness of a program can be done using the following variables: 1. Program Objective Achievement, which refers to the extent to which program participants achieve the objectives set for the program; 2. Program Socialisation, which refers to the ability of program organisers to socialise the program so that information about its implementation can be conveyed to the general public and program participants in particular; 3. Program Goal Achievement, which refers to the extent to which the results are in line with the program goals that have been set; 4. Program Monitoring: activities conducted after the program is implemented as a form of attention to program participants. (Budiani, 2007:53).

Based on the above explanation, the effectiveness of a program can be measured by program target achievement, program socialisation, program implementation, program goal achievement, and program monitoring.

2.3 Performance

Performance comes from the words job performance or actual performance (work performance or actual achievements made by someone). The definition of performance (work performance) is the quality and quantity of work achieved by an employee in carrying out their duties in accordance with the responsibilities assigned to them. Performance refers to employee achievements measured based on standards or criteria set by the company (Suryanto, 2020).

According to Mangkunegara (2017), employee performance is the quality and quantity of work achieved by an employee in performing their duties in accordance with the responsibilities entrusted to them. Furthermore, Pranata (2020) states that performance is the work results that can be displayed or the work performance of an employee, while Hasibuan (2018) states that performance is the work results that can be achieved by an individual or group of people in an organisation in accordance with their respective authorities and responsibilities in order to achieve the organisation's objectives legally, without violating the law and in accordance with morals and ethics.

Performance refers to the degree of achievement of the tasks that make up an employee's job. Performance is defined as the result of the work/activities of an individual or group within an organisation that is influenced by various factors to achieve the organisation's objectives within a certain period of time (Suryanto, 2020). Employee performance refers to an employee's ability to carry out all the tasks that are their responsibility. The objectives of an institution can only be achieved when the institution is supported by the work units within it.

Employee performance can be categorised into high, medium, or low performance levels, and can also be categorised as exceeding targets, meeting targets, or falling short of targets. Based on these considerations, performance is understood as the overall work performance of an employee (Mundakir & Zainuri, 2018).

3. Methodology

This study uses a qualitative descriptive analysis method with the aim of analysing the use of Artificial Intelligence (AI) on production effectiveness and employee performance. The data used for analysis is derived from previous literature reviews. By incorporating literature reviews, this study aims to present a comprehensive understanding of the contribution of AI to production effectiveness and employee performance. The qualitative descriptive approach is used to approach this phenomenon in a deep manner, facilitating the identification of patterns, trends, and implications that may arise from the integration of AI in production effectiveness

and employee performance. Qualitative analysis through literature review in this study refers to a systematic process of understanding and reorganising information from relevant literature sources. The qualitative approach focuses on a deep and interpretative understanding of concepts, phenomena, or theories, and this method is well-suited for exploring the complex aspects of the use of Artificial Intelligence (AI) on production effectiveness and employee performance.

In the context of a literature review, this study collects and evaluates previous works that have outlined various aspects of AI in various journal articles. Qualitative analysis involves identifying patterns, themes, and common findings that can be found in the literature. Additionally, this approach allows researchers to detail differences, controversies, or knowledge gaps that may exist in the literature.

By conducting qualitative analysis through a literature review, this study not only summarises information but also performs an in-depth interpretation of the findings. This includes understanding the context in which previous research was conducted, evaluating the methodologies used, and identifying the implications of the findings. Overall, qualitative analysis through a literature review provides a strong foundation for detailing the conceptual framework of the research and better understanding the use of AI in production effectiveness and employee performance.

4. Results and discussions

Journals are categorized by type to facilitate the search and analysis process. The following table shows the grouping of journals by source and year of publication:

Table 1. Classification of Journals Based on Source and Year of Publication

No	Research	Year	Total
1	Production Schedule Optimisation (Agra Nurtrihadi et al.)	2025	1
2	Efficiency & Innovation (Herbet Simangunsong et al.)	2025	1
3	AI in Manufacturing (API Tulungagung)	2025	1
4	USNI Repository (Sutrisno)	2024	1
5	SLR Human Resource Effectiveness (Kurniawan et al.)	2024	1
6	AI Competence (Anwar Tahir et al.)	2024	1
7	Jurnal Inobis (Rahmawati et al.)	2023	1
8	JPSN (Ardiansyah et al.)	2023	1
9	Makreju (Maulidina)	2023	1
10	Jurnal Jaras (Nurdin)	2023	1
11	Generative AI (Brynjolfsson et al.)	2023	1
12	GitHub Copilot Study	2023	1

Discussion of Results

RQ1: What is the Potential Application of Artificial Intelligence (AI) in Production Effectiveness and Employee Performance?

The following table shows the potential application of AI in Production Effectiveness and Employee Performance:

Table 2. Potential Application of AI in Production Effectiveness and Employee Performance

No	Research	Findings
1	Agra Nurtrihadi et al.	Production efficiency and flexibility improved with AI.
2	Herbet Simangunsong et al.	Machine downtime reduced by 25%, defect detection improved by 95%.
3	API Tulungagung	Productivity increased by 18%, ROI positive.
4	Sutrisno	AI accelerated business processes.
5	Kurniawan et al.	Focus on HR analytics and performance evaluation.
6	Anwar Tahir et al.	Productivity increased by 68.9%.
7	Rahmawati et al.	AI assisted HR and performance evaluation.
8	Ardiansyah et al.	AI accelerated work decisions.
9	Maulidina	Work processes are more efficient.
10	Nurdin	AI reduces manual errors in the back office.
11	Brynjolfsson et al.	Customer support productivity increases by 15%.
12	GitHub Copilot Study	Coding speed increases by 55%.

RQ2: How does AI solve problems related to production effectiveness and employee performance?

Table 3. AI Solutions for Solving Production Effectiveness and Performance Issues

No	Research	Solutions Provided
1	Agra Nurtrihadi et al.	Further research is needed to measure the impact of AI on employee performance, such as job satisfaction or stress levels.
2	Herbet Simangunsong et al.	Further research is needed to measure the impact of AI on employee performance, such as job satisfaction or stress levels.
3	API Tulungagung	Evaluate the impact of AI on job structures, such as whether there is a reduction in human resources or changes in job descriptions.
4	Sutrisno	More detailed research on the impact of AI on employee productivity, not just the organization, is needed.
5	Kurniawan et al.	Integrate AI into HR training to improve competency in the manufacturing sector.
No	**Research**	**Solutions Provided**
6	Anwar Tahir et al.	Pilot a similar model in the manufacturing sector to see the impact of AI on the production line.

7	Rahmawati et al.	Develop AI for performance analysis of production operators in manufacturing.
8	Ardiansyah et al.	Apply AI in predictive maintenance to reduce machine downtime.
9	Maulidina	Pilot on the production line to measure the acceleration of the manufacturing process.
10	Nurdin	Apply AI in production quality control.
11	Brynjolfsson et al.	Adapt generative AI for technical documentation or machine troubleshooting.
12	GitHub Copilot Study	Use AI for CNC machine programming or product design automation.

RQ3: What are the positive impacts of AI implementation on production effectiveness and employee performance?

Table 4. Positive Impact of AI Implementation on Production Effectiveness and Employee Performance

No	Research	The Positive Impact of AI
1	Agra Nurtrihadi et al.	AI increases production efficiency and flexibility.
2	Herbet Simangunsong et al.	Machine downtime reduced by 25%, defect detection increased by >95%.
3	API Tulungagung	Productivity increased by 18% with positive ROI.
4	Sutrisno	AI accelerates business processes and improves organizational performance.
5	Kurniawan et al.	AI helps HR analytics and employee performance evaluation.
6	Anwar Tahir et al.	Productivity increased by 68.9% in the retail sector.
7	Rahmawati et al.	AI helps HR performance evaluation.
8	Ardiansyah et al.	AI accelerates decision making.
9	Maulidina	AI improves general work efficiency.
10	Nurdin	AI reduces manual errors and improves accuracy.
11	Brynjolfsson et al.	Customer support productivity increased by 15%.
12	GitHub Copilot Study	Developers work 55% faster.

The following is a summary table of previous research from existing sources related to the use of Artificial Intelligence (AI):

Table 5. Previous Research

No	Research & Year	Focus & Method	Key Results	Equations	Differences
1	Optimisation of Production Schedules (Agra Nurtrihadi et al., 2025)	Qualitative – manufacturing	Increased efficiency and flexibility	Production effectiveness via AI	Do not measure employee performance
2	Efficiency & Innovation (Herbet Simangunsong et al., 2025)	Qualitative	Downtime -25%, defect detection +95%	Focus on AI production & innovation	No direct assessment of human resources yet
3	AI in Manufacturing (API Tulungagung, 2025)	Mixed method	Productivity +18%, positive ROI	Production efficiency & AI	Do not measure individual performance
4	USNI Repository (Sutrisno, 2024)	Study of the impact of AI in the digital age	AI accelerates business processes	The effect of AI on performance	Do not measure production output
5	SLR Human Resource Effectiveness (Kurniawan et al., 2024)	Systematic literature	AI assists HR and evaluation	Performance & HR analytics	Not specific to production
6	AI Competence (Anwar Tahir et al., 2024)	Quantitative (99 respondents)	Productivity increased by 68.9%	Focus on AI & productivity	Retail context, not manufacturing
7	Inobis Journal (Rahmawati et al., 2023)	Quantitative	AI assists HR and evaluation	Focus on human resource performance	No discussion of direct production
8	JPSN (Ardiansyah et al. 2023)	AI studies & work	AI speeds up work decisions	Work effectiveness increases	Not specific to production
9	Makreju (Maulidina, 2023)	Quantitative	Work efficiency improves	Faster work process	Not in the production sector
10	Jaras Journal (Nurdin, 2023)	Digital transformation study	Reduction of manual errors	AI improves work accuracy	Focus back office
11	Generative AI (Brynjolfsson et al., 2023)	Experiment	Productivity +15%	The effect of AI on productivity	Focus Customer support
12	GitHub Copilot Study (2023)	Coding experiment	Task completed 55% faster	AI efficiency is very high	Focus software developer

Research by Agra Nurtrihadi et al. (2025) investigated the optimisation of production schedules in the manufacturing sector using a qualitative approach, with the results showing that the application of AI can improve efficiency and flexibility in the production process. The

main focus was on improving operational effectiveness, but this study did not measure the direct impact on employee performance.

According to Herbet Simangunsong et al. (2025), a qualitative study was conducted on the application of AI in improving production process efficiency and innovation. The results showed that machine downtime was reduced by up to 25% and product defect detection increased by more than 95%. This study demonstrated a significant impact on production efficiency, although it did not directly address the impact of AI on human resources.

Furthermore, according to API Tulungagung (2025), a mixed method was used in the research to assess the application of AI in the manufacturing sector. This study found an 18% increase in productivity and a positive Return on Investment (ROI). The main focus was on production efficiency through the use of AI, without specifically discussing its impact on individual performance.

According to Sutrisno in the USNI Repository (2024), which discusses the impact of AI on accelerating business processes in the digital era. This study emphasises how AI contributes to improving organisational performance, although it does not directly measure production output.

Then, according to Kurniawan et al. (2024), a systematic literature review was conducted on the effectiveness of using AI to support human resource management. The main findings stated that AI is useful in the HR analytics process and employee performance evaluation. The focus is more on human resource optimisation than production efficiency.

According to Anwar Tahir et al. (2024), the study used a quantitative method involving 99 respondents to assess AI's competencies in the workplace. The study found that AI can increase productivity by 68.9%. However, this study was conducted in the retail sector, not manufacturing.

In a study conducted by Rahmawati et al. in the Inobis Journal (2023), which presented quantitative research on the use of AI in supporting Human Resource (HR) functions, including performance evaluation and assessment. This study highlighted the role of AI in improving human resource performance, although it did not discuss its application in the production process.

Then, according to Ardiansyah et al. in the JPSN Journal (2023), a study was conducted on the influence of AI on work effectiveness. The results showed that AI can accelerate the decision-making process in the workplace, thereby increasing overall effectiveness. However, this study did not specifically focus on the production sector.

Meanwhile, according to Maulidina in the Makreju Journal (2023), a quantitative study was conducted which showed that the application of AI can improve work efficiency in general. In this case, AI can help speed up work processes, but this study was not conducted in the context of the manufacturing sector.

There are similarities between the research conducted by Maulidina and Nurdin in the Jaras Journal (2023), which examines digital transformation with a focus on the use of AI in the back-office work environment. This study found that AI was able to reduce manual errors and improve job accuracy, but was not directly related to the production process.

Highlighting the field of customer service, according to Brynjolfsson et al. (2023), which conducted experiments on the use of generative AI in the field of customer support. The results show a 15% increase in productivity, which proves that AI can speed up task completion and increase output. The focus of this research is more on customer service.

On the other hand, according to the GitHub Copilot Study (2023), it shows how AI can support the work of software developers, so that in this experiment the developers completed programming tasks 55% faster with the help of AI. This study is proof of high work efficiency through AI, especially in the context of software development.

The results show that the application of Artificial Intelligence (AI) has great potential in improving operational efficiency, both through process automation, reducing work time, increasing accuracy, and making faster decisions. However, there are also negative psychological impacts such as work stress that need attention. This research makes an important contribution to understanding the future direction of AI development in business operational practices.

From the results of a systematic literature review of 13 studies, it can be concluded that Artificial Intelligence (AI) makes a clear positive contribution to the efficiency of the production process, work acceleration, and increased accuracy in business decision making. However, the implementation of AI also poses challenges, especially in the form of psychological pressure on the workforce due to significant changes in work processes. Therefore, the implementation of AI in business must be balanced with an adaptive managerial approach to maintain sustainable productivity and human resource welfare.

5. Conclusion

Based on the results of the literature review of 12 analyzed studies, it can be concluded that Artificial Intelligence (AI) has a significant contribution to improving production efficiency and employee performance. The application of AI in the context of business operations is proven to automate routine tasks, speed up work processes, improve decision-making accuracy, and support more strategic human resource management. Findings show that AI has a positive impact in various sectors, ranging from manufacturing, education, public services, to smart city management. AI not only acts as a technical tool, but also as an agent of organizational transformation towards more optimal performance.

However, the integration of AI in the workplace also poses challenges, especially related to HR adaptation and potential psychological burdens such as stress due to changes in the work system. Therefore, the implementation of AI needs to be accompanied by an inclusive managerial strategy, strengthening the digital capacity of HR, and policies that ensure employee welfare.

Considering the benefits and risks, it can be concluded that AI is a strategic tool that, if applied wisely, can sustainably improve production effectiveness and employee performance. Further research is still needed to examine the dynamics of AI implementation contextually across different types of industries and organizational levels

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THE EFFECT OF WORK STRESS, PHYSICAL WORK ENVIRONMENT, AND ORGANIZATIONAL CITIZENSHIP BEHAVIOR (OCB) ON WORK PERFORMANCE IN THE PRODUCTION DEPARTMENT OF PT. GENTA TRIKARYA SUMEDANG

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Abstract

This study aims to analyze the effect of work stress, physical work environment, and Organizational Citizenship Behavior (OCB) on the performance of production employees at PT. Genta Trikarya Sumedang. This study uses a quantitative approach with 41 respondents from the production department, while the performance assessment is carried out by one direct superior. Data collection was carried out using a questionnaire consisting of four variables. Data were analyzed using multiple linear regression. The results of the data processing simulation showed that work stress had no effect on employee performance β = -0.008, the physical work environment had a significant positive effect on performance β = 0.344, and OCB also had a significant positive effect on employee performance β = 0.358. Simultaneously, the three independent variables had a significant effect on employee performance with a calculated F value of 29.278 and a coefficient of determination (R^2) of 0.709, which indicated that 70.9% of the variation in performance could be explained by the three variables. The conclusion of this study is that work stress in this context does not directly reduce or increase their performance significantly. However, it still needs to be managed so that it does not develop into chronic stress and damage productivity in the long term, while a decent physical work environment and high OCB behavior can improve performance. Therefore, companies are advised to improve the physical conditions of the work environment and encourage a work culture that supports OCB, while managing workloads to reduce employee stress.

Keywords: *Job Stress, Physical Work Environment, Organizational Citizenship Behavior (OCB), Employee Performance.*

1. Introduction

In the era of globalization and increasingly fierce competition, the success of a company is highly dependent on the quality of its human resources, especially in terms of employee productivity and performance. Employee performance plays an important role in achieving the company's strategic and operational goals, including achieving production targets, improving product quality, and ensuring customer satisfaction. However, employee performance is often influenced by various factors, both internal and external. With very rapid technological changes, of course, it brings changes in human life, so these changes result in high demands on each individual in improving their performance, with the development of technology and knowledge, employees must be able to change their work patterns and systems with various demands applied in the current era. Performance is the result achieved by a person in carrying out PT. Genta Trikarya, as one of the companies engaged in the musical instrument industry, especially guitars with ukuleles which routinely markets its products to England, Germany and the Netherlands **(beacukai.go.id)** . According to **Nur & Marlina (2022)** stated that employee performance is part of the actions or behaviors that are in accordance with the work that has been given by the company, with the current changes of course the company is experiencing

development, with changes in the company. As a result of declining employee performance, of course, there are many factors that can be the basis of performance problems. According to **Amanda, Suherman, & Hidayaty (2022)** , work stress affects employee performance, so work stress is one of the factors that can affect employee performance. In addition to work stress that affects employee performance, the physical work environment is also a factor that causes less than optimal employee performance. According to **Rastana, S. Made & Premayani (2021)** , the physical work environment affects performance. The physical work environment affects employee performance **Rastana, Mahayasa, & Premayani (2021).** In addition to the physical work environment which is a problem for performance, *Organizational Citizenship Behavior* (OCB) one of the factors causing declining employee performance. Based on research conducted by **Sartika (2022),** it was stated that *Organizational Citizenship Behavior* (OCB) affect employee performance. *Organizational Citizenship Behavior (OCB)* or organizational citizenship behavior can also affect employee performance because employee behavior can support the implementation of tasks carried out.

Thus, based on the facts obtained from the company PT. Genta Trikarya Sumedang, it can be assumed that employee performance is influenced by work stress, physical work environment, and *Organizational Citizenship Behavior* (OCB), so that the problem that underlies this study takes the title **" The Effect of Work Stress, Physical Work Environment, and *Organizational Citizenship Behavior (OCB)* on the Performance of Production Employees at PT. Genta Trikarya Sumedang ".** The identification of problems from this study, as follows:

1. How is the level of work stress of Production Department employees at PT. Genta Trikarya Sumedang.
2. How do respondents respond to the physical working environment conditions of the Production Department of PT. Genta Trikarya Sumedang.
3. How do respondents respond to *Organizational Citizenship Behavior* (OCB)? Production Department employees at PT. Genta Trikarya Sumedang.
4. How is the performance of Production Department employees based on the perception of their direct superiors at PT. Genta Trikarya Sumedang.
5. How do work stress, physical work environment, and *Organizational Citizenship Behavior* (OCB) affect the performance of Production Department employees both partially and simultaneously at PT. Genta Trikarya Sumedang.

2. Literature Review

2.1 Job Stress

Job stress is a condition that affects a person's emotions, thought processes, and condition. People who experience stress become *nervous* and feel chronic anxiety **(Hasibuan, 2013)**

- ***Sources of Work Stress in the Work Environment***

According to **Suwanto & Priansa (2018),** the sources of work stress in the work environment are as follows:

1. Stress that originates from the individual level

Stress that originates from the individual level is stress that is related to tasks that must be completed quickly and to the relationship between a person's position in their workplace.

2. Stress originating from groups and organizations

Stress from groups and organizations refers to the emotional and psychological pressure experienced by individuals as a result of the interactions or dynamics that occur within the work group or organization to which they belong.

2.2 Physical Work Environment

The physical work environment is a condition that exists in the workplace, so it will affect employees either directly or indirectly (**Sedarmayanti, 2017).**

- ***Factors Affecting the Physical Work Environment***

According to **Sedarmayanti (2018),** the factors that influence the physical work environment are as follows:

1. Adequate lighting/light

Lighting is very important in a room, especially in the workplace, therefore good lighting can affect employee performance.

2. Temperature

Each part of the human body has a different temperature, the human body will try to maintain a normal state, with a perfect body system it will adapt to changes that occur outside the body.

3. Humidity

This humidity is related to or can be influenced by air temperature, as well as together with temperature, humidity, speed of moving air and heat radiation from the air.

4. Air circulation

Air circulation is the main source for employees to breathe fresh air, with good circulation, there will be many plants in the workplace to produce more oxygen.

2.3 Organizational Citizenship Behavior (OCB)

Organizational Citizenship Behavior (OCB) is behavior that is voluntary, not through a formal reward system, and can increase the effectiveness of organizational functions (**Kaswan, 2016).**

- ***Dimensions in Organizational Citizenship Behavior (OCB)***

According to **Lestari & Ghaby (2018)** there are 5 dimensions in *Organizational Citizenship Behavior* (OCB), namely:

1. *Altruism*

An attitude or behavior that is oriented towards caring for others without expecting rewards or personal gain and without coercion (voluntary).

2. *Conscientiousness*

The attitude shown can exceed the requirements set by the company, such as arriving at the factory early and making good use of working time.

3. *Sportsmanship*

A positive attitude towards work and the organization even when facing less than ideal situations, and having positive behavior towards the organization by tolerating or not complaining about less than ideal conditions in the organization.

4. *Courtesy*

Proactive action to avoid conflict in the work environment, so you have to maintain good relationships with coworkers to prevent conflict from occurring in order to avoid interpersonal problems.

5. *Civic Virtue*

Active participation in organizational life that reflects responsible participation and participation in the sustainability of the organization.

2.4.Employee performance

Performance is the result of work and attitude while working which has been achieved by completing the tasks and responsibilities given in a certain period (**Kasmir, 2016)**

- ***Dimensions That Influence Employee Performance Levels in a Company***

According to **Kasmir (2016),** there are dimensions that can influence the level of employee performance in a company:

1. Quality

Quality is a process with a level in completing a task of an activity that approaches the point of perfection or conformity with established regulations.

2. Quantity

The quantity of work produced by an individual or group as a requirement that becomes the standard of work.

3. Time

Time is a type of work that is given a time limit to complete the work, which has a minimum and maximum limit in a given job.

4. Cooperation between employees

The work that is done is not always done alone, there must be cooperation where performance is often linked to cooperation between employees and between leaders.

5. Supervision

Supervision is monitoring carried out by employees which is carried out by superiors to their employees.

3. Research Methods

This study uses a quantitative approach, documentation data collection techniques, questionnaires, interviews, and descriptive and associative studies to achieve research objectives that lead to the quality of employee performance in the Production Department. The number of population units is 41 employees in the production department of PT. Genta Trikarya Sumedang and all of them are used as respondents (census), with the characteristics of respondents who have worked at PT. Genta Trikarya Sumedang for at least one year. In this study, the measuring instrument testing technique uses validity and reliability tests.

3.1 Theoretical Framework

According to **Robbins and Judge (2015),** work stress is a dynamic condition in which individuals are confronted with opportunities, demands, or resources related to their desires and where the outcome is perceived as important and uncertain. The physical work environment is everything that is around the work and can directly affect a person in their work, including lighting, control, noise in the workplace, and security arrangements in the workplace **Sukanto and Indryo (2018).** According to **Robbins & Timothy (2016)** *Organizational Citizenship Behavior* (OCB) is *a discretionary* that is not part of the employee's formal job requirements, but which promotes the effective functioning of the organization. According to **Marzuki, Nasir, and Idris (2020)** Performance or what is often referred to as work achievement is a quality and quantity produced by an individual in a particular activity and according to the applicable measures for the work concerned and determined by the organization which is set as a target in a period.

3.2 Conceptual Framework

Based on research conducted by **Ariansy & Kurnia (2022)** , it was stated that work stress has a negative effect on employee performance, while according to **Rastana, Mahayasa, & N. Wayan (2021)** it shows that the physical work environment has a positive effect on

employee performance, as well as previous research conducted by **Anggraini & Rakhmalina (2023)** shows that *Organizational Citizenship Behavior* (OCB) has an effect on employee performance. For more details regarding work stress, physical work environment and *Organizational Citizenship Behavior* (OCB) on employee performance that have been described above, the framework of thought (Instrumentation) is manifested using a research paradigm as shown in Figure 1.

3.3 Instrumentation

This study contains 31 statement items contained in the questionnaire that will be tested using the reliability and validity test shown in Table 1. In this validity and reliability test, statements will be tested one by one stating valid and reliable, if the statement is valid, it means the value is less than 0.05 (sig <0.05), if the reliability test value of Cronbach's Alpha should be greater than 0.6 (Cronbach's Alpha> 0.6) then the statement is declared reliable. The results of the validity test in each statement of all variable instruments X1, X2, X3 and Y are declared valid because the $_{\text{calculated R value}} > R_{\text{table}}$ (0.312) The results of the reliability test can be seen in table 1.

Table 1.
Reliability Test Results

Variables	Alpha Cronbach	R_{table}	Information
X1	0.679	0.312	Reliable
X2	0.960	0.312	Reliable
X3	0.768	0.312	Reliable
Y	0.845	0.312	Reliable

Source: Data Processing Results, 2025

The following is the research paradigm of the Influence of Work Stress, Physical Work Environment, and *Organizational Citizenship Behavior* (OCB) on the Performance of Employees in the Production Division of PT. Genta Trikarya Sumedang:

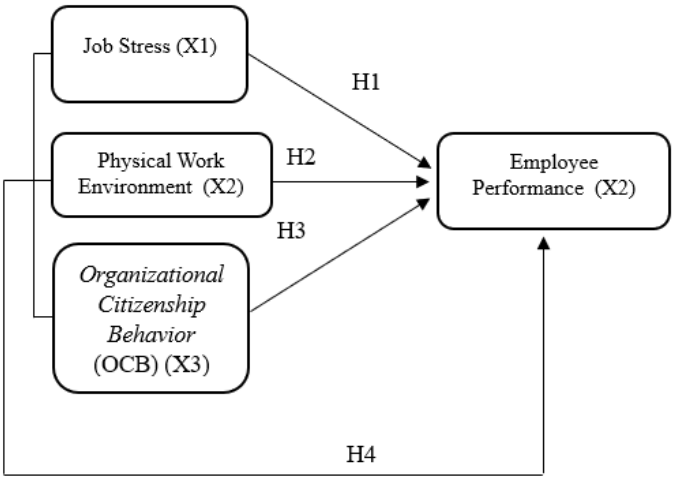

Figure 1. Research Paradigm of the Influence of Work Stress, Physical Work Environment, and *Organizational Citizenship Behavior* (OCB) on the Performance of Production Employees at PT. Genta Trikarya Sumedang

Based on the paradigm above, the research hypothesis that is used as the basis for the research conducted is:

H1: Work stress has a negative effect on the performance of employees in the Production Department of PT. Genta Trikarya Sumedang

H2: Physical work environment has a positive effect on the performance of employees in the Production Department of PT. Genta Trikarya Sumedang

H3: *Organizational Citizenship Behavior (OCB*) has a positive effect on the performance of employees in the Production Department of PT. Genta Trikarya Sumedang

H4: Job stress, physical work environment, and *Organizational Citizenship Behavior* (OCB) influence on the performance of employees in the Production Department of PT. Genta Trikarya Sumedang

4. Results and Discussion

The influence of work stress, physical work environment and *organizational Citizenship Behavior (OCB)* on employee performance partially and simultaneously and utilizing quantitative associative using multiple linear regression analysis test and determination coefficient.

In order for the use of multiple linear regression tests to pass , the requirements for using classical assumption tests are as follows:

a. Classical Assumption Test

To test the classical assumptions there are normality tests, multicollinearity tests, and heteroscedasticity tests:

1. Data Normality Test

The data normality test showed a significant value of 0.946 > 0.05 with the significance results meaning that the research data was declared to be normally distributed.

2. Multicollinearity Test

The multicollinearity test of the data shows that the *tolerance value* for variable X1 is 0.946>0.01, variable X2 is 0.576>0.01, and variable X3 is 0.553>0.01, while the VIF value for variable X1 is 1.058<10, variable X2 is 1.736<10, variable X3 is 1.810<10, which means that the data does not experience multicollinearity.

3. Heteroscedasticity Test

Heteroscedasticity test showing significant data worth variable X1 0.27>0.05 variable X2 0.940>0.05, and variable X3 0.175>0.05. Which means there is no heteroscedasticity symptom. To determine \the criteria for the influence of the results of the determination coefficient test, namely:

Table 3.
Criteria for the Influence of the Determination Coefficient

INTERVAL COEFFICIENT OF DETERMINATION	INFORMATION
<4.99%	Very Low Influence
5% -16.99%	Low But Sure Influence
17% -49.99%	Significant Influence
50% -80.99%	High or Strong Influence
>81%	Very High Influence

Source: Fitrianingsih and Budiansyah, (2019)

b. Statistical Hypothesis

1. Hypothesis of the influence of work stress variable (X1) on employee performance (Y) in the Production Department of PT. Genta Trikarya Sumedang

Ho: β 1≥0 (work stress does not affect the performance of employees in the Production Department of PT. Genta Trikarya Sumedang).

Ha: β 1<0 (work stress has a negative effect on the performance of employees in the Production Department of PT. Genta Trikarya Sumedang).

2. Hypothesis of the influence of physical work environment variables (X2) on employee performance (Y) in the Production Department of PT. Genta Trikarya Sumedang

Ho: β 1≤0 (physical work environment does not affect the performance of employees in the Production Department of PT. Genta Trikarya Sumedang).

Ha: β 1>0 (physical work environment has a positive effect on the performance of employees of the Production Department of PT. Genta Trikarya Sumedang).

3. Hypothesis of the influence of *the Organizational Citizenship Behavior (OCB) variable* (X3) on employee performance (Y) in the Production Department of PT. Genta Trikarya Sumedang.

Ho: β 1≤ 0 (*Organizational Citizenship Behavior* (OCB) has no effect on the performance of employees in the Production Department of PT. Genta Trikarya Sumedang).

Ha: β 1>0 (*Organizational Citizenship Behavior* (OCB)) has a positive effect on the performance of employees of the Production Department of PT. Genta Trikarya Sumedang).

4. Ho: $\beta 1$, $\beta 2$, $\beta 3$ = 0 (Work stress, physical work environment, and *Organizational Citizenship Behavior* (OCB) do not affect the performance of employees in the Production Department of PT. Genta Trikarya Sumedang).

Ho: $\beta 1$, $\beta 2$, $\beta 3 \neq 0$ (Work stress, physical work environment and *Organizational Citizenship Behavior* (OCB) have an effect on the performance of employees in the Production Department of PT. Genta Trikarya Sumedang).

c. Descriptive Analysis

1. Work Stress Level of Production Employees at PT. Genta Trikarya Sumedang.

By calculating the respondents regarding variable X1 (Work Stress) with five sub-variables and five statements, the total average result for respondents regarding variable X1 is:

Table 4
Total Average Respondents' Responses to Statements Regarding Work Stress Variables

SUB VARIABLE	TOTAL AVERAGE	CRITERIA
Opportunity to develop career.	3.65	Quite a Chance
Workload suitability.	3.70	Quite Appropriate
Member and group support	3.30	Lack of Support
The tendency of employees to work together.	3.50	Currently
Leader involvement.	3.58	Enough
TOTAL AVERAGE SCORE (3.65+3.70+3.30+3.50+3.58)/5 = 3.55		
CRITERIA = Medium		

Source: Questionnaire, Reprocessed, 2025

Based on table 4. There is a total average for the work stress variable (X1) of **3.55** and is classified as **moderate,** which means that the level of work stress in the company PT. Genta Trikarya Sumedang is moderate, which means that it does not have a high level of stress.

In table 4. The smallest value for the work stress variable (X1) is in the member and group support sub-variable.

2. Respondents' Responses to Physical Working Environment Conditions of the Production Section of PT. Genta Trikarya Sumedang

By calculating the respondents regarding variable X2 (Physical Work Environment) with 5 sub-variables and 12 statements, the total average results regarding respondents regarding variable X2 are:

Table 5
Total average of respondents' responses to statements regarding the fiscal work environment variables

SUB VARIABLE	TOTAL AVERAGE	CRITERIA
Adequate lighting/lighting	3.10	Underexposed
Air comfort (temperature, humidity, and air circulation).	3.13	Less comfortable
Noise	3.13	Noisy
Vibration	2.95	Quite disturbing
The aroma that arises	3.00	Less fragrant
Color scheme conformity	2.98	Less appropriate
Layout conformity.	3.00	Less appropriate
Security	2.95	Less secure
Cleanliness	3.58	Quite clean
TOTAL AVERAGE SCORE (3.10+3.13+3.13+2.95+3.00+2.98+3.00+2.95+3.58)/9= 3.00		
CRITERIA = Less		

Source: Questionnaire, Reprocessed, 2025

Based on table 5. There is a total average for the physical work environment variable (X2) of 3.00 and is classified as **lacking,** which means that the physical work environment at PT. Genta Trikarya Sumedang is not well-maintained, both in terms of place, cleanliness and security.

In table 5. The smallest value for the physical work environment variable (X2) is in the vibration and safety sub-variable.

3. Respondents' Responses to *Organizational Citizenship Behavior* (OCB) Production Employees at PT. Genta Trikarya Sumedang.

By calculating the respondents regarding variable X3 (*Organizational Citizenship Behavior (OCB)*) with 5 sub-variables and 8 statements, the total average results regarding respondents for variable X3 are as follows:

Table 6
Total Average Respondents' Responses to Statements Concerning *Organizational Citizenship Behavior* (OCB) Variables.

SUB VARIABLE	TOTAL AVERAGE	CRITERIA
Altruism.	3.53	Quite capable
Conscientiousness.	3.53	Quite capable
Sportsmanship.	3.63	Enough to do it

SUB VARIABLE	TOTAL AVERAGE	CRITERIA
Courtesy.	3.35	Less fortunate
Civic Virtue.	3.63	Quite capable
TOTAL AVERAGE SCORE (3.53+3.53+3.63+3.35+3.63)/5= 3.53		
CRITERIA = Sufficient		

Source: Questionnaire, Reprocessed, 2025

Based on table 6. There is a total average for the *Organizational Citizenship Behavior (OCB) variable* (X3) of 3.53 and is classified as **sufficient,** which means that *Organizational Citizenship Behavior (OCB*) in PT. Genta Trikarya Sumedang is sufficient regarding the voluntary attitude possessed by each employee.

In table 6. The smallest value for the *Organizational Citizenship Behavior (OCB) variable* (X3) is in the *Courtesy sub-variable.*

4. Respondents' Responses to the Performance of Production Employees Based on the Perception of Direct Superiors at PT. Genta Trikarya Sumedang.

By calculating the respondents regarding the Y variable (Performance) with 5 sub-variables and 6 statements, the total average results regarding the respondents for the Y variable are:

Table 7
Total Average Respondents' Responses to Statements Regarding Performance Variables

SUB VARIABLE	TOTAL AVERAGE	CRITERIA
Quality	3.60	Enough
Quantity	3.65	Enough
Time	3.43	Not on time
Cooperation between employees	2.60	Unable
Supervision	3.63	Quite capable
TOTAL AVERAGE SCORE (3.60+3.65+3.43+2.60+3.63)/5= 3.38		
CRITERIA = Sufficient		

Source: Questionnaire, Reprocessed, 2025

Based on table 7. There is a total average for the performance variable (Y) of 3.38 and is classified as **sufficient,** which means that the performance of production employees is quite good.

In table 7. The smallest value in Employee performance (Y) lies in the sub-variable of cooperation between employees.

d. Associative Analysis

1. The Influence of Job Stress, Physical Work Environment, and *Organizational Citizenship Behavior* (OCB) on the Performance of Production Employees Partially at PT. Genta Trikarya Sumedang.

Table 8.
Multiple Regression Test Results

Coefficients [a]						
Model		**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**
		B	Std. Error	Beta		
1	(Constant)	1,222	.385		3,173	.033
	X1	-0.008	.007	.104	1,127	.267
	X2	0.344	.069	.587	4,957	.000
	X3	0.358	.139	.312	2,581	.014
a. Dependent Variable: Y						

Source: SPSS 26 output results, Reprocessed in 2025

In table 8. The results of the multiple regression test obtained, the results of the multiple regression equation are:

Y= 1.222 + 0.104 X1 + 0.587 X2 + 0 .312 X3

How much influence the work stress variable has on employee performance variables can be seen as follows:

a. *Beta coefficient* value for the work stress variable (X1) is 0.104, which means that there is a positive influence of 10.4% on the work stress variable (X1) on performance (Y) with the criteria of **low but definite influence.**
b. The Beta coefficient value *for the physical work environment* (X2) is 0.587, which means that there is a positive influence of 58.7% on the work stress variable (X1) on performance with a **high influence criterion.**
c. *Beta coefficient* value of *the Organizational Citizenship Behavior (OCB)* variable (X3) is 0.312, which means that there is a positive influence of 31.2% on the *Organizational Citizenship Behavior (OCB*) variable (X3) on performance (Y) with the criteria of **having a significant influence.**

To conduct simultaneous testing, it is necessary to know the df (*degree of freedom)* first in order to see the $t_{\text{table value.}}$

In this study, the df used is 42-3-1 =37, so the t_{table} used is 1.687, so the calculation results can be seen in the following table:

Table 9.
Partial Test Results

Variables	t_{count}	t_{table}	Sig	Prob	Beta	Information
X1	1,127	1,687	.267	0.05	-0.008	Not Significant
X2	4,957	1,687	.000	0.05	0.344	Significant
X3	2,581	1,687	.014	0.05	0.358	Significant

Source: SPSS 26 output results, Reprocessed in 2025

In table 9. With the work stress variable with a $_{\text{calculated T value}} > T_{\text{table}}$ 1.127 <1.687 with the magnitude of the influence of the work stress variable with a significant value of 0.267> 0.05, therefore H0 is accepted and Ha is rejected, which means that work stress does not affect the performance of the production department of PT. Genta Trikarya Sumedang but is significant.

Furthermore, the physical work environment variable with a $_{\text{calculated T value}} > T_{\text{table}}$ 4.957> 1.687 with a large influence of the work stress variable with a significant value of 0.000 <0.05,

therefore H0 is rejected and Ha is accepted, which means that the physical work environment has a positive effect on the performance of the production department of PT. Genta Trikarya Sumedang but is significant.

Furthermore, the *Organizational Citizenship Behavior (OCB*) variable with a calculated T value > T table 2.581> 1.687 with a large influence of the work stress variable with a significant value of 0.014 <0.05, therefore H0 is rejected and Ha is accepted, which means that *Organizational Citizenship Behavior (OCB*) has a positive effect on the performance of the production department of PT. Genta Trikarya Sumedang.

2. The Influence of Job Stress, Physical Work Environment, and *Organizational Citizenship Behavior* (OCB) on the Performance of Production Employees Both Simultaneously at PT. Genta Trikarya Sumedang.

In order to find out the variables X1 (work stress), X2 physical work environment and X3 (*Organizational Citizenship Behavior) (OCB),* there is a calculated F of 0.431.

And the F table value used is 42-3-1 = 37, then the F table is 2.84, so the calculation results can be seen in table 10. As follows:

Table 10.
Simultaneous Test Results

Variables	F count	F table	Sig.	Prob	Information
Job stress, physical work environment, and *organizational citizenship behavior (OCB)*	29,278	2.84	0,000	0.05	Significant

Source: SPSS 26 output results, Reprocessed in 2025

The results of the simultaneous test are in table 10. Showing the calculated F value > F table 29.278 > 2.84 with a significant value of 0.000 < 0.05, then H0 is rejected and Ha is accepted, which means that work stress, physical work environment and *Organizational Citizenship Behavior (OCB)* have a significant effect on the performance of employees in the production department of PT. Genta Trikarya Sumedang.

In measuring the extent to which the model's ability to explain the dependent variable, the independent variable becomes weaker, but if R *square* approaches 0 in influencing the relationship between the independent variable, but if R *square* approaches 1, then the stronger the independent variable with the dependent variable can be seen in the following table:

Table 11.
Determination of Variables

Model Summary				
Model	R	R Square	Adjusted R Square	Sig.
1	.842 [a]	0.709	0.685	0.2851
a. Predictors: (Constant), X3, X1, X2				

Source: SPSS 26 output results, Reprocessed in 2025

The results are in table 11. The variables of work stress, physical work environment, and *Organizational Citizenship Behavior (OCB)* on employee performance are shown by the determination coefficient value (R2) of 0.709 with a sig value of 0.2851.

So the test results can be influenced by the respondents' responses to the questionnaire that has been distributed.

5. Conclusion

This study aims to determine the effect of work stress, physical work environment, and Organizational Citizenship Behavior (OCB) on the performance of production employees at PT. Genta Trikarya Sumedang. Based on the results of data analysis, it was found that work stress did not have a significant partial effect on employee performance, while the physical work environment and OCB were proven to have a positive and significant effect on improving employee performance.

Simultaneously, the three independent variables. Job stress, physical work environment, and OCB have a significant effect on performance, with a coefficient of determination (R^2) of 70.9%, which means that most of the variation in employee performance can be explained by the three factors. The physical work environment has the greatest effect, followed by OCB.

Thus, companies need to focus more on improving the quality of the physical work environment, such as lighting, air circulation, security, and cleanliness, as well as encouraging positive and voluntary behavior (OCB) among employees. Although work stress has not been proven to have a statistically significant effect, stress management is still important so as not to reduce work enthusiasm and comfort indirectly.

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THE INFLUENCE OF ECO-EFFICIENCY, CARBON EMISSION DISCLOSURE, AND GREEN INNOVATION ON COMPANY VALUE SUB-SECTOR BASIC MATERIAL COMPANY

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Abstract

Economic growth is marked by the growth of industry in recent years. In line with the development of the industrial world, issues regarding environmental pollution such as global warming and carbon emissions have developed. The purpose of this study is to determine how eco-efficiency, carbon emission disclosure, and green innovation affect company value. The method used is quantitative, using secondary data. The sampling technique using purposive sampling obtained 85 data, data processing using SPSS version 25. This study shows that eco-efficiency and carbon emission disclosure do not affect company value, while green innovation has a positive and significant effect on company value, and simultaneously eco-efficiency, carbon emission disclosure, and green innovation affect company value. It can be concluded that eco-efficiency and carbon emission disclosure cannot reduce the environmental impact caused by the company's operational activities, but green innovation has proven to be successful in innovating or modifying reducing the impact of environmental damage which means that the company has complied in complying with the normal social norms that exist in society related to the environment.

Keywords*: Eco-Efficiency, Carbon Emission Disclosure, Green Innovation, Company Value*

1. Introduction

According to Dewi & Rahmianingsih (2020), the environment is one of the important topics in the discussion of the global economy today. The high expectations of society for companies to be more responsible for the environment. The development of the industrial world is also followed by the development of issues regarding environmental pollution such as global warming and carbon emissions. The issue of global warming is not only a topic that needs to be discussed in Indonesia, but also in various parts of the world related to its management (Rahmanita, 2020).

Exploration of natural gas and oil, coal mining, and electricity production are the main factors causing climate change. Therefore, the company's annual report must contain information regarding the utilization and programs of resources implemented to protect the environment. (Bahriansyah & Lestari Ginting, 2022).

The United Nations (UN) implements sustainable development to meet current needs without sacrificing the fulfillment of the needs of future generations, known as SDGs (Sustainable Development Goals). SDGs came into effect in 2015 and were given a period of 15 years to implement 17 goals with the achievement of 169 targets by 2030. Of the 17 goals, this study focused on goal 7, namely clean and affordable energy, and goal 13, addressing climate change (https://sdgs.un.org/goals).

The company's CSR obligations have been regulated in Law Number 40 of 2007 on Limited Liability Companies, in Article 74 states that: "companies carrying out business

activities in the field of and/or related to natural resources are required to carry out social and environmental responsibilities" (Sanarta, 2023).

One form of accountability for the environment is that companies report Corporate Social Responsibility (CSR) which is integrated with the disclosure of business actors' efforts to reduce Greenhouse Gas emissions. Carbon Emission Disclosure in Indonesia is still voluntary disclosure, the Government of the Republic of Indonesia also participates in creating social responsibility, for example by enacting Law No. 17 of 2004 which ratified the Kyoto Protocol as an effort to reduce Greenhouse Gas emissions. In addition, the government through the Ministry of Environment & Forestry issued a Decree of the Minister of Environment No. 127 of 2002 which became the legal basis for the Performance Rating Assessment Program (PROPER) to increase stakeholder commitment to environmental conservation efforts (Rahmanita, 2020).

Companies create waste and hurt the environment, requiring awareness that company activities are not only concerned with profits for the company itself but also paying attention to the surrounding environment (Dewi & Rahmianingsih, 2020)

Therefore, to reduce global greenhouse gas emissions, there are six greenhouse gases targeted for reduction in the Kyoto Protocol including carbon dioxide (CO_2), Methane (CH_4), Nitrogen Oxide (N_2O), Hydrofluorocarbons (HFCs), Fluorocarbons (PFCs) and Sulfur Hexafluoride Gas (SF_6) (Law of the Republic of Indonesia Number 17 of 2004) (Bahriansyah & Lestari Ginting, 2022).

Companies to develop their business must compete healthily with innovations that are linked to environmental conditions. The best innovation is to realize environmental friendliness in all its activities, which is commonly called green innovation (Dewi & Rahmianingsih, 2020).

Green innovation is an indicator of a company's performance in developing better environmental conditions through effective and efficient management mechanisms (Yuniarti et al., 2022). An innovation is an investment that requires a lot of money and time but can have a positive impact on the company in the long term. Concern for the environment will result in creating the latest innovations regarding environmentally friendly products and can help business actors achieve sustainable development, improve product quality, and make the surrounding resources more efficient (Dewi & Rahmianingsih, 2020).

In addition to green innovation, there is also eco-efficiency as a form of business actor responsibility in preventing environmental pollution. Eco-efficiency stimulates creativity and innovation in finding new ways (Dewi & Rahmianingsih, 2020).

This study focuses on the value of companies in the basic materials sector, the phenomenon that occurs is a decrease in stock value, namely PT Champion Pacific Indonesia experienced a decrease in stock prices in 2019 in the previous year from IDR 384 per share to IDR 340 per share and PT Kirana Megatara Tbk, experienced a decrease in price per share in 2022 from IDR 258 per share compared to the previous year, which was IDR 334 per share. At the company PT Fajar Surya Winesa (FASW) Tbk in 2019, it recorded a decrease in revenue of 16.8% YoY to IDR 8.27 trillion, from the previous IDR 9.94 trillion. Even FAWS's net profit fell deeper, namely 31.06% YoY to IDR 968.83 billion. In fact, in 2018, FASW posted a net profit of IDR 1.4 trillion. YoY, FASW shares fell 8.44% to IDR 7,050 per share (Rahmawati, 2020). Meanwhile, in 2022, FASW's net profit was recorded at IDR 119.92 billion or dropped 80.7% compared to 2021 which was IDR 617.42 billion. As a result, earnings per share fell to IDR 48.4 per share, while at the end of, 2021 it was at IDR 249.17.

In addition, FAWS's net sales were corrected by 8.4% to IDR 10.98 trillion, triggered by a 13.8% decline in sales to third parties to IDR 8.734 trillion. However, sales to related parties grew by 22.08% to IDR 2.178 trillion. Although the cost of goods sold could be reduced by 4.04% to IDR 9.898 trillion. But gross profit still fell 38.7% to IDR 991.96 billion.

Meanwhile, total liabilities decreased by 3.7% to IDR 7.866 trillion. On the other hand, equity eroded by 2.2% to IDR 5.011 trillion. Previously, the company had projected sales until the end of 2022 to reach IDR 11 trillion. This target is not much different from the realization of sales in 2021 which amounted to IDR 11.93 trillion (Nabhani, 2023)

2. Theoretical Basis

2.1 Eco-Efficiency

Eco-efficiency is a concept of environmental sustainability carried out by companies to reduce the environmental impact of the company's operational activities by minimizing the company's operational costs (Aviyanti & Isbanah, 2019)

The World Business Council for Sustainable Development WBCSD (2006:16) defines the key elements of eco-efficiency as follows:

1. Reengineering processes, companies can reengineer their processes to reduce resource consumption, reduce pollution, and avoid risks, while saving costs.
2. Revalorizing by-products, by collaborating with other companies. Many businesses have found creative ways to revalorize their by-products. Striving for zero waste or 100% product targets, they find that the so-called waste from their processes can have value to other companies.
3. Redesigning products, their influence is not only important for the functionality and price of the product. It also has a major effect on the environmental impact of the production, maintenance, and disposal of the product. Therefore, this suggests a third area for eco-efficiency opportunities: companies can become more eco-efficient by redesigning their products.
4. Rethinking markets, some innovative companies are not just redesigning products, they are finding new ways to meet customer needs. They are working with customers or other stakeholder groups to rethink their markets and completely reshape demand and supply. Too many customers' needs today are met in ways that are material and energy-intensive.

2.2 Carbon Emission

Carbon emission is the release of carbon into the atmosphere. Disclosure of carbon emissions is one example of environmental disclosure which is part of the additional report stated in the legislation (Rusmana & Purnaman, 2020). Carbon emission disclosure is a company's activity in recording, recognizing, disclosing, measuring, and presenting the extent of carbon emissions produced by the company (Damas et al., 2021).

Carbon emission disclosure is one example of environmental disclosure which is part of the additional report stated in the legislation (Rusmana & Purnaman, 2020). Carbon emission disclosure can be divided into voluntary disclosure and mandatory disclosure. Voluntary disclosure is disclosure that is not required by existing standards or regulations. Meanwhile, mandatory disclosure is disclosure based on existing standards or regulations (Arifah & Haryono, 2021).

Information regarding carbon emission disclosure can provide a signal for investors in making investment decisions if it has been published. Information that can be used as a signal for investors includes annual reports containing financial and non-financial information (Rahmanita, 2020). Disclosure of carbon emissions is included in environmental disclosure (Amaliya et al., 2019).

However, its voluntary nature means that not all companies in industries close to the environment disclose carbon emissions (Amaliya et al., 2019). Disclosure of carbon emissions

is included in environmental disclosure (Amaliya et al., 2019). Disclosure of carbon emissions based on the Global Reporting Initiative (GRI)-305 is as follows:

1. Disclosure of management approach (this section refers to GRI 103)
2. Disclosure 305-1 Direct GHG emissions (Scope 1)
3. Disclosure 305-2 Indirect GHG emissions (Scope 2)
4. Disclosure 305-3 Other indirect GHG emissions (Scope 3)
5. Disclosure 305-4 GHG emissions intensity
6. Disclosure 305-5 GHG emissions reductions
7. Disclosure 305-6 Ozone-depleting substances (ODS) emissions
8. Disclosure 305-7 Nitrogen Oxides (NOX), Sulfur Oxides (SOX), and other significant air emissions.

2.3 Green Innovation

Green Innovation is a new technique or modification, practice, system, and production process to reduce the impact of damage to the environment. Green Innovation encourages companies to convert waste production into viable products that can generate additional profits for the company. This variable aims to reduce the impact of environmental damage, which will cause (Agustia et al., 2019). implementing green innovation will be considered responsible for the environment and can utilize its resources efficiently, this will increase investor confidence and company value (Yuliandhari et al., 2023).

Green Innovation in this study refers to the research of Agustia et al., (2019). Several indicators will be used to determine whether the company has implemented green innovation. The results of this analysis will be quantified in the form of a ratio. The indicators that will be used are: (1). The production process uses new technology to reduce energy, water, and waste, (2). products use fewer substances that do not cause pollution or are hazardous (environmentally friendly materials), (3). using environmentally friendly product packaging (paper and plastic), and (4). components or materials in the production process can be recycled or reconditioned (Damas et al., 2021).

2.4 Company Value

Company value is an important aspect in assessing the performance conditions of environmental interests and economic interests (Agustia et al., 2019).

This study uses Tobin's Q ratio to measure company value. Tobin's Q is a ratio measuring tool that defines company value as a form of tangible and intangible asset value. Tobin's Q can also describe the effectiveness and efficiency of a company in utilizing all resources in the form of assets owned by the company (Dzahabiyya et al., 2020)

Tobin's Q can be calculated using the following formula:

$$\text{Tobin's Q} = \frac{\text{MVS} + \text{Total Liabilities}}{\text{Total Asset}}$$

MVS is the market value of all outstanding shares, where MVS is added to total liabilities and then divided by total assets. If Tobin's Q is less than 1, the stock is undervalued, but if Tobin's Q = 1, the stock is average, and if Tobin's Q is more than 1, it describes the stock as overvalued.

2.5 Previous Research Review

The previous research review referred to is a study of several research results related to: Eco-Efficiency, Carbon Emission disclosure, and Green Innovation on Company Value. The following are several studies related to the object of research conducted by the author, as follows:

The influence of eco-efficiency on company value, research conducted by (Atiningsih & Setiyono, 2023), (Dewi & Rahmianingsih, 2020), (Savitri & Abdullah, 2023), (Rais & Usman, 2020), (Kurnianta & Dianawati, 2020), and (Noor et al., 2022). The results of the eco-efficiency study affect company value. However, this is in contrast to the research conducted by (Yuliandhari et al., 2023), (Damas et al., 2021), and (Kumala & Bakar, 2021). The results show that eco-efficiency has a significant negative effect on company value.

The influence of carbon emission disclosure on company value, research conducted by (Zuhrufiyah & Anggraeni, 2019), (Rahmanita, 2020), (Rusmana & Purnaman, 2020), (Alfayerds & Setiawan, 2021), (Rahmianingsih & Malau, 2021), (Damas et al., 2021), (Bahriansyah & Lestari Ginting, 2022), (Sari & Budiasih, 2022), (Yuliandhari et al., 2023), and (Hardianti & Susi Dwi Mulyani, 2023) the results of the study explain that Carbon Emission Disclosure (CED) has been proven to affect company value. Except for research conducted by (Kurnia et al., 2020) entitled Carbon Emission Disclosure, Good Corporate Governance, Financial Performance, and Firm Value. The results of this study indicate that carbon emission disclosure does not affect company value.

The influence of green innovation on company value, research conducted by (Dewi & Rahmianingsih, 2020), (Damas et al., 2021), (Putri Fabiola & Khusnah, 2022), (Yuniarti et al., 2022), (Arini et al., 2023), and (Setyawan & Wijayanti, 2023) the results of the study stated that Green Innovation has a significant positive effect on Company Value. Except for research conducted by (Tonay & Murwaningsari, 2022), (Roza Mulyadi & Maulana, 2022), and (Ramadhan et al., 2023) the results of the study stated that Green Innovation has no positive effect on Firm Value.

3. Research Methodology and Hypothesis Determination

3.1 Research Method

Research Population

The population in this study were all basic materials companies listed on the Indonesia Stock Exchange (IDX) for 5 years, namely 2018-2022, consisting of 103 companies

Sampling Technique and Research Sample

The sampling technique used the non-probability sampling method with the following criteria:

Table 1. Sample Selection with Purposive Sampling

No.	Description	Total
1	Basic Materials Sector Companies listed on the Indonesia Stock Exchange (IDX) for the 2018-2022 period.	103
2.	Not publishing annual reports consecutively from the period 2018-2022.	(37)
3.	Does not include the use of raw materials, electricity, water, gas, and fuel consecutively from the period 2018-2022.	(19)
4	Not disclosing carbon emissions for 5 consecutive years, as seen from the annual report or sustainability report (disclosing at least one carbon emission disclosure item).	(28)
5	Does not include green innovation business activities for 5 consecutive years, seen from the annual report or sustainability report (minimum includes one green innovation indicator)	(2)

	Total research sample	17

Source: IDX (data processed 2024**)**

Samples that meet the criteria of 17 companies are as follows:

Table 2. List of Research Sample

No.	Code	Company Name
1.	ANTM	Antam Tambang Tbk
2.	CTBN	Citra Tubindo Tbk
3.	DPNS	Duta Pertiwi Nusantara Tbk
4.	FASW	Fajar Surya Winesa Tbk
5.	IGAR	Champion Pasific Indonesia Tbk
6.	INAI	Indai Alumunium Industry Tbk
7.	INRU	Toba Pulp Lestari Tbk
8.	INTP	Indocement Tunggal Prakasa Tbk
9.	IPOL	Indopoly Swakarsa Industry Tbk
10.	KMTR	Kirana Megatara Tbk
11.	LTLS	Lautan Luas Tbk
12.	NIKL	Pelat Timah Nusantara Tbk
13.	OKAS	Ancora Indonesia Resource Tbk
14.	SMBR	Semen Baturaja (Persero) TBK
15.	SMCB	Solusi Bangun Indonesia Tbk
16.	SMGR	Semen Indonesia (Persero) Tbk
17.	TKIM	Pabrik Kertas Tjiwi Kimia Tbk

Source: IDX (data processed 2024)

3.2. Variable Operationalization

Table 3. Variable Operationalization

Variable	Concept	Indicator	Scale
Independent (X_1) Eco-Efficiency	Eco-efficiency: is an environmental sustainability concept carried out by companies to reduce the environmental impact of company operational activities by minimizing company operational costs (Aviyanti & Isbanah, 2019)	WBCSD module published in 2006 Eco-efficiency = $\frac{\text{Net sales}}{\text{environmental cost}}$ Environmental cost: Raw materials, electricity, water, gas, and fuel. (Dewi & Rahmianingsih, 2020)	Ratio

Variable	Concept	Indicator	Scale
(X_2) Carbon Emission Disclosure	Carbon Emission Disclosure: is a company activity in recording, recognizing, disclosing, measuring, and presenting the extent of carbon emissions produced by the company (Damas et al., 2021)	Carbon Emission Disclosure = Carbon Emission Disclosed ----------X100% All carbon emission disclosures (Muhammad & Aryani, 2021)	Ratio
(X_3) Green Innovation	Green Innovation: are new or modified techniques, practices, systems, and production processes to reduce the impact of damage to the environment. (Agustia et al., 2019)	Green Innovation = $\frac{\text{Total Indicator Score}}{\text{Total of all indicator scores}}$ (Agustia et al., 2019)	Ratio
Dependent (Y) Company Value	Company value is an assessment given by investors for the success of the company and the company's performance which is reflected through the stock price in the market. The company value formed through the stock price indicator in the market will show the existence of good investment opportunities. (Hidayat & Khotimah, 2022)	$Tobin's\ Q = \frac{\text{MVE} + \text{DEBT}}{\text{TA}}$ MVE: Market value of equity (Closing stock price X number of shares outstanding at the end of the year) DEBT: Total debt of the company TA: Total Assets (Dzahabiyya et al., 2020)	Ratio

Table 4. Indicator Carbon Emission Disclosure

Category	Code	Item
Management Approach (GRI 103)	PM1	An explanation of why carbon emissions are a topic for companies.
	PM2	An explanation of how companies manage their carbon emissions.
	PM3	Statement of objectives for carbon emission management.
	PM4	Description of company policies or commitments related to carbon emissions.
	PM5	Evaluation of management approaches related to carbon emissions.

Category	Code	Item
Emission (GRI 305)	CD1	Total carbon emissions are presented in metric tons.
	CD2	Disclosure of sources of carbon emission factors.
	CD3	Disclosure of base year of calculation.
	CD4	Disclosure of standards, methodologies, assumptions, and/or calculation tools used.
	CD5	Emission carbon intensity ratio.
	CD6	Reducing carbon emissions.

Source: Global Reporting Initiative (GRI) 103 dan 305, (Muhammad & Aryani, 2021)

Table 5. Indicator Green Innovation

No.	Measurement Indicator
1.	The production process uses new technologies to reduce energy, water, and waste.
2.	Products use fewer non-polluting or hazardous substances (eco-friendly materials)
3.	Using environmentally friendly product packaging (e.g. paper and plastic)
4.	Components or materials in the production process can be recycled or reconditioned

Source: (Agustia et al., 2019)

3.3 Hypothesis Determination

1. Partially:

a. Eco-efficiency has a positive effect on company value.

$H0_1$: $\beta_1 \geq 0$ Eco-efficiency does not have a positive effect on Company Value.

Ha_1: $\beta_1 < 0$ Eco-efficiency has a positive effect on Company Value.

b. Carbon Emission Disclosure has a positive effect on company value

$H0_2$: $\beta_2 \geq 0$ Carbon Emission Disclosure does not have a positive effect on Company Value.

Ha_2: $\beta_2 < 0$ Carbon Emission Disclosure has a positive effect on Company Value.

c. Green Innovation has a positive effect on company value

$H0_3$: $\beta_3 \geq 0$ Green Innovation does not have a positive effect on Company Value.

Ha_3: $\beta_3 < 0$ Green Innovation has a positive effect on Company Value.

2. Simultaneously:

$H0_4$: $\beta_1 = \beta_2 = \beta_3 = 0$ Eco-efficiency, Carbon Emission Disclosure, and Green Innovation do not have a simultaneous effect on Firm Value.

Ha_4: $\beta_1 \neq \beta_2 \neq \beta_3 \neq 0$ Eco-efficiency, Carbon Emission Disclosure, and Green Innovation have a simultaneous effect on Firm Value.

3.4 Data Processing Test

1. Description of Data
2. Classical Assumption Tests include: (a) data normality test, (b) multicollinearity test, (c) heteroscedasticity test, and (d) autocorrelation test.
3. Multiple regression analysis

The formula for multiple regression according to Sugiyono (2022, p. 188) is as follows:

$$\mathbf{Y=a+ b_1 X_1+ b_2 X_2+ b_3 X_3+Ɛ}$$

Description:

Y = Company Value

a = Constant, if variable X is zero

X_1 = Eco-efficiency

X_2 = Carbon Emission Disclosure
X_3 = Green Innovation
$b_1b_2b_3$ = Multiple regression coefficients between each variable
Ɛ = Standard error
4. Correlation Coefficient Analysis
5. Determination Coefficient Analysis
6. Partial Hypothesis Test (t-statistic test)
7. Simultaneous Hypothesis Test (f test). Data processing using SPSS 25 tools.

4. Discussion

4.1 Data Description

1. Eco-Efficiency in basic materials companies listed on the Indonesia Stock Exchange in 2018-2022.

The following is the calculation results of the eco-efficiency variable from 2018-2022

Table 6. Eco-Efficiency in basic materials sector companies listed on the IDX 2018 - 2022

No	Issuer Code	Eco Efficiency					Average 5 Years
		2018	2019	2020	2021	2022	
1	ANTM	10,3	11,06	11,94	13,87	9,81	11,40
2	CTBN	1,31	1,64	1,91	1,42	1,44	1,54
3	DPNS	1,96	1,85	2,21	2,3	1,72	2,01
4	FASW	1,68	1,63	1,46	1,38	1,31	1,49
5	IGAR	1,39	1,52	1,59	1,49	1,44	1,49
6	INAI	1,8	1,69	1,56	1,71	1,62	1,68
7	INRU	1,58	1,22	1,63	1,46	1,69	1,52
8	INTP	2,15	2,41	2,63	2,37	2,15	2,34
9	IPOL	1,58	1,65	1,82	1,65	1,6	1,66
10	KMTR	1,16	1,14	1,15	1,09	1,19	1,15
11	LTLS	5,5	4,14	4,12	3,67	3,32	4,15
12	NIKL	1,12	1,23	1,18	1,2	1,14	1,17
13	OKAS	4,67	4,38	3,43	3,57	3,26	3,86
14	SMBR	2,62	3,04	3,15	3,15	3,04	3,00
15	SMCB	14,89	16,13	21,56	15,79	15,97	16,87
16	SMGR	3,31	3,7	3,71	3,53	3,25	3,50
17	TKIM	1,96	2,11	2,34	2,23	2,06	2,14
Average		3,47	3,56	3,96	3,64	3,29	3,58
Minimum		1,12	1,14	1,15	1,09	1,14	
Maximum		14,89	16,13	21,56	15,79	15,97	

Source: SPSS (processed, 2024)

Based on Table 6. the average eco-efficiency for 5 years is 3.58, there are 4 companies above the average, namely ANTM, LTLS, OKAS, and SNCB. The rest, namely 13 companies, are below the average.

2. Carbon Emission Disclosure in basic materials companies listed on the Indonesia Stock Exchange in 2018-2022.

Table 7. Carbon Emission Disclosure in basic materials sector companies listed on the IDX 2018-2022

No	Issuer Code	Carbon Emission Disclosure					Average 5 Years
		2018	2019	2020	2021	2022	
1	ANTM	1	1	1	1	0,91	0,98
2	CTBN	0,55	0,55	0,55	0,82	0,82	0,66
3	DPNS	0,27	0,27	0,36	0,82	0,82	0,51
4	FASW	0,45	0,45	0,45	0,55	0,45	0,47
5	IGAR	0,45	0,45	0,73	0,73	0,82	0,64
6	INAI	0,27	0,27	0,27	0,55	0,55	0,38
7	INRU	0,27	0,27	0,27	0,27	0,27	0,27
8	INTP	1	1	1	1	0,91	0,98
9	IPOL	0,09	0,36	0,36	0,64	0,64	0,42
10	KMTR	0,09	0,45	0,45	0,45	0,45	0,38
11	LTLS	0,09	0,45	0,45	0,55	0,73	0,45
12	NIKL	0,18	0,18	0,18	0,27	0,27	0,22
13	OKAS	0,18	0,18	0,18	0,36	0,36	0,25
14	SMBR	0,55	0,55	0,82	0,82	0,82	0,71
15	SMCB	0,55	0,55	0,64	0,64	0,64	0,60
16	SMGR	1	1	1	1	0,91	0,98
17	TKIM	0,18	0,18	0,27	0,36	0,36	0,27
Average		0,42	0,48	0,53	0,64	0,63	0,54
Minimum		0,09	0,18	0,18	0,27	0,27	
Maximum		1	1	1	1	0,91	

Source: SPSS (processed, 2024)

Based on Table 7. the average carbon emission disclosure for 5 years is 0.54. There are 7 companies above the average, namely: ANTM, CTBN, IGAR, INTP, SMBR, and SMGR the remaining 10 companies are below the average.

3. Green Innovation in basic materials companies listed on the Indonesia Stock Exchange in 2018-2022

Table 8. Green Innovation in basic materials sector companies listed on the IDX 2018-2022

No	Issuer Code	Green Innovation					Average 5 Years
		2018	2019	2020	2021	2022	
1	ANTM	0,5	0,5	0,5	0,5	0,5	0,50
2	CTBN	0,5	0,5	0,5	0,5	0,5	0,50
3	DPNS	0,25	0,25	0,25	0,25	0,25	0,25
4	FASW	0,75	0,75	0,75	1	1	0,85
5	IGAR	0,5	0,5	0,25	0,25	0,25	0,35
6	INAI	0,25	0,25	0,5	0,5	0,5	0,40
7	INRU	0,5	0,5	0,5	0,5	0,5	0,50
8	INTP	0,5	0,5	0,5	0,5	0,5	0,50
9	IPOL	0,75	0,75	0,75	0,75	0,75	0,75
10	KMTR	0,25	0,25	0,25	0,25	0,25	0,25
11	LTLS	0,25	0,5	0,5	0,5	0,75	0,50
12	NIKL	0,5	0,5	0,5	0,75	0,75	0,60
13	OKAS	0,5	0,5	0,5	0,5	0,5	0,50
14	SMBR	0,25	0,25	0,25	0,25	0,25	0,25
15	SMCB	0,5	0,5	0,5	0,5	0,5	0,50
16	SMGR	0,75	0,75	0,75	0,75	0,75	0,75
17	TKIM	0,5	0,5	0,5	0,5	0,5	0,50
Average		0,47	0,49	0,49	0,51	0,53	0,50
Minimum		0,25	0,25	0,25	0,25	0,25	
Maximum		0,75	0,75	0,75	1	1	

Source: SPSS (processed, 2024)

Based on Table 8. The average Green Innovation for 5 year period is 0.5, there are 5 companies below the average, namely: DPNS, IGAR, INAI, KMTR, and SMBR, besides that 12 companies are above and equal to the average.

4. Company Value in basic materials companies listed on the Indonesia Stock Exchange in 2018-2022

Table 9. Company Value in basic materials sector companies listed on the IDX 2018 - 2022

No	Issuer Code	Company Value					Average 5 Years
		2018	2019	2020	2021	2022	
1	ANTM	1	1,07	1,87	2,01	1,71	1,53
2	CTBN	1,89	1,46	1,64	1,33	0,98	1,46
3	DPNS	0,46	0,38	0,39	0,51	0,52	0,45
4	FASW	2,37	2,25	1,99	2,03	1,74	2,08
5	IGAR	0,81	0,67	0,63	0,67	0,61	0,68
6	INAI	0,97	0,97	0,92	0,87	0,92	0,93
7	INRU	0,71	0,85	0,9	0,81	0,84	0,82
8	INTP	2,61	2,69	2,14	1,85	1,56	2,17
9	IPOL	0,58	0,57	0,6	0,64	0,62	0,60
10	KMTR	1,17	1,15	1,13	1,13	1,03	1,12
11	LTLS	0,82	0,68	0,72	0,74	0,87	0,77
12	NIKL	4,95	1,51	2,6	1,63	1,23	2,38
13	OKAS	1,03	1,19	1,13	1,13	1,09	1,11
14	SMBR	3,51	1,16	2,25	1,6	1,14	1,93
15	SMCB	1,43	1,11	1,03	1,19	1,05	1,16
16	SMGR	1,7	1,44	1,46	1,02	0,94	1,31
17	TKIM	1,39	1,3	1,21	0,96	0,77	1,13
Average		1,61	1,2	1,33	1,18	1,04	1,27
Minimum		0,46	0,38	0,39	0,51	0,52	
Maximum		4,95	2,69	2,6	2,03	1,74	

Source: SPSS (processed, 2024)

Based on Table 9. the average company value for the 5 Years measured by Tobin's Q is 1.27, there are 4 companies above the average, namely: FASW, INTP, NIKL, and SMBR, and the remaining 13 companies are below the average.

The results of statistical tests using SPSS can be seen in Table 10

Table 10. Descriptive Statistics

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Eco-Efficiency	85	1.09	21.56	3.5859	4.15147
Carbon Emission Disclosure	85	.09	1.00	.5396	.28142
Green Innovation	85	.25	1.00	.4971	.18296
Nilai Perusahaan	85	.38	4.95	1.2729	.71908
Valid N (listwise)	85				

Source: SPSS 25 (processed data 2024)

Based on Table 10. the results of the descriptive test show that the maximum value of the eco-efficiency variable is 21.56 and the minimum value is 1.09. The average value is 3.58. The carbon emission disclosure variable shows a maximum value of 1.00 and a minimum value of 0.09. The average value is 0.5396. The green innovation variable shows a maximum value of 1.00 and a minimum of 0.25. The average value is 0.4971. Furthermore, the company value variable shows a maximum value of 4.95 and a minimum of 0.38. The average value is 1.2729.

4.2 Results of Classical Assumption Testing

The Classical Assumption Test consists of 4 tests, namely Data normality results, multicollinearity tests, heteroscedasticity tests, and autocorrelation tests. The 4 tests aim to determine the certainty of the regression equation so that it is not biased and consistent.

1. Data Normality Test Results

The Kolmogorov-Smirnov test is used to conduct normality tests in this study. The results of the normality test are as follows:

Table 11. Normality Test Results

One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		85
Normal Parameters [a, b]	Mean	.0000000
	Std. Deviation	.70354391
Most Extreme Differences	Absolute	.142
	Positive	.142
	Negative	-.115
Test Statistic		.142
Asymp. Sig. (2-tailed)		.000[c]

a. Test distribution is Normal.
b. Calculated from data.
c. Lilliefors Significance Correction.

Source: SPSS 25 (Processed data 2024)

Based on Table 11. shows the results of the Kolmogorov-Smirnov asymp. Sig. (2-tailed) test of 0.000, this figure is smaller than 0.05, So, that the residual data is not normally distributed. Therefore, it is necessary to make improvements using an outliner, namely deleting extreme data. After making improvements to the data on eco-efficiency, carbon emission disclosure, green innovation, and company value variables, the results of the normality test are as follows:

Table 12. Kolmogorov-Smirnov Test Results

One-Sample Kolmogorov-Smirnov Test		
		Unstandardized Residual
N		64
Normal Parameters [a, b]	Mean	.0000000
	Std. Deviation	.50170860
Most Extreme Differences	Absolute	.087
	Positive	.087

Negative	-.062
Test Statistic	.087
Asymp. Sig. (2-tailed)	.200[c,d]

a. Test distribution is Normal.
b. Calculated from data.

Source: SPSS 25 (processed data 2024)

Based on the retesting that has been done, it can be seen that the results of the normality test using Kolmogorov-Smirnov show a value of 0.200, the value is greater than 0.05 so that the data can be concluded to have a normal distribution. 2. Multicollinearity Test

Table 13. Multicollinearity Test Results

Coefficients [a]

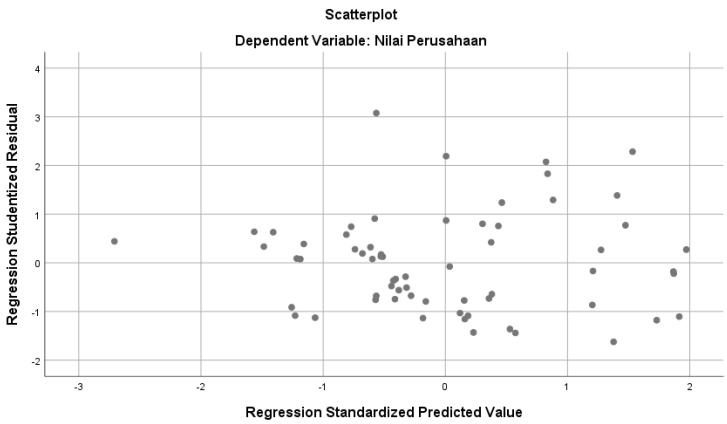
Model		Collinearity Statistics	
		Tolerance	VIF
1	Eco-Efficiency	.971	1.030
	Carbon Emission Disclosure	.953	1.049
	Green Innovation	.980	1.020

a. Dependent Variable: Nilai Perusahaan

Source: SPSS 25 (processed data 2024)

Based on Table 13. eco-efficiency has a tolerance value of 0.971, carbon emission disclosure is 0.953 and green innovation is 0.980, from the three variables it can be said that they have met the tolerance value of more than 0.10. So, it can be concluded that there is no multicollinearity.

3. Heteroscedasticity Test



Source: SPSS 25 Output Results (processed data 2024)

Figure 1 Heteroscedasticity Test Results

It can be seen in Figure 1 that the Scatterplot above does not form a clear pattern but is spread out and does not accumulate at just one point, so it can be concluded that there is no heteroscedasticity so that it is feasible to predict the independent variable on the dependent variable and can continue the next classical assumption test.

4. Autocorrelation Test

Table 14. Autocorrelation Test Results

Model Summary [b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.372[a]	.139	.096	.51410	2.504

a. Predictors: (Constant), Green Innovation, Eco-Efficiency, Carbon Emission Disclosure
b. Dependent Variable: Nilai Perusahaan
Source: Output SPSS 25 (processed data 2024)

Based on Table 14, it shows that multicollinearity occurs because the Durbin-Watson value is 2.504. Based on the DW table for k = 3 and n = 64, the lower limit value of d1 is 1.6946. The Durbin value is not between the du value of 1.6946 and the 4-du value of 2.3054, so it can be concluded that there is autocorrelation in this regression equation. So, that treatment must be carried out using the Cochrane-Orcutt method. Here are the results of Cochrane-Orcutt:

Table 15 Cochrane Results – Orcutt

Model Summary [b]					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.366[a]	.134	.090	.47630	2.183

a. Predictors: (Constant), Lag_X_3, Lag_X_1, Lag_X_2
b. Dependent Variable: Lag_ Y
Source: Output SPSS 25 (processed data 2024)

In Table 15. After the Cochrane-Orcutt treatment was carried out, the new DW value was obtained, namely 2.183. Based on the DW table for k = 3 and n = 64, the lower limit value, or d1 is 1.6946. The DW value obtained through Cochrane-Orcutt, namely 2.183, is between the du value of 1.6946 and the 4-du value of 2.3054. So, it can be concluded that there is no autocorrelation in the variables in this study.

4.3 Results of Multiple Regression Analysis

Table 16 Results of Multiple Regression Analysis

Coefficients [a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	.653	.293		2.228	.030
	Lag_X1	.042	.056	.092	.747	.458
	Lag_X2	.303	.217	.174	1.398	.167
	Lag_X3	.838	.376	.274	2.227	.030

a. Dependent Variable: Lag_ Y

Source: Output SPSS 25 (processed data 2024)

Based on Table 16. the multiple linear regression equation is as follows:

$$Y = 0.653 + 0.042X_1 + 0.303X_2 + 0.838X_3 + \epsilon$$

then the effect of the independent variable on the dependent variable is known. The explanation of the effect of each variable is described as follows:

a) The constant value of 0.653 shows the magnitude of the company value coefficient in basic materials companies listed on the Indonesia Stock Exchange (IDX) in 2018-2022, which is influenced by eco-efficiency, carbon emission disclosure, and green innovation. Changes in the independent variable will change if the independent variable does not exist,
b) The eco-efficiency regression coefficient value (X_1) of 0.042 shows a significant positive effect on company value. If eco-efficiency increases by one percent, it will be followed by an increase in company value of 0.042 assuming that the other independent variables of the regression model remain constant.
c) The regression coefficient value of carbon emission disclosure (X_2) of 0.303 indicates a significant positive effect on company value. If carbon emission disclosure increases by one percent, it will be followed by an increase in company value of 0.303 assuming that other independent variables of the regression model remain constant.
d) The regression coefficient value of green innovation (X_3) of 0.838 indicates a significant positive effect on company value. If green innovation increases by one percent, it will be followed by an increase in company value of 0.838 assuming that other independent variables of the regression model remain constant.

4.4. Results of Correlation Analysis

The results of the partial correlation analysis are as follows:

Table 17. Correlation Analysis

Correlations

		Lag_ X_1	Lag_ X_2	Lag_ X_3	Lag_ Y
Lag_ X_1	Pearson Correlation	1	.155	.001	.119

	Sig. (2-tailed)		.225	.995	.353
	N	63	63	63	63
Lag_ X_2	Pearson Correlation	.155	1	.163	.233
	Sig. (2-tailed)	.225		.201	.066
	N	63	63	63	63
Lag_ X_3	Pearson Correlation	.001	.163	1	.302*
	Sig. (2-tailed)	.995	.201		.016
	N	63	63	63	63
Lag_ Y	Pearson Correlation	.119	.233	.302*	1
	Sig. (2-tailed)	.353	.066	.016	
	N	63	63	63	63

Correlation is significant at the 0.05 level (2-tailed).

Source: Output SPSS 25 (processed data 2024)

Based on Table 17. The relationship between the independent variable and the dependent variable is known through the guidelines in knowing the level of relationship between variables. The results of the correlation analysis above can be seen in the following table:

Table 18. Results of Partial Correlation Test Interpretation

Variable Independent	Correlation Coefficient	Coefficient Interval	Degree of relationship
Eco-Efficiency (X_1)	0,119	0,00-0,199	Very low
Carbon Emission Disclosure (X_2)	0,233	0,20-0,399	Low
Green Innovation (X_3)	0,302	0,20-0,399	Low

Source: Output SPSS 25 (processed data 2024)

Based on Table 18. It can be interpreted that the relationship between eco-efficiency and company value is very low, the coefficient value shows a positive number so that every increase in eco-efficiency will be accompanied by an increase in company value. While the relationship between carbon emission disclosure and company value is low, the coefficient value shows a positive number so that every increase in carbon emission disclosure will be accompanied by an increase in company value. Furthermore, the relationship between green innovation and company value is low, the coefficient value shows a positive number so that every increase in green innovation will be accompanied by an increase in company value.

4.5. Results of the Determination Coefficient Analysis Test

The results of the determination coefficient test are as follows:

Table 19. Analysis of Determination Coefficient

Model Summary [b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.366[a]	.134	.090	.47630

a. Predictors: (Constant), Lag_X_3, Lag_X_1, Lag_X_2

b. Dependent Variable: Lag_ Y

Source: Output SPSS 5 (processed data 2024)

Based on Table 19, it can be seen that the R square value is 9%. This value shows that the variables eco-efficiency, carbon emission disclosure, and green innovation can predict the company's value by 13.4%, while the remaining 86.6% is influenced by other variables not examined in this study.

4.6. Research Results

1. Partial Hypothesis Test Results (t-Test)

The results of the partial hypothesis test (t-test) are as follows:

Table 20 Partial Hypothesis Test (t-Test)

Coefficients [a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	T	Sig.
1	(Constant)	.653	.293		2.228	.030
	Lag_X1	.042	.056	.092	.747	.458
	Lag_X2	.303	.217	.174	1.398	.167
	Lag_X3	.838	.376	.274	2.227	.030

a. Dependent Variable: Lag_ Y

Source: Output SPSS 25 (processed data 2024)

Based on Table 20. The error rate is 5% with degrees of freedom df = n-k-1, n = number of samples as many as 64 data k = number of independent as many as 3 variables so that df = 63-3-1 = 59 is obtained, then the t table value is obtained which is 1.67109.

a. Results of Independent variable X_1

The results obtained by t count on the independent variable eco-efficiency are 0.747 <1.67109 and significance 0.458> 0.050 this means that H0 is accepted and Ha is rejected, meaning that eco-efficiency does not affect company value.

b. Results of Independent Variable X_2

The results obtained by t count on the independent variable carbon emission disclosure are 1.398 <1.67109 and significance 0.167> 0.050 means that H0 is accepted and Ha is rejected, meaning that carbon emission disclosure does not affect company value.

c. Results of Independent Variable X_3

The results obtained by t count on the independent variable green Innovation are 2.227> 1.67109 and significance 0.030 <0.050 means that H0 is rejected and Ha is accepted, so it can be concluded that green innovation has a positive and significant effect on company value.

4.7. Results of Simultaneous Hypothesis Testing (F Test)

In testing this F hypothesis, it can be done by comparing the calculated f with the f table with a d distribution with degrees of freedom, namely (df) = n-k-1 and using a significance of 5% where n = number of research samples, namely 64 data and k = 3 independent variables so that 63-3-1 = 59 can be obtained so that the f table is 2.761. The results of the f hypothesis test are as follows:

Table 21. Simultaneous Hypothesis Testing (F Test)

ANOVA [a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	2.071	3	.690	3.042	.036[b]
	Residual	13.385	59	.227		
	Total	15.455	62			

a. Dependent Variable: Lag_ Y
b. Predictors: (Constant), Lag_X_3, Lag_X_1, Lag_X_2
Source: Output SPSS 25 (processed data 2024)

Based on Table 21. The f test is 3.042 > 2.761, meaning that the calculated f is greater than the table f and the significance value is less than 0.050, namely 0.032 < 0.050, meaning that H0 is rejected and Ha is accepted. So, it can be concluded that the independent variables in this study, namely eco-efficiency, carbon emission disclosure, and green innovation, have a simultaneous influence on the dependent variable, namely company value.

4.8. Discussion of Results

4.8.1. The Influence of Eco-Efficiency on Company Value

The results obtained through the t-statistical or partial test show that eco-efficiency does not affect company value. This is proven by the significance of 0.458> 0.050 and the calculated t value shows 0.747 <1.67109 where the calculated t is smaller so that H0 is accepted and Ha is rejected. The results of this study are in line with the research of Yuliandhari et al., (2023), (Damas et al., 2021), and (Kumala & Bakar, 2021). The results are that eco-efficiency does not influence company value.

Eco-efficiency in this study turned out to be unable to provide efficiency in reducing environmental impacts due to the company's operational activities. In addition, the company cannot increase public trust through the management carried out by the company.

4.8.2. The Influence of Carbon Emission Disclosure on Company Value

The results obtained show the significance for the carbon emission disclosure variable of 0.167> 0.05 and the calculated t value shows 1.398 <1.67109 t count is smaller than t_{-Table}, so H0 is accepted and Ha is rejected. So, it can be concluded that carbon emission disclosure does not affect company value, the results of this study are following with research (Kurnia et al., 2020) that carbon emission disclosure does not influence company value.

The results of this study are different from research conducted by (Yuliandhari et al., 2023) and others that carbon emission disclosure has a significant positive influence on company value.

4.8.3. The Influence of Green Innovation on Company Value

The results obtained through the hypothesis test show the significance for the green innovation variable 0.030 <0.05 and a calculated t value of 2.227> 1.67109 with a calculated t greater than the t table and a significance smaller than 0.05, then H0 is rejected and Ha is accepted. So, it can be concluded that green innovation does not influence company value.

Based on the results of the research that has been conducted above, it can provide evidence that environmentally friendly innovations carried out to reduce the impact of environmental damage can increase company value. Companies that implement green innovation will be considered responsible for the environment and can utilize their resources efficiently, this will increase investor confidence and company value (Yuliandhari et al., 2023).

The results of the study are in line with the research conducted by Dewi & Rahmianingsih, (2020), Damas et al., (2021), Putri Fabiola & Khusnah, (2022), Yuniarti et al., (2022), (Arini et al., 2023), (Setyawan & Wijayanti, 2023). In contrast to the research conducted by (Tonay & Murwaningsari, 2022), (Roza Mulyadi & Maulana, 2022), and (Ramadhan et al., 2023) the results of the study stated that Green Innovation has no positive effect on Firm Value.

5. Conclusions and Suggestions

5.1 Conclusions

Based on the results of the study, it can be concluded as follows:

Eco-efficiency does not affect the value of the company so it cannot prove that if a company implements efficiency in the use of operational costs it will increase the value of the company. Carbon emission disclosure does not affect the value of the company, the high cost of disclosing carbon emissions which is still voluntary makes companies still consider disclosing carbon emissions. Green innovation has a positive and significant effect on the value of the company so it can prove that environmentally friendly innovations carried out to reduce the impact of environmental damage can increase the value of the company. Eco-efficiency, carbon emission disclosure, and green innovation have a simultaneous effect on the value of the company in the basic materials sector companies listed on the Indonesia Stock Exchange in 2018-2022.

5.2 Suggestions

Suggestions that are expected to be useful for further research:

it is recommended for further research to use other sectors to find out how the independent and dependent variables in this study affect other sectors. Companies are expected to pay more attention to the environment related to company operations by being efficient in the use of resources and reducing operational costs, in addition to disclosing carbon emissions. In this study, it can be seen that eco-efficiency using the World Council for Sustainable Development WBCSD 2006 indicator does not affect the company's value, so it is recommended to use other indicators. In this study, it can be seen that carbon emission disclosure does not affect the company's value using the Global Reporting Initiative (GRI) 103 and 305 indicators, so it is expected to use other indicators to measure these variables.

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MUSLIM CONSUMERS' PERCEIVED VALUE ON REVISIT INTENTION TO SYAICHONA MOH CHOLIL BANGKALAN WITH CUSTOMER SATISFACTION AS MEDIATING VARIABLE

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Abstract

This study aims to analyze the effect of perceived value by Muslim consumers on the intention to revisit the tomb of Syaichona Moh Cholil in Bangkalan, with customer satisfaction as a mediating variable. In the context of growing halal tourism, understanding the factors that influence Muslim travelers' decisions is very important. The methodology used is a quantitative survey involving 94 respondents who have visited the tomb. The results of the analysis show that there is a significant positive influence between perceived value and customer satisfaction, as well as between customer satisfaction and return visit intention. The findings indicate that a positive experience felt by visitors can increase their likelihood to return, thus emphasizing the importance of service quality in attracting Muslim tourists. This research provides insights for stakeholders in the tourism sector to develop more effective strategies in meeting the needs of Muslim consumers and increasing the attractiveness of tourism destinations.

Keywords**:** *Muslim Consumers' Perceived Value, Customer Satisfaction, Revisit Intention.*

1. Introduction

Halal lifestyle is not only a trend in Muslim countries, but also in non-Muslim countries. One of the sectors affected by halal lifestyle is the tourism sector (Juliana et al., 2022). The Muslim travel market has shown resilience and strong growth despite global challenges, with international arrivals reaching 68% of pre-pandemic levels by 2022. The sector is on a promising recovery path, projected to reach 87% of 2019 levels by 2023 and full recovery by 2024. Going forward, this market is expected to expand significantly, with a projected 230 million Muslim tourist arrivals and USD 225 billion in spending by 2028. Asia leads the way in terms of Muslim traveler arrivals, followed by Europe, Africa, the Americas, and Oceania, indicating the potential for growth and better accommodation for Muslim travelers in different regions (GMTI, 2023).

Minister of Tourism and Creative Economy/Head of the Tourism and Creative Economy Agency (Menparekraf/Kabaparekraf) Sandiaga Salahuddin Uno revealed that Indonesia won the title of Top Muslim Friendly Destination of the Year 2023 in the Mastercard Crescent Rating Global Muslim Travel Index (GMTI) 2023 in Singapore on Thursday (1/6/2023). That way sharia tourism has a contribution in increasing the income of the government, the community, and has a good impact on the surrounding environment. So it can be seen that the global halal tourism ranking is very good. However, it is not supported by Sharia standardized business facilities. This is evidenced by the small number of sharia hotels and halal restaurants operating in Indonesia. Halal tourism arrangements can be made such as Regional Regulations or Pergub, as in West Nusa Tengara (NTB), but can only be done for local governments that are concerned about halal tourism and the regulation cannot be used as a national reference (Putri & Wakhid, 2023). That way halal tourism is directly able to improve the economy of a region. With the potential for attractive destinations plus the empowerment of the concept and implementation of halal tourism such as the selected tourism location is a model of tourism that is allowed in Islamic rules and can increase spiritual value, consume halal food and drinks, and facilities provided in line with Sharia principles (Putri & Wakhid, 2023). East Java

Province ranks 9th in Indonesia on provinces that have successfully positioned themselves as a top destination for Muslim travelers (IMTI, 2023). It is certainly interesting to discuss what influences the province of East Java, especially in the city of Bangkalan in terms of religious tourism.

Muslim consumers' value in (Eid & El-Gohary, 2015) contains 6 dimensions, namely, quality, price, emotional, social, Islamic physical attributes, and Islamic nonphysical attributes. However, in the research (Rodrigo & Turnbull, 2019) ignores the effects of epistemic values and conditional values associated with Muslim consumers' values. This is in line with the statement (Sheth et al., 1991) shows that Muslim consumers' values represent a much broader construct consisting of functional, social, emotional, epistemic, conditional, and Islamic values sourced from the Faith.

2. Literature review

2.1 Muslim Consumers' Perceived Value

The theory of consumption values, as developed by (Sheth et al., 1991), suggests that consumption choices are influenced by five values, namely, functional, emotional, social, economic, and epistemic and conditional values, which guide a consumer's decision to purchase/consume a particular product (Sheth et al., 1991). Previous studies (Eid & El-Gohary, 2015) on Muslim consumers' perceived value have only focused on six dimensions, namely, quality, price, emotions, social, Islamic physical attributes, and Islamic nonphysical attributes. These studies have ignored the effect of epistemic and conditional values associated with Muslim tourists. Therefore, understanding Muslim consumers' perceived value from a consumption values perspective suggested by (Sheth et al., 1991) would enable marketers to obtain a more comprehensive understanding of the value-adding attributes of products and services associated with halal holidays. (Rodrigo & Turnbull, 2019) says that the perceived value Muslim consumers seek goes beyond the basic functional, emotional, social, epistemic, and conditional values when choosing a halal holiday, and it is clear that Islamic values such as Iman (faith) play a significant role. These values reflect the broader consumption values and are associated with a number of personal values, such as fun and enjoyment, sense of belongingness, respect, security, and need for uniqueness.

H1: It is suspected that Muslim Consumers' Perceived Value has a positive effect on customer satisfaction of visitors to the tomb of Syaichona Moh Cholil bases.

H2: It is suspected that Muslim Consumers' Perceived Value has a positive effect on the revisit intention of visitors to the tomb of Syaichona Moh Cholil bases.

2.2 Customer Satisfaction

Customer satisfaction is a combination of cognitive and affective responses that arise from a customer's evaluation of their experience with a product or service. It can be defined as the feeling of contentment or discontentment derived from the experience or as the cognitive assessment of whether the rewards received align with the service experienced. It can also be understood as the perceived difference between pre- and post-consumption value. Cognitive responses stem from rational evaluations, whereas affective responses reflect emotional reactions. Together, these elements shape a customer's judgment of a product or service (Mannan et al., 2019). Customer satisfaction plays a critical role in the business process, as it reflects users' responses to the degree of satisfaction or frustration based on their cognitive and emotional evaluations (De Leon et al., 2020).

H3: It is suspected that customer satisfaction has a positive effect on the revisit intention of visitors to the tomb of Syaichona Moh Cholil bases.

2.3 Revisit Intention

Revisit intention is a form of customer's behavioral intention to come back to a site, providing positive word of mouth and visitor perceptions on quality service that leads to behavioral closeness (Jeong et al., 2020). Revisit intention has two dimensions, namely, intention or willingness to recommend something to others and intention or willingness to revisit a place (Bayih & Singh, 2020). Intention to return involves the desire to make a repeat purchase and post-purchase behavior, where the desire is influenced by previous consumption experiences, thus driving interest in consuming that product again in the future (Juliana et al., 2022). One of the most important factors influencing customer revisit intentions is satisfaction (Wu et al., 2015). Satisfaction is a decisive factor in determining whether a customer intends to revisit a destination or repeat a purchase (Y. K. Kim & Lee, 2011). It is also a key variable in consumer behavior research, due to its strong impact on customer loyalty and intention to revisit a location (Y. H. Kim et al., 2015). Customer satisfaction is a function of expectations and perceived product or service attributes. It is actually an emotional reaction that arises when the perceived performance of a product or service exceeds expectations (Marinkovic et al., 2014). The literature shows that tourists' perceived image is a significant indicator of satisfaction as well as post-visit behavioral intentions such as intention to revisit. (Alexandris et al., 2006) mentioned that satisfaction plays a very important role in making visitors return to the place. (Campo-Martínez et al., 2010) have conducted research on return visitors in Spain. The results of their research show that overall satisfaction has the greatest influence on tourists' decisions to revisit a destination. (Gholipour Soleimani & Einolahzadeh, 2018).

H4: It is suspected that Muslim Consumers' Perceived Value has a positive effect on the revisit intention of visitors to the tomb of Syaichona Moh Cholil bases through customer satisfaction.

3. Methodology

As this study is aimed at investigating the influence between Muslim consumers' perceived value and revisit intention with customer satisfaction as mediation to the visitors of Syaichona Moh Cholil Bangkalan's tomb, both directly and mediated, this study uses a survey method with a quantitative approach. This approach is chosen because of its ability to represent the visitor population and answer statistical hypotheses. To ensure that the intention to revisit is consistent with the observed sample conditions, this study selects the visitors to Syaichona Moh Cholil Bangkalan's tomb. As the number of populations of the study was uncertain, the sampling technique used is non-probability sampling with purposive sampling type. With the main criteria of this questionnaires is having visited the tomb of Syaichona Moh Cholil bangkalan once.

Questionnaires with a Likert scale of 1-5 are used to measure the effectiveness of Muslim consumers' perceived value, revisit intention and customer satisfaction as a mediation. In addition, data was processed and analysed using the least squares method using Smart PLS 3 software.

4. Results and discussions

This research involved 100 respondents spread from various regions who were taken through online questionnaire distribution. 6 of these 100 respondents were eliminated because they did not match the specified criteria. Where a total of 94 respondents were tested in this study.

4.1 Measurement Model Evaluation

The measurement model in this study consists of a reflective measurement model where the variables of Muslim Consumers' Perceived Value (X), Customer Satisfaction (Z), Revisit Intention (Y) are measured reflectively. According to Chain (1998), reflective measurement evaluation consists of loading factor >0.60, cronbach alpha >0.70, composite reliability >0.70, and average variance extracted (AVE >0.50).

Table 1. Outer loading, Composite reability, Cronbach alpha, and Average variance extracted

Variable	Measurement items	Outer Loading	Cronbach Alpha	Composite Reability	AVE
Muslim Consumers' Perceived Value	X1.1	0,662	0,860	0,891	0,507
	X2.1	0,715			
	X2.2	0,659			
	X2.3	0,673			
	X3.1	0,717			
	X3.2	0,768			
	X3.3	0,785			
	X5.1	0,704			
Customer Satisfaction	Z1.1	0,868	0,862	0,906	0,707
	Z1.2	0,889			
	Z1.3	0,779			
	Z1.4	0,824			
Revisit Intention	Y1.1	0,786	0,791	0,878	0,705
	Y1.2	0,843			
	Y1.3	0,888			

The Muslim Consumers' Perceived Value variable is measured by 7 measurement dimensions, where only 8 out of 20 indicators are valid with outer loading between 0.659-0.785 which validates the measurement of Muslim Consumers' Perceived Value. The level of variable reliability is acceptable as indicated by Cronbach's alpha (0.860) and composite reliability (0.891) above 0.70 which means reliable. The level of convergent validity shown by the AVE value of 0.507 is greater than 0.50, which means that it has met the requirements for good convergent validity. Overall, the variation of measurement items contained by the variables reaches 50.7%.

Among the eight measurement indicators, measurement indicators X3.3 and X3.2 have the highest outer loading, namely, 0.785 and 0.768, which indicates that the two measurement indicators need to be maintained. Both are included in the social value dimension.

The Customer Satisfaction variable is measured by 4 valid measurement indicators with outer loading between 0.779-0.889, which means that the four measurement items are valid to reflect the measurement of Customer Satisfaction. The level of variable reliability is acceptable as indicated by Cronbach's alpha (0.862) and composite reliability (0.906) both have values above 0.70 which means reliable. The level of convergent validity shown by the AVE value is 0.707 where this value is higher than 0.50 which indicates good convergent validity requirements. Overall, the variation of measurement items contained by the variables reaches 70.7%.

The Revisit Intention variable is measured by 3 valid measurement indicators with outer loading between 0.786-0.888, which means that the three measurement items are valid to reflect the measurement of Revisit Intention. The level of variable reliability is acceptable as indicated by Cronbach's alpha (0.791) and composite reliability (0.878) both have values above 0.70 which means reliable. The level of convergent validity shown by the AVE value is 0.705

where this value is higher than 0.50 which indicates good convergent validity requirements. Overall, the variation of measurement items contained by the variables reaches 70.5%.

4.2 Evaluation of Drisciminant Validity

Evaluation of discriminant validity needs to be seen by looking at the Fornell and Lacker criteria. Discriminant validity is a form of evaluation to ensure that variables are theoretically different and empirically proven/ statistical testing. Fornell and lacker's criterion is that the root AVE of the variable is greater than the correlation between variables.

Table 2. Fornell Lacker Criterion

	Muslim Consumers Perceived Value	Customer Satisfaction	Revisit Intention
Muslim Consumers Perceived Value	0,712		
Customer Satisfaction	0,630	0,840	
Revisit Intention	0,706	0,524	0,841

The Muslim Consumers' Perceived Value variable has a root AVE (0.712) greater than its correlation with Customer Satisfaction (0.630) and Revisit Intention (0.706). This indicates that the discriminant validity of the Muslim Consumers' Perceived Value variable is met.

The Customer Satisfaction variable has a root AVE (0.840) greater than its correlation with Revisit Intention (0.524). This indicates that the discriminant validity of the Customer Satisfaction variable is fulfilled.

Table 3. Cross Loading

	Muslim Consumers Perceived Value	Customer Satisfaction	Revisit Intention
X1.1	**0,662**	0,447	0,562
X2.1	**0,715**	0,526	0,398
X2.2	**0,659**	0,517	0,377
X2.3	**0,673**	0,556	0,436
X3.1	**0,717**	0,314	0,535
X3.2	**0,768**	0,421	0,528
X3.3	**0,785**	0,391	0,682
X5.1	**0,704**	0,411	0,460
Y1.1	0,541	**0,786**	0,439
Y1.2	0,402	**0,843**	0,409
Y1.3	0,609	**0,888**	0,463
Z1.1	0,629	0,408	**0,868**
Z1.2	0,679	0,503	**0,889**
Z1.3	0,494	0,442	**0,779**
Z1.4	0,554	0,404	**0,824**

Based on the table above, it can be seen that the cross loading factor value of each indicator against its construct is greater than other constructs. That way it can be concluded that it has met the discriminant validity criteria.

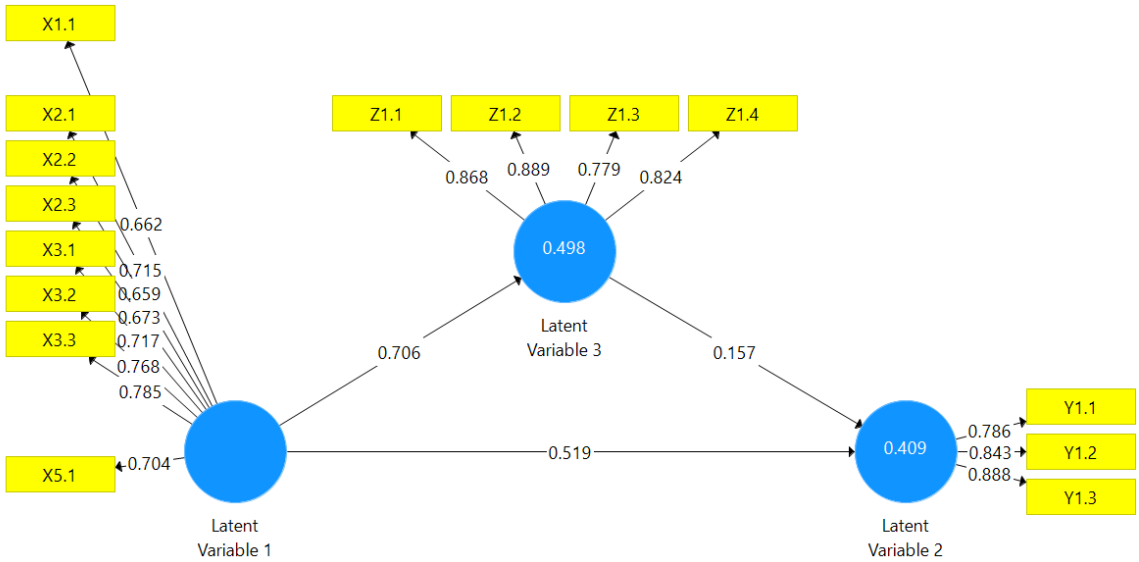
4.3 Structural Model Evaluation

Structural model evaluation is related to hypothesis testing of the influence between research variables. Structural model checking is carried out in three stages, namely first checking the absence of multicollinearity between variables with the Inner VIF (Variance Inflated Factor) measure. Inner VIF values below 5 indicate no multicollinearity between variables (Hair, 2021). The second is hypothesis testing between variables by looking at t statistics or p-value. If the t statistic calculated is greater than 1.96 (t table) or the p-value of the test results is smaller than 0.05, there is a significant influence between the variables. In addition, it is necessary to convey the results and 95% confidence interval of the estimated path coefficient parameters. The third is the f square value, which is the effect of direct variables at the structural level with criteria (f square 0.02 is low, 0.15 is moderate and 0.35 is high), (Hair, 2021). And the f square of the mediation effect is called the upsilon v statistic which is obtained by squaring the mediation coefficient, (Lachowicz et al., 2018) interpreted in (Ogbeibu et al., 2022) is a low mediation effect (0.02), moderate mediation effect (0.075) and high mediation effect (0.175).

Table 4. Inner VIF

	Muslim Consumers' Perceived Value	Customer Satisfaction	Revisit Intention
Muslim Consumers' Perceived Value		1.994	1.000
Customer Satisfaction			
Revisit Intention		1.994	

Before testing the hypothesis of the structural model, it is necessary to see whether there is multicollinearity between variables, namely with the inner VIF statistical measure. The estimation results show the Inner VIF value <5, so the level of multicollinearity between variables is low. These results strengthen the results of parameter estimation in SEM PLS is robust (unbiased).



Picture 1. Path Diagram

Table 5. Hypothesis Testing (Direct influence)

Hipotesis	Path Coefficient	p-value	97.5% Confidence Interval Path Coefficient		F square
			Lower limit	Upper limit	

H1. Muslim Consumers' Perceived Value to Customer Satisfaction	0.519	0.000	0,323	0,747	0.229
H2. Muslim Consumers' Perceived Value to Revisit Intention	0.706	0.000	0,608	0,799	0.994
H3. Customer Satisfaction to Resvisit Intention	0.157	0.281	-0,169	0,409	0.021

Based on the results of hypothesis testing above, it is known as follows

The first hypothesis (H1) has a positive influence of Muslim Consumers' Perceived Value on Customer Satisfaction with path coefficient (0.519) and p-value (0.000) below 0.05. In the 97.5% confidence interval, the effect of Muslim Consumers' Perceived Value on Customer Satisfaction lies between 0.323-0.747. And the existence of Muslim Consumers' Perceived Value in Customer Satisfaction has a moderate influence at the structural level (f square = 0.229).

The second hypothesis (H2) there is a significant effect of Muslim Consumers' Perceived Value on Revisit Intention with a path coefficient (0.706) and p-value (0.000) below 0.05. In the 97.5% confidence interval, the effect of Muslim Consumers' Perceived Value on Revisit Intention lies between 0.608-0.799. And the presence of Muslim Consumers' Perceived Value in Revisit Intention has a high influence at the structural level (f square = 0.994).

The third hypothesis (H3) there is an effect of Customer Satisfaction on Revisit Intention with a path coefficient (0.157) and p-value (0.281) below 0.05. In the 97.5% confidence interval, the effect of Muslim Customer Satisfaction on Revisit Intention lies between (-0.169)-0.409. And the presence of Customer Satisfaction in Revisit Intention has a moderate influence at the structural level (f square = 0.021).

Table 6. Mediation Testing

Hipotesis	Path Coefficient	p-value	97.5% Confidence Interval Path Coefficient		Upsilon V
			Lower limit	Batas atas	
H4. Muslim Consumers' Perceived Value to Customer Satisfaction to Revisit Intention.	0.111	0.302	-0.119	0.296	0,024

Based on the results of the above calculations, the fourth hypothesis (H4) is accepted where the Customer Satisfaction variable as a mediating variable is mediating the indirect effect between Muslim Consumers' Perceived Value on Revisit Intention with a mediation path coefficient of 0.111 and a p-value of 0.302. At the structural level, the mediating role of Customer Satisfaction has a moderate mediating effect with an upsilon v value of 0.024 which lies between 0.20 and 0.075.

4.4 Evaluation of Goodness and Fit of The Model

PLS is a variance-based SEM analysis with the aim of testing models that publish on prediction studies. Therefore, several measures were developed to declare acceptable models such as R square, Q square, SRMR, PLS predict (Hair et al., 2019) and Goodness of Fit Index, (Henseler & Sarstedt, 2013), as well as checking the robustness of the model by testing the linearity of the relationship between variables.

Table 7. R Square and Q Square

	R square	R square adjusted	Q square
Revisit Intention	0.409	0.396	0.254
Customer Satisfaction	0.498	0.493	0.338

The R square measure illustrates the amount of variation in endogenous variables that can be explained by other exogenous/ endogenous variables in the model. According to (Chin et al., 1996) the interpretation value of R square quantitatively is 0.19 (low influence), 0.33 (moderate influence) and 0.66 (high influence). Based on the results of data processing above, it can be said that the magnitude of the influence of Muslim Consumers' Perceived Value on Customer Satisfaction is 40.9% (moderate influence). The magnitude of the influence of Customer Satisfaction on Revisit Intention is 49.8% (moderate influence).

Q square describes a measure of predictive accuracy, namely how well each change in exogenous/ endogenous variables is able to predict endogenous variables. This measure is a form of validation in PLS to state that the model has predictive relevance. The q square value above 0 states that the model has predictive relevance, but in (Hair et al., 2019) the quantitative Q square interpretation value is 0 (low influence), 0.25 (moderate influence), and 0.5 (high influence). The results of data processing above the Q square value of the Revisit Intention variable is 0.254 (moderate prediction accuracy) and for Customer Satisfaction is 0.338 (moderate prediction accuracy).

Table 8. PLS Predict

Indikator	Model PLS SEM		Model LM	
	RMSE	MAE	RMSE	MAE
Y1.1	0.748	0.590	0.797	0.621
Y1.2	0.862	0.665	0.911	0.710
Y1.3	0.605	0.501	0.625	0.517
Z1.1	0.594	0.473	0.609	0.475
Z1.2	0.594	0.483	0.639	0.511
Z1.3	0.888	0.645	0.909	0.644
Z1.4	0.731	0.573	0.746	0.581

(Hair et al., 2019) stated that PLS is an SEM analysis with predictive purposes. Therefore, it is necessary to develop a form of model validation measure to show how good the predictive power of the capital it proposes. PLS predict works as a form of validation of the strength of the PLS prediction test. To show that the PLS results have a good measure of predictive power, it needs to be compared with the basic model, namely the linear regression model (LM). The PLS model is said to have predictive power if the RMSE or MAE size of the PLS model is lower than the LM model.

Based on the processing results of the data above, it shows that all PLS model measurement items with RMSE values are lower than the LM model, while there is 1 PLS model measurement item with an MAE value higher than the LM model. This shows that the proposed PLS model has medium predictive power.

5. Conclusion

The influence of perceived value by Muslim consumers on intention to revisit Syaichona Moh Cholil's tomb in Bangkalan, with a focus on customer satisfaction as a mediating variable. In the context of tourism, the value perceived by Muslim consumers covers various dimensions, including functional, emotional, social, and Islamic values rooted in faith. This research shows that customer satisfaction plays an important role in shaping return visit intentions, where positive experiences felt by visitors can increase their likelihood of returning.

The research methodology used was a survey with a quantitative approach, involving 94 respondents who met the criteria. The results of the analysis show that there is a positive relationship between perceived value and customer satisfaction, as well as between customer satisfaction and intention to return. These findings are in line with previous research that emphasizes the importance of satisfaction in tourists' decision to revisit a destination.

With the increasing interest in halal tourism and the recognition of Indonesia as a Muslim-friendly destination, it is important for stakeholders in the tourism sector to understand and cater to the needs of Muslim consumers. Efforts to improve the quality of Shariah-compliant services and facilities will contribute to positive visitor experiences, which in turn can increase return visit intentions. Therefore, this study provides valuable insights for the development of more effective tourism destination marketing and management strategies to attract Muslim tourists.

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THE EFFECT OF FINANCIAL LITERACY AND LIFESTYLE ON FINANCIAL BEHAVIOUR WITH FINTECH AS A MODERATING VARIABLE AMONG STUDENTS RECEIVING KIP KULIAH SCHOLARSHIPS AT UNIVERSITAS TRUNOJOYO MADURA

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Abstract

This study aims to determine and analyze the influence of financial literacy and lifestyle on financial behavior, with fintech as a moderating variable, among KIP scholarship recipients at Trunojoyo University, Madura. This study uses a quantitative descriptive method with primary data collected through questionnaires. A total of KIP scholarship recipients participated as respondents. Data analysis was conducted using Path Analysis with SmartPLS version 4. The results indicate that financial literacy and lifestyle positively and significantly influence students' financial behavior. However, fintech does not moderate the relationship between financial literacy and financial behavior, nor between lifestyle and financial behavior. These findings provide insights into the financial behavior of scholarship recipients and emphasize the limited moderating role of fintech in this context.

Keywords: *financial literacy, lifestyle, financial behaviour and fintech*

1. Introduction

The development of digital technology, particularly in the financial sector, has changed the way people manage their finances, especially among millennials and Generation Z, who dominate Indonesia's productive demographic (OJK, 2021). Despite the increasing national financial inclusion, there remains a significant gap due to low financial literacy rates (49.68%), indicating the unwise use of financial products (Suleiman et al., 2022). This low level of financial literacy impacts poor financial decision-making, a consumerist lifestyle, and unhealthy financial behaviour such as impulsive buying and getting trapped in illegal online loans. With the rise of financial technology (fintech), the ease of access and use of digital financial services has also influenced individual financial behaviour. However, the use of fintech without adequate literacy can exacerbate consumptive behaviour, especially among students (Firlianti et al., 2023). Some studies have found a positive influence of fintech on financial behaviour, but others have reported the opposite, indicating the presence of moderating factors. Scholarship recipients of the KIP Kuliah programme, who are both financially vulnerable and represent Generation Z, are an important group to study. In addition to managing educational funding, they are also expected to have good financial literacy and the ability to adapt to the digital financial ecosystem. Universitas Trunojoyo Madura (UTM), as one of the public universities with the highest number of KIP recipients in 2024 (Caesaria, 2024) is a strategic location for this research. This study aims to analyse the influence of financial literacy and lifestyle on the financial behaviour of KIP Kuliah scholarship recipients at UTM, with fintech as a moderating variable, to contribute to efforts to improve the financial literacy of young people in the digital era.

2. Literature Review

2.1 Theory of Planned Behaviour (TPB)

Theory of Planned Behaviour (TPB) is a theory that was originally named the Theory of Reasoned Action (TRA), developed in 1967, and subsequently revised and expanded by Icek Ajzen and Martin Fishbein. Starting in 1980, this theory was used to understand human behaviour and to develop more effective interventions. In 1988, additional elements were added to the existing reasoned action model, and it was subsequently renamed the Theory of Planned Behaviour (TPB) (Achmad, 2019).

The Theory of Planned Behaviour (TPB) describes an individual's intention to engage in a pre-determined behaviour, defined by their attitude towards the behaviour, subjective norms, and perceived behavioural control as the ability to carry out the intention, as well as the individual's resources and opportunities to perform an action (Rizky & Gunawan, 2022). The relationship between knowledge and consumer behaviour can be well explained by the Theory of Planned Behaviour (Rizky & Gunawan, 2022). According to TPB, individuals' attitudes and beliefs are shaped by knowledge. Therefore, studies on the impact of knowledge on human behaviour are implicitly underpinned by TPB (Ishak & Zabil, 2012).

2.2 Financial Behaviour

Financial behaviour is an individual's ability to manage and use money wisely to make decisions (Listiyani et al., 2021). In line with this opinion, Sufyati HS & Alvi Lestari, (2022) state that financial behaviour is related to how individuals treat, control, and use their financial resources. Furthermore, Wulandari et al., (2022) state that if an individual does not understand proper financial concepts, their financial behaviour cannot develop properly, thereby failing to provide benefits for their future. Additionally, according to Haqiqi & Pertiwi, (2022), indicators of financial behaviour include: (1) Paying obligations on time; (2) Budgeting for expenses and purchases; (3) Recording expenses and purchases; (4) Allocating funds for unexpected situations; (5) Saving regularly to accumulate funds; (6) Comparing prices to make decisions about spending and shopping. Therefore, every individual must pay attention to their financial behaviour, because the level of success in life decreases as a result of poor financial behaviour (Wulandari et al., 2022)

2.3 Financial Literacy

In a broad sense, financial literacy is knowledge that can be used to make decisions and participate in economic activities, such as saving, investing, and consuming (Khan et al., 2024). According to the Financial Services Authority (2017), financial literacy is the knowledge, skills, and confidence that influence attitudes and behaviours to improve effective decision-making and financial management to achieve well-being (U. S. Wahyuni & Setiawati, 2022).

Meanwhile, according to Sufyati HS & Alvi Lestari, (2022), financial literacy is very important for everyone to be able to overcome financial problems, because individuals often have to choose between various interests in trade-off situations. Additionally, financial skills are also very important to master so that individuals can manage their finances wisely (Sri Wahyuni Abdurrahman & Serli Oktapiani, 2020). Tribuana, (2020) in his research explains financial literacy as an individual's ability to manage their own finances so that they do not experience financial problems in their lives.

According to Murti et al., (2022), financial literacy is the knowledge and skills an individual uses to make decisions with the ultimate goal of achieving good financial outcomes, leading to a prosperous and meaningful life while avoiding risks from poor financial decision-making. Through financial literacy, individuals will find it easier to understand and recognise various aspects related to finance, so that they are able to avoid various financial problems (Gustika & Yaspita, 2021).

2.4 Lifestyle

Lifestyle refers to activities related to how a person lives their life, spends their money, and spends their time (Amelia et al., 2023). In line with this opinion, lifestyle is how a person spends their time, manages their finances, and interacts with their surroundings (Kenale Sada, 2022). According to Gunawan et al., (2020), lifestyle is a person's pattern of life as demonstrated in their activities, hobbies, and income in spending their money and how they allocate their time. Lifestyle is an individual's attitude when directly describing issues in their mind, which is often associated with various aspects related to psychological and emotional issues, or may also be linked to their interests and opinions about certain matters (Laksono & Iskandar, 2018). Meanwhile, Izzani & Yosepha, (2021) define lifestyle as when someone buys something, how they use it, and what they think and feel when using it, which is referred to as their lifestyle.

2.5 Financial Technology

Financial technology or fintech, is an innovation in the financial services sector that facilitates access to financial products and makes transactions more efficient and practical (Hijir, 2022). Fintech is an innovation in financial services, meaning that it can help improve the effectiveness, efficiency, and economy of transactions related to lending, buying and selling, and payments more effective, efficient, and economical (Wajuba et al., 2021).

According to Bank Indonesia Policy No. 19/PBI/2017, financial technology (fintech) is defined as the use of technology in the financial system that produces technology-based service products and innovative business models, which have the potential to affect financial stability, efficiency, speed, security, and effectiveness in the payment system. Fintech is a financial technology innovation that offers new products, applications, and business models that can influence the provision of financial services and the development of the financial industry, as well as create a culture of market competition and reputation among service providers (Daragmeh et al., 2021).

3. Methodology

3.1 Profile of Respondents

The population in this study consists of 917 scholarship recipients at the Faculty of Economics and Business, Universitas Trunojoyo Madura. The sampling technique used purposive sampling with the following criteria: (1) students in at least their fifth semester and (2) active users of fintech. The sample size was determined using the Slovin formula with a 5% error rate, resulting in a sample of 279 respondents.

Table 1 describes the characteristics of respondents based on demographic factors. Based on their academic background, there were 122 respondents from the Management Study Programme, which was higher than the 68 respondents from the Accounting Study Programme and the 89 respondents from the Development Economics Study Programme out of the total number of respondents. All respondents were recipients of the KIP Kuliah scholarship and users of fintech, in line with the characteristics required for this study. Based on semester, the largest number of respondents were from the seventh semester, with 157 respondents, followed by the fifth semester with 121 respondents, and the smallest number were from the ninth semester with 1 respondent. Meanwhile, based on place of residence, the number of respondents living with their parents was 30, fewer than those living in dormitories, which numbered 249 respondents.

Table 1

Sample characteristic based on Demographic Factor

Demographic Factor	Frequency	Percent (%)
Study Programme:		
Management	122	43,7
Accounting	68	24,4
Development Economics	89	31,9
Recipient of the KIP scolarship:		
Recipient	279	100
Not recipient	0	0
User Fintech:		
User	279	100
Not User	0	0
Semester:		
5	121	43,4
7	157	56,2
9	1	0,4
Residence:		
With parents	30	10,8
Boarding house	249	89,2
Total	n = 279	100,0

3.2 Measures/Scale

The questionnaire in this study consisted of nine items to measure financial literacy, adopted from (Chen and P. Volpe, 1998); six items to measure lifestyle from (R. Wahyuni et al., 2019); and six items to measure financial behaviour, covering aspects of saving behaviour, credit management, and savings and investment, as adapted from (Hilgert et al., 2003). The fintech variable was measured using eight items adopted from (Kurniawan & Helen, 2022).

Indicators of all variables as given in Table 2 were measured using 5 points Likert's scale starting from 1 to represent "strongly disagree" to 5 to represent "strongly agree".

3.3 Validity and Reliability Test

Validity test indicates that each indicator is able to consistently represent a single latent variable. Validity testing is typically conducted by examining the correlation between construct scores and the scores of each indicator item. The expected and acceptable correlation value is above 0.70 (Hair et al., 2019). Table 2 presents data from various statement items that have been tested using convergent validity and found to be valid. However, there are several invalid statement items from the overall variables, namely statement item X2.2 about shopping, X2.4 about digital transaction services, X2.6 about pleasure and self-confidence thanks to being praised by friends. X1.5 about a person's consistency in paying debts, X1.6 about the purpose of having insurance, X1.7 on the appropriate type of insurance for students, Y.3 on purchasing goods in cash, Y.4 on dependence on borrowing, and Y.6 on investment.

Table 2

Factor loading of the outer model

Indicator of latent variable	**Factor loading**	**Result**
Financial Literacy (X1)		
Saving and Borrowing		

Establishing a consistent saving routine and sticking to it is very important for every individual	0.762	Valid
I am able to plan my long-term finances according to my study and daily living needs	0.723	Valid
Investment		
Investing can help increase the value of your assets over time, potentially generating greater returns than simply keeping your money in a savings account.	0.759	Valid
It is important to understand the level of risk you are willing to tolerate before investing	0.791	Valid
Lifestyle (X2)		
Activities		
I set aside time to do activities that I enjoy	0.786	Valid
Interest		
I have a habit of living frugally by taking advantage of the KIP Kuliah scholarship	0.754	Valid
Opinion		
I realise the importance of having savings as an emergency fund from the money I receive	0.865	Valid
Financial Behavior (Y)		
A person's approach/attitude towards managing the inflow and outflow of money		
I always prepare a budget to manage my finances for the next month	0.793	Valid
I manage my expenses effectively by allocating KIP Kuliah scholarship funds for priority needs	0.843	Valid
Savings and Investments		
I have a habit of saving regularly from the KIP Kuliah scholarship funds that I receive	0.749	Valid
Fintech (Z)		
Perceived benefits		
Fintech provides efficiency in terms of time, costs and other resources	0.795	Valid
Fintech helps me manage my KIP Kuliah scholarship funds more easily	0.836	Valid
Ease of use		
I often use fintech applications for daily financial transactions	0.749	Valid
I feel comfortable using fintech services to manage my personal finances	0.819	Valid
Security guarantees		
Fintech uses advanced technology such as encryption and two-factor authentication to protect user data	0.816	Valid
I believe that fintech services are secure and reliable for educational transactions	0.862	Valid
Investment interest		
Fintech provides a platform that allows users to invest easily, even with small capital	0.812	Valid
I use fintech to access financial products that support my academic studies	0.791	Valid

After considering the loading factor, thus the second criteria to test the construct validity refers to the value of Average Variance Extracted (AVE). If AVE is more than 0.5, it means that the construct explains more than a half of the variance of its indicators. Table 3 shows that the test of validity using AVE for each variable is significant with p-value 0.000; it can be

concluded that the instrument to measure latent variable have been matched with the criteria required in construct validity.

Table 3

Construct validity and reliability

Latent variable	AVE	p-value	Cronbach's Alpha	p-value	Cronbach's reliability	p-value
Financial Literacy (X1)	0.585	0.000	0.857	0.000	0.894	0.000
Lifestyle (X2)	0.645	0.000	0.725	0.000	0.844	0.000
Financial Behavior (Y)	0.634	0.000	0.712	0.000	0.838	0.000
Fintech (Z)	0.657	0.000	0.925	0.000	0.939	0.000

To ensure that the instrument was reliable, reliability tests were applied based on composite reliability values and Cronbach's Alpha. The combined reliability value of the four variables exceeded 0.7, indicating that all reliability factors were satisfactory as a measurement instrument.

3.4 Data Analysis Techniques

The analysis was conducted using Partial Least Squares - Structural Equation Modeling (PLS-SEM) with the assistance of SmartPLS 4 software. This analysis included testing the outer model, which involved assessments of convergent validity (Average Variance Extracted/AVE), discriminant validity (using the Fornell-Larcker criterion and cross loading), as well as reliability through Cronbach's Alpha and Composite Reliability. Furthermore, the inner model was evaluated based on R-square values, F-square effect sizes, and the significance of path coefficients. A moderation analysis was also performed to determine the effect of fintech as a moderating variable, specifically in assessing whether its interaction strengthens or weakens the relationship between the independent and dependent variables.

3.5 Hypotheses

The research hypothesis will be tested using two-tailed with a t-value of 1.96 (5% significance level) according to (Ghozali, I., & Latan, 2015). The hypothesis will be accepted if the p-value is smaller than α, or the t-statistic value is greater than the t-table (two tailed test = 1.96). This research develops four hypotheses that will be tested with a quantitative approach, as follows:

H1 : There is a positive and significant impact of financial literacy on financial behaviour.
H2 : There is a positive and significant impact of lifestyle on financial behaviour.
H3 : There is a fintech can strengthen or increase the influence of financial literacy on financial behaviour
H4 : There is a fintech can strengthen or increase the influence of lifestyle on financial behaviour

4. Results and Discussions

Table 4 shows the direct and moderating effects of each variable in the internal model. This table explains the path coefficients that describe the direct and moderating effects of each variable, namely: (1) the effect of financial literacy on financial behaviour, (2) the effect of lifestyle on financial behaviour, (3) the effect of fintech in moderating financial literacy on financial behaviour, and (4) the effect of fintech in moderating lifestyle on financial behaviour.

Table 4

Path Coefficient

Direct and Moderating Effects	Original Sample (O)	t-statistics	p-value	
Financial Literacy → Financial Behavior	0.339	4.666	0.000	Accepted
Lifestyle → Financial Behavior	0.264	4.264	0.000	Accepted
Fintech*Financial Literacy → Financial Behavior	0.038	0.692	0.489	Reject
Fintech*Lifestyle → Financial Behavior	-0.066	1.189	0.234	Reject

Based on the tested hypotheses, the direct effect of financial literacy on financial behavior was found to be significant (path coefficient = 0.339; t-statistic = 4.666; p = 0.000), thus supporting the first hypothesis (H1). This indicates that students with higher financial literacy tend to make more responsible financial decisions and demonstrate better financial management. Key contributing indicators include general knowledge, saving and borrowing habits, insurance awareness, and investment understanding. These findings are consistent with previous studies (Chen and Volpe, 1998); (Wahyuni et al., 2023); (Ariska et al., 2023); (Khan et al., 2024).

The second hypothesis (H2) is also accepted, confirming that lifestyle significantly affects financial behavior (path coefficient = 0.264; t-statistic = 4.264; p = 0.000). Students with structured and mindful lifestyles exhibit healthier financial behaviors, such as emergency saving and prioritizing essential expenses. The most dominant indicator was opinion (loading factor = 0.865), highlighting the importance of saving for emergencies. This result aligns with Ajzen's Theory of Planned Behavior (2005) and is supported by research from (Andana & Yuniningsih, 2023), (Nuraeni & Ari, 2021), and (Sufyati & Lestari, 2022).

In contrast, the third hypothesis (H3) is rejected, as the moderating effect of fintech on the relationship between financial literacy and financial behavior is not statistically significant (path coefficient = 0.038; t-statistic = 0.692; p = 0.489). Although many students reported moderate to high levels of fintech usage, their use remains limited to basic transactions rather than strategic financial planning. This finding aligns with the Technology Acceptance Model (Davis, 1989) and is supported by studies conducted by Wardani & Sari (2022) and Putri & Sudarsono (2021).

Similarly, the fourth hypothesis (H4) is also rejected, indicating that fintech does not moderate the relationship between lifestyle and financial behavior (path coefficient = -0.066; t-statistic = 1.189; p = 0.234). Internal factors such as personal values, frugality, and intrinsic motivation appear to be more influential than technological tools. These findings are in line with (Radianto et al., 2025) who emphasize that psychological and behavioral factors such as self-efficacy and financial attitudes have a stronger impact on financial behavior than the use of financial technology.

5. Conclusion

This study aimed to examine the influence of financial literacy and lifestyle on financial behavior, with financial technology (fintech) as a moderating variable, among KIP Kuliah scholarship recipients at the Faculty of Economics and Business, Universitas Trunojoyo Madura. The findings indicate that financial literacy has a positive and significant effect on students' financial behavior. Similarly, lifestyle also shows a positive and significant influence on financial behavior. However, fintech does not moderate the relationship between financial literacy and financial behavior, nor does it moderate the relationship between lifestyle and financial behavior. These results suggest that while both financial literacy and lifestyle are

important determinants of students' financial behavior, the role of fintech as a moderating factor is not supported in this context.

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INCREASING PROFITABILITY THROUGH LIQUIDITY AND BANK SIZE IN INDONESIA BANKS

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Abstract

This study investigates the influence of liquidity and bank size on the profitability of banks in Indonesia, with a focus on institutions listed on the Indonesia Stock Exchange (IDX) from 2022 to 2024. Utilizing a quantitative approach and multiple linear regression analysis, the research measures profitability using Return on Assets (ROA) and Return on Equity (ROE). Liquidity is assessed by the ratio of current assets to current liabilities, while bank size is categorized using the OJK's KBMI classification. The findings reveal that both liquidity and bank size have a significant positive impact on bank profitability. Higher liquidity enables banks to meet short-term obligations, enhance operational stability, and increase lending capacity, all of which contribute to greater profitability. Larger banks benefit from economies of scale, allowing for cost efficiencies, broader market reach, and enhanced income generation. These results support the agency theory and economies of scale theory, indicating that sound liquidity management and strategic capital accumulation are critical for sustaining profitability in the banking sector. The study offers implications for bank management, regulators, investors, and academics, emphasizing the importance of liquidity optimization and scalable growth. It also provides practical suggestions for improving financial performance through strategic liquidity planning, capital consolidation, and digital infrastructure investment.

Keywords: *liquidity, bank size, profitability, ROA, ROE, Indonesia, agency theory, economies of scale*

1. Introduction

Banks are an industry that plays a central role in driving the country's economy. Banks act as the driving force of the economy by providing access to capital and financial services utilized by various sectors. By providing credit to the agricultural, industrial, trade, and service sectors, banks accelerate increased consumption and production which are the foundation of economic growth. Banks also help people manage their money through filtered products and investments, which ultimately increases financial inclusion. Banks also play a role in helping the smooth running of an efficient and secure national payment system, as well as maintaining public trust in the financial system.

Banks showed optimism about credit expansion, especially in key industries such as investment loans, high demand for capital-intensive industries such as mining and mineral processing. Consumer loans remained stable, although mostly driven by high-income households, while micro, small and medium enterprises (MSMEs) had lower growth, reflecting the economic challenges in the high labor force. Although there were concerns about non-performing loans (NPLs) in consumer loans, the overall quality of properties remained stable. OJK maintained its Risk Perception Index (IPR) at 55, indicating that bank risks are manageable.

Table 1: Indonesia's Loan-to-NPL Development, 2024

Month	Loan (in IDR Bn)	NPL (%)
Jan	7,057,558	2.35
Feb	7,094,514	2.35
Mar	7,244,637	2.25
Apr	7,310,683	2.33
May	7,376,114	2.34
Jun	7,478,404	2.26
Jul	7,514,618	2.27
Aug	7,507,704	2.26
Sep	7,579,250	2.21
Oct	7,656,895	2.20
Nov	7,717,257	2.19
Dec	7,827,148	2.08

Source: OJK

This credit expansion is also supported by the recovery in economic growth reaching 6.7% in annualized sliding in October 2024, mainly driven by the increase in current accounts and savings (CASA). However, the growth of term deposits is still lagging, reflecting the changing interests of liquidity and family businesses. To further enhance savings mobilization, the government requires a number of new regulations, including the extension of the holding period for export earnings and taxpayers. At the same time, the adoption of digital banking continues to grow, with the increasing use of QRIS and online savings accounts contributing to broader finance.

While deposit growth has provided lending facilities, banks are also seeking to diversify their income streams to maintain the benefits of high interest rates. Many banks have increased their assets in government securities and used liquidity management tools for Indonesian banks, as well as adjusting their portfolios to comply with structural changes in the economy, prioritizing high-program industries. In this regard, large banks still dominate loans and deposits, while smaller banks continue to face challenges, especially with increasing NPLs in the SME sector.

Healthy profitability in banking positions banks to operate better, serve more customers, fund more credit through stronger balance sheets, and ultimately boost economic productivity, growth, and job creation. Conversely, banks with lower profitability will be more constrained in supporting productive sectors, leading to lower overall economic growth.

Several factors, including macroeconomic conditions, monetary and fiscal policies, financial system stability, and regulations from relevant authorities such as Bank Indonesia and the Financial Services Authority (OJK), have a significant impact on the dynamics of the profitability of the banking sector in Indonesia. New issues related to asset quality, operational effectiveness, and the ability to adapt to digitalization and changes in consumer behavior have emerged, especially in the post-COVID-19 era.

Many researchers have studied how profitability can directly increase in developed countries, but few studies in developing countries like Indonesia have examined the KBMI as a measure of bank size. This study aims to examine the relationship between liquidity and bank size and profitability in the Indonesian banking sector by using the KBMI to measure bank size.

2. Literature review

9.1. Agency Theory

The main objective of agency theory is to analyze the principles that can adjust the incentive system and control mechanisms for agents to act in accordance with their preferences. Agency theory emphasizes that conflicts of interest arise when management preferences are not aligned with principal interests (Jensen & Meckling, 1976). The tendency of management to increase their personal benefits, to the detriment of the principal, can occur through the use of company resources for personal interests, risk avoidance, or neglect of responsibility.

The banking industry has a complex organizational structure, related to several interdependent classes. In the banking corporate structure, shareholders as owners of capital restoration control operations for bank management. Conflicts of benefit can occur when management focuses more on personal goals, such as achieving short-term bonuses, rather than increasing long-term business value. Investment Decisions - To make loans that are too risky is also a form of opportunistic behavior agents.

Conflicts between managers (agents) and owners (principals) can be managed well through agency mechanisms such as monitoring and incentive systems, then managers will be actualized to make decisions that maximize company profitability. Performance-based incentives compensation systems can encourage bank management to reduce operational costs, improve credit efficiency, maximize interest and non-interest income, so that it will have continuous implications in increasing ROA (Return on Assets) and ROE (Return on Equity) as indicators of profitability (Miswanto et al., 2022). In addition, in the banking sector, supervision from the board of commissioners, audit committee, and financial regulations can be tools to align the goals of agents and principals.

9.2. Economies of scale theory

The theory of economies of scale explains that as a firm increases its production level, the average cost of producing each product or unit of service begins to decrease. This concept was first emphasized by Adam Smith (1776) in the wealth of nations, where he emphasized the importance of labor assignment as an effective increase. In the context of global banking, economies of scale mean that large banks can distribute fixed costs (such as IT systems, staff training and product development) across more customers and transactions, thereby reducing the cost per unit of service. Therefore, large banks tend to have effective profits that have a positive impact on their profits.

9.3. Liquidity

Bank liquidity reflects the bank's ability to meet its short-term obligations, such as customer withdrawals. Banks with high levels of liquidity are seen as being able to manage financial risks and maintain customer trust (Shakatreh, 2021). Liquidity plays an important role in the success of a business to take advantage of opportunities and overcome financial obstacles (Maxim, 2023). Companies with high liquidity can allocate their cash to invest in projects that can increase greater profit margins in the future (Hossain & Alam, 2019).

Zaharum et al., (2022) research on the top 5 commercial banks in Malaysia in 2011-2020 found that liquidity has a positive effect on profitability. These results are also consistent with Nguyen et al., (2024) research on the top 100 companies in Vietnam in 2016-2021 that liquidity has a positive effect on profitability. In contrast to the research conducted by Lee & Alam, (2024) on banks in G7 countries in 2001-2022, which found that liquidity had no effect on profitability. In line with the research conducted by Eltweri et al., (2024) on 10 commercial banks in the UK in 2015-2021, liquidity had no effect on profitability.

Based on the agency theory, high liquidity can help a company's ability to carry out its intermediary function, thereby increasing profitability. It should be noted that if liquidity is too high, it can eliminate the company's potential to earn income because the funds are not managed productively.

9.4. Bank Size

Bank size is an indicator to explore the size of a bank in carrying out its commercial activities. It is believed that large-scale banks have the strength of operational efficiency, risk support, access to cheaper financial resources and technology investment and service innovation capacity. The theory of economies of scale states that the larger the firm, the lower the unit costs due to production and operational efficiencies.

The Financial Services Authority (OJK) has updated its bank classification system from the BUKU model to the KBMI (Bank Groups Based on Core Capital), as outlined in POJK Number 12/POJK.03/2021 on the Consolidation of Commercial Banks. The regulation mandates a phased increase in the capital of commercial banks—including Indonesian-incorporated banks, sharia-based banks, and overseas branches—to meet a minimum Core Capital and CEMA requirement of at least IDR 3 trillion by December 31, 2022.

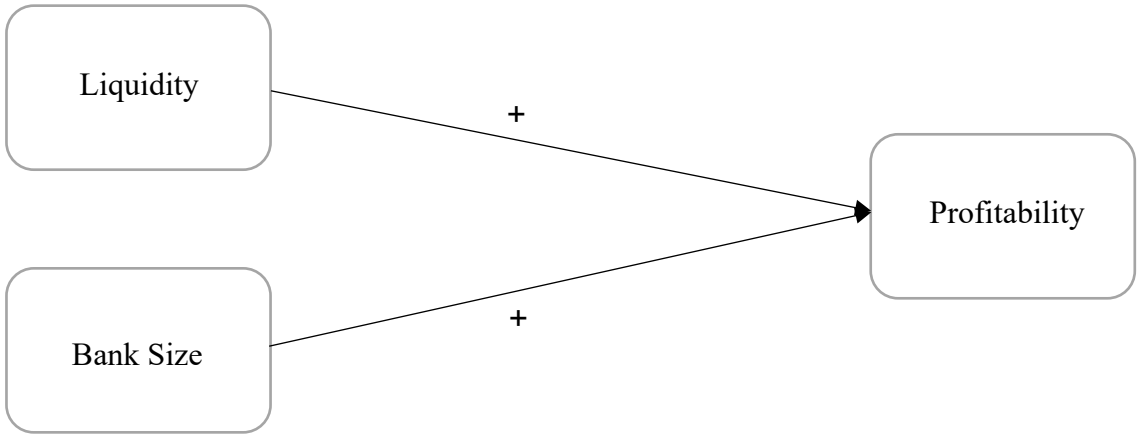
The reclassification of commercial banks from BUKU to KBMI was implemented under POJK Number 12/POJK.03/2021. KBMI categorizes banks into four groups based on core capital: KBMI I (up to IDR 6 trillion), KBMI II (over IDR 6 trillion to IDR 14 trillion), KBMI III (IDR 14 trillion to IDR 70 trillion), and KBMI IV (over IDR 70 trillion). This new framework also provides guidance for stakeholders such as Bank Indonesia and relevant ministries. With the enactment of this regulation, the previous BUKU classification—originally issued by Bank Indonesia—has been rendered invalid.

In the banking context, large banks can lower their transaction costs with better information technology and distribution systems so they can operate widely at low marginal costs (Bolívar et al., 2023). Research conducted by (Le et al., 2020) on banks in Vietnam in 2006-2015 found that bank size can affect profitability. In addition, this research is supported by Aladwan (2015) on banks in Jordan that bank size can affect profitability. In contrast to research conducted by (Jahan, 2020) which found that bank size had no effect on profitability.

9.5. Research model

Based on the introduction and literature review, the research model and hypothesis can be described as follows:

Figure 1: Model Framework



H1: There is a positive influence of liquidity on profitability
H2: There is a positive influence of bank size on profitability

3. Methodology

This study uses quantitative research with data sourced from the annual reports of 40 banks listed on the Indonesia Stock Exchange (IDX) for 2022-2024 and multiple linear regression used in the analysis of this study which was then processed using IBM SPSS 25 software.

Table 2: Variables Measurement

Variable	Description	Measure
Dependent variables		
ROA	Return on Assets	Net income/Total assets
ROE	Return on Equity	Net income/Total equity
Independent variables		
LIQ	Liquidity	Current assets/Current liabilities
SIZE	Bank Size	1 = KBMI 1, 2 = KBMI 2, 3 = KBMI 3, 4 = KBMI 4

The regression models utilized to test the effect of bank size and liquidity on profitability is as follows.

$ROA = a + \beta 1LIQ + \beta 2SIZE + e$

$ROE = a + \beta 1LIQ + \beta 2SIZE + e$

4. Results and discussions

This study aims to determine the effect of liquidity and bank size on profitability. Using data from the annual reports of banks listed on the Indonesia Stock Exchange in 2022-2024 with data collected as many as 120 samples. The measurement of profitability research is measured using ROA and ROE, liquidity is measured by current assets divided by current liabilities, and bank size in this study is based on POJK Number 12/POJK.03/20 using KBMI by providing numbers 1-4. The regression used uses multiple linear regression.

Table 3: Descriptive Statistics

	LIQ	SIZE	ROA	ROE
Mean	1.500739	2.033333	0.011984	0.063715
Median	1.260982	1.500000	0.009497	0.051521
Maximum	5.439005	4.000000	0.084093	0.383468
Minimum	0.691404	1.000000	-0.040065	-0.210720
Std. Dev.	0.840526	1.159059	0.016069	0.077967
Skewness	3.022747	0.520314	0.319791	0.196204
Kurtosis	12.20622	1.700331	7.279638	5.990326
Jarque-Bera	606.5120	13.86023	93.62183	45.48017
Probability	0.000000	0.000978	0.000000	0.000000
Sum	180.0886	244.0000	1.438085	7.645822
Sum Sq. Dev.	84.07165	159.8667	0.030728	0.723381
Observations	120	120	120	120

Table 3 reports descriptive statistics for the variables, including minimum and maximum values, mean, median, and standard deviation. For Return on Assets (ROA), the minimum value observed is -0.04, while the maximum value is 0.084 over 120 observations. The mean value is 0.0119 described the average return generated from total assets was 1.2%, showing modest profitability levels across banks in the sample. Standard deviation of 0.01606, the small standard deviation shows that most banks had similar ROA values, indicating consistent asset performance across institutions. However, outliers with negative or very high ROA still exist. For Return on Equity (ROE), the minimum value observed is -0.21, while the maximum value is 0.38 over 120 observations. The mean value is 0.0637 pointed on average, banks generated a 6.37% return on shareholders' equity, reflecting decent financial returns for investors. Standard deviation of 0.07797, there is a higher variability in ROE, implying that while some banks provide strong returns to shareholders, others perform poorly. This could result from differences in risk strategies, leverage, or capital efficiency. The minimum value of SIZE observed is 1.00, while the maximum value is 4.00 over 120 observations. The mean value is 2.0333 meaning the average bank falls between KBMI 1 and KBMI 2 categories, indicating that most sample banks are small to medium in size under OJK classifications. Standard deviation of 1.159606, There is a relatively wide variation in bank sizes across the sample, reflecting the diversity between KBMI 1 and KBMI 4 banks. This dispersion highlights structural differences in the Indonesian banking landscape. Liquidity (LIQ), the minimum value observed is 0.69, while the maximum value is 5.044 over 120 observations. The mean value is 1.5007 pointed on average the banks had 1.5 times more current assets than current liabilities, suggesting a relatively healthy short-term financial position. Standard deviation of 0.84075, liquidity ratios varied moderately among banks, suggesting some differences in how banks manage short-term assets and liabilities. While some banks maintain very high liquidity, others operate with tighter margins.

A mean liquidity ratio above 1.0 suggests that, on average, banks are capable of covering their short-term obligations without distress. A moderate dispersion in liquidity shows some banks are more conservative in holding liquid assets, while others are more aggressive, potentially trading off liquidity for profitability. The average classification of 2.03 indicates that most banks are still in the early KBMI categories, which may explain why efforts to scale

up operations and improve efficiency are central to increasing profitability. The high variation is expected due to the inclusion of banks from all KBMI categories. This heterogeneity supports the study's finding that bank size significantly affects profitability. Most banks cluster near the average ROA, indicating relatively consistent asset profitability across the industry. Greater variation in ROE reflects differences in financial structure and equity efficiency. Some banks may utilize equity more effectively or face varying levels of financial risk. Although modest, the ROA and ROE figures suggest that Indonesian banks are operating profitably. However, there is room for improvement through better asset utilization (to increase ROA) and more effective capital deployment (to increase ROE).

Figure 2: Multicolinearity Test Model 1

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-.009	.003		-2.582	.011		
	LIQ	.011	.001	.564	7.356	.000	.985	1.015
	SIZE	.002	.001	.171	2.228	.028	.985	1.015

a. Dependent Variable: ROA

Figure 3: Multicolinearity Test Model 2

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-.015	.019		-.786	.433		
	LIQ	.021	.008	.229	2.662	.009	.985	1.015
	SIZE	.023	.006	.342	3.984	.000	.985	1.015

a. Dependent Variable: ROE

The purpose of the multicollinearity test is to measure whether there is a correlation between the independent variables in the regression. Independent variables that do not have a correlation in the regression are the right regression model. If the independent variables are correlated, they are not orthogonal. Determining each independent variable has a multicollinearity problem can be calculated through the variance inflation factor (VIF) value. If the tolerance value is less than 0.10 and the VIF is greater than 10, then there is a multicollinearity problem (Algifari, 2014). Model 1 and Model 2 have tolerance values of $0.985 > 0.1$ and VIF values of $1.015 < 10$. It can be assumed that there is no multicollinearity problem in both models.

Figure 4: Heteroscedasticity Test Model 1

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	.007	.003		2.561	.012
	LIQ	.002	.001	.146	1.586	.115
	SIZE	-.001	.001	-.062	-.675	.501

a. Dependent Variable: ABS_RES1

Figure 5: Heteroscedasticity Test Model 2

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	.033	.014		2.390	.018
	LIQ	.003	.006	.046	.493	.623
	SIZE	.005	.004	.112	1.215	.227

a. Dependent Variable: ABS_RES2

The Heteroscedasticity Test in this study uses the Glejser test. The basis for decision making if the variables experience heteroscedasticity symptoms is a significance value lower than the significance set at 10% (Algifari, 2014). In model 1, the LIQ and SIZE significance values of 0.115 and 0.501 are higher than 10%, meaning that the variables in model 1 are free from heteroscedasticity. In model 2, the LIQ and SIZE significance values of 0.623 and 0.227 are higher than 10%, meaning that the variables in model 2 are free from heteroscedasticity.

Figure 6: Hypothesis Result Model 1

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	-.009	.003		-2.582	.011
	LIQ	.011	.001	.564	7.356	.000
	SIZE	.002	.001	.171	2.228	.028

a. Dependent Variable: ROA

Figure 7: Hypothesis Result Model 2

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	-.015	.019		-.786	.433
	LIQ	.021	.008	.229	2.662	.009
	SIZE	.023	.006	.342	3.984	.000

a. Dependent Variable: ROE

Based on data processing from SPSS 25, regression model 1 and model 2 can be written as follows:

$$Model\ 1: ROA = -0.009 + 0.011LIQ + 0.002SIZE + e$$

$$Model\ 2: ROE = -0.015 + 0.021LIQ + 0.023SIZE + e$$

In model 1 and model 2, the significance value of LIQ are 0.000 and 0.009, which is lower than the significance value set at 5%. It can be concluded that LIQ has a significant positive effect on ROA and ROE. Banks that have high liquidity are a reflection that the bank can settle short-term debts without having to sell the bank's assets. The bank's operations remain stable and avoid net profit losses that have a negative impact on ROA (Nguyen et al., 2024). In addition, good liquidity can help banks reduce very high external funding. With high liquidity, banks can provide more loans, so they can increase interest income and increase bank profits (Haris et al., 2024). According to agency theory, optimized liquidity indicates that management can align the interests of management and principal. High liquidity is a reflection of good risk management and effective corporate governance, it can increase the efficiency of asset use and bank profitability (E'Leimat et al., 2024). This research supports the research conducted by Nguyen et al., (2024), Zaharum et al., (2022), and Hossain & Alam (2019) which states that liquidity has a positive effect on profitability.

The significance value of SIZE is 0.002 and 0.023, which is lower than the significance value set at 5%. It can be concluded that SIZE has a significant positive effect on ROA and ROE. Banks that have a wide customer base and a high reputation can obtain third party funds at lower interest rates. It increasing profit margins and have a positive effect on profitability (Mkhaiber & Werner, 2021). Large banks (KBMI 3 & KBMI 4) have higher operational efficiency. Fixed costs such as infrastructure, IT systems, and risk monitoring can be spread across a larger business volume. This can reduce operational costs and increase profitability (Terraza, 2015). When large banks are more operationally efficient due to economies of scale, net income increases while total assets remain relatively stable or grow commensurately. Economies of scale also allow banks to maximize the use of their capital. With higher efficiency and revenues, net income increases, while equity can remain efficiently used (Hamdy et al., 2025).

5. Conclusion

5.1. Conclusion

The research analyzed how bank profitability depended on liquidity and bank size at Indonesia Stock Exchange (IDX) during 2022–2024. The study evaluated bank profitability

using Return on Assets (ROA) and Return on Equity (ROE) through quantitative analysis of multiple linear regression while considering liquidity and bank size as independent variables. Liquidity has a significant positive effect on profitability (both ROA and ROE). A bank that maintains high liquidity levels can easily fulfill its short-term duties while keeping its operations stable and decreasing its need for external funding and expanding its loan offerings that generate more interest revenue and enhance total profitability. This research confirms agency theory predictions which state that when management and shareholders have their interests aligned through effective liquidity management it leads to improved profitability. Profitability increases notably with the size increase of banks. KBMI 3 and KBMI 4 banks achieve economies of scale which lead to reduced transaction expenses and enhanced capital availability and better technological infrastructure and broader operational efficiency. Larger banks achieve superior profit margins while operating more efficiently than smaller competitors due to these advantages. The findings demonstrate how agency theory and economies of scale theory serve as effective frameworks to analyze Indonesian banking sector profitability. The research reveals that Indonesian banks can enhance their profitability through better liquidity management and their KBMI classification-based capital strengthening initiatives.

5.2. Implications

The significant positive influence of liquidity and bank size on profitability underscores the importance of prudent liquidity management and strategic capital growth. Banks should maintain optimal liquidity—not excessively high or low—to avoid idle assets and to maximize interest income. Additionally, investing in infrastructure and expanding operations to move up the KBMI classification can yield operational efficiencies and higher profitability. KBMI framework evaluation in the study confirms its ability to differentiate bank capacity along with risk management. Regulatory organizations now have concrete evidence to back their decisions when implementing and developing capital adequacy measures and liquidity management frameworks. The main focus needs to be on helping smaller banks develop their capacity through initiatives that enable them to enhance liquidity and grow their business in a sustainable manner. This study extends the existing literature which is emerging from developing economies specifically in Indonesia by showing the importance of agency theory and economies of scale for banking profitability. The study generates new directions for future researchers who wish to explore how digital adoption and risk appetite and corporate governance influence banking profitability.

5.3. Suggestion

Banks should improve liquidity forecasting and management tools to balance the need for liquidity with profitability. Initiatives such as digital cash management systems and improved credit risk modeling can help optimize asset utilization. Smaller banks should consider mergers, acquisitions, or strategic alliances to scale operations and progress to a higher KBMI classification. Such growth can lead to better access to funding, reduced unit costs, and improved profitability. To ensure that increased liquidity and size translate into sustainable profitability, banks must also strengthen internal controls, governance structures, and compliance with prudential norms. Risk-based supervision should be intensified, especially for banks showing rapid growth. Technological innovation can enable cost efficiencies and broaden market access. Banks should prioritize investment in digital banking services, which support liquidity and help expand market share without proportional increases in fixed costs. Future studies should examine other variables such as credit risk, cost-to-income ratio, and

digital banking adoption as possible mediators or moderators in the relationship between liquidity, size, and profitability. Including post-2024 data could also provide insights into long-term trends and policy effectiveness.

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THE INFLUENCE OF THE NUMBER OF BRAND AMBASSADOR ON PURCHASING DECISIONS FOR SCARLETT WHITENING PRODUCTS FOR MANAGEMENT STUDY PROGRAM STUDENTS

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Abstract

The development of skincare and body care companies increasingly shows fierce competition. The presence of e-commerce is well utilized by companies as a medium for promoting and marketing their products. Scarlett whitening is one of the local skincare brands that uses brand ambassadors as a promotional medium for products marketed through e-commerce. This research is a quantitative research, with respondents of Management Study Program Students of Pakuan University. The selection of respondents was carried out by probability sampling with a stratified sampling method with a total of 100 respondents. Data collection was done through questionnaires and data analysis methods using descriptive analysis, classical assumption testing, and simple linear regression analysis. The results showed that the number of brand ambassadors had a significant positive effect on the purchase decision of Scarlett Whitening products in Management Study Program Students of Pakuan University. Test results show that brand ambassadors have a simultaneously positive influence on purchasing decisions. The contribution of brand ambassadors is 32.1% to purchasing decisions, while the remaining 67.9% is influenced by other variables that are not studied such as price, product quality, product image, service quality, lifestyle, and many more.

Keywords: Multiple Brand Ambassador; Purchasing Decisions; Skincare; Scarlett Whitening.

1. Introduction

Tranggono and Latifah (2007) proposed the classification of cosmetics based on their application to the skin which is divided into 2 types, the first is skincare cosmetics which are cosmetics used to maintain, care for and maintain skin conditions, and the second is decorative makeup cosmetics (makeup) used to beautify the face. Indonesia is expected to become the fifth largest cosmetics market in the world in the next 10 to 15 years (Rizaty, 2021). Seeing the growing growth of the skincare industry, resulting in the emergence of other local skincare companies that are relatively new in coloring the skincare industry. Based on the research results, there are ten skincare brands with best-selling sales in e-commerce, namely Scarlett Whitening, Somethinc, MS Glow, Avoskin, Whitelab, Azarine, Wardah, Erha, Emina, and Bio Beauty Lab (Compass, 2022).

The presence of e-commerce is well utilized by companies as a medium to promote and market their products. One of the promotional activities commonly carried out by skincare products is through brand ambassadors. The use of brand ambassadors can improve product image so that this can be an opportunity for skincare brands to reach consumers through brand ambassadors, In promotional activities through brand ambassadors, the company will display

its products through visuals and messages that have been planned in advance with the intention to attract consumers and increase brand awareness which is expected to increase sales.

Scarlett Whitening is one of the local skincare brands that uses brand ambassadors as a promotional medium for products marketed through e-commerce. Since the beginning of Scarlett Whitening releases its products until 2023, Scarlett Whitening has collaborated with approximately 19 local and international artists. Another skincare brand that also uses brand ambassadors as promotional media is Somethinc. Through monitoring from Somethinc's official Instagram, from 2022 to 2023 Somethinc only collaborates with approximately 3 local and international artists. Unlike what Scarlett Whitening often does to upgrade brand ambassadors, in 2021 Scarlett Whitening announced 6 different brand ambassadors which they refer to as "Scarlett's Family".

The strategy carried out by Scarlett Whitening is not without reason, but there is a message conveyed through the use of various brand ambassadors that Scarlett Whitening products are safe for use by women and men from the age of 15-50 years and over. This can be seen from the table below through research conducted on Scarlett Whitening's official Instagram regarding the use of Scarlett Whitening's brand ambassadors from 2021-2022:

Table 40: Brand Ambassador of Scarlett Whitening

No.	Years	*Brand Ambassador of* Scarlett Whitening	Profession
1	2021	1. Agnez Monica 2. Ria Ricis 3. Natasha Wilona 4. Laudya Cynthia Bella 5. Song Joong Ki 6. Twice	Singer, Songwriter, Dancer, YouTuber, Actress, Model, Host, Idol Group.
2	2022	1. Rossa 2. Dinda Hauw 3. Rey Mbayang 4. Fadil Jaidi 5. Oki Setiana Dewi	Singer, Songwriter, Designer, Motivator, Host, Influencer, Actor, Actress, Model, Entrepreneur.

No.	Years	*Brand Ambassador of* Scarlett Whitening	Profession
		6. Shireen Sungkar 7. Zaskia Sungkar 8. Zaskia Adya Mecca 9. Cassandra Lee 10. Sarwendah 11. Sandrinna Michelle 12. Teuku Ryan 13. Muhammad Jaidi	

The use of Muhammad Jaidi or Pak Muh as the brand ambassador of Scarlett Whitening products in 2022 at the age of 61 gives a message that Scarlett Whitening products can be used by all ages and circles because the product content is safe and has been clinically tested by BPOM-RI. Brand ambassador characters that match the brand image will create chemistry and create attachment between the brand ambassador and the product brand image so that it can influence purchasing decisions. In accordance with Firmansyah's opinion (2019), that consumer purchasing decisions can be influenced by brand ambassadors.

Purchasing decisions can occur due to the emergence of a need and want, so it includes determining what to buy. The purchase decision process describes a reason why consumers prefer, choose and buy a product with a certain brand (Firmansyah, 2019). Along with the development of technology, it makes it easier for consumers to carry out transaction activities through digital platforms. Based on the results of research conducted by the author on the official Scarlett Whitening account in e-commerce by looking at reviews provided by consumers related to the products purchased, the author found that of the 15 reviews that the author took, 3 of them bought the product because they were interested in merchandise in the form of Song Joong Ki and Twice photocards, while the other 12 reviews bought because they were satisfied with the benefits of Scarlett Whitening products.

Ease in shopping activities not only has a positive impact, but also has a negative impact, one of which is impulse purchases. One of the factors that influence the occurrence of impulse purchases is the buyer's emotions, when consumers buy a product that is not really needed. A person's way of thinking will also determine the activity of buying goods that suit their needs or not. Therefore, companies can promote by utilizing emotional ways in influencing potential buyers, because it is likely that someone when seeing an ad then turns into a purchase decision and will increase sales (Savitri, 2022).

The purpose of this study is to analyze how much the purchasing decisions of students of the Management Study Program of Pakuan University are influenced by the number of brand ambassadors Scarlett Whitening.

2. Literature Review

2.1 Brand

One form of product marketing strategy is by branding, branding is done to introduce products through brands to potential customers. Firmansyah (2019) that a brand is a name, sign, design, or combination of them that is used as the identity of an individual, organization or company on goods and services owned to be distinguished from other service products.

2.1.1 Brand Ambassador

Companies are required to always develop following the times. Various kinds of marketing strategies have emerged, one of which is using brand ambassadors to help promote the products sold, by utilizing the popularity and personality of a brand ambassador who is able to influence consumers and increase consumer desire for a product. Brand ambassadors are individuals or groups selected by the company and then contracted to participate in branding a product or service owned by the company Ainurrofiqin (2021).

Wang & Hariandja (2016), in carrying out marketing activities, the use of public figures in an advertisement should be reviewed using the presenter effect in advertising (VisCAP) model. The VisCAP model proposes four dimensions, which are as follows:

1. Visibility
   Visibility is the fame attached to celebrities who can reflect a product.
2. Credibility
   Credibility includes relevant skills, beliefs and experience.
3. Attraction
   Not only physical, but non-physical appearance that is attractive and can support a product or advertisement.
4. Power
   Power is a charisma emitted by celebrities to be able to influence consumers so that consumers are influenced to use or purchase products.

2.2 Purchase Decision

Purchasing decision is the process of formulating various alternative actions to make a choice on one particular alternative to make a purchase Firmansyah (2019). Purchasing decision is an individual activity that is directly involved in making decisions to buy products offered by sellers (Indrasari, 2019).

Kotler and Keller (2016), there are six indicators in purchasing decisions, namely:

1. Product Selection

Consumers make purchases because the products offered are in accordance with what is needed and it is easy to find the goods needed.

2. Brand Selection
   Consumers actively search for information about brands, because each brand has its own differences and characteristics.
3. Choice of Reseller
   Consumers use the information obtained to determine the choice of dealer to be addressed, the selection of suppliers can be due to factors such as location, price, completeness of products and so on.
4. Number of Purchase
   Consumer decisions buy how much product is needed or wanted, in this case the company must prepare product inventory in accordance with consumer wishes.
5. Time of Purchase
   A situation where consumers decide to buy a product every day, once a week, once a month or maybe once a year.
6. Payment Methods
   When making transactions, consumers can pay with cash, credit or debit card payments though.

Along with the development of technology, it makes it easier for consumers to carry out transaction activities through digital platforms. The emergence of this digital platform not only has a positive impact, but also has a negative impact, one of which is impulsive buying in the form of purchase decisions that are made suddenly and do not require much consideration (Firmansyah, 2019). Impulsive buying is influenced by the buyer's emotions, when consumers buy a product that is not really needed.

H1: The number of Brand Ambassadors positively influences purchasing decisions.

3. Methodology

In this study, the sample of respondent data was students of the Management Study Program, Faculty of Economics and Business, Pakuan University, Class of 2019 – 2022, with a total of 1,590 students. Samples are selected based on the minimum requirement of knowing and having purchased or used Scarlett Whitening products. Sampling in each batch was calculated using the Slovin formula with a significant rate of 10% with a total sample of 100 people. The samples in each batch can be seen in the table below:

Table 41: Sample of Management Students 2019-2022

Generation	Sample	Persentase
2019	22	22%
2020	25	25%
2021	27	27%
2022	26	26%
Total	**100**	**100%**

4. Results and Discussion

4.1 Normality Test

The data normality test in this study used the Kolmogorov-Smirnov test. A data is said to be normal if the significance value > 0.05.

Table 42: Normality Test

One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		100
Normal Parameters[a,b]	Mean	0,0000000
	Std. Deviation	3,54026332
Most Extreme Differences	Absolute	0,068
	Positive	0,046
	Negative	-0,068
Test Statistic		0,068
Asymp. Sig. (2-tailed)		.200[c,d]

Sourch: Data Primer, 2023.

Based on the results of the normality test above, it is known that the significance value of Asymp. Sig. (2-tailed) of 0.200 which means that the significance value is greater than 0.05 (0.200 > 0.05), then the residual value is normally distributed.

4.2 Heterocedasticity Test

The heteroscedasticity test in this study uses the Glejser test, aiming to ensure that the regression model is really the largest of heteroscedasticity. If the significance value is greater than 0.05, heteroscedasticity does not occur.

Table 43: Heterocedasticity Test

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	0,874	1,408		0,620	0,536
		0,079	0,056	0,140	1,395	0,166

Brand Ambassador					

a. Dependent Variable: ABS_RES

Based on the Glejser test above, it is known that the significance value of the brand ambassador is 0.166 which means that the value is greater than 0.05 (0.166 > 0.05). So the brand ambassador variable has no symptoms of heteroscedasticity.

4.3 Linearity Test

This linearity test was conducted to determine the form of the relationship between brand ambassador variables and purchase decision variables. If the significance value of deviation from linearity > 0.05, then there is a linear relationship between the brand ambassador variable and the purchase decision variable.

Table 44: Linearity Test Result

ANOVA Table

			Sum of Squares	df	Mean Square	F	Sig.
Keputusan Pembelian * Brand Ambassador	Between Groups	(Combined)	747,698	16	46,731	3,591	0,000
		Linearity	586,947	1	586,947	45,105	0,000
		Deviation from Linearity	160,751	15	10,717	0,824	0,649
	Within Groups		1080,062	83	13,013		
	Total		1827,760	99			

Source: Data Primer, 2023.

Based on the results of the linearity test above, it is known that the significance value of deviation from linearity is 0.649 which means that the value is greater than 0.05 (0.649 > 0.05). So the brand ambassador variable has a linear relationship with the purchase decision variable.

4.4 Simple Linear Regression

This simple linear regression analysis is used to analyze the influence between brand ambassador variables and purchasing decisions. The simple linear regression analysis formula in this study is as follows:

$$KP = a + b_{BA}$$

Notes:
KP = Keputusan Pembelian (Variabel Y)
a = Konstanta
b = Koefisien Regresi
BA = *Brand Ambassador* (Variabel X)

Table 45: Simple Linear Regression Test Result

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	19,738	2,368		8,334	0,000
	Brand Ambassador	0,645	0,095	0,567	6,809	0,000

a. Dependent Variable: Keputusan Pembelian

Source: Data Primer, Diolah 2023.

Based on the results of the simple linear regression test above, a simple linear regression equation is obtained as follows:

$KP = a + b_{BA}$

$KP = 19{,}738 + 0{,}645_{BA}$

Based on the results of the equation it can be explained that:

1. If the brand ambassador variable (X) is considered zero or not counted, then the purchase decision variable (Y) already exists which is 19,738.
2. If there is an increase in the brand ambassador variable by 1 unit, then the purchase decision variable (Y) will increase by 0.645 units, because the regression value is marked positive, this indicates that the brand ambassador has a positive effect on the purchase decision. This indicates that if there is an increase in the number of brand ambassadors, the purchase decision of Scarlett Whitening products will increase.

4.5 Hypothesis Test

The step used is to compare Fcalculate against Ftable, with the following conditions:

1. If Fcalculate < Ftabel then H0 is accepted and H1 is rejected
2. 2. If Fcalculate > Ftable then H0 is rejected and H1 is accepted

Table 46: F Test Result

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	586,947	1	586,947	46,357	.000[b]
	Residual	1240,813	98	12,661		
	Total	1827,760	99			

a. Dependent Variable: Keputusan Pembelian

b. Predictors: (Constant), Brand Ambassador

Source: Data Primer, Diolah 2023.

Based on the results of the F test above, it is known that Fcalculate is 46.357 with the value of Ftabel is 3.938, so that the value of Fcalculate > Ftable or 46.357 > 3.938, with a significance level of 0.000 < 0.05 then H0 is rejected and H1 is accepted. So the number of brand ambassadors has a significant influence on the purchase decision of Scarlett Whitening products.

4.6 Test Coefficient of Determination (R^2)

The coefficient of determination test is carried out to determine what percentage of the ability of the brand ambassador variable in the regression model can explain changes or variations in the value of purchase decision variables.

Table 47: Test Coefficient of Determination Result

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0,567[a]	0,321	0,314	3,558

a. Predictors: (Constant), Brand Ambassador

Source: Data Primer, 2023.

The table above explains that the magnitude of the correlation value is 0.567, from these results obtained a coefficient of determination (R Square) of 0.321, which contains the understanding that the brand ambassador variable contributes to purchasing decisions by 32.1%, while the remaining 67.9% is influenced by other variables that were not studied in this study.

Based on the results of the analysis that has been done, it is known that the number of brand ambassadors has a significant positive effect on the purchase decision of Scarlett Whitening products for students of the Management Study Program of Pakuan University by looking at the attractiveness and strength given by each brand ambassador. The number of brand ambassadors Scarlett Whitening has different influences due to the characteristics and professions of brand ambassadors who are also diverse. In this study, consumers tend to see the appeal of an attractive and multitalented brand ambassador.

The attraction of a brand ambassador as a communication facility that will attract the attention of consumers so that they are moved to buy marketed products (Andaru et al., 2023). The higher the attractiveness of a brand ambassador, the purchase decision will also increase. After seeing the attractiveness, consumers will see in terms of the strength of brand ambassadors. A brand ambassador becomes a tool or mediator used by companies to represent the brand of a product by branding in the hope of promoting products sold in the hope of influencing consumers to the purchase stage through the reputation of the brand ambassador, as conveyed by Halim et at., (2020) that one of the benefits of using a brand ambassador is to influence fans of a famous artist so that it can increase Sales.

5. Conclusion

Based on the results of research on the influence of the number of brand ambassadors on the purchase decision of Scarlett Whitening products (study on Management Study Program Students of Pakuan University), the following conclusions can be drawn:

The number of brand ambassadors simultaneously affects the purchase decision of Scarlett Whitening products for Management Study Program Students of Pakuan University. The value of the coefficient of determination shows that the brand ambassador variable contributes 32.1% to the purchase decision, while the remaining 67.9% is influenced by other variables that were not studied in this study such as price, product quality, product image, service quality, lifestyle, and many more.

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THE INFLUENCE OF CORPORATE SOCIAL RESPONSIBILITY (CSR), FIXED ASSET INTENSITY AND PROFITABILITY ON TAX AVOIDANCE IN HEALTH SECTOR COMPANIES LISTED ON THE INDONESIA STOCK EXCHANGE 2019–2023 TAHUN 2019–2023

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Abstrak

This study aims to analyze the influence of Corporate Social Responsibility (CSR), fixed asset intensity, and profitability on tax avoidance in health sector companies listed on the Indonesia Stock Exchange (IDX) for the 2019–2023 period. The phenomenon underlying this research is the inconsistency between the dynamics of CSR disclosure, fixed asset intensity, and profitability with corporate tax compliance in this sector. The research method used is quantitative with a purposive sampling technique, resulting in a final sample of 5 companies with a total of 25 panel data observations. Secondary data sourced from annual reports and sustainability reports were analyzed using panel data regression with the Fixed Effect Model (FEM). The results show that partially, CSR and profitability have a significant influence on tax avoidance, while fixed asset intensity does not have a significant influence. The direction of the influence of CSR and profitability indicates that the higher their levels, the higher the practice of tax avoidance. Simultaneously, all three independent variables have a significant influence.

Kata Kunci: *Tax Avoidance, Corporate Social Responsibility, Fixed Asset Intensity, Profitability, Health Sector*

1. INTRODUCTION

Tax plays a crucial role as the main source of income in Indonesia, used to finance national development, from infrastructure to essential public services such as health and education. The significant contribution of the tax sector is evident from the continuously increasing revenue realization each year, which confirms the position of tax as a vital element in supporting public welfare and national economic stability. However, there is a fundamental conflict of interest between the government, which seeks to optimize tax revenue, and companies, which tend to minimize their tax burden for efficiency. This conflict encourages companies to engage in tax avoidance practices, which are legal efforts to reduce the amount of tax owed by utilizing loopholes in applicable regulations. Tax avoidance practices are influenced by various internal company factors. One of them is Corporate Social Responsibility (CSR), where the costs incurred for social activities can encourage companies to achieve tax efficiency as compensation. This phenomenon is seen in data from health sector companies for the 2019-2023 period, where an increase in the average CSR disclosure in 2022 was actually followed by a decrease in the Effective Tax Rate (ETR), indicating higher tax avoidance practices. Another factor is fixed asset intensity, where depreciation expense

can theoretically reduce taxable income. However, the data shows an inconsistency: in the 2021-2022 period, a decrease in fixed asset intensity should have increased the ETR, but the ETR actually decreased drastically. In addition, high profitability is also a major driver, because the greater the profit earned, the greater the incentive to conduct aggressive tax planning to maintain that profit. The health sector was chosen as the object of research due to its strategic role for public welfare and the complexity of its operational and tax regulations, including various fiscal incentives from the government. The existence of various phenomena and inconsistencies between theory and empirical data in this sector indicates a research gap that is interesting to study further. Therefore, this study aims to analyze the influence of Corporate Social Responsibility (CSR), fixed asset intensity, and profitability on tax avoidance practices in health sector companies listed on the Indonesia Stock Exchange for the 2019–2023 period. The results of this study are expected to provide academic contributions and practical insights for companies and tax regulators in understanding the dynamics of tax compliance in the health sector.

2. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

2.1 The Influence of Corporate Social Responsibility (CSR) on Tax Avoidance

Corporate Social Responsibility (CSR) is a company's commitment to participate in sustainable economic development to improve the quality of life and the environment. However, in practice, costs incurred for CSR can be accounted for as a reduction in taxable income. This creates an opportunity for companies to use CSR as a strategic tool to reduce their tax burden. Research by Susanto & Veronica (2022) found that CSR can play a dual role, both as a tax reducer and as a deterrent to the negative impact on company image due to aggressive tax practices.

H_1: Corporate Social Responsibility (CSR) has an influence on tax avoidance in health sector companies listed on the Indonesia Stock Exchange in 2019-2023.

2.2 The Influence of Fixed Asset Intensity on Tax Avoidance

Fixed asset intensity reflects the proportion of a company's investment in long-term assets such as property and equipment. High investment in fixed assets will result in significant depreciation expense in financial statements. In tax regulations, depreciation expense is a non-cash expense that can be a tax-deductible item. Therefore, companies with high fixed asset intensity have a greater opportunity to reduce their tax liabilities through the allocation of these depreciation costs. This is supported by research by Yulyanti & Abbas (2022) and Prapitasari & Safrida (2019) which shows that fixed asset intensity has a positive effect on tax avoidance actions.

H_2: Fixed Asset Intensity has an influence on tax avoidance in health sector companies listed on the Indonesia Stock Exchange in 2019-2023.

2.3 The Influence of Profitability on Tax Avoidance

Return on Asset (ROA) is the company's ability to generate profit, which is directly related to the amount of tax burden that must be borne. The higher the profit earned, the greater the potential tax to be paid, thus encouraging management to carry out tax avoidance to reduce this burden. This relationship is supported by various previous studies, such as

those conducted by Rachmat Sulaeman (2021) and Alvionita Br. Kaban (2024), who found that profitability has a significant influence on tax avoidance practices.

H_3: Profitability has an influence on tax avoidance in health sector companies listed on the Indonesia Stock Exchange in 2019-2023.

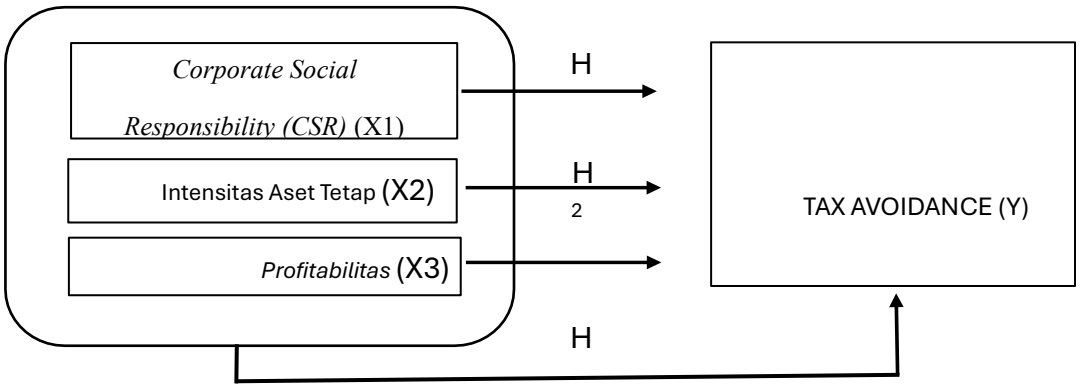
2.4 The Simultaneous Influence of CSR, Fixed Asset Intensity, and Profitability on Tax Avoidance

Corporate tax decisions are not influenced by a single factor, but are the result of the interaction of various strategies and internal conditions. The incentive to compensate for CSR costs , the opportunity to utilize depreciation expense from fixed assets , and the incentive to protect high profits are factors that collectively shape corporate tax policy. The interaction between social commitment, asset structure, and financial performance together determines the extent to which companies will engage in tax avoidance practices. Therefore, it can be assumed that these three independent variables simultaneously have a significant influence on tax avoidance.

H_4:CSR, Fixed Asset Intensity, and Profitability simultaneously have an influence on tax avoidance in health sector companies listed on the Indonesia Stock Exchange in 2019-2023.

Based on the explanation above, the author creates a conceptual framework with three independent variables, namely CSR, Fixed Asset Intensity, and Profitability and one dependent variable, namely tax avoidance.

Berikut merupakan gambar diagram berfikir.



Gambar 1. Konstelasi Penelitian

3. RESEARCH METHODS

This research uses a verificative research type with a quantitative approach, which aims to test hypotheses regarding the influence of Corporate Social Responsibility (CSR), fixed asset intensity, and profitability on tax avoidance. The population in this study is 34 health sector companies listed on the Indonesia Stock Exchange (IDX) during the 2019–2023 period. Sampling was carried out using the purposive sampling method based on a series of specific criteria. These criteria include: companies operating in the health sector and listed on the IDX for the full period 2019-2023 , companies that consistently publish annual

financial reports and sustainability reports and provide the necessary data for research variables , companies not delisted from the exchange during the observation period , and companies not experiencing pre-tax losses (having positive pre-tax profit) to enable the calculation of the Effective Tax Rate (ETR). Based on this selection process, a final sample of 5 companies was obtained with a total of 25 panel data observations. This research uses quantitative secondary data obtained through documentation techniques from published annual reports and sustainability reports.

In this study, the independent variables used are Corporate Social Responsibility (CSR), Fixed Asset Intensity, and Profitability. Meanwhile, the dependent variable is Effective Tax Rate (ETR). The operationalization of variables in this study is summarized in the following table:

Tabel 1. Operasional variable

Variabel	Indikator	Ukuran	Skala
Corporate Social Responbility Index (CSR)	Corporate Social Responsibility Disclosure Index	$\frac{\sum Xi}{n}$	Rasio
Fixed Asset Intensity	Fixed Asset Intensity	$\frac{Total\ Fixed\ Assets}{Total\ Asset}\ X\ 100$	Rasio
Profitability	*Return on Asset* (ROA)	$\frac{Profit\ After\ Tax}{Total\ Aotal\ Assets}\ X\ 100$	Rasio

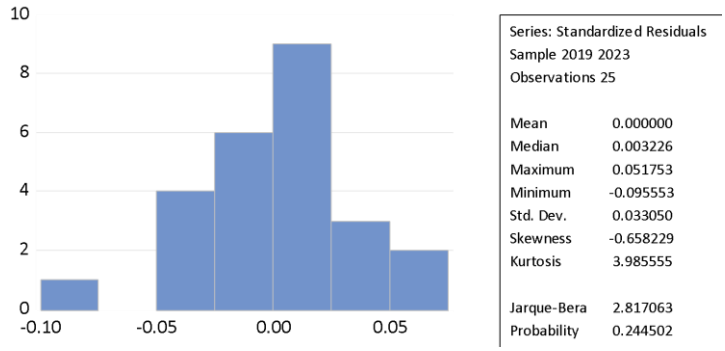
4. RESULTS AND DISCUSSION

4.1 Best Regression Model Section

To determine the most appropriate panel data regression model, a series of statistical tests were performed. Based on the Chow Test results, the Cross-section Chi-square probability value was 0.0254, which is smaller than the significance level of 0.05, so it can be concluded that the Fixed Effect Model (FEM) is more appropriate to use than the Common Effect Model (CEM). This test was further strengthened by the Hausman Test results, which showed a Cross-section random probability value of 0.0304, which is also less than 0.05, confirming that FEM is more suitable for this research than the Random Effect Model (REM). Therefore, based on these two consistent test results, the model chosen and used for analysis in this study is the Fixed Effect Model (FEM) for panel data.

4.2 Normality Test

The data normality test in this study identifies the presence or probability of Jarque-Bera. Data is normally distributed if the probability value is more than 0.05. The following are the results of the normality test processed using Eviews 12:



Picture 2. Normality Test

The Jarque-Bera value is 0.244502. Since this value is greater than the significance level of 0.05, it can be concluded that the regression model residuals in this study are normally distributed and have met the normality assumption.

4.3 Multicollinearity Test

Tabel 2. Multicollinearity Test

	CSR	CI	ROA
CSR	1.000000	-0.021361	-0.149882
CI	-0.021361	1.000000	-0.142687
ROA	-0.149882	-0.142687	1.000000

Data processed with Eviews 12, 2025

Based on the table above, it can be seen that all correlation coefficient values between independent variables are below the threshold of 0.80. Thus, it can be concluded that the regression model in this study does not have multicollinearity problems.

4.4 Heteroscedasticity Test

Tabel 3. Heteroscedasticity Test

Dependent Variable: ABS(RESID)
Method: Panel Least Squares
Date: 07/03/25 Time: 16:25
Sample: 2019 2023
Periods included: 5
Cross-sections included: 5
Total panel (balanced) observations: 25

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.011880	0.068108	-0.174426	0.8636
CSR	0.208078	0.165623	1.256334	0.2260
CI	0.007172	0.203522	0.035240	0.9723
ROA	0.032223	0.133532	0.241314	0.8122

Data processed with Eviews 12, 2025

Based on the table above, it can be concluded that this regression model does not contain heteroscedasticity problems. The test results show that the probability value for each independent variable is greater than the significance level of 0.05; CSR (0.2260), CI (0.9723), and ROA (0.8122). Since all these probability values are above 0.05, the homoscedasticity assumption is met.

4.5 Autocorrelation Test

Table 4. Autocorrelation Test

R-squared	0.437489	Mean dependent var	0.232143
Adjusted R-squared	0.109358	S.D. dependent var	0.043559
S.E. of regression	0.041108	Akaike info criterion	-3.256043
Sum squared resid	0.020279	Schwarz criterion	-2.857750
Log likelihood	40.56043	Hannan-Quinn criter.	-3.178292
F-statistic	1.333275	Durbin-Watson stat	1.674413
Prob(F-statistic)	0.315387		

Data processed with Eviews 12, 2025

The Durbin-Watson (DW) value is 1.674413. This value is then compared to the critical value from the Durbin-Watson table at a 5% significance level, where the upper bound (dU) is 1.66. According to the criteria, the model is considered free from autocorrelation if the DW value is between dU and (4-dU). Since the DW value (1.674) is greater than dU (1.66) and less than (4-1.66 = 2.34), it can be concluded that there is no autocorrelation problem in this regression model.

4.6 T-Test

Table 5. Uji T

Dependent Variable: ETR
Method: Panel Least Squares
Date: 07/03/25 Time: 16:27
Sample: 2019 2023
Periods included: 5
Cross-sections included: 5
Total panel (balanced) observations: 25

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.354772	0.126277	2.809472	0.0121
CSR	-0.690048	0.307077	-2.247148	0.0382
CI	0.165655	0.377345	0.439002	0.6662
ROA	-0.533228	0.247579	-2.153772	0.0459

Data processed with Eviews 12, 2025

Based on the results in the table above, the hypothesis testing can be elaborated as follows:

H_1: The Influence of Corporate Social Responsibility (CSR) on Tax Avoidance

The results of the first hypothesis test (H1) for the CSR variable obtained a t-Statistic value of -2.247148 and a probability value of 0.0382. Since the probability value (0.0382) is smaller than the significance level of 0.05, H1 is accepted. This indicates that Corporate Social Responsibility (CSR) has a significant influence on tax avoidance. The negative coefficient direction indicates that the higher the CSR disclosure, the higher the tax avoidance practices tend to be.

H_2: The Influence of Fixed Asset Intensity (CI) on Tax Avoidance

The second hypothesis test (H2) for the Fixed Asset Intensity (CI) variable shows a t-Statistic value of 0.439002 with a probability value of 0.6662. Since the probability value (0.6662) is greater than the significance level of 0.05, H2 is rejected. Thus, it can be

concluded that Fixed Asset Intensity does not have a significant influence on tax avoidance in this study.

H_3; The Influence of Profitability (ROA) on Tax Avoidance

For the third hypothesis (H3), the Profitability (ROA) variable obtained a t-Statistic value of -2.153772 and a probability value of 0.0459. Since the probability value (0.0459) is smaller than the significance level of 0.05, H3 is accepted. These results prove that Profitability has a significant influence on tax avoidance. The negative coefficient indicates that companies with higher profitability tend to engage in higher tax avoidance.

4.7 F-Test (Simultaneous)

Table 6. F-Test (Simultaneous

R-squared	0.552090
Adjusted R-squared	0.367656
S.E. of regression	0.039269
Sum squared resid	0.026215
Log likelihood	50.28025
F-statistic	2.993433
Prob(F-statistic)	0.030635

Data processed with Eviews 12, 2025

Based on the test results in the table above, the F-statistic value is 2.993433 with a Prob(F-statistic) value of 0.030635. Since the probability value (0.030635) is smaller than the significance level of 0.05, H4 is accepted. This proves that the independent variables (Corporate Social Responsibility, Fixed Asset Intensity, and Profitability) jointly or simultaneously have a significant influence on the dependent variable (Tax Avoidance).

4.8 Discussion

4.8.1 The Influence of Corporate Social Responsibility (CSR) on Tax Avoidance

The results of this study prove that CSR has a significant influence on tax avoidance, thus H1 is accepted. The negative coefficient direction indicates that the higher the level of CSR disclosure, the lower the Effective Tax Rate (ETR) value, which indicates higher tax avoidance practices. This finding supports legitimacy theory, where companies use CSR disclosure as a strategic tool to build a positive image in the eyes of the public and stakeholders. By having a reputation as a socially responsible company, companies can "compensate" or divert attention from aggressive tax practices.

In addition, costs incurred for CSR activities can be a reduction in taxable income, which directly provides an opportunity to achieve tax efficiency. This phenomenon is seen in the research data, where the trend of CSR disclosure continues to increase, but it is not followed by a proportional increase in ETR; in fact, ETR tends to decrease. These results are consistent with the majority of previous studies, such as those conducted by Susanto & Veronica (2022) and Yutaro Zoebar (2020), which also found that CSR has a significant influence on corporate tax practices.

4.8.2 The Influence of Fixed Asset Intensity on Tax Avoidance

Fixed Asset Intensity does not have a significant influence on tax avoidance, so H2 is rejected. Theoretically, companies with a high proportion of fixed assets are expected to be able to utilize depreciation expense to reduce taxable income. However, this finding shows that in the health sector companies that were sampled, this mechanism is not a major determining factor in tax avoidance strategies. This is strongly suspected because the characteristics of the health industry's operations are more dominated by current assets than large-scale fixed assets. Pharmaceutical and healthcare companies rely heavily on the turnover of drug inventories, accounts receivable, and cash for daily operational activities.

Therefore, their tax planning strategies are likely to focus more on working capital management or other more complex schemes, so the role of depreciation from fixed assets becomes less significant. This inconsistency is also seen in the data, where a small decrease in the average fixed asset intensity was actually followed by a deeper decrease in ETR, indicating other more influential factors. These results are consistent with the findings of Shafira Kumala (2023) and Nita Enggelina (2024) who also did not find a significant influence from this variable.

4.8.3 The Influence of Profitability on Tax Avoidance

The research results prove that Profitability (ROA) has a significant influence on tax avoidance, thus H3 is accepted. The negative coefficient direction indicates that the higher the company's profitability, the more aggressive its tax avoidance practices. High profits create a large potential tax burden, so management has strong incentives to undertake aggressive tax planning to minimize tax payments and maintain net profit. Highly profitable companies also tend to have greater resources to access tax consultant services and implement sophisticated tax avoidance strategies. This is confirmed by data for the 2021-2022 period, where an increase in average ROA was actually followed by a decrease in average ETR, which is strong justification for this research. These findings strengthen the results of the majority of previous studies by Uliya Utami (2024) and Rachmat Sulaeman (2021) who also concluded that profitability is a major driver of tax avoidance practices.

4.8.4 The Influence of Corporate Social Responsibility, Fixed Asset Intensity, and Profitability on Tax Avoidance

Based on the F-test results, it was found that the three independent variables jointly have a significant influence on tax avoidance, thus H4 is accepted. The Adjusted R-squared value of 0.367656 indicates that 36.8% of the variation in tax avoidance can be explained by the combination of CSR, fixed asset intensity, and profitability. The significance of the overall model illustrates a complex company strategy. Although fixed asset intensity individually has no influence, the combination of tax efficiency incentives from high profitability (as the main motive) and the use of CSR as a strategic tool together is strong enough to create a detectable influence on tax avoidance practices. This confirms that corporate tax decisions are not the result of a single factor, but rather an interaction of various motives, including financial performance and company image management.

5. CONCLUSION

Based on the data and analysis that has been outlined previously, Corporate Social Responsibility (CSR) is proven to have a significant influence on Tax Avoidance in health

sector companies listed on the Indonesia Stock Exchange for the 2019-2023 period. The direction of the influence shows that the higher the CSR disclosure, the higher the tax avoidance practices carried out by the company. Fixed asset intensity is not proven to have a significant influence, and this is emphasized due to the operational characteristics of the health industry, which relies more dominantly on current assets (such as drug inventory and receivables) compared to large-scale fixed assets, so the role of depreciation as a tax planning loophole becomes less relevant. Profitability (ROA) is proven to have a significant influence on Tax Avoidance in health sector companies listed on the Indonesia Stock Exchange for the 2019-2023 period. The direction of the influence shows that the higher the profitability, the higher the tax avoidance practices. Corporate Social Responsibility (CSR), Fixed Asset Intensity, and Profitability together (simultaneously) are proven to have a significant influence on Tax Avoidance in health sector companies listed on the Indonesia Stock Exchange during the 2019-2023 period.

6. SUGGESTIONS

Based on the research findings, several practical suggestions are proposed. For company management, considering that high profitability drives tax avoidance, it is suggested to substantively integrate CSR commitments with ethical governance practices, not just as a strategic tool to build an image. For the government and tax authorities, these findings have two important implications. First, supervision and audits need to be specifically increased for highly profitable companies. Second, the insignificance of the influence of fixed asset intensity indicates that tax examinations should not only focus on depreciation but should be broadened to detect other more complex tax planning schemes. For investors, it is suggested to be more critical and not only rely on CSR reports as a proxy for company ethics, but also to consider tax transparency. For future research, it is suggested to develop models by testing other relevant variables such as corporate governance mechanisms. In addition, expanding the research to other industrial sectors or adding macroeconomic factors can provide a more comprehensive picture of the dynamics influencing tax avoidance practices in Indonesia.

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THE INFLUENCE OF PROMOTION AND PRODUCT QUALITY ON THE PURCHASING DECISIONS OF SCREAMOUS BOGOR DISTRO CONSUMERS

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Abstract

This research aims to determine the Influence of promotion and product quality on the purchasing decisions of Screamous Bogor distro consumers. This research is a quantitative study using descriptive analysis methods. The data collection techniques were obtained through observation and questionnaires. The population in this study consists of 100 screamous consumers, with the sampling method being a saturated or census sampling. The data analysis methods used are descriptive analysis, classical assumption tests, multiple linear regression, T-test, F-test, and the coefficient of determination. Based on the results of the descriptive analysis, the promotion condition falls into the very good or very high category with an average total score of 84.25%. The condition of product quality falls into the very good or very high category with an average total score of 84.4%. The condition of the purchase decision is in the very good or very high category with an average score of 84.25%. The results of the multiple regression test obtained a constant coefficient value of 13.070 in a positive form, which proves that the three variables, namely (X1) promotion and (X2) product quality, have an influence on (Y) purchasing decisions. Thus, the hypothesis stating that the three variables have a positive influence and can be accepted.

Keywords: Promotion, Product Quality, Purchase Decision

1. Introduction

Fashion is something that is very important and has a big influence in the current era of globalization, in this modern era, there will definitely be significant developments and changes because there will definitely be a lot of people following fashion trends, especially among teenagers. The development of the fashion world has become an important thing for various groups, both young and old. Recently, the promising business in Indonesia is the world of fashion. Fashion is the primary reason consumers visit malls and boutiques, offering clothing for women, men, and children, as well as cosmetics and other accessories. Java, particularly Bogor, is renowned for its rapidly evolving fashion trends. Anggia Petrisa Wintar, (2019).

Screamous is a retail company operating in the clothing industry that was founded on May 29, 2004. The company is registered under the name of CV. Rotasindo and carries the brand name Screamous. Screamous's principle is to provide a differentiated choice in the fashion industry. Their target market are teenagers and anyone who is open-minded, independent, and part of a modern society. They strive to incorporate every aspect of human culture and behavior into their products.

Initially, this company set up a shop at Cipaganti Street No. 56 for about two years, then to get closer to the market and a more strategic location in early 2006, this company has now moved to Trunoyo Street No. 23. Until now, they have two official stores in Bandung. In addition to the official store, they have branches in major cities in Indonesia and collaborate

with other companies such as (Distro) located in these major cities.

Bogor is Screamous' choice to open the store to market the products more widely. Located at Lodaya Street II No. 6, Bogor Tengah District, Bogor. Bogor itself has several distro who dominates in the fashion field. Screamous Distro is spread across various cities such as Bogor, Bekasi, and Surabaya. Consumers can also shop online through the website www.screamous.com.

So, based on the various phenomena and problems that have been described above, the researcher is interested in conducting research entitled **"The Influence of Promotion and Product Quality on the Purchasing Decisions of Screamous Bogor Distro Consumers"**.

2. Literature review and hypotheses development

2.1 Marketing

According to (Sudaryono, 2022) marketing is a management process that seeks to maximize profits (returns) for shareholders in establishing relationships with key customers (valued customers) and create competitive advantages. According to (Kotler and Keller, 2021) marketing management is the art and science of attracting, retaining, and growing customers by selecting target markets and creating, delivering, and communicating superior customer value. According to (Tjiptono and Diana, 2020) marketing is the process of creating, distributing, promoting, and pricing goods, services and ideas to facilitate satisfying exchange relationships with customers and to build and maintain positive relationships with stakeholders in a dynamic environment. According to (Laksana, 2019), marketing is the meeting of sellers and buyers to conduct transactions for goods or services. Therefore, the concept of a market no longer refers to a location but rather to the activity or meeting of sellers and buyers to offer a product to consumers. Meanwhile According to (Sunyoto, 2019) marketing is a human activity that aims to satisfy the needs and desires of customers through an exchange process and parties who have an interest in the company.

From the opinions of the experts above, it can be concluded that marketing is one of the main activities that need to be carried out by companies, whether goods or service companies, in an effort to maintain the survival of their business.

2.2 Promotion

According to Purba (2019), promotion is an effort made by a company to influence consumers to buy the products they produce or to convey news about products by communicating with listeners in a persuasive manner. According to Tjiptono (2017), promotion is a form of marketing communication in the form of marketing activities that seek to disseminate information, influence or persuade and remind the market of the company or its products so that they are willing to accept, buy and be loyal to the products offered by the company concerned. Meanwhile, according to Rheza (2019), promotion is an effort to provide or introduce products or services to attract customers who have the potential to use the product or service.

From these three definitions according to experts, it can be concluded that promotion is a company's effort to communicate with consumers with the aim of influencing their interest in the products or services offered. Promotion aims to disseminate information, persuade, and remind consumers to accept, purchase, and remain loyal to a particular product or service. Essentially, promotion is a marketing strategy to introduce a product or service and attract potential customers.

2.3 Product Quality

According to Amilia (2019) product quality is the ability of a product to carry out its functions, this ability includes durability, reliability, accuracy produced, ease of operation and repair and other valuable attributes of the product as a whole. According to Purnama (2021), product quality is the ability of a product to carry out its functions, including durability, reliability, accuracy, ease of operation and repair, and other valuable attributes. Meanwhile According to Chandra (2019) Quality is a dynamic condition related to products, services, human resources, processes, and the environment that meets or exceeds expectations.

Based on the description above, product quality is the ability of a product to perform its function optimally, including aspects of durability, reliability, accuracy, ease of operation, and ease of repair. In addition, other valuable attributes such as design, additional features, and aesthetics are also an important part of the overall product quality. Quality is not only limited to the basic function of the product, but also involves dynamic factors such as service, human resources, production processes, and a supporting environment. From the definition above, it can be concluded that product quality is the physical condition, function and nature of a product, whether goods or services, based on the level of quality expected by consumers or customers with the aim of meeting and satisfying the needs of consumers or customers.

2.4 Purchase decision

According to Gunawa (2022), a purchasing decision is defined as an activity, action, and psychological process undertaken by consumers before making a final decision to purchase a product or service with the aim of fulfilling the needs and desires of individuals, groups, and organizations. According to Putra (2022), a purchasing decision is a decision-making process that begins with identifying a problem, then evaluating it, and deciding on the product that best suits the needs. Meanwhile, according to Kotler (2019), a consumer purchasing decision is a decision to purchase the most preferred brand. And according to Warsito et al (2022),that the purchasing decision is the stage when the consumer has a choice and is ready to make a purchase.

Based on the definitions provided by these experts, it can be concluded that a purchasing decision is an action taken by consumers before deciding to purchase a product, good, or service. This process begins with identifying the problem, then evaluating it, and then deciding which product, good, or service best meets their needs. This allows consumers to decide whether or not to make a purchase.

3 Research methods

The type of research used in this study is quantitative with a qualitative approach, which aims to prove and analyze the causal relationships of the variables studied by testing hypotheses, which generally explain phenomena in the form of relationships between variables. The research technique used is quantitative statistics.

Based on the title of this research, the object of the research is Promotion and Product Quality on Consumer Purchasing Decisions of Screamous Bogor Distro. Promotion is the independent variable (X1), Product Quality is the variable (X2), and Purchasing Decision is the dependent variable (Y).

In this study, the unit of analysis was Screamous consumers. The research location was

Bogor.

The type of data examined in this study is quantitative data, in the form of numbers or figures, which can be processed numerically. The data sources used in this study are two data sources, namely primary and secondary data. Data processing is carried out by collecting, processing, and presenting it in tabular form with multiple linear regression analysis, hypothesis testing and coefficient of determination through research instrument tests such as validity and reliability tests, classical assumption tests, descriptive analysis, t-test, f-test, and R2 test.

Meanwhile, the activities in data analysis are grouping data based on variables and types of respondents, tabulating data based on variables for all respondents, presenting data for each variable studied, and performing calculations to test the hypotheses that have been proposed.

4 Results and discussion

4.1 Respondent Characteristics

In this study, the author used a questionnaire with the help of Google Form by distributing Screamous to consumers to obtain the necessary data, involving 100 respondents as a research sample. The respondent descriptions used in this study include gender and age.

4.2 Descriptive Analysis Table of Descriptive Analysis Results

Variables	Average	Notes
Promotion	84,25%.	Very good
Product Quality	84,4%.	Very good
Purchase Decision	84,25%.	Very good

Based on these results, it can be concluded that social media promotion and purchasing decisions are good but need to improve things that are still lacking based on respondents' assessments.

4.3 Instrument Test 1

4.3.1 Validity test

a. Promotion Validity Test

Variables	Statement Items	Calculated-R	R-Table	Information
Promised (X1)	Question 1	676	0,361	Valid
	Question 2	800	0,361	Valid

	Question 3	399	0,361	Valid
	Question 4	564	0,361	Valid
	Question 5	487	0,361	Valid
	Question 6	461	0,361	Valid

Based on the results of the table above, the statement of the promotion variable shows that all statements on work discipline, totaling 6 statements, are said to be valid, because the calculated r value is > r table.

b. Product Quality Validity Test

Variables	**Statement Items**	**Calculated-R**	**R-Table**	**Information**
Product Quality (X2)	Question 1	551	0,361	Valid
	Question 2	537	0,361	Valid
	Question 3	643	0,361	Valid
	Question 4	630	0,361	Valid
	Question 5	641	0,361	Valid
	Question 6	645	0,361	Valid
	Question 7	652	0,361	Valid
	Question 8	599	0,361	Valid
	Question 9	550	0,361	Valid
	Question 10	415	0,361	Valid
	Question 11	406	0,361	Valid
	Question 12	653	0,361	Valid
	Question 13	554	0,361	Valid
	Question 14	551	0,361	Valid
	Question 15	537	0,361	Valid

Based on the results of the table above, the product quality variable statement shows

that all 15 statements on work discipline are valid, because the calculated r value is > r table.

c. Test the Validity of Purchasing Decisions

Variables	Statement Items	Calculated-R	R-Table	Information
Purchase Decision (Y)	Question 1	388	0,361	Valid
	Question 2	427	0,361	Valid
	Question 3	665	0,361	Valid
	Question 4	678	0,361	Valid
	Question 5	694	0,361	Valid
	Question 6	740	0,361	Valid
	Question 7	672	0,361	Valid
	Question 8	722	0,361	Valid
	Question 9	643	0,361	Valid
	Question 10	408	0,361	Valid

Based on the results of the table above, the statement of the purchasing decision variable shows that all 10 statements on work discipline are said to be valid, because the calculated r value is > r table.

4.3.2 Reliability Test

Questionnaire Items	Conclusion Criteria			Information
	Cronbach Alpha	R table	N of items	
Promotion	0,771	0,771 > 0,60	6	Reliable
Product Quality	0,715	0,715 > 0,60	15	Reliable
Decision Purchase	0,753	0,753 > 0,60	10	Reliable

The results of the reliability test on the social media promotion and purchasing

decision variables show a Cronbach Alpha (α) value > 0.60 so that it can be declared reliable because it has a Cronbach Alpha (α) value > 0.60.

4.4 Classical Assumption Test

4.4.1 Normality Test

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
VAR00001	.182	100	.360	.930	100	.000
VAR00002	.072	100	.200*	.981	100	.168
VAR00003	.161	100	.489	.957	100	.003

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Based on the results of the normality statistical test with Kolmogorov Smirnov above, it shows a significant value for the promotion variable of 0.360, the product quality variable has a significant value of 0.200 and the significant value of the purchasing decision variable is 0.489 which means it is greater than 0.189. so that the H0 provision is accepted and it is concluded that the normality assumption is met.

4.4.2 Linearity Test

ANOVA TABLE

			Sum of Squares	df	Mean Square	F	Sig.
purchase decision * promotion	Between Groups	(Combined)	86.856	12	7.238	.569	.862
		Linearity	1.554	1	1.554	.122	.728
		Deviation from Linearity	85.303	11	7.755	.609	.816
	Within Groups		1107.504	87	12.730		
	Total		1194.360	99			

Based on the results of the linearity test presented in the ANOVA table, the

relationship between the promotion variables, product quality, and purchasing decisions can be considered linear. In the linearity test, the Sig value**.** for Linearity is 0.728, which is greater than 0.05, indicating that the relationship between the three variables is linear. Meanwhile, the Sig value**.** The Deviation from Linearity value is 0.816, which is also greater than 0.05, indicating no significant deviation from the linear relationship. Thus, it can be concluded that there is a significant linear relationship between the promotion variables, product quality, and purchasing decisions.

4.4.3 Multiple Linear Regression Test

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	13.070	3.820		3.421	.614
	Promotion	.523	.118	.399	6.521	.726
	product quality	.628	.071	.796	8.817	.688

a. Dependent Variable: purchasing decision

The table above shows that the constant coefficient value is 3.576, the social media promotion coefficient is 0.907. So the regression equation is Y = 3.576 + 0.907 X. Based on the equation above, the constant value is 3.576. Systematically, this constant value states that when social media promotion is 0, the purchasing decision has a value of 3.576.

4.5 Hypothesis Test

4.5.1 Partial Test (T Test)

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	13.070	3.820		3.421	.614

	Promotion	.523	.118	.399	6.521	.726
	Product Quality	.628	.071	.796	8.817	.688
a. Dependent Variable: purchasing decision						

a. The value of the t-test results between Promotion and Purchasing Decisions produces a calculated t of 6.521, while the t table is 0.676 and a significance value of 0.726 which is greater than α (0.05). This means that Ha is accepted and H0 is rejected, thus the Promotion variable has a significant influence on Discreet Purchasing Decisions.
b. The value of the t-test results between Product Quality and Purchasing Decisions produces a calculated t of 8.817, while the t table is 0.676 and a significance value of 0.688 which is greater than α (0.05). This means that Ha is accepted and H0 is rejected, thus the Product Quality variable has a significant influence on discreet purchasing decisions.

4.5.2 Simultaneous Test (F Test)

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	532.228	2	266.114	38.985	.563b
	Residual	662.132	97	6.826		
	Total	1194.360	99			
a. Dependent Variable: purchasing decision						
b. Predictors: (Constant), product quality, promotion						

It is known that the significance value for the (simultaneous) influence of Promotion and Product Quality on Purchasing Decisions is 0.018 < 0.05 and the calculated F value is 67.811 > F table 38.985. So it can be concluded that H0 is rejected and Ha is accepted, which means the regression model

This can be used to examine the Promotion and Product Quality variables, which simultaneously influence Purchasing Decisions. Thus, it can be said that the Promotion and Product Quality variables simultaneously have a significant influence on Purchasing Decisions.

4.6 Coefficient of Determination

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.668[a]	.446	.434	2.613
a. Predictors: (Constant), product quality, promotion				

Based on the table above, the R-Square value of 0.446 indicates that the Promotion and Product Quality variables influence the Purchase Decision variable by 43.4%. This means that Promotion at Screamous and Product Quality have a proportion of influence on the Purchase Decision at Screamous of 43.4%, while the remaining 56.6% is influenced by other variables not examined in this study.

4.7 The Influence of Promotion and Product Quality on Screamous Purchasing Decisions

Based on the results of the Simultan test, it was found that the promotion and product quality variables simultaneously influenced purchasing decisions. The results of this study showed a calculated F value of 67,811 with a significance value of 0.018, which is below 0.05. This means that Ha is accepted and Ho is rejected, meaning that statistically, promotion and product quality in this study simultaneously have a significant effect on purchasing decisions. The better the promotion and the better the product quality, the more it will increase purchases through purchasing decisions made by consumers at the Screamous distro. Thus, it can be said that the promotion and product quality variables simultaneously have a significant effect on purchasing decisions. This is in line with research conducted by Gandhy & Hairuddin, (2018) on the influence of purchasing decisions can be influenced by product differentiation, evidenced by research results showing that purchasing decisions can be influenced by several factors. First, promotions have been shown to have a positive impact on consumer purchasing decisions. Various promotional strategies carried out, such as exhibitions, word of mouth, the use of social media, and news, can increase purchasing decisions. Second, product differentiation is the most dominant factor in influencing purchasing decisions. Third, premium prices also play an important role in purchasing decisions. This is proven through a partial T-test, where for the promotion variable, the T-count of 3.576 is greater than the T-table of 1.985 at a significance level of 5%, and for product differentiation, the T-count of 5.482 is also greater than the T-table of 1.985, which indicates a significant influence on purchasing decisions. This research is strengthened by the study of Gandhy & Hairuddin, (2018) entitled "Analysis of Promotion and Product Differentiation: The Influence of Jukajo on Consumer Purchasing Decisions", which states that purchasing decisions are influenced by factors such as promotions, product differentiation, and premium prices.

Based on the description above, promotion and product quality simultaneously have a significant influence on purchasing decisions at the Screamous distribution center. This research finding aligns with research by Astuti & Abdullah (2024), which states that promotion and product quality variables significantly influence purchasing decisions. Promotion and product quality are the main factors influencing consumer purchasing decisions at the Screamous distribution center. Effective promotions, such as discounts and loyalty programs, can attract consumer attention, while maintaining product quality builds trust and encourages loyalty and repeat purchases. To achieve company goals, it is important to motivate individual employees, as their maximum contribution to product promotion and quality maintenance will directly influence consumer purchasing decisions.

5. Conclusion

Based on the results of calculations and data analysis that have been carried out in the research, the following conclusions can be drawn.

1. Based on the research results, there is a positive influence between promotions on purchasing decisions, this can be seen from the results of the analysis that t count > t table (6.521>0.676), meaning that Ho is rejected and Ha is accepted, which means that promotions have an influence on purchasing decisions made by consumers of the Screamous distro.
2. There is a positive influence between product quality on purchasing decisions at the Scramous distro, this can be seen from the results of the analysis that t count > t table (8.817>0.676), meaning that Ho is rejected and Ha is accepted, which means that product quality has an influence on purchasing decisions made by consumers of the Scramous distro.
3. Based on the results of simultaneous testing (F test), it can be seen that promotion and product quality have a simultaneous influence on purchasing decisions at dsitro screamous. This is proven by the results of simultaneous testing calculations (F test) where the calculated F value > F table, namely 67.811 > 38.985 or the sig value of F (0.018) < α = 0.05.
4. There is a positive influence between promotion and product quality on purchasing decisions at dsitro screamou, this can be seen from the results of the analysis of the coefficient of determination of the independent variables on the related variables showing that the R value of r2 = 0.446 means that the influence of promotion and product quality on purchasing decisions has a contribution (R) of 43.4% and the rest is influenced by other variables not included in this model.

6. Suggestion

Based on the discussion and conclusions that have been outlined previously in this research, there are several suggestions that the researcher can provide, namely as follows:

1. This research is expected to be used as a consideration for screamous distributors regarding the importance of promotion and product quality in determining consumer purchasing decisions.
2. Maintaining and Improving Promotion Quality, considering the significant positive influence between promotions on purchasing decisions, Distro Screamous needs to ensure that promotional activities remain routine and attractive to consumers. Offering various types of promotions, such as discounts and loyalty programs, as well as maximizing the use of social media as the main promotional channel, can further increase consumer purchasing interest and expand market reach.
3. Improving Product Quality. Given the positive influence of product quality on purchasing decisions, Distro Screamous must continue to focus on improving product quality. This includes product innovation that aligns with market trends and ensuring products have visual appeal and functionality that meet consumer expectations.
4. Collaboration between Promotion and Product Quality. The analysis results show that promotion and product quality simultaneously influence purchasing decisions. Therefore, Distro Screamous is advised to integrate its promotional strategy with an

emphasis on product quality. Combining attractive promotions with quality products can have a greater impact on consumer purchasing decisions.

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THE INFLUENCE OF STORE ATMOSPHERE AND WORD OF MOUTH ON PURCHASING DECISIONS AT COGER KUJANG COFFEE & RESTO BOGOR

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Abstract

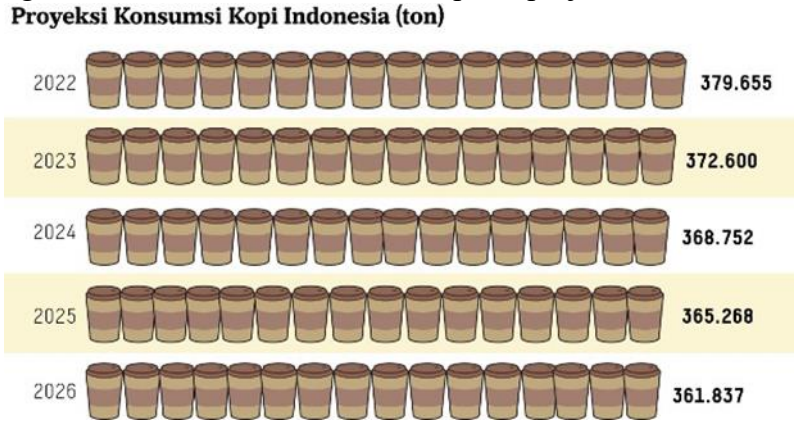
This study aims to determine the effect of store atmosphere and word of mouth on purchasing decisions at Coger Kujang Coffee & Resto Bogor. The coffee shop industry in Bogor City is experiencing rapid growth along with changes in people's lifestyles. However, Coger Kujang Coffee & Resto has experienced a decrease in the number of visitors and sales. This study uses a quantitative approach with 100 respondents selected through purposive sampling technique. Data was collected using a questionnaire and analyzed using SEM-PLS through SmartPLS 4.0 software. The results showed that store atmosphere has a positive and significant effect on purchasing decisions (t-statistic = 3.023), as well as word of mouth (t-statistic = 7.643). This study concludes that both variables significantly influence consumer purchasing decisions.

Keywords: Store Atmosphere, Word Of Mouth, Purchase Decision, Coffee Shop

1. Introduction

The coffee shop and restaurant industry in Indonesia is experiencing rapid growth until 2024. This growth is not only driven by the increasing number of coffee lovers, but also by the development of lifestyle trends and the need for a comfortable hangout place.

Figure1 : Indonesian coffee consumption projection 2022-2026



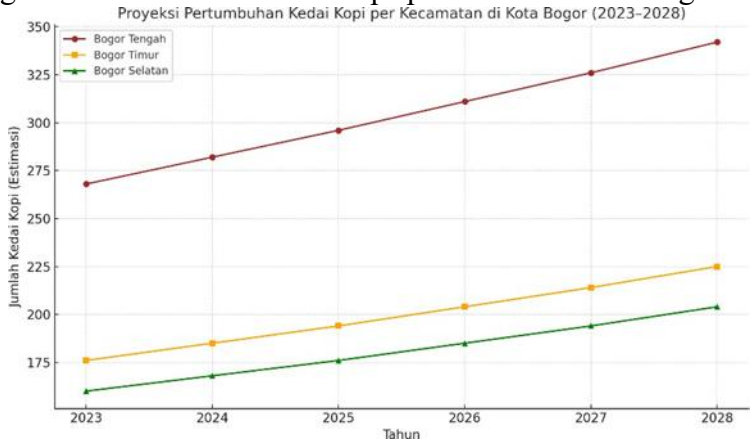
Source: Secondary data, 2024

In 2024 the ministry of agriculture shows domestic projection data amounting to around 368,752 tons. However, according to Kompas.id, (2024) in 2023 Indonesian coffee consumption is still relatively low compared to other countries. Although the projections change, Indonesia has a great opportunity to develop in the coffee management industry because of its rich natural resources as potential raw materials and supported by a large market.

Bogor City is one of the cities that has highlighted the rapid development of the coffee and restaurant industry in recent years. One of the most prominent phenomena is the rise of

coffee shops that have sprung up in various corners of the city, the competition for coffee shops in Bogor is getting tighter.

Figure2 : Growth of coffee shops per sub-district in Bogor City



Source: Secondary data, 2025

Based on data from the Bogor City Central Bureau of Statistics, the projected growth in the number of coffee shops in the three main sub-districts of Bogor City (Central, East, South) from 2023-2028 shows a fairly rapid development in recent years. The projection graph illustrates a stable expansion trend in the three main sub-districts, influenced by the increasing public interest in coffee culture, easy access to infrastructure, and the strategy of developing culinary areas by the local government. This phenomenon encourages more and more coffee shops to emerge with various concepts and uniqueness of each, thus creating intense competition in this industry.

Store atmosphere is a factor that must be considered in the cafe business. With an attractive store atmosphere, it can encourage consumers to come back. All the elements contained in the store atmosphere affect the atmosphere of the store that you want to create and can determine the image of a place itself.

Coger Kujang Coffee & Resto is one of the coffee shop business actors in Bogor which comes with a minimalist tropical concept with Balinese nuances that is aesthetic and contemporary. Despite having a high rating on Google Rating, in recent times there has been a decrease in the number of visitors and transactions.

Image3 : Display of Coger Kujang Coffee & Resto Bogor

Source: Secondary data, 2024

Creating a store atmosphere needs to be done so that the appearance of the store becomes attractive to potential customers and is able to attract them to enter it. In addition, marketers also need to build an atmosphere that supports consumer comfort while in the cafe. A comfortable atmosphere is a separate consideration for consumers before deciding to come or visit a particular cafe.

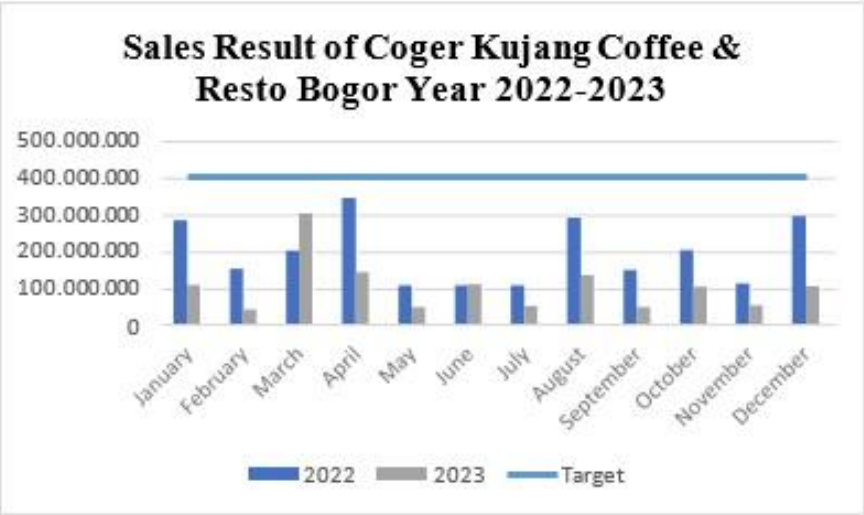
Table1 .Visitor Data Coger Kujang Coffee & Resto Bogor

Month	**Year**	
	2022	**2023**
January	520	400
February	452	290
March	500	500
April	600	450
May	400	315
June	410	420
July	497	335
August	555	425
September	455	300
October	504	415
November	405	350
December	597	490
Total	**5.895**	**4.690**

Source: Primary Data, 2024

Visitor data presented in table 1. The year 2023 shows a significant decline, the number of visitors is seen decreasing almost every month. This decline is quite significant and can be a concern for further evaluation.

Figure4 . Sales results of Coger Kujang Coffee & Resto Bogor



Source: Secondary data, 2024

Sales results in 2022 and 2023 fluctuated and did not reach the target set by Coger Kujang Coffee & Resto Bogor.

To find out what consumer complaints about store atmosphere and word of mouth on purchasing decisions at Coger Kujang Coffee & Resto Bogor, the researchers conducted a pre-survey, namely by distributing to 30 consumers of Coger Kujang Coffee & Resto Bogor.

Table2 . Pre-survey of consumers of Coger Kujang Coffee & Resto Bogor

No	Question	Respondent's Answer		Total	Number of Respondents
		YES	NO		
Store Atmosphere					
1	Is the signage at Coger Kujang Coffee & Resto Bogor clearly visible?	8 (26,7%)	22 (73,3%)	100%	30
2	Does the music played at Coger Kujang Coffee & Resto make you feel comfortable?	7 (23,3%)	23 (76,7%)	100 %	30
3	Is the interior design of Coger Kujang Coffee & Resto attractive?	13 (43,3%)	17 (56,7%)	100%	30
Word Of Mouth					
4	Did you find out about Coger Kujang Coffee & Resto Bogor through Instagram? Did you visit Coger Kujang	18 (60%)	12 (40%)	100%	30
5	Coffee & Resto Bogor because of a recommendation from friends or family?	12 (40%)	18 (60%)	100%	30
Purchase Decision					
6	Does Coger Kujang Coffee & Resto Bogor match your expectations?	12 (40%)	18 (60%)	100%	30
7	Would you recommend Coger Kujang Coffee & Resto Bogor to friends or family?	10 (33,3%)	20 (66,7%)	100%	30
8	Do you feel that Coger Kujang Coffee & Resto Bogor is your first choice when looking for a place to eat or drink?	9 (30%	21 (70%)	100%	30

Source: Primary data, 2024

Based on the pre-survey results in table 1. shows that in the first statement related to store atmosphere, 73.3% of respondents felt that the signboard at Coger Kujang Coffee & Resto was not clearly visible. In the second statement 76.7% of respondents stated that the music presented made them uncomfortable. In the third statement, 45.7% of respondents felt that the interior design was not attractive. This shows that improvements are needed in visual aspects, atmosphere and aesthetics to improve the consumer experience. In statements related to word of mouth, 60% of respondents stated that they knew more through Instagram and the second statement respondents did not visit based on recommendations. This shows that word of mouth has not been very effective, promotion through word of mouth or word of mouth carried out by Coger Kujang Coffee & Resto Bogor is still relatively low. In statements related to purchasing decisions, 60% of respondents felt that it did not match expectations. In the second statement 66.7% did not recommend it to friends / family. In the last statement, 70% of respondents did not consider Coger Kujang coffee & restaurant to be the first choice. From the three statements related to purchasing decisions, this shows that Coger Kujang must improve store atmosphere and word of mouth so that consumers are interested in coming back to visit and getting many new consumers.

According to Sudarsono, (2020) promotion is a process in which business actors persuade, convey information, and influence consumers to make purchasing decisions. One of the strategic steps that companies must take to achieve their goals is to first understand the needs and desires of customers or target markets thoroughly. Most individuals show a tendency to trust marketing delivered through word-of-mouth communication more than other formal promotional methods. This is because the recipient of the recommendation feels confident that the information conveyed by the recommendation buyer is honest and free from ulterior motives. Therefore, word of mouth marketing is considered more effective in building consumer trust (Baskara & Ernasari, 2018).

Purchasing decisions involve consumers and their level of trust in a product or service. In the context of the coffee shop business, consumer attractiveness is not only focused on the variety of menus and drinks offered, but also on the atmosphere of a cafe that is visually appealing or has an instagramable impression.

2. Literature review and hypothesis development

2.1 Store Atmosphere

According to Ijup, (2020) store atmosphere is a store atmosphere that involves affection (feelings) in the form of emotions in a store that consumers may not fully realize, including various displays of store elements on the exterior and interior of the store as an attraction for consumers in the desire to buy. Sambara et al., (2021) states that one of the marketing mix in outlets is store atmosphere, which is very important to attract buyers, make customers feel comfortable when they come to the store, and remind them of what products they want. Indicators of store atmosphere in this study include:

1. Store exterior
2. General interior
3. Layout and room design

2.2 Word of mouth

According to Karlina & Haryanti, (2021) word of mouth is a promotion carried out by consumers verbally, in writing, or through electronic media to spread information about brands

or products to other consumers. According to Rayhaniah, (2022) word of mouth (WOM) is an expression from mouth to mouth or known as "getok tular, WOM is a personal communication between two or more individuals. According to Berger, (2023) word of mouth (WOM) is a word of mouth promotion activity carried out by consumers based on experiences with products or services because they get satisfaction. The indicators of word of mouth variables in this study:

1. Talking about
2. Suggest
3. Encourage

2.3 Purchase decision

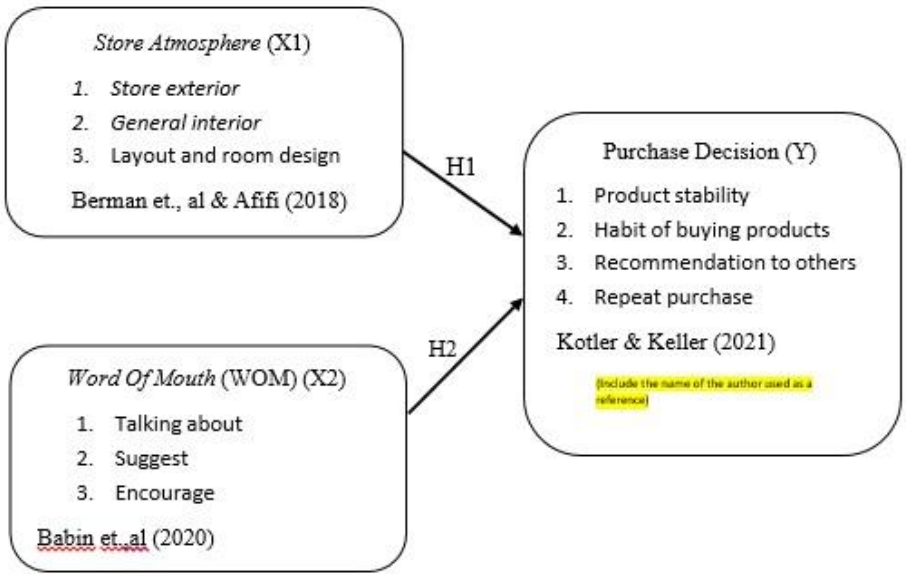
According to Arfah, (2022) purchasing decisions are the result of a process influenced by various factors, in which consumers consciously consider various things before finally choosing the product that best suits their preferences. According to Manik et al., (2021) states that purchasing decisions are the real actions of consumers to obtain the desired product or service. Thus, purchasing decisions can be understood as a process of selecting the best solution from a number of available alternatives, which ends with a purchase action. Indicators of purchasing decisions in this study are:

1. Product stability
2. Habit of buying products
3. Recommendations to others
4. Repurchase

2.4 Research constellation

Purchasing decisions are the result of a consumer consideration process in choosing a product or service based on various influencing factors, the two main factors that play a role in shaping purchasing decisions are store atmosphere and word of mouth (WOM). Meanwhile, research conducted by Nabila Ayu Khairunnisa et al., (2024) . The Effect of Word Of Mouth and Store Atmosphere on Consumer Purchasing Decision (Study on Kasungka Coffee Consumers in Majalengka City) "shows that word of mouth partially has a significant effect on purchasing decisions, then store atmosphere partially has a significant effect on purchasing decisions. Research conducted by Gultum Miranda, (2021) with the title "The Effect of Store Atmosphere and Word of Mouth Promotion on Purchasing Decisions at the Jambi Inland Coffee Café" shows that both variables, both simultaneously and partially, have a significant influence on consumer purchasing decisions. Based on the above framework, the researcher can make a research constellation as follows:

Figure5 . Research constellation



2.5 Research Hypothesis

H1: Store atmosphere has a positive effect on purchasing decisions for Coger Kujang Coffee & Resto Bogor.

H2: Word of mouth has a positive effect on purchasing decisions for Coger Kujang Coffee & Resto Bogor.

3. Research method

The type of research in this study is quantitative research with causal associative methods. The object of this research which is the independent variable is store atmosphere and word of mouth, while the dependent variable is purchasing decisions. The unit of analysis in this study were consumers of Coger Kujang Coffee & Resto Bogor. The research location is on Jl. Bincarung No. 17, Tanah Sereal, Kec. Tanah Sereal, Bogor City, West Java 16161. The type of data used is quantitative. Data sources consist of primary data and secondary data. The sampling method in this study was NonProbability sampling with a sample size of 100 respondents, using accidental sampling technique.

4. Results and Discussion

4.1 Validity Test

In this study, the validity test process was carried out using the help of SPSS software version 25. The test was carried out on 30 respondents (N = 30) with a significant level of 0.05. The instrument is declared valid if the r-count> r-table value.

Table3 . Validity Test Results

No	Item	R Count	R Table	Description
1	SA1.1	0,687	0,361	Valid
2	SA1.2	0,543	0,361	Valid
3	SA1.3	0,676	0,361	Valid
4	SA2.1	0,596	0,361	Valid
5	SA2.2	0,602	0,361	Valid
6	SA2.3	0,550	0,361	Valid

7	SA3.1	0,604	0,361	Valid
8	SA3.2	0,484	0,361	Valid
9	SA3.3	0,657	0,361	Valid
10	WOM1.1	0,677	0,361	Valid
11	WOM1.2	0,623	0,361	Valid
12	WOM1.3	0,623	0,361	Valid
13	WOM2.1	0,629	0,361	Valid
14	WOM2.2	0,738	0,361	Valid
15	WOM2.3	0,803	0,361	Valid
16	WOM3.1	0,484	0,361	Valid
17	WOM3.2	0,597	0,361	Valid
18	WOM3.3	0,475	0,361	Valid
19	KP1.1	0,589	0,361	Valid
20	KP1.2	0,519	0,361	Valid
21	KP1.3	0,688	0,361	Valid
22	KP2.1	0,481	0,361	Valid
23	KP2.2	0,594	0,361	Valid
24	KP2.3	0,678	0,361	Valid
25	KP3.1	0,518	0,361	Valid
26	KP3.2	0,571	0,361	Valid
27	KP3.3	0,641	0,361	Valid
28	KP4.1	0,486	0,361	Valid
29	KP4.2	0,610	0,361	Valid
30	KP4.3	0,539	0,361	Valid

Source: Primary data, 2025

The validity test results in table 4.1, all instruments or items on the questionnaire obtained an r-count value> r- table value, it can be concluded that each statement item in the questionnaire is declared valid.

4.2 Reliability Test

Table4 . Reliability Test Results

Variable	**Cronbach`s Alpha**	**N of items**	**Description**
Store atmosphere	0.765	9	Reliable
Word of mouth	0.803	9	Reliable
Purchase decision	0.795	12	Reliable

Source: Primary data, 2025

Variables are said to be reliable if the Cronbach`s Alpha value is> 0.70. Based on the reliability test results in table 4, the Cronbach's alpha value on each variable has results greater than 0.70. It is concluded that all research instruments are declared reliable.

4.3 Structural Equation Model-Partial Least Square (outer model)

4.3.1 Convergent Validity

This stage is evaluated through a loading factor with a straight assassment greater than 0.7, but the range of 0.5 - 0.6 is still acceptable Hair et al., (2021) , so in this study the loading factor above 0.5 is considered valid.

Table5 . Outer Loading Results

Variable	Indicator	Code	Loading Factor	Evaluation
Store Atmosphere	Store Exterior	SA1.1	0.804	Valid
		SA1.2	0.835	Valid
		SA1.3	0.733	Valid
	General Interior	SA2.1	0.840	Valid
		SA2.2	0.745	Valid
		SA2.3	0.761	Valid
	Layout and Room Design	SA3.1	0.863	Valid
		SA3.2	0.807	Valid
		SA3.3	0.842	Valid
Word of Mouth	Talking about	WOM1.1	0.718	Valid
		WOM1.2	0.705	Valid
		WOM1.3	0.784	Valid
	Suggest	WOM2.1	0.845	Valid
		WOM2.2	0.793	Valid
		WOM2.3	0.766	Valid
	Encouraging	WOM3.1	0.774	Valid
		WOM3.2	0.729	Valid
		WOM3.3	0.759	Valid
Purchase Decision	Product Stability	KP1.1	0.803	Valid
		KP1.2	0.807	Valid
		KP1.3	0.713	Valid
	Habits in Buying Products	KP2.1	0.824	Valid
		KP2.2	0.813	Valid
		KP2.3	0.751	Valid
	Recommendations to Others	KP3.1	0.777	Valid
		KP3.2	0.813	Valid
		KP3.3	0.757	Valid
	Repeat purchase	KP4.1	0.743	Valid
		KP4.2	0.780	Valid
		KP4.3	0.737	Valid

Source: Primary data, 2025

Store atmosphere, word of mouth, and purchasing decision variables show item values that meet convergent validity standards because all factors have a value of more than 0.5. Therefore, it can be concluded that all constructs or variables tested are valid. The next stage in the convergent validity analysis is to evaluate the average variance extracted (AVE) value, with the criteria that the AVE value must be greater than 0.5.

Table6 . AVE value

Variable	AVE

Store Atmosphere	0.604
Word of Mouth	0.647
Purchase Decision	0.585

Source: Primary data, 2025

4.3.2 Discriminant Validity

Discriminant validity is tested to ensure that the research instrument can appropriately reflect the latent variable, which can be seen through the cross loading value. The model is said to have good discriminant validity if each cross loading value of a latent variable is higher than the loading value of that variable on other latent variables.

Table7 . Cross Loading Value

Code	Store Atmosphere	Word of Mouth	Purchase Decision
SA1.1	0.804	0.563	0.578
SA1.2	0.835	0.687	0.679
SA1.3	0.733	0.518	0.541
SA2.1	0.840	0.706	0.696
SA2.2	0.745	0.605	0.651
SA2.3	0.761	0.671	0.657
SA3.1	0.863	0.753	0.712
SA3.2	0.807	0.756	0.756
SA3.3	0.842	0.752	0.718
WOM1.1	0.594	0.718	0.599
WOM1.2	0.606	0.705	0.616
WOM1.3	0.657	0.784	0.753
WOM2.1	0.716	0.845	0.765
WOM2.2	0.656	0.793	0.686
WOM2.3	0.582	0.766	0.650
WOM3.1	0.674	0.774	0.718
WOM3.3	0.639	0.729	0.658
WOM3.3	0.634	0.759	0.725
KP1.1	0.677	0.692	0.803
KP1.2	0.711	0.743	0.807
KP1.3	0.606	0.601	0.713
KP2.1	0.672	0.736	0.824
KP2.2	0.669	0.784	0.813
KP2.3	0.638	0.684	0.751
KP3.1	0.599	0.717	0.777
KP3.2	0.663	0.743	0.813
KP3.3	0.624	0.641	0.757
KP4.1	0.612	0.673	0.743
KP4.2	0.635	0.690	0.780
KP4.3	0.660	0.667	0.737

Source: Primary data, 2025

Based on table 7, it can be concluded that the indicators in a latent variable have differences with indicators in other variables, indicated by a higher cross loading value than the construct itself.

4.3.3 Composite Reliability

Table8 . Composite Reliability Value

Variable	Cronbach`s alpha	Composite Reliability
Store Atmosphere	0.940	0.948
Word of Mouth	0.911	0.943
Purchase Decision	0.940	0.927

Source: Primary data, 2025

The composite reliability value is declared reliable if the value is> 0.6. The composite reliability value of the store atmosphere, word of mouth and purchasing decision variables is> 0.6, so it can be stated that all variables in this study are reliable.

4.4 Structural-Partial Least Square (inner model)

4.4.1 R-Square

Table9 . R-Square Value

Endogenous Variable	R-square
Purchase Decision	0.831

Source: Primary data, 2025

The resulting R-square value in the purchasing decision variable is 0.831 or 83.1%. This shows that the store atmosphere and word of mouth variables can explain the construct of purchasing decisions by 83.1% and the remaining 16.9% is explained by other variables that are not included in this research variable. So that based on the results of the R^2 calculation, it shows that R^2 is included in the strong category.

4.4.2 Path Coefficient

This coefficient value is in the range 0 to 1 to indicate a positive relationship between constructs or variables, and between -1 to 0 to indicate a negative relationship.

Table10 . Path Coefficient Value

Endogenous Variable	Purchase Decision	Relationship
Store Atmosphere	0.265	Positive
Word of Mouth	0.678	Positive

Source: Primary data, 2025

The store atmosphere variable has a coefficient value of 0.265, indicating a positive relationship to the purchasing decision variable. This shows that the store atmosphere can provide a positive relationship in encouraging consumer purchasing decisions. Meanwhile, the word of mouth variable has a coefficient value of 0.678, indicating a positive relationship to purchasing decisions.

4.4.3 F-Square

The f-square value of 0.02, 0.05 and 0.35 can be interpreted whether the latent variable has a small, medium or large effect at the structural level.

Table11 . F-Square Value

F-Square	Purchase Decision
Store Atmosphere	0.124
Word Of Mouth	0.808

Source: Primary data, 2025

The results of the f-square value show that the store atmosphere variable has a moderate influence on purchasing decisions, with a value of 0.124. In contrast, the word of mouth variable shows a strong influence, characterized by an f-square value of 0.808. This indicates that word of mouth has a much more dominant contribution in influencing consumer purchasing decisions than store atmosphere.

4.4.4 Boostrapping

Furthermore, boostrapping analysis is carried out to measure the effect of exogenous variables on endogenous variables by paying attention to the t-statistic value on each relationship path.

Table12 . Boostrapping Value

Effect of	Original Sample	t-statistic	p-value	Effect of
Store Atmosphere on Purchasing Decision	0.265	3.087	0.002	Significant
Word of Mouth on Purchasing Decision	0.678	7.926	0.000	Significant

Source: Primary data, 2025

The boostripping test results show that store atmosphere has a positive effect on purchasing decisions, with an original sample value of 0.265, a t-statistic value of 3.087, and a p-value of 0.002. These results indicate a significant influence. Meanwhile, the word of mouth variable shows a stronger influence on purchasing decisions, with an original sample value of 0.678, a t-statistic of 7.926, and a p-value of 0.000, which also indicates a significant influence.

4.4.5 Predictive Relevance (Q-Square)

If the Q^2 value is greater than 0.35, the model is considered to have good predictive relevance. Conversely, if the Q^2 value is less than 0, the model is considered to have insufficient predictive relevance.

Table13 . Q-Square Values

Q-Square Value	Description	Q-Square Value Purchase Decision Variable
0.02 to <0.15	Weak	

0.15 to <0.35	Medium	
➢ **0,35**	**Large**	**0,705**

Source: Primary data, 2025

The Q-square value of the purchasing decision variable is 0.705 and is classified as large. This shows that the model has a large predictive power of purchasing decisions. This means that the model in this study has good predictive quality and is able to explain the dependent variable strongly.

4.4.6 Model Fit

In this study, an NFI value of 0.734 was obtained, which indicates that the level of model fit reached 73.4%.

	Saturated model	**Estimated model**
SRMR	0.063	0.063
d_ULS	1.827	1.827
d_G	1.600	1.600
Chi-Square	730.361	730.361
NFI	0.734	0.734

Source: Primary data, 2025

4.5 Hypothesis Test Results

Based on the data processing carried out in the outer model and inner model, this research then conducts hypothesis testing. Hypothesis testing is done by processing data through the boostrapping method in the SmartPLS 4.0 application.

Table14 . Direct Effect Calculation Results

No	**Direct Effect**	**T-statistic**	**P-value**
1.	Store Atmosphere Purchase Decision	3.023	0.002
2.	Word of Mouth Purchase Decision	7,643	0.000

Source: Primary data, 2025

The results of the direct effect calculation show that the influence of the store atmosphere variable on purchasing decisions is significant, because the t-statistic value is 3.023> 1.96. This means that the store atmosphere variable affects consumer purchasing decisions at Coger Kujang Coffee & Resto Bogor. Meanwhile, the word of mouth variable has a significant effect on purchasing decisions, indicated by the t-statistic value of 7.643> 1.96. This means that word of mouth has a significant influence on purchasing decisions at Coger Kujang Coffee & Resto.

Table15 . Hypothesis Test Results

No	**Hypothesis**	**Analysis**	**Decision**

1	There is a significant influence between store atmosphere on purchasing decisions.	The results of the path coefficient analysis store atmosphere has a positive relationship with purchasing decisions with a value of 0.225 and is significant with a t-statistic value of 3.087> 1.96.	Accepted
2	There is a significant influence between word of mouth on purchasing decisions.	The results of the path coefficient analysis word of mouth has a positive relationship with purchasing decisions with a value of 0.678, and has been significant with a t-statistic value of 7.692> 1.96.	Accepted

Source: Primary data, 2025

The t-statistic value of the store atmosphere variable is 3.087 and word of mouth with a t-statistic value of 7.926, both of these variables have a value exceeding the t-table of 1.96. then both hypotheses can be accepted.

4.6 Discussion and Interpretation of Results

4.6.1 The effect of store atmosphere on purchasing decisions

Based on the results of descriptive analysis, it shows that the store atmosphere variable is a factor considered good, this is in accordance with the responses of respondents who on average agree. This indicates that although the respondents considered the overall atmosphere of the place to be good, there is still room for improvement in the aspects of room temperature comfort and room layout that support consumer activities such as working or relaxing. The results of the SEM-PLS analysis of the path coefficient value resulted in a positive relationship of 0.265 with a value range of 0-1, while the boostrapping results obtained store atmosphere has a significant influence on purchasing decisions with a t-statistic value of 3.087 greater than the t-table of 1.96 and a P-value of 0.002 <0.05, so the hypothesis is accepted, with an original sample value of 0.265, this means that purchasing decisions increase if the store atmosphere increases by one unit. This means that the store atmosphere has a direct effect on purchasing decisions.

4.6.2 The effect of word of mouth on purchasing decisions

Based on the results of descriptive analysis, it shows that word of mouth is a factor that is considered good and approved by respondents in increasing consumer confidence in Coger Kujang Coffee & Resto Bogor. This means that even though the consumer experience is good, not all consumers actively suggest or talk about this place, so it can be a potential that can be optimized through word of mouth communication strategies. The results of the SEM-PLS analysis of the path coefficient value resulted in a positive relationship of 0.678 with a value

range of 0-1 while the boostrapping results obtained word of mouth has a significant influence on purchasing decisions with a t-statistic value of 7.643 greater than the t-table of 1.96 and a P-value of 0.000 <0.05, the hypothesis is accepted, with an original sample value of 0.678, this means that purchasing decisions increase if word of mouth simultaneously influences purchasing decisions. This shows that the word of mouth variable can influence purchasing decisions directly and indirectly.

5. Conclusion

1. Store atmosphere is proven to have a significant influence on purchasing decisions. This is supported by the t- statistic value of 3.023 which is higher than the t-table value of 1.96, as well as a p-value of 0.002 which is smaller than 0.05. Based on these results, it can be concluded that store atmosphere directly influences consumer purchasing decisions at Coger Kujang Coffee & Resto Bogor.
2. Word of mouth also shows a significant influence on purchasing decisions. The t-statistic value obtained of 7.643 exceeds the t-table of 1.96, and the p-value of 0.000 is smaller than 0.05. Thus, it can be concluded that word of mouth plays a direct role in influencing consumer purchasing decisions at Coger Kujang Coffee & Resto Bogor. This indicates that the higher the intensity of word of mouth communication, the more likely consumers are to make a purchase. Conversely, low word of mouth tends to directly reduce purchasing decisions.

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MITIGATING AGENCY CONFLICTS THROUGH ESG: A STUDY ON PROFITABILITY AND TAX AVOIDANCE BEHAVIOR IN CORPORATIONS

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Abstract

This study examines the effect of profitability on corporate tax avoidance. It investigates the moderating role of Environmental, Social, and Governance (ESG) performance in this relationship, grounded in the framework of agency theory. Using a sample of 224 firm-year observations from manufacturing companies listed on the Indonesia Stock Exchange (IDX) during the period 2020–2023, the analysis applies panel data regression with a random effects model, as determined by the Hausman test. The results indicate that profitability has a statistically significant positive effect on tax avoidance, suggesting that more profitable firms tend to employ tax minimization strategies. However, ESG performance is found to significantly moderate this relationship, reducing the impact of profitability on tax avoidance. These findings highlight the role of ESG as a soft governance mechanism that can mitigate agency-driven behaviors by enhancing transparency and ethical compliance. The study provides important implications for corporate decision-makers and regulators in emerging markets, emphasizing the strategic value of ESG integration to promote responsible financial practices.

Keywords: *Tax Avoidance; Profitability; ESG Performance; Agency Theory; Corporate Governance; Emerging Markets; Panel Data*

1. Introduction

In recent years, the increasing scrutiny of corporate ethical conduct has intensified academic interest in the intersection of profitability, tax avoidance, and Environmental, Social, and Governance (ESG) practices. Tax avoidance, while often legal, presents a classic dilemma within agency theory, where the misalignment between managers (agents) and shareholders (principals) may incentivize opportunistic behavior aimed at short-term gains through aggressive tax strategies ((Ajmal et al., 2025); (Adegbite & Bojuwon, 2019)).

Highly profitable firms are particularly exposed to such behavior due to the greater flexibility in managing discretionary financial policies, including tax planning (Armstrong et al., 2015a). This dynamic creates tension between profit maximization and ethical financial stewardship, often exacerbated by opaque corporate governance mechanisms. Recent empirical evidence supports the notion that profitability positively correlates with tax avoidance intensity, particularly in environments with weak institutional monitoring ((Permatasari et al., 2024); (Handayani & Ibrani, 2019)).

Against this backdrop, ESG performance has emerged as a pivotal moderating factor that could potentially mitigate these agency-driven tendencies. ESG disclosures are not merely corporate signaling mechanisms; they represent embedded organizational values and governance structures that can restrict managerial latitude in exploiting tax strategies for personal or short-term gain ((Addison & Mueller, 2015); (Khuong et al., 2020)). Firms with robust ESG practices

are found to demonstrate greater transparency and accountability, leading to reduced information asymmetry and enhanced trust among stakeholders ((Elgharbawy & Aladwey, 2025); (Karbala, 2023)).

Several studies support the premise that strong ESG engagement is associated with lower levels of tax aggressiveness ((Friede et al., 2015); (Mayangsari et al., 2024)). ESG acts as a constraint on agency costs, redirecting management behavior towards long-term sustainable goals. This is especially critical in emerging economies, where regulatory environments are often fragmented and susceptible to opportunistic corporate practices ((Yoon et al., 2021); (Tawfiq et al., 2024)).

However, the literature on how ESG moderates the relationship between profitability and tax avoidance remains limited, especially in emerging markets and within specific sectors such as manufacturing, where environmental and labor compliance pressures are intense. This study, therefore, investigates whether ESG practices attenuate the link between profitability and tax avoidance, providing insights from an emerging economy context and grounding its framework in agency theory.

2. Literature Review

Agency theory provides a foundational lens for understanding the behavior of managers in corporate decision-making, particularly regarding tax avoidance. Within this framework, tax avoidance is often viewed as a manifestation of agency conflict, where managers exploit informational asymmetry and prioritize their interests over those of shareholders. (Armstrong et al., 2015a) argue that tax minimization strategies can serve as tools for managerial opportunism, especially when internal governance mechanisms are weak. Empirical findings support this claim, suggesting that firms with higher agency costs are more prone to aggressive tax planning (Armstrong et al., 2015). Profitability plays a dual role in this context. On one hand, it equips firms with greater resources to engage in sophisticated tax avoidance schemes; on the other, it may increase scrutiny from regulators and stakeholders. Studies by Permatasari et al., (2024) and Paramita & Andika, (2021) show that more profitable Indonesian firms tend to exhibit higher levels of tax avoidance, reinforcing the notion that financial strength can facilitate opportunistic behavior in the absence of strong governance structures.

In recent years, Environmental, Social, and Governance (ESG) practices have gained prominence as potential mitigators of agency-related issues. ESG not only reflects a firm's commitment to ethical and sustainable operations but also functions as a soft governance mechanism that can constrain managerial discretion. Prior research has found a negative association between ESG performance and tax aggressiveness, suggesting that firms committed to ESG are less likely to engage in opaque tax practices ((Lanis & Richardson, 2015); (Friede et al., 2015)). This aligns with findings by (Fadhila & Handayani, 2019), who reported that ESG disclosures reduce tax avoidance behavior in Indonesian firms. Khan et al., (2022) further explain that ESG enhances transparency and builds trust among stakeholders, thus increasing the reputational and ethical costs of tax avoidance. From the agency theory perspective, ESG initiatives improve monitoring, reduce information asymmetry, and align managerial decisions with long-term shareholder value (Vincenzo, 2023). However, despite these insights, there remains limited empirical evidence on the moderating role of ESG in the relationship between profitability and tax avoidance, particularly in emerging markets. Existing studies tend to examine these variables in isolation, with few addressing how ESG can potentially weaken the link between firm profitability and aggressive tax behavior. Therefore, this study aims to fill this gap by empirically testing the moderating effect of ESG practices on the relationship between profitability and tax avoidance, drawing evidence from the manufacturing sector in an emerging economy.

The Effect of Profitability on Tax Avoidance

Agency theory posits that conflicts of interest arise when management (agents) pursues actions that may not align with the interests of shareholders (principals). In the context of tax avoidance, this conflict becomes evident when managers exploit their control over financial reporting and tax planning to reduce tax obligations, not necessarily to maximize long-term firm value, but often to boost short-term performance indicators, secure bonuses, or divert attention from inefficient management. Profitability enhances the agency problem because more profitable firms generate higher taxable income, which increases both the incentive and the ability to engage in aggressive tax strategies (Armstrong et al., 2015b). When governance mechanisms are weak, management may channel the firm's financial strength into complex avoidance schemes that are difficult to detect and monitor.

From this perspective, profitability is not merely an enabler of tax avoidance through access to resources but also a signal of potential managerial discretion over tax decisions. Highly profitable firms often face external expectations to maintain or exceed performance benchmarks, creating pressure on managers to minimize tax liabilities and artificially inflate after-tax profits. These practices may include income shifting, strategic use of tax havens, or exploiting loopholes, actions that can be masked within larger profit margins. Without effective oversight mechanisms, such as board independence or ethical frameworks, profitability can thus amplify agency costs, manifesting in greater tax avoidance behavior. Therefore, understanding the link between profitability and tax avoidance through the lens of agency theory is crucial to uncovering the behavioral motivations behind corporate tax planning decisions.

H1: Profitability has a positive effect on tax avoidance, indicating that more profitable firms are more likely to engage in tax avoidance behavior due to agency conflicts.

The Moderating Role of ESG in the Relationship Between Profitability and Tax Avoidance

While agency theory suggests that higher profitability increases the opportunity for tax avoidance due to greater managerial discretion and weaker oversight, the presence of robust Environmental, Social, and Governance (ESG) practices may alter this dynamic. ESG serves as a non-financial governance mechanism that enhances transparency, ethical behavior, and long-term stakeholder alignment. Firms with strong ESG frameworks are typically subject to greater external scrutiny from investors, regulators, and the public, making it more difficult for managers to engage in opportunistic tax practices without reputational consequences. As such, ESG can constrain the agency-driven link between profitability and tax avoidance by promoting accountability and discouraging excessive risk-taking in tax planning.

Empirical studies support the idea that ESG engagement is associated with reduced levels of corporate tax aggressiveness ((Lanis & Richardson, 2015); (Islam et al., 2025)). In firms with high profitability, ESG may function as a moderating force that weakens the positive relationship between profitability and tax avoidance. Managers in ESG-committed firms are more likely to adopt socially responsible financial practices, including ethical tax compliance, to maintain alignment with sustainability goals and public expectations. Thus, while profitability may still enable tax avoidance through resource availability, the effect is likely to be mitigated when ESG performance is high, as ESG principles impose reputational and ethical boundaries that deter aggressive tax behavior.

H2: ESG performance moderates the relationship between profitability and tax avoidance, such that the positive effect of profitability on tax avoidance is weaker in firms with high ESG performance.

3. Methodology

Research Design

This study employs a quantitative explanatory research design using secondary data from publicly listed companies. The objective is to examine the effect of profitability on tax avoidance, with ESG performance as a moderating variable, under the lens of agency theory. The approach is deductive, using panel regression analysis to test the hypothesized relationships across multiple years and firms.

Population and Sample

The population of this study comprises non-financial corporations listed on the Indonesia Stock Exchange (IDX), with a particular focus on the manufacturing sector, considering its relatively high environmental impact and regulatory sensitivity. The sample is selected using purposive sampling based on the following criteria:

- Companies that published complete annual reports and ESG disclosures between 2020 and 2023
- Availability of key data: profitability (ROA), tax payments, and ESG indicators
- Exclusion of financial firms due to different tax regulations and capital structures

The final sample is expected to consist of 224 observations.

Variable Operationalization

Table 1. Variable Operationalization

Variable	Indicator	Measurement
Tax Avoidance	Effective Tax Rate (ETR)	ETR = Tax Expense / Pre-Tax Income
Profitability	Return on Assets (ROA) or Return on Equity (ROE)	ROA = Net Income / Total Assets
ESG Performance	Composite ESG Score or Dummy (1 = ESG Disclosed, 0 = Not Disclosed)	ESG disclosure index based on GRI items or third-party rating sources

Note: A lower ETR indicates higher tax avoidance.

Model Specification and Data Analysis

The following moderated regression model will be used to test the hypotheses:

Model 1: Direct Effect

$$TA_{it}=\beta 0+\beta 1PROF_{it}+\varepsilon it$$

Model 2: Moderation with ESG

$$TA_{it}=\beta 0+\beta 1PROF_{it}+\beta 2ESG_{it}+\beta 3(PROF_{it}\times ESG_{it})+\varepsilon it$$

Where:

- TA = Tax Avoidance (proxied by ETR)
- PROF = Profitability
- ESG = ESG performance
- PROF×ESG = Interaction term for moderation
- ϵ = Error term

The data will be analyzed using panel data regression (Fixed Effect or Random Effect based on the Hausman Test), and tested for multicollinearity, heteroskedasticity, and autocorrelation to ensure model validity. Statistical analysis will be conducted using EVIEWS.

4. Results and Discussion

Results

Descriptive Statistics

Based on the results of the sample selection for this study, the following descriptive statistics are presented:

Table 2. Descriptive Statistics

	Tax Avoidance	Profitability	ESG
Mean	0.227517	0.091755	0.571429
Median	0.220509	0.072367	1.000000
Maximum	0.806903	0.363620	1.000000
Minimum	0.000000	0.001254	0.000000
Std. Dev.	0.080306	0.073976	0.495980
Observations	224	224	224

Source: Data Processed, 2025

Table 2 presents the descriptive statistics for the three main variables used in this study: tax avoidance, profitability, and ESG performance, based on 224 firm-year observations. The mean value of tax avoidance is 0.2275, with a median of 0.2205, suggesting that, on average, firms pay approximately 22.75% of their pre-tax income in taxes. The values range from 0.0000 (indicating total tax avoidance) to 0.8069, showing significant variation across the sample. The standard deviation of 0.0803 indicates a moderate level of dispersion, reflecting differences in corporate tax planning behavior. The closeness of the mean and median implies a relatively symmetrical distribution, though some firms may be engaging in more aggressive tax strategies than others.

Profitability, measured by return on assets (ROA), has a mean of 0.0918 and a median of 0.0724, indicating that firms in the sample generate an average return of about 9.18% on their assets, with most firms earning slightly below this level. The minimum profitability value is 0.0013, while the maximum reaches 0.3636, showing that some firms achieve considerably higher profitability than others. The standard deviation of 0.0740 reveals that profitability varies substantially across the sample. This variation may be attributed to differences in operational efficiency, industry sub-sectors within manufacturing, or firm-specific factors such as size and leverage.

Regarding ESG performance, the average value is 0.5714, indicating that approximately 57% of the observed firms disclose ESG-related activities. The median value of 1.0000 implies that more than half of the companies in the sample engage in ESG reporting, although a substantial portion (minimum = 0.0000) does not. The standard deviation of 0.4960 reflects a near-even split between ESG-adopting and non-adopting firms, which is consistent with the binary nature of this variable in many emerging market contexts. Overall, these descriptive statistics highlight considerable variability across all key variables, justifying further examination into how profitability and ESG relate to corporate tax avoidance behavior.

Data Panel Testing

This research employs panel data regression. Therefore, it is necessary to select the appropriate panel data model by conducting the following tests using Eviews 13 software.

Hausman Test

Table 3. Hausman Test
Model with Moderation

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	1.805394	1	0.1791

Source: Data Processed, 2025

The Hausman test results presented in Table 3 are used to determine the appropriate panel data estimation model between fixed effects and random effects in the moderated regression analysis. The Chi-square statistic is 1.8054 with 1 degree of freedom and a p-value of 0.1791. Since the p-value exceeds the 0.05 significance level, the null hypothesis cannot be rejected, indicating that the random effects model is more appropriate than the fixed effects model for this study. This suggests that unobserved heterogeneity across firms is not significantly correlated with the independent variables, and thus, the random effects approach is preferred for estimating the moderating effect of ESG on the relationship between profitability and tax avoidance.

The Effect of Profitability on Tax Avoidance

Table 4. Panel Least Squares

Variable	Coefficient	Std Error	t-Statistics	Prob.
C	0.241569	0.010371	23.29230	0.0000
X1	0.153133	0.086877	1.762654	0.0093

Source: Proceed Data, 2025

Table 4 presents the results of the panel least squares regression examining the effect of profitability (X1) on tax avoidance. The coefficient for profitability is 0.1531 with a p-value of 0.0093, which is below the 0.05 significance threshold, indicating that profitability has a positive and statistically significant effect on tax avoidance. This means that as firms become more profitable, they are more likely to engage in tax avoidance strategies, consistent with agency theory, which suggests that higher profitability gives managers greater discretion to pursue opportunistic financial practices. Therefore, the first hypothesis (H1), which states that *profitability has a positive effect on tax avoidance*, is accepted based on the empirical evidence.

ESG Moderates the Effect of Profitability on Tax Avoidance

Table 5
Panel Least Squares 1

Variable	Coefficient	Std Error	t-Statistics	Prob.
C	0.254723	0.013320	19.12265	0.0000
X1	-0.166982	0.086550	-1.929315	0.0450
Z	-0.020797	0.013335	-1.559557	0.0203

Source: Proceed Data, 2025

Table 6

Panel Least Squares 2

Variable	Coefficient	Std Error	t-Statistics	Prob.
C	0.270001	0.016922	15.95541	0.0000
X1	-0.317633	0.135600	-2.342426	0.0201
Z	-0.044655	0.021110	-2.115358	0.0355
X1Z	0.252180	0.174575	1.444535	0.0500

Source: Proceed Data, 2025

Based on the regression results in Table 5, the independent variable profitability (X1) shows a negative and statistically significant effect on tax avoidance, with a coefficient of -0.16698 and a p-value of 0.0450, which is below the 0.05 threshold. This result is somewhat contrary to the initial expectation under agency theory, suggesting that in the presence of ESG performance (Z), the direct relationship between profitability and tax avoidance becomes negative. Additionally, the ESG variable itself also has a negative and significant coefficient (-0.0208, p = 0.0203), implying that ESG performance alone reduces the tendency of firms to avoid taxes. These findings support the notion that ESG acts as a governance mechanism that discourages aggressive tax practices and aligns firm behavior with stakeholder expectations for transparency and ethical conduct.

In Table 6, the regression model includes an interaction term (X1Z) to test the moderating effect of ESG on the relationship between profitability and tax avoidance. The coefficient for the interaction term is +0.2522 with a p-value of 0.0500, indicating a statistically significant moderation at the 5% level. This positive coefficient suggests that although profitability alone has a negative association with tax avoidance in this model, the presence of ESG moderates this relationship, reducing the negative effect, or even reversing it as ESG scores increase. In essence, ESG acts as a moderator that reshapes how profitability influences tax behavior, possibly by limiting managerial discretion or increasing public and investor scrutiny. Therefore, the second hypothesis (H2), which states that *ESG performance moderates the relationship between profitability and tax avoidance*, is accepted.

Discussion

The Effect of Profitability on Tax Avoidance

The results of this study indicate that profitability has a statistically significant effect on tax avoidance, as evidenced by the positive regression coefficient and p-value below the 5% threshold. This finding is consistent with the core principles of agency theory, which posits that managers of highly profitable firms may have greater discretion and incentives to engage in aggressive tax planning to maximize reported after-tax income, potentially at the expense of shareholder interests. When firms generate higher profits, they often possess greater resources and flexibility to exploit tax loopholes, utilize tax havens, or defer income, especially in the absence of effective oversight mechanisms. This outcome aligns with prior research by (Armstrong et al., 2015a) and (Richardson et al., 2015), who observed that profitability enables tax avoidance by increasing both opportunity and pressure to minimize tax liabilities.

Moreover, the result strengthens the view that profitability alone may not necessarily reflect responsible financial conduct, especially in environments where internal controls are weak or where managerial incentives are closely tied to short-term performance metrics. In line with studies conducted in emerging markets (Permatasari et al., 2024), this study reinforces the idea that without adequate governance constraints, profitability can act as a driver of opportunistic tax behavior. However, the findings also raise questions about the broader ethical and reputational implications of tax avoidance in profitable firms, which may appear financially

healthy while eroding public trust through aggressive tax strategies. These insights highlight the importance of incorporating non-financial governance mechanisms, such as ESG, to curb the adverse impacts of agency problems that are magnified by increased profitability.

ESG Moderates the Effect of Profitability on Tax Avoidance

The findings from the regression analysis demonstrate that ESG performance significantly moderates the relationship between profitability and tax avoidance, as indicated by the positive and significant coefficient of the interaction term (profitability × ESG). This suggests that while profitability alone may enable or even reduce tax avoidance depending on the context, the presence of ESG alters this relationship. In particular, when ESG engagement is high, the potential for agency-driven tax avoidance behavior among profitable firms is constrained. ESG operates as a governance-enhancing mechanism that increases transparency, encourages ethical corporate behavior, and subjects managerial decisions to greater stakeholder scrutiny. This is consistent with prior studies by Lanis & Richardson (2015), Alomair & Metwally (2025), and Handayani (2020), which highlights ESG's role in discouraging aggressive tax practices by improving corporate accountability and reputation management.

The moderating effect of ESG also aligns with agency theory, which emphasizes the role of oversight in mitigating managerial opportunism. In this study, ESG appears to function as a form of soft governance, limiting the discretionary power of managers in high-profit firms to engage in tax avoidance. This is especially relevant in emerging markets, where traditional regulatory enforcement may be less robust, and ESG initiatives provide an alternative pathway for aligning corporate behavior with stakeholder expectations. The interaction effect underscores that ESG is not only a corporate responsibility tool but also a strategic moderating variable that reshapes how financial indicators like profitability translate into behavioral outcomes such as tax avoidance. These results emphasize the need for firms especially those with high profitability, to institutionalize ESG practices not just for compliance, but as a long-term strategy to reduce agency conflicts and enhance ethical financial conduct.

5. Conclusion

Based on the results of this study, it can be concluded that profitability has a significant effect on tax avoidance, supporting the agency theory notion that more profitable firms possess greater discretion and incentive to engage in tax planning strategies. However, the findings also reveal that ESG performance plays a critical moderating role, weakening the positive influence of profitability on tax avoidance. This suggests that firms with stronger ESG commitments are less likely to exploit their profitability for opportunistic tax behavior, as ESG acts as a governance mechanism that promotes transparency, ethical conduct, and accountability. These results highlight the importance of integrating ESG principles into corporate strategy, not only to meet stakeholder expectations but also to mitigate agency conflicts and enhance the integrity of financial practices, particularly in emerging market contexts where regulatory enforcement may be limited.

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THE EFFECT OF INCOME, FINANCIAL LITERACY, AND FINANCIAL ATTITUDE ON FINANCIAL FREEDOM, WITH HEDONISM LIFESTYLE AS A MEDIATING VARIABLE

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Abstract

This study aims to examine the influence of income, financial literacy, and financial attitude on financial freedom, with hedonistic lifestyle as a moderating variable. a quantitative approach with an explanatory research design was employed. The sample consisted of 106 productive-age individuals (25–55 years) residing in urban areas of Indonesia, selected using purposive sampling. Data were analyzed using Structural Equation Modeling-Partial Least Squares (SEM-PLS). The results indicate that income, financial literacy, and financial attitude significantly affect financial freedom. Furthermore, hedonistic lifestyle negatively moderates the relationship between income and financial attitude with financial freedom, but does not moderate the effect of financial literacy. These findings underscore the importance of lifestyle control in achieving financial independence.

Keywords: *financial freedom, income, financial literacy, financial attitude, hedonistic lifestyle.*

1. INTRODUCTION

Financial freedom, often referred to as financial independence, is the dream of many people. It is not merely about having a large amount of money, but rather about having the freedom to live according to our own choices without being constrained by financial pressures. Imagine being able to spend time with loved ones, pursue your passions, or even travel without worrying about bills that need to be paid or a monthly salary that arrives late. This is what makes financial freedom such a highly desired life goal for many.

However, achieving financial freedom is not easy. Many factors influence whether someone can attain it, starting from how we earn income and whether that income is sufficient, excessive, or even insufficient to meet daily needs; financial literacy to manage money effectively; and the attitude to make wise financial decisions, as well as the financial habits we build from an early age. In fact, many of us struggle to find a balance between meeting daily living expenses and investing for the future.

Based on research findings, nearly half of Indonesia's population (46%) is classified as financially vulnerable. According to tSurvey.id cited in Nada naurah (2025), 46% of respondents admitted feeling uncertain about their ability to handle emergency situations

requiring expenses of at least IDR 10 million. On the other hand, 62% of respondents demonstrated a high level of financial capability, indicating that this proportion of individuals falls into the category of Financial Freedom. Financial capability refers to a person's ability to manage and grow their financial resources, assessed by their confidence in their future financial capacity.

Referring to the findings from tSurvey.id in Nada naurah (2025), these differing conditions are likely influenced by variations in the availability of initial financial resources across economic groups. Generally, middle- to upper-class individuals have greater awareness of the potential risks involved in managing large sums of money, leading them to exercise more caution in financial decision-making.

Several previous studies have identified income, financial literacy, and financial attitude as factors predicted to influence financial freedom. "Income is a fundamental factor that determines an individual's ability to save, invest, and build assets to achieve financial freedom" (Lusardi & Mitchell, 2017). Meanwhile, "financial literacy relates to an individual's understanding and ability to manage finances effectively" (Huston, 2010), supported by research from Wahyuni et.al (2024), which states that "individuals with good financial understanding accompanied by proper financial management behaviors tend to have higher levels of financial well-being." Financial attitude reflects an individual's psychological orientation toward money management, which can influence financial behavior and decision-making (Ajzen, 2011). This is further supported by Agus Dwi Cahya, et.al (2021), who explain that "financial attitude is the evaluation, insight, or thought process regarding finance applied to one's attitudes. The more positive the attitude toward management, supported by extensive financial knowledge, the more effective practices can be implemented."

On the other hand, a hedonistic lifestyle—characterized by a tendency toward consumption and short-term pleasure orientation—has the potential to hinder the attainment of financial freedom (O'Loughlin & Szmigin 2009). In modern society, increases in income do not always correspond to improvements in financial well-being due to the phenomenon of lifestyle inflation, where expenditures rise alongside income growth.

Various previous studies have examined the relationship between income, financial literacy, and financial attitude on financial well-being. However, a gap remains in the literature regarding how a hedonistic lifestyle moderates the relationship between these factors and financial freedom. This study aims to fill that gap by analyzing the moderating role of

hedonistic lifestyle in the relationship between income, financial literacy, financial attitude, and financial freedom.

The Theory of Planned Behavior, according to Ajzen (1991) as cited in Novia Regita Cahyani (2022), is "a theory related to individual attitudes." A person's behavior and attitude are generally influenced by intentions and specific goals they aim to achieve, which can serve as indicators of changes in individual behavior. Intention is considered a key factor in predicting an action. The Theory of Planned Behavior combines several important concepts from social science and behavioral psychology. This theory explains how to understand and predict individual behavior in certain situations. Within this theoretical framework, there are three main components that influence a person's behavior: attitude toward the behavior, subjective norm, and perceived behavioral control (Ajzen, 2005, as cited in Novia Regita Cahyani (2022).

Furthermore, according to Ajzen (2005) Novia Regita Cahyani (2022), background factors can also influence a person's behavior, including: "personal factors such as personality, attitudes, life values, intelligence, and emotions; social factors such as age, gender, ethnicity, religion, income, and education; and informational factors such as knowledge, skills, and media exposure." Thus, the Theory of Planned Behavior is used as the theoretical basis to explain how income, financial literacy, financial attitude, and hedonistic lifestyle relate to behavior.

Financial freedom can be defined as being financially independent (Rahman, M.A., 2022). In terms, it refers to when a person has broad control over their finances." When in a state of financial freedom, it becomes possible to work freely or earn additional income through passive income, which is money earned without actively working.

Income is defined as "the amount of money obtained from business activities and individual performance" (Muntahanah, S., Cahyo, H., Setiawan, H., & Rahmah 2021). Asih S & Khafid M (2020) show that a person's income enables them to meet their needs and desires. This means that individuals with higher income find it easier to fulfill their needs and even desires, while those with lower income may struggle to meet their needs and responsibilities.

Financial literacy is "the knowledge, skills, and confidence that influence attitudes and behaviors to improve the quality of decision-making and financial management to achieve financial well-being" (OJK 2024, as cited in Angguliyah Rizqi Amaliyah, et,al 2025).

"Financial attitude is the psychological orientation of a person toward financial matters, reflected in beliefs, values, and preferences related to money management" (Icek Ajzen 2011).

Financial attitude affects how individuals perceive and handle money, which in turn impacts their financial behavior.

Sudiantara (2003), as cited in Refianti & Intan Zoraya (2024), states that "hedonism is a doctrine or school of thought that considers pleasure or enjoyment as the highest good for humans." A hedonistic lifestyle is "a way of living that pursues pleasure as something to be chased and made a life goal" (Mahmudah & Retnosari, 2021, as cited in Refianti & Intan Zoraya, 2024).

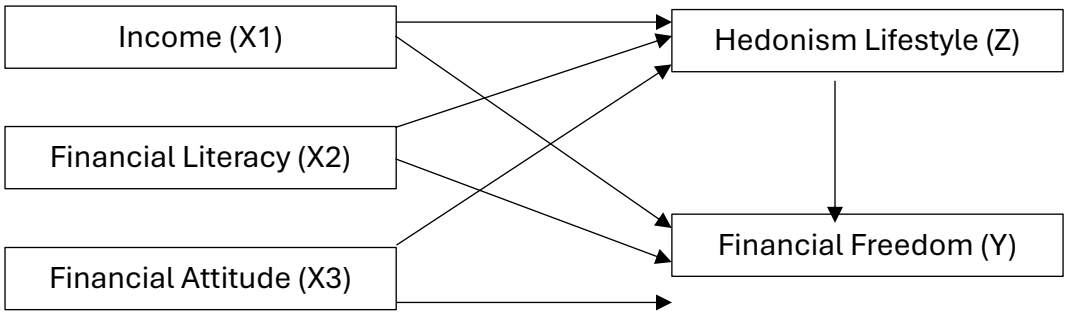

Figure 1. Research Framework

Explanation:

X1 = Income

X2 = Financial Literacy

X3 = Financial Attitude

Y = Financial Freedom

Z = Hedonistic Lifestyle

Hypotheses:

H1 = The effect of Income on Financial Freedom

H2 = The effect of Financial Literacy on Financial Freedom

H3 = The effect of Financial Attitude on Financial Freedom

H4 = The effect of Income on Financial Freedom mediated by Hedonistic Lifestyle

H5 = The effect of Financial Literacy on Financial Freedom mediated by Hedonistic Lifestyle

H6 = The effect of Financial Attitude on Financial Freedom mediated by Hedonistic Lifestyle

2. RESEARCH METHOD

This study employs a quantitative approach with an explanatory research design. Explanatory research aims to explain causal relationships among research variables through

hypothesis testing (Sekaran U & Bougie R 2016). This approach was chosen because the study intends to analyze the influence of income, financial literacy, and financial attitude on financial freedom, with hedonistic lifestyle as a moderating variable.

The population in this study consists of productive-age individuals (25–55 years) residing in urban areas of Indonesia. This age group was selected based on the consideration that individuals within this range generally have income and financial decision-making independence. The sampling technique used purposive sampling, resulting in a total sample of 106 respondents. The data were analyzed using SEM-PLS software.

3. RESULT AND DISCUSSION

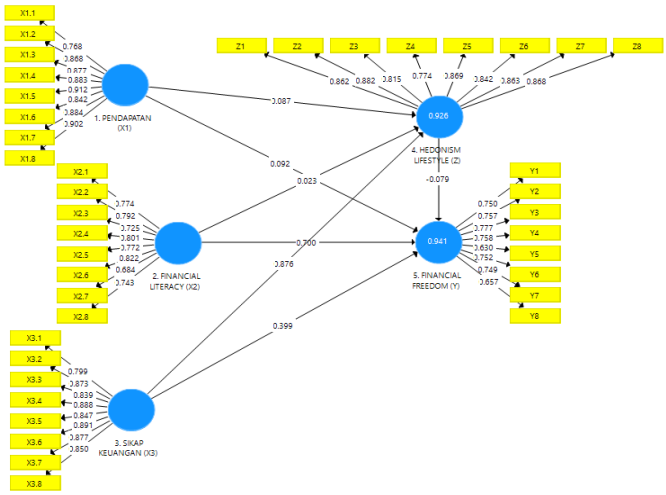

Figure 2. Standardized Loading Factor (SEM PLS source processed by the author)

Table 1: Research Results of P Values

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
1. INCOME (X1) -> 4. HEDONISM LIFESTYLE (Z)	0,287	0,292	0,054	1,961	**0,007**
1. INCOME (X1) -> 5. FINANCIAL FREEDOM (Y)	0,192	0,193	0,052	1,976	**0,029**
2. FINANCIAL LITERACY (X2) -> 4. HEDONISM LIFESTYLE (Z)	0,123	0,121	0,031	2,734	**0,046**
2. FINANCIAL LITERACY (X2) -> 5. FINANCIAL FREEDOM (Y)	0,700	0,701	0,040	17,609	**0,000**

3. FINANCIAL ATTITUDE (X3) -> 4. HEDONISM LIFESTYLE (Z)	0,876	0,872	0,050	17,494	**0,000**
3. FINANCIAL ATTITUDE (X3) -> 5. FINANCIAL FREEDOM (Y)	0,399	0,393	0,093	4,276	**0,000**
4. HEDONISM LIFESTYLE (Z) -> 5. FINANCIAL FREEDOM (Y)	0,279	0,275	0,078	2,005	**0,015**
1. INCOME (X1) -> 4. HEDONISM LIFESTYLE (Z) -> 5. FINANCIAL FREEDOM (Y)	0,177	0,178	0,031	2,641	**0,022**
2. FINANCIAL LITERACY (X2) -> 4. HEDONISM LIFESTYLE (Z) -> 5. FINANCIAL FREEDOM (Y)	0,183	0,181	0,034	2,488	**0,026**
3. FINANCIAL ATTITUDE (X3) -> 4. HEDONISM LIFESTYLE (Z) -> 5. FINANCIAL FREEDOM (Y)	0,269	0,265	0,058	3,014	**0,011**

Source: SEM PLS 4, processed by the author, 2025

The Effect of Income on Financial Freedom

Based on the research results, the P-value is 0.029, which is less than the significance level of 0.05, indicating that income has a positive effect on financial freedom. This finding reinforces that income is a crucial factor in achieving financial freedom. Income is defined as "the amount of money earned from business activities and individual performance" (Muntahanah, S., Cahyo, H., Setiawan, H., & Rahmah 2021). Asih S & Khafid M (2020) show that income enables individuals to meet their needs and desires. In other words, higher income makes it easier for someone to fulfill their needs and even desires, whereas lower income leads to difficulties in meeting needs and responsibilities.

Adequate income plays a vital role as the foundation for achieving financial freedom. With sufficient earnings, individuals can not only cover basic needs but also have opportunities to save, invest, avoid unnecessary debt, and prepare for emergencies. Consistent income also contributes to improved quality of life, including mental health, by providing a sense of security against financial risks. Through careful financial management, income can serve as a solid basis for achieving sustainable financial stability and well-being.

Income can come from active sources (direct work) or passive sources (investments or other businesses) and represents the financial resources received by individuals or families over a certain period as compensation for goods or services provided. Income is essential in building economic stability. Indicators of financial freedom include the availability of liquid funds, sufficient savings, efficient asset management, protection against inflation, optimal tax management, household expenditures aligned with financial capacity, and prudent credit risk

control. A person can be considered financially free if their income exceeds total expenditures, enabling overall financial improvement (Astuti & Kharisma, 2024, as cited in Wahyuni, et. al 2024).

The Effect of Financial Literacy on Financial Freedom

The research results show a P-value of 0.000, which is less than 0.05, indicating that financial literacy positively affects financial freedom. Financial literacy is defined as "knowledge, skills, and confidence that influence attitudes and behaviors to improve the quality of decision-making and financial management to achieve financial well-being" (OJK 2024, as cited in Angguliyah Rizqi Amaliyah, et. al, 2025). However, a high level of financial literacy does not automatically guarantee financial freedom, especially if financial management skills are lacking. Even if someone understands financial concepts deeply, without effective management skills, they remain at risk of financial problems. Conversely, good financial management skills enable individuals to avoid financial obstacles that could disrupt economic stability. According to Radiman et al. (2022) in Wahyuni et. al (2024), "individuals with good financial understanding accompanied by proper financial management behaviors tend to have higher levels of financial well-being." Therefore, financial literacy must play a role in shaping good financial behavior to achieve financial well-being. Financial management behavior acts as an important mediator in the relationship between financial literacy and financial freedom.

The Effect of Financial Attitude on Financial Freedom

The study shows a P-value of 0.000, less than 0.05, indicating that financial attitude positively affects financial freedom. Financial attitude refers to opinions and evaluations about one's financial situation. It relates to financial challenges faced by young people. Financial attitude can be viewed from perspectives such as self-confidence, self-development, and security (Herdjiono & Damanik, 2016, as cited in Wahyuni et. al 2023). Agus Dwi Cahya, et. al (2021) define financial attitude as "the evaluation, insight, or thought process about finance applied to one's attitude. The more positive the attitude toward management, supported by extensive financial knowledge, the more effective practices can be implemented."

Financial attitude reflects beliefs, views, and behaviors regarding money and its management. It includes how individuals perceive the importance of saving, investing, managing debt, and planning finances for the future. In the context of achieving financial freedom, financial attitude plays a crucial role. Even with high income or good financial

knowledge, without a positive and disciplined attitude toward money, achieving financial stability and independence can be difficult.

Individuals with good financial attitudes tend to make wiser financial decisions, such as avoiding a consumptive lifestyle, prioritizing finances, setting aside income for savings and investments, and preparing emergency funds. Such attitudes foster healthy and consistent financial behaviors that directly support the achievement of financial freedom. Conversely, attitudes characterized by extravagance, neglect of financial planning, or focus on short-term satisfaction hinder long-term economic stability. Therefore, a positive financial attitude not only improves daily money management but also forms a vital foundation for sustainable and stable financial freedom.

The Effect of Income on Financial Freedom Moderated by Hedonistic Lifestyle

The research results show a P-value of 0.022, which is less than 0.05, indicating that income's effect on financial freedom is moderated by hedonistic lifestyle. A hedonistic lifestyle is associated with excessive consumption, wastefulness, and a focus on fulfilling short-term desires. Such behavior tends to ignore long-term financial planning, such as saving, investing, or managing debt. Consequently, individuals with stable or high income may struggle to achieve financial stability due to uncontrolled consumptive spending.

This finding shows that the positive effect of income on financial freedom weakens as individuals exhibit higher levels of hedonistic lifestyle. Conversely, if a person's lifestyle is more frugal, simple, or non-consumptive, the effect of income on financial freedom becomes stronger. Lifestyle acts as an important filter in income management. Two individuals with the same income may have vastly different levels of financial freedom depending on how they manage their spending and lifestyle habits.

The Effect of Financial Literacy on Financial Freedom Moderated by Hedonistic Lifestyle

The P-value is 0.026, which is greater than 0.05, indicating that the moderating effect of hedonistic lifestyle on the relationship between financial literacy and financial freedom is not significant. This suggests that in individuals with a high hedonistic lifestyle, the positive influence of financial literacy on financial freedom is weakened. In other words, even good financial literacy will struggle to translate into financial freedom if accompanied by a

hedonistic lifestyle. Conversely, financial literacy combined with a healthy lifestyle facilitates easier achievement of financial freedom.

The Effect of Financial Attitude on Financial Freedom Moderated by Hedonistic Lifestyle

The P-value is 0.011, less than 0.05, indicating that financial attitude's effect on financial freedom is moderated by hedonistic lifestyle. This means that even if someone has a good financial attitude, the positive effect of this attitude on financial freedom diminishes if their lifestyle is hedonistic. In this context, positive financial attitudes such as awareness of saving or investing may become ineffective if consistently countered by excessive consumptive behavior. Conversely, individuals with good financial attitudes and a more frugal or minimalist lifestyle have a much higher potential to achieve financial freedom. This highlights the importance of balancing mindset and lifestyle in attaining financial independence.

4. CONCLUSION

Based on the results of the study on the influence of income, financial literacy, and financial attitude on financial freedom with hedonistic lifestyle as a moderating variable, the following conclusions are drawn: Income positively influences financial freedom; the higher the income, the greater the financial stability, making it easier for individuals to achieve financial freedom. Financial literacy positively affects financial freedom; with adequate financial knowledge, individuals can manage their income effectively to reach financial freedom. Financial attitude positively impacts financial freedom; good financial attitudes encourage individuals to manage their finances wisely, facilitating achievement of financial freedom. Hedonistic lifestyle moderates the effect of income on financial freedom; a hedonistic lifestyle makes achieving financial freedom more difficult, even with good income, if not accompanied by a proper lifestyle. Hedonistic lifestyle also moderates the effect of financial literacy on financial freedom; good financial knowledge alone cannot provide real benefits without lifestyle control. Finally, hedonistic lifestyle moderates the effect of financial attitude on financial freedom; individuals with good financial attitudes and a frugal or minimalist lifestyle have a much higher potential to achieve financial freedom, and vice versa.

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THE INFLUENCE OF ENTREPRENEURIAL EDUCATION, ENTREPRENEURIAL SPIRIT AND SELF-EFFICACY ON ENTREPRENEURIAL INTENTION IN GENERATION Z IN THE SPECIAL REGION YOGYAKARTA (DIY).

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Abstract

This study aims to analyze the influence of entrepreneurial education, entrepreneurial spirit, and self-efficacy on entrepreneurial intention among Generation Z in the Special Region of Yogyakarta (DIY). A purposive sampling technique was employed, with 115 respondents participating in the research. Primary data were collected through a validity- and reliability-tested Google Form questionnaire. Data analysis included descriptive statistical analysis, instrument tests (validity and reliability), classical assumption tests (normality, linearity, heteroscedasticity, and multicollinearity), and hypothesis testing (t-test and F-test). The coefficient of determination (R^2) was used to measure the extent to which the independent variables influence the dependent variable. Multiple linear regression analysis was applied, and quantitative data were processed using IBM SPSS version 25. The results indicate that entrepreneurial education, entrepreneurial spirit, and self-efficacy individually exert a positive influence on entrepreneurial intention. Furthermore, these three variables collectively demonstrate a significant positive impact on entrepreneurial intention. This research underscores the critical role of fostering entrepreneurial competencies and psychological factors to enhance entrepreneurial aspirations among Generation Z.

Keywords: Entrepreneurial education, Entrepreneurial intention, Entrepreneurial spirit, Self-efficacy.

1. Introduction

An interconnected world in an increasingly competitive global economy, according to Fadhlurrahman (2025), the number of Indonesia's population currently reaches 283.49 million people, this number places Indonesia in the fourth most populous position in the world. Based on data BPS (2021), the composition of Indonesia's population shows that 70.72% of the population is in the productive age group. Indonesia still faces a number of economic and social challenges, one of the main problems faced is poverty caused by the high unemployment rate, according to BAPPENAS data (2023), the Open Unemployment Rate (TPT) reaches 5.35%. According to Pujiastuti and Cahyo (2020), one way to overcome the unemployment problem is to open new jobs through entrepreneurial activities.

Youth empowerment in economic independence is a solution to overcome unemployment problems (Octavia et al, 2023). However, interest in entrepreneurship among Generation Z is still relatively low (Nasri, 2024). This research focuses on the Special Region of Yogyakarta (DIY) Province because Yogyakarta is known as a student city that has a dynamic education and entrepreneurship ecosystem (Ciputra, 2022).

2. Literature review

2.1 Theory of planned behavior

Theory of Planned Behavior (TPB) developed by Ajzen & Schmidt (2020), is widely used as a reference in explaining the mechanism of formation *entrepreneurial intention*. *Theory of planned behavior* emphasizes the three main factors that affect a person's intention to start a business, attitude toward entrepreneurship, subjective norms and perceived control of behavior. By understanding these three factors, it is possible to design more effective interventions to encourage entrepreneurial intent, such as programs of *entrepreneurial education* comprehensive and social support.

2.2 Entrepreneurial education

Entrepreneurial education is a learning program that aims to improve the skills, knowledge and characteristics of individuals that support entrepreneurial activities (Jiatong et al, 2021). According to Fayolle dan Gailly (2016) *entrepreneurial education* is an educational intervention designed to instill entrepreneurial competence, raise awareness about entrepreneurship as a career option and develop a positive attitude towards entrepreneurial activities. *Entrepreneurial education* is all educational activities with the ultimate goal of developing entrepreneurial intentions (Li and Wu, 2019).

2.3 Entrepreneurial spirit

Entrepreneurial spirit is attitudes and behaviors that encourage individuals to take risks, innovate and pursue business opportunities, including the ability to adapt to change, collaborate and have social responsibility (Q. Liu & Xiao, 2023). According to Saputra et al. (2023), an entrepreneurial spirit is someone who dares to take risks in making an effort of his own will based on his creativity and soul.

2.4 Self-efficacy

Self-efficacy is an individual's belief in his or her ability to complete tasks and achieve goals that result in the expected (Wang et al, 2016). According to Pebriyanti & Rizky (2024), *self-efficacy* is a person's belief in his ability to solve a problem. *Self-efficacy* is the belief that drives individuals to do and achieve something (Hutasuhut, 2018).

2.5 Entrepreneurial intention

Entrepreneurial intention is a self-acknowledged belief and preparation to establish a new business venture, add value to an existing organization or consciously plan to do so in the future(Wang et al, 2016). According to Nurfitriana (2019), entrepreneurial intention is the desire, interest and willingness to work hard or have a strong will to be independent or try to meet their life needs without feeling afraid of the risks that will occur, and always learning from the failures experienced. *Entrepreneurial intention* is a state of mind that attracts a person's attention and behavior in entrepreneurship rather than an employee of an organization/company (Wach dan Głodowska, 2019).

2.6 Hypotheses development

The results of the research conducted by Wiranta & Aziz (2024), Wu et al. (2022), Vernanda & Rokhmani (2021) and Liu et al. (2019) state that entrepreneurial education has a positive and significant influence on entrepreneurial intention.

H1: Entrepreneurial education has a positive effect on entrepreneurial intention.

Research conducted by Saputra et al. (2023), W. Safitri & Nurasik (2022), Rachmawati (2020) and Nasrullah (2016) showed that entrepreneurial spirit has a positive and significant effect on entrepreneurial intention.

H2: Entrepreneurial spirit has a positive effect on entrepreneurial intention.

Research Taneja et al. (2024), S. Santoso & Oetomo (2018), Wang et al. (2016) and Wu et al. (2022) that self-efficacy has a positive and significant influence on entrepreneurial intention.

H3: Self-efficacy has a positive effect on entrepreneurial intention

Research results in Wiranta & Aziz (2024) entrepreneurial education and entrepreneurial spirit have a positive and significant effect on entrepreneurial intention, Wu et al. (2022), Prayitno et al. (2024) and Martyajuarlinda & Kusumajanto (2018) states that entrepreneurial education and self-efficacy have a positive and significant effect on entrepreneurial intention.

H4: Entrepreneurial education, entrepreneurial spirit and self-efficacy simultaneously have a positive effect on entrepreneurial intention.

3. Methodology

3.1 Population and Sample

The population used in this study is generation Z in the Special Region of Yogyakarta (DIY). The sampling technique in this study uses purposive sampling. The criteria used for sampling in this study are generation Z who have received entrepreneurial education.

3.2 Variable and Operation Definitions

3.2.1 Independent Variables

In this study, the independent variables are entrepreneurial education, entrepreneurial spirit and self-efficacy. According to Jiatong et al. (2021), entrepreneurial education is a learning program that aims to improve the skills, knowledge and characteristics of individuals who support entrepreneurial activities. Measured by entrepreneurial knowledge, values and motives, social interactions, entrepreneurial skills and abilities. According to Q. Liu & Xiao (2023), entrepreneurial spirit is attitudes and behaviors that encourage individuals to take risks, innovate and pursue business opportunities, including the ability to adapt to change, collaborate and have social responsibility. Measured by willingness and confidence, focus on goals, daring to take risks, being responsible, hardworking, creative and innovative. According to Wang et al. (2016), self-efficacy is an individual's belief in his or her ability to complete tasks and achieve goals that result in the expected results. Measured by confidence, persistence and optimism, leadership and mentality.

3.2.2 Dependent Variable

The dependent variable in this study is entrepreneurial intention. According to Wang et al. (2016), the entrepreneurial intention is a self-acknowledged belief and preparation to establish a new business venture, add value to an existing organization or consciously plan to do so in the future. Measured through a career as an entrepreneur, individual beliefs and desires.

3.3 Data Analysis Methods

The data analysis method in this study is a quantitative method using SPSS (Statistical Product and Service Solution) software version 25. Data analysis used descriptive statistical analysis, instrument tests (validity and reliability), classical assumption tests (normality, linearity, heteroscedasticity and multicollinearity), multiple regression equations and hypothesis tests (partial t-test, determination coefficient and simultaneous test F).

4. Results and discussions

4.1 Descriptive Statistics

This study uses primary data collected through a questionnaire survey from the people of generation Z in the Special Region of Yogyakarta, The respondents of this study consist of 115 individuals with the majority of the male gender as many as 73 respondents, based on the

last education of bachelor (S1) as many as 47 respondents, domicile in the city of Yogyakarta as many as 41 respondents and based on the business field of interest, namely food & beverage as many as 35 respondents.

Table 1 Descriptive Statistics

No	Respondents	Characteristics	Total	Percentage
1	Gender	Man	73	63,53%
		Woman	42	36,5%
2	Final Education	Junior High School/Equivalent	1	0,9%
		High School/Vocational School/Equivalent	46	40,0%
		Diploma (D1/D2/D3/D4)	18	15,7%
		Bachelor (S1)	47	40,9%
		Magister (S2)	3	2,6%
3	Regional Domicile	Bantul	9	7,8%
		São Paulo	11	9,6%
		Gunungkidul	15	13%
		Sleman	39	33,9%
		Yogyakarta	41	35,7%
4	Business Fields of Interest	Tourism	7	6,1%
		Property and Real Estate	10	8,7%
		Creative and Craft Industries	12	10,4%
		Healthcare Industry	14	12,2%
		Fashion	17	14,8%
		Agribusiness	20	17,4%
		Food & Beverage	35	30,4%

4.2 Classic Assumption Test

4.2.1 Normality

The normality test aims to find out whether the data used in this study is normally distributed or not. The results of the normality test can be seen in the following table:

Table 2 Kolmogorov-Smirnov Normality Test Results

One-sample Kolmogorov-Smirnov Test	
N	*Unstandardized Residual*
	115
Monte Carlo sig. (2-tailed)	0,877

Based on Table 2 on the results of the normality test, the significance result of the normality test was 0.877 where the result had a value greater than the significance level used, which was 0.05. So it can be concluded that the normality test of the variables of entrepreneurial education, entrepreneurial spirit, self-efficacy and entrepreneurial intention has been distributed normally.

4.2.2 Linearity

The linearity test is aimed at seeing whether the specifications of the model used are correct or not. The results of the linearity test can be seen in the following table:

Table 3 Results of the linearity test X1 to Y

Variable	*Deviation form Linearity*	
Entrepreneurial education and entrepreneurial intention	F	Sig.
	1,576	0,099

Based on Table 3, the linearity test of the variable X1 against Y can be seen that the Deviation from Linearity F calculated by 1.576 is smaller than the F of the table of 2.690. The

sig value of 0.099 is greater than 0.05 which means that there is a linear and significant relationship between the variables of entrepreneurial education and entrepreneurial intention.

Table 4 Results of the Linearity Test X2 Against Y

Variable	*Deviation form Linearity*	
Entrepreneurial spirit and entrepreneurial intention	F	Sig.
	1,292	0,235

Based on Table 4 of the linearity test of the variable X2 against Y, it can be seen that the Deviation from Linearity F calculated by 1.292 is smaller than the F of the table of 2.690. The sig value of 0.235 is greater than 0.05 which means that there is a linear and significant relationship between the variable entrepreneurial spirit and entrepreneurial intention.

Table 5 Results of the linearity test X3 Against Y

Variable	*Deviation form Linearity*	
Self-efficacy and entrepreneurial intention	F	Sig.
	1,140	0,333

Based on Table 5 of the linearity test of the variable X3 against Y, it can be seen that the Deviation from Linearity F calculated by 1.140 is smaller than the F of the table of 2.690. The sig value of 0.333 is greater than 0.05 which means that there is a linear and significant relationship between the self-efficacy variable and entrepreneurial intention.

4.2.3 Heteroskedastisitas

In this study, the researcher conducted a heteroscedasticity test using the Glejser test to determine the occurrence of heteroscedasticity or homoscedasticity. The results of the heteroscedasticity test can be seen in the following table:

Table 6 Heteroscedasticity Results

Coefficients						
Model		*Unstandardized Coefficients*		*Standardized Coefficients*	t	Sig.
		B	*Std. Error*	*Beta*		
1	(*Constant*)	4,090	0,886		4,614	0,000
	X1	-,013	0,037	-,055	-,360	0,719
	X2	-,092	0,046	-,308	-1,977	0,051
	X3	0,006	0,040	0,029	0,154	0,878
a. Dependent Variable: ABS_RES						

Based on the results of the Glejser test in Table 6 in the sig column, it shows that all significance values > 0.05 for the variables of entrepreneurial education (X1), entrepreneurial spirit (X2) and self-efficacy (X3), so it is concluded that based on the results of the Glejser test, heteroscedasticity does not occur.

4.2.4 Multikolinearitas

The multicollinearity test is a test aimed at testing whether there is a correlation between independent variables in the regression model. The results of the multicollinearity test can be seen in the following table:

Table 7 Multicollinearity Results

Coefficients[a]			
Model		*Collinearity Statistics*	
		Tolerance	VIF
1	X1 entrepreneurial education	0,349	2,868
	X2 entrepreneurial spirit	0,332	3,015
	X3 self-efficacy	0,231	4,326
a. Dependent Variable: Y entrepreneurial intention			

Based on the results of the multicollinearity test in Table 7, it shows that the entrepreneurial education variable has a VIF value of 2.868 < 10 and a tolerance value of 0.349 > 0.10, the entrepreneurial spirit variable has a VIF value of 3.051 < 10 and a tolerance value of 0.332 > 0.10 and the self-efficacy variable has a VIF value of 4.326 < 10 and a tolerance value 0.231 > 0.10. So in this test of all independent variables, multicollinearity does not occur.

4.3 Multiple Regression Equation Results

To analyze the influence of the variables of entrepreneurial education (X1), entrepreneurial spirit (X2) and self-efficacy (X3) on entrepreneurial intention (Y), which can be seen in the following table:

Table 8 Multiple Linear Regression Equation Results

Coefficients[a]						
Model		*Unstandardized Coefficients*		*Standardized Coefficients*	t	Sig.
		B	*Std. Error*	*Beta*		
1	(*Constant*)	1,458	1,498		,974	,332
	X1	0,281	0,062	0,402	4,544	,000
	X2	0,180	0,078	0,209	2,302	,023
	X3	0,183	0,067	0,294	2,709	,008
a. Dependent Variable: Y						

It can be concluded from the multiple regression model that all independent variables have a constant value of positive value, which means that if the factor in the independent variable increases, it will increase the intention of generation Z to become an entrepreneur.

4.4 Hypothesis Test Results

4.4.1 Statistical Test t

The t-test is aimed at measuring the extent to which an independent variable influences a dependent variable. The basis for decision-making is that if the value of t is calculated > t of the table and the significance value is < 0.05, it means that there is a significant influence between the independent variable and the dependent variable. The results of the t-test in this study can be seen in the following table:

Table 9 Results of the t-test of the effect of X1 on Y

Model		*Unstandardized Coefficients*		*Standardized Coefficients*	t	Sig.
		B	*Std. Error*	*Beta*		
1	(*Constant*)	1,458	1,498		0,974	0,332
	Entrepreneurial education	0,281	0,062	0,402	4,544	0,000
a. Dependent Variable: Entrepreneurial Intention						

Based on Table 9, it can be concluded that there is an influence between entrepreneurial education and entrepreneurial intention, therefore H1 is accepted.

Table 10 Results of the t-test of the effect of X2 on Y

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1,458	1,498		0,974	0,332
	Entrepreneurial spirit	0,180	0,078	0,209	2,302	0,023
a. Dependent Variable: Entrepreneurial Intention						

Based on Table 10, it can be concluded that there is an influence between entrepreneurial spirit and entrepreneurial intention, therefore H2 is accepted.

Table 11 Results of the t-test of the effect of X3 on Y

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1,458	1,498		0,974	0,332
	Self-efficacy	0,183	0,067	0,294	2,709	,008
a. Dependent Variable: Entrepreneurial Intention						

Based on Table 11, it can be concluded that there is an influence between self-efficacy and entrepreneurial intention, therefore H3 is accepted.

4.4.2 F Test (Simultaneous)

The F test or simultaneous test is used to find out whether all independent variables together or simultaneously affect the dependent variable The results of the F test can be seen in the table below:

Table 12 F Test Results

ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	554,816	3	184,939	85,435	,000b
	Residual	240,280	111	2,165		
	Total	795,096	114			

Based on Table 4.18, it can be seen that the F value is calculated as 85.435 > F of the table is 2.690 and the significance value is 0.000 < 0.05. So it can be concluded that the variables of Entrepreneurial Education, Entrepreneurial Spirit and Self-Efficacy simultaneously or together have a positive effect on Entrepreneurial Intention. It can be concluded that H4 is acceptable.

4.5 Coefficient of Determination (R2)

To measure how far the model is able to explain the variation of dependent variables. The results of the determination coefficient (R2) in this study can be seen in the following table:

Table 13 Determination Coefficient Results

Model Summary

Model	R	*R Square*	*Adjusted R Square*	*Std. Error of the Estimate*
1	0,835a	0,698	0,690	1,47129
a. Predictors: (Constant), X1, X2, X3.				

Table 13 shows that the Adjusted R Square is 0.690 which means that the variables of entrepreneurial education, entrepreneurial spirit and self-efficacy affect the entrepreneurial intention variable by 69.0%, and the remaining 31.0% is influenced by other variables outside the model.

4.6 Discussion

4.6.1 The Influence of Entrepreneurial Education on Entrepreneurial Intention

Based on the test results in Table 9, the data processing was obtained t calculation of 4,544 > t table of 1.981 and the significance value obtained was 0.000 < 0.05. So it can be concluded that there is an influence between entrepreneurial education and entrepreneurial intention. The results of this study are in line with the research conducted by Wiranta and Aziz (2024), Vernanda dan Rokhmani (2021), Wu et al. (2022) and X. Liu et al. (2019)that entrepreneurial education has a positive effect on entrepreneurial intention By getting entrepreneurship education, generation Z will gain knowledge and experience about entrepreneurship, so it will have an impact on increasing the intention of generation Z to be entrepreneurial.

4.6.2 The Influence of Entrepreneurial Spirit on Entrepreneurial Intention

Based on Table 10, the results of the data processing were obtained t calculation of 2.302 > t table of 1.981 and the significance value was obtained of 0.023 < 0.05. So it can be concluded that there is an influence between entrepreneurial spirit with entrepreneurial intention. The results of this study are in line with the research conducted by Saputra et al. (2023), W. Safitri and Nurasik (2022), Rachmawati (2020) and Nasrullah (2016) that entrepreneurial spirit has a positive effect on entrepreneurial intention. The entrepreneurial spirit or entrepreneurial spirit that Generation Z has can be a supporting factor so as to encourage Generation Z's intention to be entrepreneurial.

4.6.3 The Effect of Self-Efficacy on Entrepreneurial Intention

Based on Table 11, the results of the data processing were obtained t-count of 2.709 > t of the table of 1.981 and the significance value was obtained of 0.008 < 0.05. So it can be concluded that there is an influence between self-efficacy with entrepreneurial intention. The results of this study are in line with the research conducted by Taneja et al. (2024), S. Santoso and Oetomo (2018), Wang et al. (2016) and Wu et al. (2022) that self-efficacy has a positive effect on entrepreneurial intention. Self-confidence or self-efficacy owned by generation Z, is one of the driving factors for the creation of entrepreneurial intentions.

4.6.4 The Simultaneous Influence of Entrepreneurial Education, Entrepreneurial Spirit and Self-Efficacy on Entrepreneurial Intention.

Based on the results of the F test in Table 12, the F value of the calculation was obtained at 85.435 > F of the table of 2.690 and the significance value was 0.000 < 0.05. It can therefore be concluded that entrepreneurial education, entrepreneurial spirit and self-efficacy simultaneously have a positive effect on entrepreneurial intention. The results of this study are in line with the research conducted by Wiranta and Aziz (2024), Wu et al. (2022), Prayitno et al. (2024) and Martyajuarlinda and Kusumajanto (2018) who found that entrepreneurial education, entrepreneurial spirit and self-efficacy simultaneously have a positive effect on entrepreneurial intention. Of these three variables, they can complement in forming

entrepreneurial intention in generation Z. Entrepreneurial education provides the knowledge base and skills necessary for entrepreneurship, entrepreneurial spirit supporting generation Z to work hard and not give up easily to be entrepreneurial, self-efficacy Increased confidence to face challenges.

5. Conclusion, Limitations and Suggestions

Based on the results of the tests that have been carried out, several conclusions can be drawn as follows:

5.1 H1 is accepted, *entrepreneurial education* has a positive and significant effect on *entrepreneurial intention*.

5.2 H2 is accepted, *entrepreneurial spirit* has a positive and significant effect on *entrepreneurial intention*.

5.3 H3 is accepted, *self-efficacy* has a positive and significant effect on *entrepreneurial intention*.

5.4 H4 is accepted, *entrepreneurial education*, *entrepreneurial spirit* and *self-efficacy* simultaneously have a positive and significant effect on *entrepreneurial intention*.

This research has several limitations. First, the data collection method used in this study is an online questionnaire through google form, so there is a possibility of bias. Second, this study is limited to the Province of the Special Region of Yogyakarta (DIY), so the findings cannot represent conditions in other regions. Third, the independent variables used in this study are entrepreneurial education, entrepreneurial spirit and self-efficacy, there are still other variables that are suspected to affect entrepreneurial intention. Fourth, the dependent variable in this study is the entrepreneurial intention, which cannot necessarily be used to measure the real actions of generation Z to be entrepreneurial.

Based on the conclusions and limitations that have been presented, there are several suggestions that can be conveyed. First, for further research, it is recommended to expand the scope of the research area in order to see the consistency of the results. Second, for future researchers, it is recommended to add other variables that are suspected to affect entrepreneurial intention. Third, for future researchers, it is recommended to develop dependent variables that can measure the extent to which Generation Z implements their entrepreneurial abilities. Fourth, for educational institutions, it is recommended to develop an entrepreneurship curriculum, so that generation Z will gain knowledge and experience about entrepreneurship, thereby having an impact on increasing the intention of generation Z to be entrepreneurial.

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THE INFLUENCE OF MANAGEMENT INFORMATION SYSTEM (MIS) INTEGRATION AND ENTERPRISE RESOURCE PLANNING (ERP) ON EMPLOYEE WORK PRODUCTIVITY

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Abstract

This research aims to analyze the effect of Management Information System (MIS) integration and Enterprise Resource Planning (ERP) on employee work productivity in processing industry companies specializing in agricultural product processing. The research method used is a survey approach with a quantitative design. The sampling technique employed is a total sampling, considering the population size is less than 100 people. The number of respondents in this study is 98 employees. Data collection was carried out using structured questionnaires with a five-point Likert scale. Data analysis was performed using SPSS version 24.0 software. The results showed that both individually and simultaneously, MIS and ERP integration have a positive and significant effect on employee work productivity. MIS integration facilitates more efficient and real-time information management, while ERP supports automation of business processes and inter-departmental coordination. Additionally, when combined, both systems contribute to achieving optimal productivity more effectively. These findings emphasize the importance of strategic utilization of information technology to improve employee performance and work effectiveness in the industrial sector.

Keywords: *Management Information System, Enterprise Resource Planning, Work Productivity, Information Technology, Employees.*

1. Introduction

In the era of digitalization and increasingly fierce global competition, organizations are required to continually innovate in managing their resources and business processes. One strategic step taken by many companies is integrating Management Information Systems (MIS) with Enterprise Resource Planning (ERP). These two systems are believed to enhance operational efficiency, accelerate decision-making, and create transparency and accountability in the management of company data and information (Santo Fernandi Wijaya et al., 2023). Management Information System (MIS) functions as a means to collect, process, and present relevant information for management to perform their functions effectively (Syahfitri et al., 2023). Meanwhile, ERP is a software-based system that integrates core business functions such as finance, human resources, production, and distribution into a centralized system (Gessa et al., 2023). The integration of MIS and ERP is expected to create synergy that drives employee efficiency and productivity (Puig-Denia et al., 2023).

Employee work productivity is a crucial factor in achieving organizational goals. Improvements in productivity are not only determined by individual competencies but are also highly influenced by the availability of supporting information systems and technology (Muttaqien et al., 2023). Therefore, it is essential to investigate how the integration of information systems, particularly MIS and ERP, positively impacts employee productivity. Based on data released by the Central Statistics Agency (BPS) in the 2023 Indonesia Labor Productivity Index report, the Indonesian labor productivity rate is recorded at 19.1 thousand

US dollars per worker. This figure is still relatively low compared to ASEAN countries such as Malaysia (34.7 thousand USD) and Thailand (25.4 thousand USD). The low productivity level serves as an indicator of structural challenges in workforce management and work systems in many organizations across Indonesia (Fahrezi & Sudibyo BO, 2023).

Furthermore, the World Bank report (2022) highlights that one of the causes of low employee productivity is the lack of integrated utilization of information technology in work processes. Many organizations in Indonesia, especially in the manufacturing and service sectors, still manage data manually or use fragmented systems, leading to data duplication, input errors, delays in information, and decreased work efficiency (Herdianzah et al., 2023). In this context, the integration of Management Information Systems (MIS) and Enterprise Resource Planning (ERP) becomes a strategic solution that companies can adopt. However, not all organizations are capable of or succeed in implementing this system integration effectively. Several studies indicate that without proper planning and management, ERP systems—which are supposed to improve performance—can actually become burdensome due to system complexity and user resistance (Suharto, 2023). Therefore, the underlying problem of this research is the still-low employee productivity in various organizations in Indonesia, partly caused by insufficient integration and optimization of management information systems and ERP. It is thus important to explore the extent to which the integration of these two systems contributes to improving work productivity, serving as a basis for policy-making and digital transformation strategies in the workplace.

2. Literature Review

2.1 Management Information System

A Management Information System (MIS) is an integrated framework that utilizes information technology to support decision-making processes, coordination, control, data analysis, and information visualization within an organization. According to (Darwis et al., 2023), MIS defines as a set of interconnected components that gather, process, store, and distribute information to support managerial operations and decision-making. MIS serves as the backbone of operational efficiency, enabling companies to manage data systematically and generate accurate reports (Ta & Nguyen, 2023). Research by Alfahl, (2023), shows that effective MIS implementation can enhance information access speed, reduce data redundancy, and support inter-departmental collaboration. Furthermore Kim et al., (2023), emphasize that the success of MIS depends on alignment between business needs, technological infrastructure, and user competencies. In this context, organizations need to ensure that the systems employed are appropriate for the company's operational characteristics and supported by adequate human resources.

A study by Al-Faouri et al., (2023), highlights that MIS functions not only as an operational support tool but also contributes to a company's competitive advantage through the use of real-time data and predictive analytics. They suggest that organizations conduct periodic evaluations of their systems to ensure adaptability to technological developments. Meanwhile, Dewi et al., (2023), explain that primary challenges in MIS implementation include user resistance, data security, and integration with other systems. Overall, MIS is a critical component in promoting organizational efficiency and effectiveness. However, its success is highly influenced by technical factors, human resources, and the organization’s readiness to face digital transformation.

2.2 Enterprise Resource Planning

Enterprise Resource Planning (ERP) is an integrated system designed to manage and automate various business functions such as finance, human resources, supply chain, and manufacturing within a centralized platform. According to Sastrodiharjo & Khasanah, (2023),

ERP is defined as a software solution that enables companies to consolidate business processes, enhance data transparency, and accelerate workflows. ERP has become a vital foundation in organizational digital transformation because of its ability to connect various departments in real-time. Research by Kolmykov & Logunova, (2023), indicates that successful ERP implementation can generate operational efficiency, reduce redundant costs, and improve data accuracy. However, a study by Juturi, (2023), reveals that many organizations face obstacles in ERP deployment, such as high implementation costs, system complexity, and the need for user training. Therefore, companies need to undertake strategic planning and select appropriate vendors to minimize failure risks.

Furthermore, Nurdaya et al., (2023), highlights that ERP not only functions as an automation tool but also plays a role in supporting data-driven decision-making. They emphasize the importance of conducting needs analysis before choosing the suitable ERP system. Meanwhile, studies by Kunduru & Kandepu, (2023), explain that organizations that successfully integrate ERP with their business strategies tend to achieve increased productivity and customer satisfaction. Overall, ERP is a strategic solution for enhancing business integration and efficiency. However, its successful implementation depends heavily on organizational readiness, management commitment, and user adaptation to system changes.

2.3 Employee Work Productivity

Employee work productivity is an indicator of performance that measures the efficiency and effectiveness of labor in achieving organizational targets. According to Galanti et al., (2021), productivity is defined as the ratio of output produced relative to the input of resources (time, labor, and costs) used. High productivity reflects employees' ability to work optimally by utilizing available resources efficiently. Research Husainah, (2023) shows that factors such as job satisfaction, a conducive work environment, training, and motivation significantly influence employee productivity. Furthermore Setyawati et al., (2023), emphasize that supportive leadership and recognition of employees' contributions can increase engagement and productivity. In this context, organizations need to establish clear reward and career development systems to encourage optimal performance.

A study of Herman Sjahruddin et al., (2023), highlights that technology, such as MIS and ERP, also plays a role in boosting productivity by reducing administrative workload and speeding up business processes. They suggest conducting regular training to ensure employees can effectively utilize technology. Meanwhile, research Demas Hafiyyan et al., (2023), explains that productivity is influenced not only by individual factors but also by job design, organizational culture, and work-life balance. Overall, employee productivity results from the interaction of personal, organizational, and technological factors. Companies that create supportive work environments, provide adequate tools, and offer appropriate incentives are more likely to achieve higher productivity levels. However, productivity is also affected by market dynamics, competitive pressure, and generational shifts in the workforce.

3. Methodology

The research method used in this study is a survey approach with a quantitative design. The research sample consists of 98 employees working in an agricultural processing industry company. The sampling technique employed is purposive sampling, with specific criteria such as employees who have worked for at least two years in the company. This is to ensure that respondents have sufficient experience and understanding. Data collection was conducted through the distribution of structured questionnaires designed to measure respondents' perceptions of the integration of Management Information Systems (MIS) and Enterprise Resource Planning (ERP), as well as their influence on employee work productivity. The questionnaire instrument uses a five-point Likert scale, ranging from "strongly disagree" (1) to

"strongly agree" (5), to ensure that the data obtained is measurable, objective, and can be analyzed statistically using SPSS software version 24.0.

4. Results and Discussions

4.1 The Normality Test

The normality test aims to determine whether the data for each variable follow a normal distribution. In this study, the normality test was conducted using the One-Sample Kolmogorov-Smirnov Test method of SPSS software. The variables tested include Management Information Systems, Enterprise Resource Planning, and Employee Work Productivity. The results of the normality test can be seen in the following table.

Table 1. Normality Test

One-Sample Kolmogorov-Smirnov Test				
		Management Information Systems	Enterprise Resource Planning	Employee Work Productivity
N		98	98	98
Normal Parameters[a,b]	Mean	129.54	121.10	134.21
	Std. Deviation	13.034	14.975	15.271
Most Extreme Differences	Absolute	.044	.062	.062
	Positive	.063	.045	.045
	Negative	-.055	-.051	-.025
Test Statistic		.063	.065	.053
Asymp. Sig. (2-tailed)		.200[c,d]	.200[c,d]	.200[c,d]
a. Test distribution is Normal.				
b. Calculated from data.				
c. Lilliefors Significance Correction.				
d. This is a lower bound of the true significance.				

Based on the normality test results using the One-Sample Kolmogorov-Smirnov Test for the three variables: Management Information System, Enterprise Resource Planning, and Employee Work Productivity, the obtained Asymp. Sig. (2-tailed) values are each 0.200. These values are greater than the significance level used, which is $\alpha = 0.05$. Therefore, the decision is to accept the null hypothesis (H_0), stating that the data originate from a normal distribution. This indicates that the three variables have data distributions that are normal or approximately normal. The test also employs the Lilliefors significance correction, which is appropriate for normal distribution testing with parameters estimated from the data. As a result, the data for all three variables are considered to meet the normality assumption, which is an important prerequisite for conducting further parametric statistical analyses such as regression analysis, Pearson correlation analysis, or t-tests.

4.2 The Homogeneity Test

The homogeneity test is conducted to determine whether the data used have equal or homogeneous variances across groups. Homogeneity of variances is one of the prerequisites in parametric statistical analysis, particularly when performing regression analysis. If the data are not homogeneous, the analysis results can become biased and inaccurate. The homogeneity test can be performed using Levene's Test. If the significance value (Sig.) is greater than 0.05, then the data are considered homogeneous or to have equal variances.

Table 2. Homogeneity Test

Variable	Levene Statistic	df1	df2	Sig. (p-value)
Productivity based MIS (X1)	1.812	1	96	0.182
Productivity based ERP (X2)	0.964	1	96	0.329

Based on the results of Levene's Test for Equality of Variances, the significance values for variable X1 against Y is 0.182, and for X2 against Y is 0.329. Both significance values are greater than 0.05, indicating no significant difference in variances between groups in each independent variable. Therefore, it can be concluded that the variances of Management Information System and ERP variables are homogeneous regarding Employee Work Productivity. This condition shows that the assumption of homogeneity is met, making the data suitable for further analysis using multiple linear regression.

4.3 The Multicollinearity Test (Coefficients Table))

Multicollinearity can be detected by examining the values of Tolerance and Variance Inflation Factor (VIF). A Tolerance value less than 0.10 or a VIF value greater than 10 indicates the presence of multicollinearity. Conversely, if the Tolerance value is greater than 0.10 and the VIF is less than 10, it can be concluded that multicollinearity does not occur. In this study, the multicollinearity test was conducted on two independent variables, namely Management Information System (X1) and Enterprise Resource Planning (ERP/X2), which are used to predict Employee Work Productivity (Y), with a sample of 98 respondents. The results of the multicollinearity test are presented in the following table.

Table 3. Multicollinearity Test

Model	Collinearity Statistics: Tolerance	Collinearity Statistics: VIF
X1 (MIS)	0.552	1.812
X2 (ERP)	0.552	1.812

Based on the table above, it can be seen that the Tolerance values for the Management Information System (X1) and ERP (X2) variables are 0.552, which is greater than 0.10. This means there are no issues of multicollinearity based on the Tolerance value. Additionally, the Variance Inflation Factor (VIF) for both variables is 1.812, which is well below the critical limit of 10. This indicates that there is no evidence of multicollinearity among the independent variables in this regression model.

4.4 The Hypothesis Test

Table 4. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.801	0.641	0.632	3.214

In the Model Summary table, the R value obtained is 0.801, indicating a strong relationship between the independent variables (Management Information System and ERP) and the dependent variable (Employee Work Productivity). The R Square value is 0.641, meaning that 64.1% of the variation or change in Employee Work Productivity can be explained by Management Information System and ERP simultaneously. The remaining 35.9% is explained by other variables not included in this model. The Adjusted R Square value of 0.632 further confirms that this model is sufficiently good and stable when used to generalize the population.

Table 5. ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	1854.432	2	927.216	89.78	0.000
Residual	1037.528	95	10.921		
Total	2892.000	97			

The ANOVA table shows that the calculated F value is 89.78 with a significance (Sig.) value of 0.000. Since the Sig. value is less than 0.05, it can be concluded that this multiple linear regression model is statistically significant. In other words, collectively, the variables Management Information System (X1) and ERP (X2) significantly influence Employee Work Productivity (Y). Thus, the regression model used is proper and capable of explaining the relationships among the variables studied.

Table 6. Coefficients

Model	B	Std. Error	Beta	t	Sig.
(Constant)	11.258	2.114	—	5.326	0.000
X1 (MIS)	0.478	0.097	0.482	4.928	0.000
X2 (ERP)	0.395	0.093	0.413	4.247	0.000

Based on the Coefficients table, the constant (intercept) value is 11.258, indicating that if variables X1 and X2 are assumed to have no effect (value zero), then the Employee Work Productivity (Y) remains at 11.258. Additionally, the Management Information System (X1) has a regression coefficient of 0.478 with a significance value of 0.000, which means that a one-unit increase in the Management Information System will increase Employee Work Productivity by 0.478 units, assuming other variables are constant. Since the significance value is less than 0.05, this influence is statistically significant. Similarly, for the Enterprise Resource Planning (ERP/X2) variable, the regression coefficient is 0.395 with a significance value of 0.000, indicating that each one-unit increase in ERP usage will increase Employee Work Productivity by 0.395 units. The significance value being less than 0.05 also shows that this influence is statistically significant. Therefore, the regression equation derived from this analysis can be written as: Y = 11.258 + 0.478X1 + 0.395X2. This means that both Management Information System and ERP, both individually and jointly, have a positive and significant effect on Employee Work Productivity.

4.5 The Effect of Management Information System (MIS) Integration on Employee Work Productivity

Management Information System (MIS) integration plays a vital role in enhancing the efficiency and effectiveness of work processes within an organization. Based on the analysis conducted, it was found that there is a positive and significant influence of MIS integration on employee productivity. This indicates that the higher the level of MIS integration and utilization within a company, the greater the level of productivity achieved by the employees. MIS integration enables employees to access the information they need quickly, accurately, and in real-time (Rahmisyari Rahmisyari & Musafir Musafir, 2023). This accelerates decision-making, reduces work duplication, and improves coordination between work units.

Additionally, an integrated system helps employees plan, execute, and evaluate their tasks in a more structured manner (Depiansah & Mellita, 2023). The availability of centralized data through MIS also minimizes the likelihood of information errors and enhances accountability in employee performance.

These findings align with previous studies showing that implementing an integrated information system can improve the productivity of individuals and teams (Azizah et al., 2023; Iswanto et al., 2023). This is due to increased operational efficiency, easier access to data, and the ability to monitor and evaluate performance continuously. Thus, it can be concluded that MIS integration is not only an administrative support tool but also a crucial strategy in human resource management to improve employee performance and productivity. Therefore, organizations should continuously develop and strengthen MIS integration to effectively support the achievement of work objectives.

4.6 The Effect of Enterprise Resource Planning (ERP) on Employee Work Productivity

Enterprise Resource Planning (ERP) is an integrated system designed to manage various business processes within an organization, including planning, production, finance, and human resources. Based on the analysis conducted in this study, it was found that ERP has a positive impact on employee productivity. This means that the more optimal the implementation of ERP within an organization, the higher the level of productivity achieved by employees. ERP systems provide numerous benefits for daily tasks, such as automating work processes, facilitating interdepartmental integration, and enabling faster and more accurate information access. With ERP, employees no longer need to record data manually, allowing them to focus more time and energy on strategic, value-added tasks. Additionally, ERP supports better collaboration among departments, ultimately creating a more efficient and effective workflow (A. S. Dewi et al., 2023).

These results reinforce the theory that the appropriate use of information technology, such as ERP, can increase productivity by reducing work cycle times, minimizing errors, and improving transparency and accountability in performance (Rahmadoni et al., 2023). In the context of human resources, ERP also aids in performance management, work evaluation, and more structured employee training (Dharma et al., 2024; Ditha et al., 2024; Wahyuni et al., 2024). Therefore, it can be concluded that the implementation of ERP not only impacts overall operational efficiency but also directly promotes the enhancement of employee productivity. Consequently, companies need to ensure that the ERP system used is accessible and fully utilized by all employees, supported by adequate training and development.

4.7 The Effect of Management Information System (MIS) Integration and Enterprise Resource Planning (ERP) on Employee Work Productivity

Based on the results of multiple linear regression analysis conducted in this study, it was found that MIS integration and ERP, both jointly and individually, have a significant influence on employee work productivity. The F-test results show that the significance value is less than the predetermined significance level ($\alpha = 0.05$), indicating that collectively, the variables MIS integration and ERP significantly affect productivity. This suggests that the combined implementation of these two systems can create a more efficient, structured, and responsive work environment that meets organizational needs, thereby directly contributing to an increase in employee output. Furthermore, the t-test results reveal that both independent variables (MIS integration and ERP) each have a positive and significant effect on employee productivity. The MIS integration variable makes a significant contribution because an integrated information system can provide accurate, real-time data, accelerate decision-making processes, and improve work efficiency across various organizational units (Ardianto et al., 2025; Mega Julianti et al., 2023; Putri et al., 2024). Similarly, the ERP variable also has a significant impact

because this system supports automation of work processes, interdepartmental integration, and minimizes administrative errors, all of which contribute to increases in individual and team productivity (Gusnadi et al., 2024; Yusdhika et al., 2024).

These findings indicate that both information technology systems used by the company MIS and ERP complement each other in creating a more productive work system (Eka Apriyani et al., 2023; Jo & Park, 2023; Kolmykov & Logunova, 2023; Ramadhan & Zailani, 2023). Proper information management through MIS, combined with effective business process management via ERP, has proven to positively impact employee performance (Ardianto et al., 2020, 2025). Therefore, organizational management is advised to continue developing and strategically integrating the use of MIS and ERP to maximize the benefits of both systems and achieve a direct increase in employee productivity.

5. Conclusion

Based on the analysis and discussion conducted, it can be concluded that the integration of Management Information Systems (MIS) and Enterprise Resource Planning (ERP) has a significant impact on employee work productivity, both individually and simultaneously. Individually, these two variables have shown to contribute positively to increasing work productivity, where MIS integration supports effective and efficient information management, while ERP helps automate work processes and improves cross-functional coordination within the organization. These systems provides a stronger impact in creating a structured work environment, enabling faster decision-making, and minimizing errors, thus leading to an overall increase in employee productivity. This finding indicates that the strategic utilization of appropriate and integrated information technology is a crucial factor in enhancing human resource performance in the digital era. Therefore, organizations or companies are advised to continuously develop their management information systems and ERP systems, and ensure that all employees receive adequate training to optimize the use of these systems in supporting productivity.

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BURNOUT AND EMPLOYEE PRODUCTIVITY: A STUDY OF OCCUPATIONAL STRESS IN THE WORKPLACE

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Abstract

This study aims to analyze how employee productivity at the workplace is affected by experiences of burnout. Burnout is a state of physical, emotional, and mental exhaustion caused by excessive work pressure, which often negatively impacts employee performance and motivation, leading to a decrease in productivity. The survey used a quantitative approach, employing a questionnaire distributed to 45 respondents working in the sales and marketing department at Auto2000 Bandar Lampung. The results of the regression analysis indicate that burnout has a negative and significant effect on employee productivity, with an R^2 coefficient of 0.765. This means that 76.5% of the variance in employee productivity can be explained by the level of burnout experienced. The higher the burnout level, the lower the productivity. These findings highlight the importance of implementing stress management programs and efforts to maintain a work-life balance to improve workforce productivity.

Keywords: Burnout, Employee Productivity, Work Stress, Work-Life Balance

1. Introduction

In the modern, highly competitive work environment, expectations for employee performance continue to rise. Companies demand optimal productivity levels to remain competitive amidst dynamic market changes. However, this intense pressure often has negative effects on employees' psychological and physical well-being, one of which can manifest as work fatigue or burnout (Taufik & Wijiastuti, 2021). Burnout is a condition characterized by emotional, physical, and mental exhaustion resulting from prolonged stress caused by continuous work pressure (Septiani et al., 2024; Yusdhika et al., 2024). This phenomenon is increasingly observed across various sectors, including sales and marketing, which require high performance, consistent target achievement, and frequent interaction with customers. In automotive companies like Auto 2000, particularly in the Sales and Marketing Department, the work pressure is quite high due to sales target demands, dealer competition, and rapidly changing consumer preferences. These conditions make employees more susceptible to burnout. If not properly addressed, burnout can negatively impact employee productivity.

Employee productivity is a key factor in supporting company performance and operational sustainability. Employees with high productivity levels are able to complete tasks effectively and efficiently, contributing significantly to the achievement of organizational goals. However, when employees experience burnout, their enthusiasm and energy tend to decrease, ultimately leading to reduced productivity (Ardianto et al., 2020b; Putri et al., 2024). The impact of burnout on declining employee productivity can be reflected in various aspects, such as decreased service quality, delays in task completion, increased absenteeism, and internal conflicts within the team (Fairnandha, 2022). This situation poses a significant challenge for management, especially in maintaining the performance of departments focused on target achievement, such as the sales and marketing division. Many studies have explored burnout and its effects on productivity across different sectors, but research specifically examining the context of automotive dealers in Indonesia, especially in major cities like Bandar Lampung,

remains limited. Therefore, a more in-depth investigation is needed to understand how burnout influences employee productivity in such a competitive work environment.

Auto2000 Bandar Lampung, as an official Toyota dealer with a significant market share in the region, relies heavily on its sales and marketing team as the front line for product sales. The pressure to meet increasing targets, tight work schedules, and demands for excellent customer service make this department highly vulnerable to burnout symptoms (Sundari & Meria, 2022). Recognizing the importance of maintaining a balance between job demands and employees' psychological well-being, this study aims to examine the extent to which burnout affects employee productivity at the Sales and Marketing Department of Auto2000 Bandar Lampung. The results are expected to provide a deeper understanding of the real situations faced in the field. Furthermore, this research intends to offer recommendations to company management for designing effective strategies or policies to reduce the risk of burnout while simultaneously enhancing employee well-being and productivity (Pranitasari et al., 2023). An approach based on data and empirical analysis is expected to support more accurate and targeted decision-making by management. Based on this background, the focus of this study is to analyze the influence of burnout on employee productivity in the Sales and Marketing Department of Auto2000 Bandar Lampung. It is hoped that this research can contribute both academically and practically to the development of human resource management and support the sustainability and competitiveness of the company in the future.

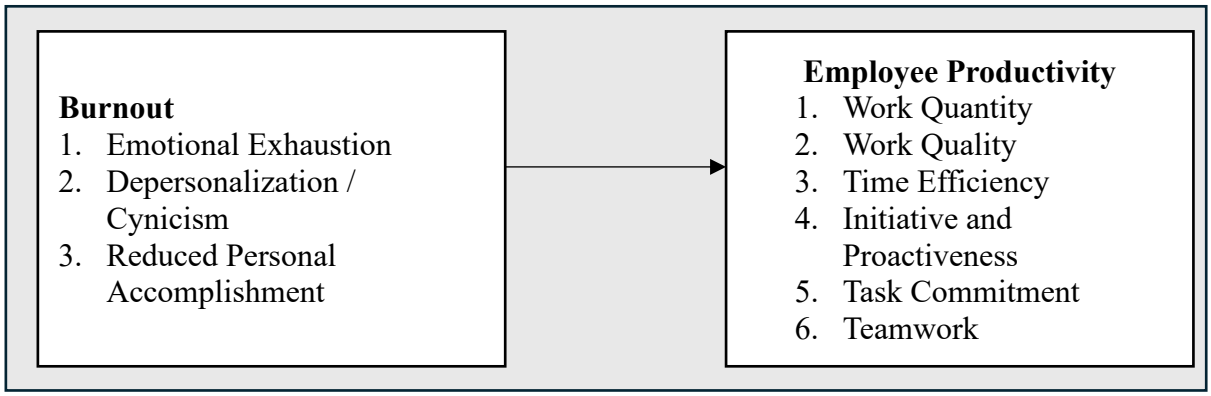

Figure 1. Variable Relationship Structure Model

2. Literature Review

2.1 Burnout

Burnout is a psychological condition characterized by emotional, physical, and mental exhaustion resulting from prolonged stress. This phenomenon is commonly experienced by individuals facing excessive pressure, especially due to high workload, unrealistic demands, or a lack of social support in the workplace. Burnout can negatively affect individual performance, reduce motivation, decrease job satisfaction, and damage the quality of interpersonal relationships within the work environment. In an organizational context, if not properly addressed, burnout can have adverse effects on productivity, employee loyalty, and can increase turnover rates.

2.2 Employee Productivity

Employee productivity refers to an individual's ability to produce maximum output efficiently, considering both the quality and quantity of work results. Several factors influence employee productivity, including motivation, skills, physical and mental conditions, and a supportive work environment. Employees with high productivity tend to be more effective in

completing tasks and make positive contributions toward achieving organizational objectives. In the organizational context, increasing employee productivity can drive overall company performance, encompassing aspects such as customer satisfaction and profitability.

3. Methodology

This study adopts a quantitative approach with a survey design to analyze the effect of burnout on employee productivity. The sample consists of 45 respondents working in a company environment characterized by high dynamism and stress-related risks. Data collection was carried out through questionnaires that measure the respondents' levels of burnout and its impact on work productivity. The questionnaires used a 5-point Likert scale to assess both variables—burnout and productivity. The data analysis included validity and reliability tests, linear regression, and t-tests to identify the significant influence of burnout on employee productivity. This research also limited respondents to employees working in companies with high work pressure. Ethical considerations were maintained by ensuring data confidentiality and obtaining respondents' consent before they completed the questionnaires.

4. Result and Discussions

4.1 Instrument Test Output.

Based on the validity test results for the instrument measuring the effect of burnout on employee productivity, it was found that out of 90 statement items tested, 80 items were valid. These valid items are used to measure the variables of burnout and employee productivity in the Sales and Marketing Department of Auto2000 Bandar Lampung. These results indicate that the instrument used has a good level of validity for assessing the impact of burnout on employee productivity.

4.2 Instrument Reliability Test

Based on the reliability test results for the variables of burnout and employee productivity, high consistency reliability coefficients were obtained. The Reliability Analysis using SPSS 26 output produced Cronbach's Alpha values that meet the standards for good reliability. Therefore, it can be concluded that the instruments used in this study have good validity and reliability and are ready for further analysis regarding the influence of burnout on employee productivity in the Sales and Marketing Department of Auto2000 Bandar Lampung.

Table 1. Validity Test

	Reliability Statistics	
	Cronbach's Alpha	N of Items
Burnout	.890	40
Employee Productivity	.870	40

4.3 Normality Test

The results of the Kolmogorov-Smirnov test indicate that the data for the burnout and employee productivity variables are normally distributed, as the significance values are below the required threshold. Meanwhile, the burnout variable for some respondents shows a distribution close to normal, with significance values approaching the accepted limit. Therefore, for further analysis, this data can be analyzed using parametric statistical methods, given that the data meet the normality assumption. If necessary, data transformation can be

performed to ensure a more appropriate distribution. The normality test results using the One Sample Kolmogorov-Smirnov test are presented in the following table:

Table 2. Normality Test

One-Sample Kolmogorov-Smirnov Test				
		X^1	X^2	Y
N		79	77	85
Normal Parametersa	Mean	1.286	1.232	1.185
	Std. Deviation	1.738	1.765	1.941
Most Extreme Differences	Absolute	.180	.166	.119
	Positive	.180	.166	.114
	Negative	-.113	-.111	-.119
Kolmogorov-Smirnov Z		1.509	1.607	1.784
Asymp. Sig. (2-tailed)		.108	.132	.187
a. Test distribution is Normal.				

Source: Data processed in 2025 using SPSS 26 software

The results of the Homogeneity of Variances test indicate that the variance data for the burnout and employee productivity variables are homogeneous. This is evidenced by the significance values being above the required threshold, i.e., > 0.05. Therefore, it can be concluded that the assumption of equal variances is met. Consequently, the data qualifies for further analysis using parametric statistical methods that require homogeneity of variances. For more detailed information, the test results are presented in the following table:

Table 3. Homogeneity Test

Test of Homogeneity of Variances Instrument Validity Test on Employee Productivity			
Levene Statistic	df1	df2	Sig.
1.125	50	220	.314
1.055	50	220	.457

Source: Data processed in 2025 using SPSS 26 software

Table 4. Regression Equation Output

Coefficientsa						
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	25.701	7.619		4.146	.006
	Burnout	.697	.086	.982	15.277	.000
a. Dependent Variable: Employee Productivity						

Source: Data processed in 2025 using SPSS 26 software

The coefficient analysis results indicate that the burnout variable has a significant effect on the dependent variable, which is employee productivity. The unstandardized regression coefficient shows the magnitude of burnout's influence on employee productivity in its original units, while the standardized coefficient indicates the impact on a normalized scale. The high t-value and the very small significance value suggest a strong and significant relationship between burnout and employee productivity. Therefore, burnout is an important predictor in influencing the level of employee productivity, particularly in the Sales Marketing Department of Auto2000 Bandar Lampung.

Table 5. Anova Analysis Output

ANOVA[b]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	22929.745	22	849.031	43.554	.000
	Residual	1501.798	57	24.839		
	Total	28231.443	78			
2	Regression	24718.913	24	1182.329	39.416	.000
	Residual	1738.441	56	32.517		
	Total	29358.354	78			
a. Predictors: (Constant), Burnout						
b. Dependent Variable: Employee Productivity						

Source: Data processed in 2025 using SPSS 26 software

The ANOVA test results show that the regression model used is significant in explaining the variation in the dependent variable, which is employee productivity. The high F-value accompanied by a very low significance level indicates that the overall regression model can accurately predict employee productivity based on burnout. Therefore, it can be concluded that there is a significant relationship between the independent variable (burnout) and the dependent variable (employee productivity), and the model used is sufficiently reliable for further analysis within the context of the Sales Marketing Department of Auto2000 Bandar Lampung.

Table 6. Coefficients

	Unstandardized Coefficients		Standardized Coefficients		
Model	B	Std. Error	Beta	t	Sig.
(Constant)	34.100	6.917		7.588	.000
Burnout	.641	.048	.792	18537	.000
(Constant)	28.368	8.051		6.418	.000
Employee Productivity	.738	.061	.869	17.007	.000

Source: Data processed in 2025 using SPSS 26 software

Table 7. Determination Coefficient Analysis (R)

Model Summary[b]				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.862[a]	.896	.693	7.09724
2	.880[a]	.708	.886	7.81557
3	.820[a]	.765	.865	7.63499

a. Predictors: (Constant), Burnout

b. Dependent Variable: Employee Productivity

Source: Data processed in 2025 using SPSS 26 software

The regression analysis results indicate that burnout has a significant effect on employee productivity. The regression coefficient of 0.697 with a significance value of 0.000 signifies that burnout contributes substantially to changes in employee productivity. This is further supported by an R-squared value of 0.765, meaning that 76.5% of the variation in employee productivity can be explained by the burnout variable. Thus, the higher the level of burnout experienced by employees, the greater its impact on decreasing productivity, especially in the Sales Marketing Department of Auto2000 Bandar Lampung. This study aims to examine the extent to which burnout affects employee productivity (Erma Wati et al., 2022). Based on data collected from 45 respondents, it was found that the majority of employees experience burnout symptoms with varying levels. The identified burnout symptoms encompass three main dimensions: emotional exhaustion, depersonalization, and a decreased sense of personal accomplishment at work. Results from validity and reliability tests show that all items in the instrument used to measure burnout and employee productivity are valid and reliable. This indicates that the instrument accurately represents the psychological state and productivity levels of employees in the field.

Normality testing using the Kolmogorov-Smirnov method shows that the data follow a normal distribution, allowing the use of simple linear regression analysis in this study. Additionally, the homogeneity test results indicate that the data have uniform variances, further supporting the validity of the chosen analysis method. The regression analysis results reveal that burnout significantly affects employee productivity. The negative regression coefficient indicates that an increase in burnout levels results in a decrease in employees' work productivity. The significance value in the regression test is below 0.05, indicating that the effect of burnout on employee productivity is significant and not due to chance. With an R-squared value of 0.765, it can be concluded that 76.5% of the variation in employee productivity is explained by burnout factors. This finding aligns with previous research that identifies burnout as a primary factor leading to decreased motivation, concentration, and energy at work (Ardianto et al., 2020a, 2025). Employees experiencing burnout tend to lose focus, make more mistakes, and show decreased enthusiasm in completing their tasks.

More specifically, emotional exhaustion the core aspect of burnout strongly influences employees' ability to meet sales targets and interact with customers. Negative interactions with customers caused by work-related stress directly affect the performance of the sales team (Kardiawan, 2018). Additionally, feelings of being unappreciated and losing meaning in work (the dimension of decreased personal achievement) are also found to worsen productivity (Ardianto et al., 2024, 2025, 2023). Employees who feel unrecognized for their efforts tend to reduce their work intensity (Ngailia et al., 2024). Although some respondents did not

experience high levels of burnout, the majority acknowledged that target pressures, lack of rest, and an imbalance between work and personal life are primary factors triggering their burnout (Pujayanti et al., 2024). Based on these results, it is recommended that Auto2000 management focus more on employees' psychological well-being, especially in the sales marketing department facing high work pressure. Implementing stress management programs, providing adequate rest periods, and recognizing achievements are essential steps to reduce burnout and maintain employee productivity.

5. Conclusion

In conclusion, based on the research conducted in the Sales Marketing Department of Auto2000 Bandar Lampung, burnout has a significant influence on employee productivity. The higher the burnout level, the lower the productivity, as reflected in the dimensions of emotional exhaustion, decreased personal achievement, and depersonalization. Regression analysis shows that burnout explains 76.5% of the variation in employee productivity, highlighting the importance of managing burnout within the work environment. Therefore, management needs to implement effective stress management strategies to improve employee well-being and sustain optimal productivity.

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THE RELATIONSHIP BETWEEN EMPLOYEE RECOGNITION AND ORGANIZATIONAL LOYALTY IN BANDAR LAMPUNG INDUSTRIES

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Abstract

This study aims to explore the relationship between the recognition given to employees and the level of loyalty to the organization. Recognition, whether financial or non-financial, is considered a crucial element that can enhance job satisfaction and employees' sense of belonging to the company. In this research, a quantitative approach was employed by distributing questionnaires to 100 employees from various industries in Bandar Lampung. The linear regression analysis results show that recognition has a positive and significant influence on employee loyalty, with an R-squared value of 0.608. This means that 60.8% of the variation in employee loyalty can be explained by the recognition they receive. These findings underscore the importance of implementing effective recognition strategies to retain loyal and committed employees. Additionally, companies that prioritize employee acknowledgment are more likely to foster a positive organizational culture. A well-designed recognition system can also boost employee motivation and overall organizational performance. Therefore, organizations are encouraged to continually evaluate and improve their recognition management practices to maintain employee loyalty in the long term.

Keywords: *Employee Recognition, Organizational Loyalty, Job Satisfaction, Employee Retention.*

1. Introduction

In the face of increasingly fierce business competition, companies are not only required to continuously innovate in products and services but also need to pay serious attention to human resource management (HRM). One crucial aspect of HRM is how companies treat their employees, especially in terms of recognizing and rewarding their contributions. Employee recognition becomes a strategic factor that plays a role in shaping work attitudes and behaviors and can enhance their loyalty to the organization (Rambe, 2024). Recognition can be given in two forms: financial and non-financial. Financial rewards include salaries, bonuses, and incentives, while non-financial rewards can be in the form of acknowledgment, promotions, certificates of appreciation, or opportunities for career development. When employees feel valued, they tend to show higher work enthusiasm, feel more respected, and are motivated to make greater contributions to the company. High employee loyalty to the organization is one of the indicators of successful human resource management (Sinaga et al., 2023). Loyalty reflects the level of commitment, attachment, and the desire of employees to stay and grow with the company in the long term. Employees with high loyalty are not only physically present but also contribute maximally through their effort, time, and thought for the company's progress.

Various studies have proven a positive relationship between employee rewards and loyalty toward the organization (Adha et al., 2022). Employees who receive fair and performance-based rewards tend to feel more satisfied and develop a strong emotional bond with the company. Conversely, unfair reward systems can demotivate employees, lead to dissatisfaction, and ultimately increase the risk of turnover. The current industrial situation in Bandar Lampung shows how important it is to maintain employee loyalty. With growth in

manufacturing, trade, and services sectors, competition among companies to attract and retain qualified workers becomes a significant challenge. Therefore, companies need to design fair and transparent reward systems to retain their top human resources. However, in practice, some companies in Bandar Lampung still do not optimally provide rewards to their employees. Several industries still adopt a transactional approach to work, without paying enough attention to the importance of non-material appreciation. This condition can lead to dissatisfaction among employees, which ultimately impacts decreased loyalty and productivity (Pratiwi & Fauzan, 2024). Based on this situation, it is crucial to conduct an in-depth study on the relationship between employee recognition and organizational loyalty within the industry context in Bandar Lampung. This research is expected to provide a more comprehensive understanding of how employees perceive the reward systems implemented and to what extent these influence their commitment to stay with the organization in the long term.

This study focuses on employees working in medium and large industries in the Bandar Lampung area, aiming to identify which forms of recognition have the most significant influence and to assess how these rewards contribute to shaping employee loyalty. In addition, this research will analyze differences in employee loyalty levels based on the types of rewards they receive (Pertiwi & Adi, 2023). Using a quantitative approach through distribution of questionnaires to employees, this research aims to measure the statistical relationship between employee recognition variables and organizational loyalty. It is expected that the findings will provide meaningful contributions for companies in Bandar Lampung to develop more precise and effective human resource policies. Overall, this research plays an important role in efforts to improve organizational performance through effective human resource management. By understanding the impact of recognition on employee loyalty, companies can create a supportive work environment and build long-term, mutually beneficial relationships between the organization and its employees.

2. Literature Review

2.1 Concept of Employee Recognition.

Employee recognition encompasses the organization's acknowledgment of an individual's contributions, achievements, and performance within the workplace. This recognition can be in the form of financial rewards, such as salaries, bonuses, and incentives, or non-financial rewards, such as promotions, symbolic awards, and opportunities for career development. Several studies have shown that fair and timely recognition can boost motivation, job satisfaction, and strengthen employees' attachment to the organization. Therefore, implementing an effective recognition system is a key strategy in human resource management to maintain and enhance employee productivity.

2.2. Concept of Organization

An organization can be understood as a social entity consciously formed by two or more individuals working together towards a predetermined goal. In management, organizations serve as a means for individuals to collaborate in a structured manner, through role division, authority, and responsibility, to achieve desired results. Elements such as organizational structure, work culture, and operational systems significantly influence members' attitudes and performance. Therefore, a comprehensive understanding of organizational dynamics is essential to realize operational efficiency, harmonious work relationships, and the optimal achievement of organizational goals.

2.3 The Relationship Between Recognition and Loyalty

The level of recognition received by employees, whether through financial or non-financial compensation, has a significant impact on their loyalty to the organization. When recognition is given fairly and proportionally, it can increase job satisfaction, strengthen emotional bonds, and foster employees' commitment to continue contributing in the long term. Conversely, unfairness or inadequacies in recognition can trigger dissatisfaction, reduce loyalty, and increase turnover tendencies. Therefore, the proper implementation of recognition systems is a critical factor in maintaining employee loyalty and supporting the organization's stability and sustainability.

3. Methodology

This study employs a descriptive quantitative approach aimed at illustrating and analyzing the relationship between two primary variables: employee recognition and organizational loyalty. The research design is structured to address the formulated research questions while anticipating potential challenges during the implementation process. The steps include developing the background, identifying and formulating research problems, reviewing relevant theories on employee recognition and loyalty, establishing research variables, and selecting appropriate data collection techniques. Data will be gathered through closed-ended questionnaires using a Likert scale, designed to measure respondents' responses, perceptions, and attitudes toward the recognition system implemented and their level of loyalty to the organization. A sample of 100 employees from various medium and large-scale industries in Bandar Lampung will be surveyed. Each variable indicator is translated into statements, which respondents will answer based on their level of agreement. The collected data will then be analyzed to determine the extent of the relationship between the recognition provided by the company and employee loyalty to the organization.

4. Result and Discussions

4.1 Normality Test.

Table 1. One Sample Kolmogorov-Smirnov Test

		Employee Recognition	Organizational Loyalty
N		100	100
Normal Parameters	Mean	75.2300	81.4500
	Std. Deviation	8.45000	7.98000
Most Extreme Differences	Absolute	.075	.062
	Positive	.075	.062
	Negative	-.065	-.059
Kolmogorov-Smirnov Z		.750	.620
Asymp. Sig. (2-tailed)		.629	.835
a. Test distribution is Normal.			
b. Calculated from data.			

Source: Data processed using SPSS 26 software

Based on the results of the Kolmogorov-Smirnov normality test for the two research variables, namely employee recognition and organizational loyalty, the significance values (Asymp. Sig. 2-tailed) are 0.629 and 0.835, respectively. These values are greater than 0.05, indicating that the data for both variables are normally distributed. With the normality

assumption met, the data are suitable for further analysis using parametric statistical techniques.

4.2 Linearity Test

Scatter Plot and Regression Line of Employee Rewards vs Organizational Loyalty

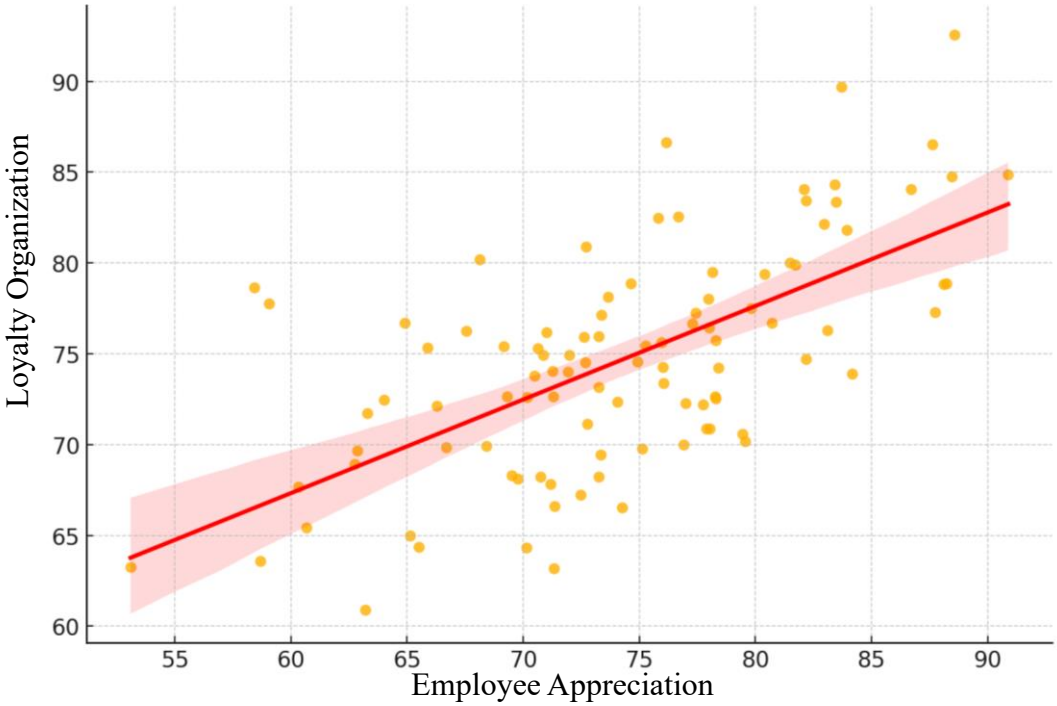

Figure 1. Scatter Plot

Based on the scatter plot, it appears that the data points are dispersed in a pattern close to a straight line, indicating a linear relationship between employee recognition and organizational loyalty. The regression line, fitted through the data, suggests that the higher the recognition employees receive, the more likely their loyalty to the organization increases. This linearity test reinforces that the relationship between the variables can be further analyzed using Pearson correlation or simple linear regression, as the linearity assumption is satisfied.

Table 2. Coefficients

Model	Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.
(Constant)	36.414	0.062	–	585.624	0.000
Employee Recognition	0.515	0.062	0.642	8.286	0.000
a. Dependent Variable: Organizational Loyalty					

Source: Data processed using SPSS 26 software

The results of the simple linear regression indicate that the employee recognition variable has a significant effect on organizational loyalty, with a significance value (Sig.) of 0.000 (less

than 0.05). The regression coefficient of 0.515 suggests that a one-unit increase in employee recognition will increase organizational loyalty by 0.515 units, in a linear manner. The standardized coefficient Beta value of 0.642 indicates that the relationship between the two variables is fairly strong. This supports the conclusion that employee recognition is a significant predictor of organizational loyalty.

4.3 Homogeneity Test

The homogeneity test was conducted to determine whether the variances between two groups of data are equal (homogeneous). Specifically, it tested whether the variances of the employee recognition variable and the organizational loyalty variable are homogeneous.

Table 3. Homogeneity Test (Levene's Test)

Variable	Levene Statistic	df1	df2	Sig. (p-value)
Recognition-Loyalty	1,284	1	98	0,260

The test results indicate that the Levene's Statistic value is 1.284, with a significance level (Sig.) of 0.260. Since the significance value is greater than 0.05 (Sig. > 0.05), it can be concluded that the variances between the two variables are homogeneous. This means there is no significant difference in variance between employee recognition and organizational loyalty. Consequently, the data meet the assumption of homogeneity and are suitable for further analysis using parametric statistical techniques.

4.4 Simple Regression Analysis Results

To determine the extent of the influence of work stress on employee performance, a simple linear regression analysis was conducted using 100 respondents. The analysis results are presented in the table below:

Table 4. Coefficients

Model	Unstandardized Coefficients	Std. Error	Standardized Coefficients (Beta)	t	Sig.
	B				
(Constant)	35,420	2,616		13,538	.000
Organizational Loyalty	-0,511	0,116	-0,813	-4,418	.001

a. Dependent variable: Employee Recognition

Based on the results of a simple linear regression analysis, it is known that employee recognition significantly affects organizational loyalty. The testing results show that the constant value is 35.420, indicating that if no recognition is given to employees, the organizational loyalty would be at 35.420. The regression coefficient for the employee recognition variable is negative at -0.511, meaning that for every one-unit increase in employee recognition, there is a corresponding decrease in organizational loyalty by 0.511 units. However, the t-statistic test results show a value of -4.418 with a significance level of 0.001, which is less than 0.05, indicating that the relationship is statistically significant. The standardized beta value of -0.813 indicates that employee recognition has a strong but negative influence on organizational loyalty. Therefore, it can be concluded that there is a significant and negative relationship between employee recognition and organizational loyalty in this study.

Hypothesis testing was conducted to determine whether there is a significant effect of employee recognition on organizational loyalty. Based on the regression analysis results, a significance (Sig.) value of 0.001 was obtained, which is less than the significance threshold of 0.05. This indicates that the employee recognition variable statistically has a significant effect on organizational loyalty. Thus, the hypothesis stating that "employee recognition affects organizational loyalty" is accepted. This means that the higher or lower the recognition received by employees, the more it impacts their loyalty to the organization. Although the direction of the relationship shows a negative regression coefficient of -0.511, the significant influence means that employee recognition remains a key factor in shaping loyalty to the organization.

4.5 Relationship Between Employee Recognition and Organizational Loyalty

The results of this study indicate that there is a significant relationship between employee recognition and organizational loyalty (Putri et al., 2024). This finding suggests that the form of recognition received by employees, whether financial or non-financial, influences the extent to which an employee is willing to stay and commit to the organization they work for (Gusnadi et al., 2024; Nyanabhadra et al., 2024). Employee recognition is an important factor in human resource management, as it can enhance work motivation, job satisfaction, and ultimately impact employee loyalty (Ardianto et al., 2025b; Luwiha et al., 2025b; Suryanadi et al., 2021; Tupari et al., 2023). When employees feel valued for their contributions and achievements, they tend to feel more respected and have a stronger emotional bond with the organization (Ardianto et al., 2020, 2025a; Dharma et al., 2024). This fosters a loyal attitude, characterized by a desire to remain employed long-term, a positive attitude towards the organization, and a commitment to the institution's progress (Yusdhika et al., 2024). Conversely, when employees feel they are not receiving adequate recognition for their performance, it can lead to disappointment, decreased work enthusiasm, and even a desire to seek employment elsewhere that is perceived to value their contributions more (Burmansah et al., 2024; Ngailia et al., 2024). Therefore, recognition is not merely a form of compensation but also a strategic tool for retaining the best talent within the organization (Safira & Kurbani, 2024).

These findings align with previous theories, such as Herzberg's two-factor theory, which states that recognition falls into the category of motivator factors that can enhance job satisfaction and loyalty (Kawulur et al., 2018 ; Septiani et al., (2024). Additionally, this finding reinforces earlier research that indicates a fair and transparent reward system can improve employee retention and strengthen organizational commitment (Ardianto et al., 2025a; Luwiha et al., 2025a; Taridi et al., 2024). However, it is important to note that employee loyalty is not only influenced by recognition but also by various other factors such as work climate, interpersonal relationships, leadership, and career development opportunities. Therefore, while recognition plays a crucial role, organizations must also consider other factors holistically to create a work environment that supports long-term loyalty.

5. Conclusion

Based on the research conducted, it can be concluded that there is a significant relationship between employee recognition and organizational loyalty. Recognition provided by the organization, whether in material or non-material forms, has been shown to affect the level of employee loyalty. The higher the level of recognition received, the greater the tendency for employees to demonstrate loyalty to the organization. This finding emphasizes the importance of a fair and transparent reward system in building long-term employee commitment. Organizations that can appropriately appreciate their employees' contributions will have a better chance of retaining quality and dedicated workforce. Therefore, organizational

management is advised to continuously evaluate and improve recognition policies to not only motivate employees in the short term but also foster strong loyalty and attachment to the organization in the long term.

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REVIEWING GENERATION Z'S INVESTMENT INTEREST THROUGH MOBILE BANKING

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Abstract

The development of financial technology has transformed the way people interact with banking services, particularly through mobile banking. This study aims to explore Generation Z's investment interest by considering the influence of the Technology Acceptance Model (TAM) and subjective norms. Using a quantitative approach, the research involved 310 respondents from Generation Z and analyzed the data using the SEM PLS method. The findings indicate that perceived usefulness and perceived ease of use have a significant impact on attitudes, which in turn positively affects investment interest. However, subjective norms did not show a significant influence on investment interest. This research fills a gap in the literature by examining investment interest through mobile banking from the perspectives of TAM and subjective norms.

Keywords: Investment Interest, Mobile Banking, Technology Acceptance Model, Generation Z

1. Introduction

The development of information and communication technology, particularly in the field of artificial intelligence (AI), has drastically changed digital financial services. In recent years, technological innovations have accelerated the way people interact with various financial services (Liu et al. 2025; Perdana et al. 2025; Sandhu et al. 2025). With advancements in AI, financial services have become more responsive, efficient, and secure. This technology enables the analysis of large amounts of data to provide more accurate and tailored recommendations for users. For example, AI can help identify spending patterns and offer investment suggestions that align with individual risk profiles. Additionally, transaction security has been further strengthened through the use of biometric technology and more advanced encryption methods (Desyatnyuk et al. 2024; Onyshchenko et al. 2022). This not only enhances the security of services but also builds public trust in the use of digital platforms. Thus, this technology not only facilitates transactions but also reinforces the public's understanding of the importance of good financial management.

Mobile banking has become one of the primary solutions for providing accessible financial services to various segments of society (Siano et al. 2020). The applications that can be downloaded to smartphones, users can conduct various financial transactions anytime and anywhere without the need to visit a physical bank. This convenience is particularly important for the younger generation, who seek fast and efficient services. Moreover, mobile banking offers various features that allow users to check balances, pay bills, and transfer money easily (Arcand et al. 2017). With real-time notifications, users can monitor their transactions, which aids in better financial management. In this context, mobile banking plays a crucial role in accelerating the development of digital finance, encouraging society to shift from cash transactions to digital ones (Jun and Palacios 2016; Kamboj et al. 2022). This not only benefits individuals but also contributes to overall economic growth by enhancing efficiency and transparency in the financial system.

The functions of mobile banking are now increasingly diverse, extending beyond just transfers and payments. Many mobile banking applications provide dedicated menus for investments, allowing users to purchase investment products such as stocks, mutual funds, and bonds. These investment menus are designed to attract users who want to start their investment journeys in a more accessible way. With intuitive interfaces and clear information, users can quickly understand the products offered and make more informed investment decisions (Goswami and Raghavendran 2009). Additionally, educational features often included in mobile banking applications help users, especially Generation Z, learn about investments and risk management. With this approach, mobile banking not only serves as a transaction tool but also as a financial education platform that encourages users to invest. Financial companies are increasingly recognizing the importance of these features, as they can attract more users, particularly among the younger generation who are more open to investing (Ammer and Aldhyani 2022).

In Indonesia, the development of mobile banking shows a very positive trend (Rahmi and Handayani 2024). Many banks and financial institutions have invested in developing mobile banking applications that not only facilitate daily transactions but also provide investment features. These initiatives aim to attract the younger generation to be more active in investing, in line with global trends showing high interest in investments among Generation Z. Some applications even offer investment simulation features that allow users to try investing without financial risk. In this context, the government also plays a role with policies that encourage the digitization of financial services (Zhou et al. 2023), making it easier for the public to access information and investment products. With an increasing number of options and conveniences offered, it is hoped that the younger generation, particularly Generation Z, can become more engaged in the world of investments. This is expected not only to enhance individual well-being but also to have a positive impact on the national economy.

Despite the progress in financial inclusion in Indonesia, challenges remain. According to reports from the Financial Services Authority (OJK), although the number of digital financial service users has increased, there are still segments of society that remain unserved, particularly in remote areas (Miranti Midu and Sri Dewi Yusuf 2024). Generation Z, who have grown up in the digital era, have great potential for investing as they are more familiar with technology and information (Kim et al. 2022; Park et al. 2024). They tend to be more open to the concept of investing and have better access to information through the internet. By utilizing mobile banking, this generation can easily make small investments that may have previously seemed difficult or unattainable. Furthermore, with the increasing awareness of the importance of financial planning among young people, it is hoped that they can contribute to enhancing financial inclusion in Indonesia. This will help create a more inclusive and sustainable financial ecosystem.

However, despite numerous studies on the use of mobile banking, specific research on Generation Z's investment interest through this platform is still very limited. Many studies focus more on the technical aspects and general adoption of mobile banking, while investment interest as a key element in the development of the digital economy has not been extensively researched. One study conducted in Saudi Arabia attempted to examine the intention to use virtual assistants (Alkadi and Abed 2025) and utilized the TAM model in its research. The current study aims to fill this gap. This gap is important to address because understanding the factors influencing Generation Z's investment interest can help design better strategies to attract them into the world of investing. This includes understanding their preferences, behaviors, and the challenges they face in using investment services through mobile banking. By identifying this gap, we can provide more relevant recommendations for application developers and financial institutions to enhance the features and services offered.

Therefore, research on Generation Z's interest in investing through mobile banking is crucial. Understanding how this generation adapts to technology in the context of mobile banking can provide valuable insights for application developers, financial institutions, and policymakers. This study is expected to uncover the motivations, barriers, and expectations of Generation Z in investing, thereby creating an environment that supports investment growth. With a better understanding of the needs and preferences of this generation, financial institutions can design more relevant and appealing products, as well as improve marketing strategies to reach them more effectively. Additionally, the results of this research can also be used to formulate policies that promote financial inclusion and enhance financial literacy among young people, enabling them to contribute more significantly to the national economy.

2. Literature Review

2.1 Theory Acceptance Model

This study proposes a framework based on the Technology Acceptance Model (TAM) (Davis 1989) to investigate the factors influencing Generation Z's interest in investing using mobile banking. TAM has proven effective in predicting user acceptance of information technology (Belanche et al. 2019), making it a suitable model for exploring user responses to innovative technology over the past two decades. This model has been widely applied to study consumer intentions in adopting various electronic services in the banking sector, such as internet banking (Salimon et al. 2017) and fintech (Belanche et al. 2019). however, much of the literature indicates that TAM often receives criticism for overlooking other important factors that influence user behavior, such as social aspects. TAM was originally designed to explain the factors affecting technology adoption in general, rather than to explain the adoption of specific types of technology (Rezaei et al. 2024). his limitation indicates the need to complement attitudes with subjective norms, in line with the approach proposed by Ajzen (1997) in the Theory of Reasoned Action (TRA). Therefore, to address this criticism, our model extends TAM by including subjective norms.

2.2 Technology Acceptance Model

TAM indicates that there are two main components that influence an individual's attitude toward technology: perceived usefulness (PU) and perceived ease of use (PEU) (Davis 1989). Based on the cost-benefit paradigm, a person's attitude toward technology significantly affects their intention to accept and adopt it (Davis 1989). Attitude reflects the extent to which an individual considers a particular behavior, such as using new technology, as desirable or undesirable (She et al. 2024). In today's digital era, attitude has become a crucial predictor of consumer behavior (She et al. 2024). PEU refers to the extent to which a person believes that using a particular technology does not require much effort, while PU refers to the extent to which they believe that the technology can enhance their performance (Davis 1989). Several studies related to AI in the banking sector have analyzed factors within TAM (Belanche et al. 2019; Rahman et al. 2023). Thus, the relevant hypotheses are proposed.

H1: Perceived usefulness significantly positively influences attitudes toward investment interest using mobile banking

H2: Perceived ease of use significantly positively influences attitudes toward investment interest using mobile banking

H3: Attitude significantly positively influences investment interest using mobile banking

Various studies have shown a significant influence of PU on behavioral intention (Belanche et al. 2019). Salimon et al. (2017) found a strong positive relationship between PU, perceived security, and acceptance of e-banking. Additionally, Alalwan et al. (2016) demonstrated that PU has a significant impact on behavioral intention in the context of

consumer acceptance of mobile banking in Jordan. Therefore, we propose the following hypothesis.
H4: Perceived usefulness significantly positively influences investment interest using mobile banking.
Furthermore, research has also shown that PEU is an important predictor of consumer intention to adopt electronic banking (Salem and Rassouli 2025; Singh et al. 2025). When consumers perceive a particular system as easier to use, they tend to have a positive attitude toward that system and are more likely to accept it. Therefore, the following hypothesis is proposed.
H5: Perceived ease of use significantly positively influences investment interest using mobile banking

2.3 Subjective Norms

In social psychology, normative influence refers to the perception that others believe one should or should not perform a certain behavior (Ajzen 1997). Social norms depend on social information and encourage individuals to adopt specific behaviors based on the views of others. In the context of digital finance, subjective norms (SN) are often influenced by interpersonal and external sources of information (Bhattacherjee 2000). This aligns with research on technology-based innovations, where public opinion shapes behavior through comments, actions, and media reports (Liao et al. 2024). Several studies have shown that SN positively influences behavioral intention in AI-based banking services (Belanche et al. 2019). Given the importance of social confirmation and incentives in the adoption of AI in the banking sector, we propose the following hypothesis.
H6: Subjective norms significantly positively influence investment interest using mobile banking.

3. Methodology

3.1 Research Approach

This research is quantitative, research by obtaining data in the form of numbers or quantitative data that is added up (Sugiyono, 2018). The research approach used is associative which looks at the relationship between two or more variables. This study examines Islamic financial literacy and religiosity on interest in saving at Islamic Banks and examines whether the mediating variable trust, can support the effect of Islamic financial literacy and religiosity on interest in saving at Islamic Banks.

3.2 Sample Selection and Data Collection

The use of convenience sampling is an economical method that allows for a variation of different participants (Golzar et al. 2022). To enhance the representativeness of the sample and reduce bias in sampling, a larger sample size is required without restricting demographic factors such as gender, income, or place of residence (Golzar et al. 2022). An online survey was distributed using Google Forms between January and February 2025. Potential biases in online data collection include technology familiarity bias, where respondents' comfort level with technology may affect their participation rate. To address this issue, the survey was designed to be user-friendly and distributed across various platforms to reach a broader segment of Generation Z, resulting in a more representative sample. The questionnaire targeted members of Generation Z, yielding 310 respondents aged 18-28 who completed the survey, a sufficient number to validate the research methodology and test the hypotheses (Hair et al. 2019). The questionnaire consisted of closed-ended questions assessed using a 5-point Likert scale.

3.3 Definitions, Variable Measurement, and Data Analysis

The definitions and measurements for each variable are presented in Table 1, and the questionnaire statements for data collection are presented in Table 2. Subsequent data analysis utilized SEM PLS by testing the Outer Model and Inner Model to assess validity and reliability, leading up to the hypothesis testing of the research.

Table 1. Variable Definition

Variable	Definition	Indicator	Reference
Investment Interest	Investment interest, referring to the tendency or interest of individuals to make investments with the aim of achieving future profits.	Desire to find out about investing; Willingness to spend time learning about investing; Confidence to try investing	(Che Hassan et al. 2023)
Perceived Usefulness	Perceived Usefulness is defined as the extent to which a person believes that the use of a particular technology will improve their work performance or results..	Improves job performance; Increase productivity; Increase Effectiveness; Useful	(Davis 1989)
Perceived Ease of Use/PE	Perceived Ease of Use/PEOU is defined as the extent to which a person believes that the use of technology will make their tasks easier and require less effort.	Easy to learn; Easy to use; Clear and understable; Become skillful	(Davis 1989)
Attitude	Attitude is an expression of an individual's feelings that reflect his or her likes or dislikes towards an object, idea, or situation.	Wealth Building; Practical; Advantages Over Other Instruments; Old Age Benefits	(Doob 1947)
Subjective Norm	Subjective norm is an individual's view of the beliefs of others that may influence his or her intention to perform or not perform the behaviour under consideration.	Friend Influence; Parent Influence; Sibling Influence	(Latimer and and Martin Ginis 2005)

Table 2. Research Questionnaire Statement

Variable	Statement
Investment Interest	- I look for information about investing - I consider news about investment - I find out the advantages and disadvantages of investment
	- I take the time to participate in activities related to investment - I read information about investment
	- I have sufficient capital for investment - I am interested in trying to invest - By considering the benefits and risks, I am more interested in investing

Usability Perception	- The use of mobile banking services can expedite all kinds of transactions - The use of mobile banking services minimizes banking activities, especially in transactions
	- Through mobile banking I get the information I need - By using mobile banking services, I can make transactions practically
	- Using mobile banking services allows me to make transactions faster - Using mobile banking allows me to make transactions more easily
	- The benefits of mobile banking services can save time in making transactions - The benefits of mobile banking services can save costs in making transactions
Perceived Ease of Use	- The use of mobile banking services is easy to learn - The menu layout of mobile banking services is easy to understand
	- Mobile banking can be easily used anywhere and anytime - Mobile banking can be easily accessed
	- Mobile banking can facilitate frequent transactions - Fitur yang ada pada layanan mobile banking mudah dimengerti
	- The features available in mobile banking services are easy to comprehend - Using mobile banking services can enhance skills
Attitude	- Personally, activities that can develop wealth are good activities - Investment is an activity that can develop wealth
	- For me, engaging in practical activities is a good thing - Investment is a practical activity to undertake
	- For me, choosing profitable activities is a good thing - Investment is a profitable activity
	- For me, activities that provide additional capital in old age are good - Investment is an activity that provides additional capital in old age
Subjective Norm	- I usually follow what my friends recommend - My friends will support me in investing
	- I usually follow what my parents recommend - My parents will support me in investing
	- I usually follow what my siblings recommend - My siblings will support me in investin

4. Results and Discussions

4.1. Validity Test (Convergent Validity)

Convergent validity test is the correlation between indicator scores and latent variable scores. The convergent validity of a construct with reflective indicators is evaluated by Average Variance Extracted (AVE). A good AVE value is equal to 0.5 or more, and an AVE value of 0.5 or more means that the construct can explain 50% or more of the item variance (Ahmad et al., 2017). Table 3 shows that the AVE value for each variable is more than 0.5, which means this value explains that each indicator can explain or represent more than 50% of the latent variable.

Table 3. Validity and Reliability Test Results

Variable	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)	Fornell Lacker Criterion				
					Variable				
					AT	II	PEU	PU	SN
AT	0.926	0.931	0.940	0.661	0.813				
II	0.893	0.898	0.918	0.652	0.500	0.808			
PEU	0.944	0.952	0.954	0.750	0.600	0.728	0.866		
PU	0.919	0.923	0.940	0.757	0.578	0.802	0.841	0.870	
SN	0.921	0.929	0.938	0.717	0.634	0.732	0.855	0.868	0.847

Note: AT (Attitude), II (Investment Interest), PEU (Perceived Ease of Use), PU (Perceived Usefulness), dan SN (Subjective Norms).

4.2. Discriminant Validity

The test is carried out to compare the AVE square root value of each construct with the correlation between other constructs in the model (Fornell Lacker Criteria). If the AVE square root value of each construct is greater than the correlation value between constructs and other constructs in the model, then the model is said to have good discriminant validity value (Cheah et al., 2017). Table 3 shows that the value of each construct is greater when correlated with other constructs in the model, meaning that each construct in the model has good discriminant validity.

4.3. Reliability Test

The Cronbach's Alpha test aims to measure the lower limit of the reliability value of a construct; the construct is declared reliable if the Cronbach's Alpha value is more than 0.60. Composite reliability aims to measure the true value of the reliability value of a construct. A construct can be said to be reliable if the composite reliability value is above 0.70 (Cheah et al., 2017). In Table 4 it can be seen that the Cronbach's Alpha value for each construct is greater than 0.60, and the composite reliability value for each construct is above 0.70. This means that each instrument used in the construct is accurate, precise, and consistent to measure a construct.

4.4. Structure Model/Inner Model

4.4.1. R Square (R2)

The test is conducted to show the extent to which exogenous variables affect endogenous variables. A good R-Square value is expected to be more than 0.67. The R-Square value is said to be strong if it is at 0.75, moderate if 0.50, and weak if 0.25 (Cheah et al., 2017). Based on table 4, it can be seen that the R-Square value of Investment Interest is 0.649 or 64%, this value means that the Investment Interest variable is 64% influenced by the independent variable and the remaining 36% is influenced by other variables outside those studied. The attitude variable based on the R-Square value of 0.573 or 57% is influenced by the perceived usefulness and perceived ease of use variables, while the remaining 33% is influenced by other variables outside the study.

4.4.2. Predictive Relevance (Q^2)

Testing is done to see the value that shows how well the observations are made or to measure how well the observation values are produced by the model and parameter estimates. The value that shows good observation results is > 0 and if on the contrary < 0 then the observation results have a bad value (Cheah et al., 2017). Table 4 shows the Q-Square / Predictive Relevance Value of the endogenous variables is more than 0 or 0.408 which means it has a good observation value. The Attitude variable based on the Q-Square table shows a value of 0.239, which means that the variable has a good observation value.

Table 4. R Square and Predictive Relevance test results

Variable	R Square (R^2)	Predictive Relevance (Q^2)
Attitude	0.573	0.239
Invesment Interest	0.649	0.408

4.5 Hypothesis Test

The results of hypothesis testing were tested and presented in table 5. The test results show that perceived usefulness and perceived ease of use are significantly positively related to attitude and investment interest, which further supports the hypothesis. Furthermore, attitude significantly has a positive effect on investment interest, and subjective norms are the opposite, namely not significantly affecting investment interest.

Table 5. Hypothesis Testing Results

Variable	Original Sample (O)	P Values
Attitude -> Investment Interest	0.027	0.016
Perceived Ease of Use -> Attitude	0.403	0.000
Perceived Ease of Use -> Investment Interest	0.049	0.006
Perceived Usefulness -> Attitude	0.227	0.013
Perceived Usefulness -> Investment Interest	0.656	0.000
Subjective Norm -> Investment Interest	0.101	0.311

Discussion

In this study, we applied the Technology Acceptance Model (TAM) and subjective norms to explore Generation Z's investment interest using mobile banking. The findings indicate that perceived usefulness and perceived ease of use have a positive and significant impact on attitudes, supporting hypotheses 1 and 2. This suggests that when Generation Z perceives real benefits and ease of use in mobile banking, they are likely to develop a positive attitude toward

the application. This highlights the importance of a user-friendly interface and relevant features that can enhance the user experience. Previous research also indicates that ease of access and clarity of information significantly contribute to the formation of positive attitudes. Therefore, mobile banking service providers need to focus on enhancing features that can strengthen these positive perceptions to attract Generation Z as potential investors.

Furthermore, we found that perceived usefulness, perceived ease of use, and attitude significantly positively influence Generation Z's investment interest in using mobile banking. These findings support hypotheses 3, 4, and 5. This indicates that the positive attitude formed from these two factors perceived usefulness and perceived ease of use directly motivates Generation Z to invest through mobile banking. This research is consistent with the theory that individuals tend to take actions they perceive as beneficial and easy (Septiani et al. 2024). Generation Z, being tech-savvy, is more likely to be motivated to use mobile banking as an investment tool if they feel that the application can provide financial benefits and is easily accessible (Putri et al. 2024; Yusdhika et al. 2024). Therefore, it is important to provide education and clear information regarding the real advantages of investing through mobile banking platforms to instill greater confidence in Generation Z's investment decisions.

However, the results of this study also indicate that subjective norms do not have a significant impact on Generation Z's investment interest in using mobile banking, meaning hypothesis 6 is rejected. Although social norms are often considered a key factor in decision-making, these findings suggest that Generation Z prioritizes personal experience and their perceptions of technology over social pressure from their surroundings (Pujayanti et al. 2024). This may be due to Generation Z's characteristics, which include being more independent in decision-making and more open to technological changes . They tend to seek information independently through the internet and various digital platforms, thereby forming their own views without being overly influenced by others' opinions. This research provides important insights that to attract Generation Z's interest, a more individualized experience and education about technology are needed, rather than relying on existing social norms.

Overall, the results of this study indicate that the findings can be relied upon to predict Generation Z's investment interest using mobile banking. By understanding the factors that influence their attitudes and interests, financial service providers can design more effective strategies to engage Generation Z in using mobile banking as an investment tool. This research also opens opportunities for further studies on how technological developments and changes in social behavior may influence Generation Z's investment attitudes in the future. Therefore, it is essential for the financial industry to continuously adapt to changes in consumer behavior to remain relevant and provide services that meet the needs of the younger generation. With the right approach, mobile banking can be an effective tool in enhancing financial literacy and investment interest among Generation Z.

5. Conclusion

The development of banking technology, particularly through mobile banking, has prompted researchers to investigate Generation Z's investment interest. In this study, we combined the Technology Acceptance Model (TAM) and subjective norms to understand the factors influencing this group's investment decisions. We employed a quantitative approach and SEM PLS as a data analysis tool. The findings indicate that perceived usefulness and perceived ease of use significantly impact attitudes toward using mobile banking. Additionally, the results suggest that positive attitudes, along with these two factors, contribute to Generation Z's investment interest. However, subjective norms did not show a significant influence on investment interest, indicating that Generation Z is more influenced by personal experience and their perceptions of technology than by social pressure. Overall, this research provides

valuable insights for financial service providers to understand Generation Z's behavior in utilizing mobile banking as an investment tool, emphasizing the importance of enhancing features and education to attract this group's attention.

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ENTREPRENEURSHIP EDUCATION COMPETENCE AS THE KEY TO INDONESIA'S ECONOMIC DEVELOPMENT IN THE DIGITAL AGE

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Abstract

Entrepreneurship competencies are key to driving Indonesia's economic growth and development in the digital era, especially in addressing challenges such as unemployment and economic inequality. This study uses a qualitative approach with a systematic literature review method and semi-structured interviews to analyze the drivers and barriers of entrepreneurship, the role of education, and the impact of digital transformation. The study results show that strengthening entrepreneurship competencies requires the integration of a practice-based curriculum, digital entrepreneurship training, and government policy support. Case studies at the State University of Malang (UM) and Wonogiri UMKM prove that a combination of entrepreneurship education and field experience can create innovative and competitive entrepreneurs. Thus, the development of a holistic entrepreneurial ecosystem through education, technology, and policy collaboration is a strategic solution to improve Indonesia's economic competitiveness.

Keywords: *Entrepreneurship Competency, Digital Economy, UMKM, Digital Transformation*

1. Introduction

In the midst of global economic uncertainty, strengthening the entrepreneurship sector and education has become one of Indonesia's main pillars for enhancing economic competitiveness and creating new job opportunities. According to Rokhim et al., (2024), the open unemployment rate in Indonesia remains at 5.32%, with a predominance of youth unemployment. This underscores the urgency of developing entrepreneurship within education as a strategic approach. Entrepreneurial activities play a strategic role in creating new business actors and companies. There can be no development without the presence of entrepreneurs, as entrepreneurship drives the economy towards national equilibrium (Nguyen & Nguyen, 2023).

Entrepreneurship in education is an approach that integrates the concepts and practices of entrepreneurship into the education system (Azqueta et al., 2023). the aims is to develop entrepreneurial skills, attitudes, and mindsets among students, as well as to encourage innovation and project-based learning in educational institutions rapidly and globally (Dabbous & Boustani, 2023). This condition presents unique challenges for educational institutions in preparing graduates who are competent and ready to enter the workforce or engage in independent entrepreneurship. It is not enough to deliver academic material conventionally; there must be a learning ecosystem that encourages students to become problem solvers, innovators, and business actors capable of creating added value (Hestiningtyas et al., 2023; Gusnadi, Ardianto, and Rapiadi 2024). Therefore, the integration of entrepreneurship into the educational curriculum is a fundamental necessity for building entrepreneurial spirit and competencies.

These competencies are not limited to theoretical knowledge about business but also encompass practical skills and the mental attitudes necessary for success in the entrepreneurial world. Entrepreneurial competencies refer to an individual's ability to identify, develop, and realize business opportunities through innovation, creativity, and measured risk-taking (Wang

et al., 2023). Strong entrepreneurial competencies play a crucial role in fostering the emergence of adaptive, innovative, and competitive entrepreneurs (Sun et al., 2s023). Entrepreneurial competencies include a combination of knowledge, skills, and attitudes required to identify business opportunities, manage businesses, and create sustainable added value (Krishnawati et al., 2023). In the digital era, these competencies are further expanded to include the ability to adapt to technological developments, mastery of digital marketing, and data-driven business management (Yasa et al., 2023; Yusdhika et al., 2024). Nevertheless, strengthening entrepreneurial competencies remains a significant challenge, both in terms of education, training, and government policies.

On the other hand, the Government of Indonesia faces demographic challenges, with more than 64% of the population in the productive age group (15-64 years) compared to the non-productive age group (Setiawan, 2021; Pujayanti et al., 2024). This phenomenon presents a significant opportunity for entrepreneurship development, particularly among the younger generation. According to Zuhroh & Pradhani, (2024), Indonesia's entrepreneurship rate is still relatively low compared to other Southeast Asian countries. The current entrepreneurship ratio in Indonesia is around 3.47%, while Singapore reaches 8.76% and Malaysia 4.74%. One of the reasons for this is the lack of entrepreneurial competencies relevant to the needs of the digital era, such as digital literacy, utilization of online platforms, and technological innovation (Qiu et al., 2023). This condition demands individuals not only to possess theoretical knowledge but also practical skills and an adaptive mentality in facing uncertainty and intense competition.

This condition demands individuals not only to possess theoretical knowledge but also practical skills and an adaptive mentality in facing uncertainty and intense competition (Avelar et al., 2024). Therefore, building a digital-based entrepreneurial ecosystem is an important step for Indonesia. The majority of MSME actors and prospective entrepreneurs in Indonesia still face limitations in digital skills and online marketing, which are major obstacles to their business development (Listyaningsih et al., 2023).

The urgency of strengthening entrepreneurial competencies is further reinforced by the fact that the fourth industrial revolution has shifted the economic paradigm towards the gig economy, where flexibility and innovation are key. Entrepreneurs are required not only to be adaptive to technological changes but also to possess a creative and collaborative entrepreneurial mindset (Di Paola et al., 2023). Digital entrepreneurship training can enhance the motivation of the younger generation to engage in entrepreneurship and expand market access globally (Tiberius & Weyland, 2023; Taridi et al., 2024). Furthermore, the role of entrepreneurship education still needs to be strengthened. The implementation of the *Merdeka Belajar Kampus Merdeka* (MBKM) program has provided space for strengthening entrepreneurial soft skills; however, the effectiveness of this program heavily depends on the capacity of educational institutions to provide curricula relevant to the demands of Industry 4.0 and Society 5.0. Therefore, education combined with structured digital entrepreneurship training will enhance the readiness of the younger generation to face the challenges of the digital business era (Thomas, 2023).

Based on the above discussion, strengthening entrepreneurial competencies is a fundamental need to support Indonesia's economic development in the digital era, and education encompasses elements of teaching, training, and mentoring an individual's potential. Research and development programs focused on strengthening digital entrepreneurial competencies should continue to be enhanced, both in educational environments, MSME communities, and the broader social environment. Thus, Indonesia can optimize its digital economic potential to achieve inclusive and sustainable economic growth towards the era of Society 5.0.

2. Methodology

This study employs a systematic literature review approach, which involves reviewing literature such as books, journals, and other academic works related to the research topic (Herman & Sopiah, 2023). By analyzing these sources, this research aims to produce a comprehensive discussion. The data sources in this study are obtained from various scientific literature, including journal articles, books, research reports, and other academic publications. The data collection process is conducted through systematic searches in electronic databases such as Google Scholar, JSTOR, Science Direct, and university repositories using the keyword "entrepreneurship in education." This research utilizes a qualitative descriptive analysis approach by examining various sources such as national and international journals and books to generate new theories or understandings. The analysis techniques include data grouping, identifying patterns of similarities and differences, and providing insights.

3. Results and Discussions

Competence refers to a set of knowledge, skills, and attitudes that an individual possesses, masters, and manifests in performance to achieve specific results in a particular context. Competence encompasses not only cognitive and technical aspects but also social and emotional skills that support an individual in effectively carrying out tasks and responsibilities (Sitaridis & Kitsios, 2024). Meanwhile, entrepreneurship is the ability of an individual to create something new and valuable through the development of creative ideas, risk-taking, and the utilization of market opportunities to produce goods or services that provide added value to society (Rodrigues, 2023).

Thus, entrepreneurial competence refers to a set of knowledge, skills, and attitudes required for an individual to recognize opportunities, develop innovations, and effectively and sustainably build and manage a business in the face of market dynamics and business challenges. This competence includes dimensions of creativity, managerial skills, communication, decision-making, and the courage to take risks in the context of entrepreneurship (Olutuase et al., 2023). With strong entrepreneurial competence, individuals are not only capable of creating new businesses but also contributing to the improvement of the community's economy through sustainable innovation. On the other hand, entrepreneurship in education is an approach that integrates the concepts and practices of entrepreneurship into the education system.

3.1. Entrepreneurship in Indonesia

The state of entrepreneurship in Indonesia has been steadily increasing year by year, particularly with the rapid development of information and communication technology, especially the growth of the internet. This has sparked enthusiasm for entrepreneurship, encouraging entrepreneurs, including startups in both technology and non-technology sectors. However, it cannot be denied that technological advancements have increased the number of startups in Indonesia.

Currently, the trend among entrepreneurs is predominantly among the youth who possess competencies in accessing technology, particularly Information and Communication Technology (ICT). The interest of young people in entrepreneurship is influenced by digital developments that are an active part of their activities, as well as the availability of facilities for accessing information and ease of communication through ICT (Elyta et al., 2020). The Indonesian Internet Service Providers Association (APJII) 2024 reports that the number of internet users in Indonesia has reached 221,563,479, or about 79.5% of the total population, compared to 212.9 million in 2023 (Rifky Pamungkas et al., 2021).

The phenomenon of building a mindset and motivation among young people to utilize their competencies presents a new opportunity for entrepreneurs to start and develop their

businesses. Therefore, knowledge of entrepreneurship must be possessed by young people as intellectuals who can easily access information digitally to spark innovation in entrepreneurship. The opportunities are expanding, especially with the advent of internet entrepreneurship for young people to initiate entrepreneurial activities, supported by government programs that enable entrepreneurs to engage in entrepreneurial activities through educational entrepreneurship training and funding programs for MSMEs. Entrepreneurship in Indonesia is rapidly developing, especially with the rise of the digital economy and the entry of MSMEs into technology-based business.

3.1.1. Potential and Challenges of Entrepreneurship

Indonesia has significant potential for entrepreneurship development, supported by a large domestic market, abundant natural resources, a growing middle class, a strong entrepreneurial spirit among the community, and government support. The large and diverse population creates broad and specific business opportunities tailored to local needs. The wealth of natural resources in agriculture, fisheries, forestry, mining, and renewable energy provides a strong foundation for various types of businesses. The rapidly growing middle class drives demand for quality products, education services, healthcare, and tourism. A high entrepreneurial spirit, supported by creativity, innovation, and collaborative networks, becomes a unique strength (Rachmawati & Humairoh, 2023). The government also supports this through financing programs, training, ease of licensing, and strengthening digital infrastructure. Law No. 20 of 2008 reinforces the commitment to create a conducive business climate for MSMEs.

However, various challenges still need to be addressed. Access to capital remains difficult, especially for young people with limited experience and assets. Weak competencies, mental resilience, and an instant-gratification mindset also hinder the development of a robust entrepreneurial spirit. Additionally, limited infrastructure and access to technology in remote areas impede the equitable utilization of digital markets. The societal paradigm that favors formal professions over entrepreneurship further weakens the motivation of the younger generation. Furthermore, government policies have not been uniformly implemented, resulting in program benefits not reaching all regions fairly (Rohmanuddin et al., 2023). Therefore, stronger collaboration between the government, private sector, and society is needed to build an inclusive, adaptive, and sustainable entrepreneurial ecosystem.

3.1.2. Demographic Potential and Digital Economy

Indonesia has significant demographic potential through a demographic bonus, where the productive age population is dominant. This presents a golden opportunity to drive economic growth, especially if tech-savvy young people can develop digital businesses (Ratnasari & Levyda, 2021). A low dependency ratio allows for a focus on human and infrastructure development. However, this potential can only be optimally utilized through investments in education, training, and supportive regulations to avoid increasing unemployment and social issues.

On the other hand, Indonesia's digital economy continues to grow rapidly, providing significant opportunities for MSMEs through e-commerce, digital payments, and technological innovations. The ability to adapt to technological changes is key to success in this era. To support inclusive and sustainable digital economic growth, collaboration between the government, private sector, and educational institutions is needed, along with increased financial literacy among entrepreneurs. With a conducive ecosystem, digitalization can expand job opportunities and enhance national competitiveness.

3.1.3. Indonesia's Ranking in the Global Entrepreneurship Index

Indonesia's ranking in the Global Entrepreneurship Index (GEI) remains relatively low, ranging from 45 to 75 out of 137 countries, generally placing it fifth in Southeast Asia. Nevertheless, the entrepreneurial ecosystem shows a trend of improvement, with an increase in the GEI score of about 14% per year. The entrepreneurship ratio in Indonesia is still low at 3.18%, but the Total Early-Stage Entrepreneurial Activity (TEA) rate is relatively high, reaching 9.6% in 2020 the second highest according to the Global Entrepreneurship Monitor (Wijaya & Widjaja, 2023). his reflects a significant interest in entrepreneurship among the population, although it still needs to be supported by strengthening the ecosystem.

3.1.4. Driving and Hindering Factors of Entrepreneurial Competence

The motivation to engage in entrepreneurship is influenced by various factors, such as family and peer environments, education, and strong personal will. The environment significantly impacts an individual's mindset and actions in starting a business, while education provides the foundational knowledge about entrepreneurship. The internal drive is the primary foundation for building and developing a business. However, entrepreneurs often face obstacles stemming from both internal and external factors (Suharyati et al., 2023). Internal obstacles include a lack of financial control, fear of failure, absence of strategic planning, limited market experience, and low risk-taking capacity.

External obstacles include issues related to human resources, strict market regulations, and a lack of practical entrepreneurship training. Entrepreneurs need to understand the importance of cash flow management, plan their businesses with solid strategies, and conduct thorough market research. Additionally, competent workforce support, readiness to face government regulations, and ongoing training are necessary to address market challenges. Without mastering these aspects, the entrepreneurial journey will struggle to develop optimally, even though potential and interest are high.

3.1.5. Impact of Low Entrepreneurial Competence

Low entrepreneurial competence has widespread effects, ranging from weak MSME (Micro, Small, and Medium Enterprises) development to an increase in unemployment rates. Entrepreneurs lacking skills in innovation, leadership, and management struggle to scale their businesses and create new job opportunities. As a result, local economies stagnate, and communities lose opportunities for economic independence (Purnamasari & Ramdani, 2020). Many higher education graduates are also unprepared for entrepreneurship due to a lack of skill training and confidence, as well as minimal experiential learning. This fosters a dependency on formal employment, which has limited capacity, leading to persistently high unemployment rates, especially among the productive age group.

On the other hand, the contribution of MSMEs to GDP is still not optimal, despite their increasing numbers. Many MSMEs operate in the informal sector with low productivity due to limitations in management, marketing, and technology. The inability to adopt digital technology also poses a serious barrier. Many entrepreneurs still rely on conventional methods, leaving them behind in the rapidly evolving digital market. The lack of digital literacy and technological innovation results in a deficiency of technology-based business breakthroughs, even though market opportunities in the digital era are vast and promising.

3.1.6. The Role of Education in Building Entrepreneurial Competence

Entrepreneurship education aims to shape well-rounded individuals who possess character, understanding, and skills as entrepreneurs. This education can be integrated into various school activities and plays a crucial role in fostering interest, attitudes, and motivation for entrepreneurship (Hariyanto & Ie, 2023). Instilling an entrepreneurial spirit from an early age, through the roles of teachers and parental support, is essential for developing mindsets and mental attitudes such as self-confidence, creativity, resilience, and decision-making abilities.

Entrepreneurship learning should not only be cognitive but can also be embedded in thematic activities that naturally build practical values and entrepreneurial character.

Successful examples of entrepreneurship education can be seen in China, where children are guided from an early age to become independent and innovative individuals. Through the Triple Helix approach involving universities, government, and industry, entrepreneurship education in China has proven to enhance students' entrepreneurial intentions and self-efficacy. In Europe, countries like France, Germany, and the Netherlands implement the Junior Enterprise (JE) system, which is an organization run by students to manage real projects for external clients. This model has proven effective, with 21% of JE alumni starting businesses within three years of graduation, significantly above the EU average. These approaches demonstrate that well-designed, practice-based entrepreneurship education from an early age can produce resilient entrepreneurs ready to face global challenges (Aryadi & Hoesin, 2022).

3.1.7. Solutions to Enhance Entrepreneurial Competence

To enhance entrepreneurial competence, the primary solution is to integrate entrepreneurship education into a curriculum that is practical and experience-based. Entrepreneurship education should not be purely theoretical; it must emphasize project-based learning, business skills training, and direct student involvement in real business activities, whether through simulations or campus business incubators. This approach will foster an entrepreneurial mindset, increase risk-taking courage, and encourage innovation from an early age (Annisa et al., 2023). Additionally, entrepreneurship education should also strengthen character traits such as discipline, hard work, and responsibility to ensure graduates have the resilience to face the dynamics of the business world.

Another solution is to strengthen the synergy between the education sector, industry, and government in creating a conducive entrepreneurial ecosystem. Higher education institutions need to establish strategic partnerships with industry players to provide internship programs, mentoring, and market-driven learning (link and match) (Elyta et al., 2020). Meanwhile, the government should implement affirmative policies such as business capital assistance, digital entrepreneurship training, and providing market access through digital platforms. Strengthening digital infrastructure is also crucial to support the growth of digital entrepreneurship, where technologies like e-commerce and social media can be utilized by young people to start and develop businesses independently.

3.1.8. Entrepreneurship at Islamic Universities in Malang and MSMEs in Wonogiri Regency.

Entrepreneurship at State University of Malang (UM) and MSMEs in Wonogiri Regency play a vital role in driving development and economic improvement in the digital era through the enhancement of entrepreneurial competence. Data from the Central Statistics Agency in 2014 indicated a high unemployment rate among higher education graduates, prompting UM, particularly the Faculty of Education, to develop students' entrepreneurial skills through data collection, mentoring, and entrepreneurship training, which has proven to increase students' understanding by up to 94%. UM aims to produce young entrepreneurs who are creative, capable of creating jobs, utilizing technology, and building networks with established entrepreneurs. Meanwhile, MSME actors in Wonogiri Regency have also seen growth, as evidenced by the increase in the Gross Regional Domestic Product (GRDP) index in 2020 compared to 2019, indicating the development of entrepreneurship in the region.

Table 1. Business Category in Wonogiri District

No	Business	Address	Year	Sector

1	Hara Chicken	Jl. Jendral Sudirman No. 204, Wonogiri	3,5	**Food**
2	Jamur Midic	Jl. Sidoharjo – Girimarto, Kendal RT 04 RW 07, Girimarto, Wonogiri	2	**Food**
3	Melani Bakery	Sidoharjo Wonogiri	2	**Food**
4	Klinik Rainbow Therapy	Jl. Srigunting II Sukorejo RT 02 RW 10, Giritirto, Wonogiri	7	**Health**
5	**Buana Pangan**	**Jl. Menur 3, RT 03 RW 10, Wonoboyo, Wonogiri**	**6**	**Food**

The results show that the entrepreneurial spirit emerges before and continues to develop while starting a business, characterized by perseverance, hard work, optimism, innovation, creativity, as well as a spirit of mutual assistance and readiness to face risks. The entrepreneurial spirit is essential for leading a business with an attitude of appreciating differences, thinking openly, and accepting feedback. To develop their businesses, respondents utilize social media promotions, maintain good relationships and customer loyalty, ensure product quality, and target the right market. These findings are consistent with relevant previous research. Based on 5 sources of journal articles that have met the inclusion criteria, the details of the research results are presented in Table 2.

Table 2. Research Results Education Entrepreneurship Competence as the Key to Indonesia's Economic Development in the Digital Age

Researcher & Year	Journal	Research Result
(Suharyati et al., 2023)	Journal of Digital Economic Education	Entrepreneurship education integrated with digital technology improves students' ability to create digital business innovations so as to contribute to the development of local and national economies in Indonesia.
(Pramudita et al., 2025)	Journal of Management and Entrepreneurship	Entrepreneurship competence through digital-based entrepreneurship training can improve graduates' readiness to face global competition and trigger the growth of new businesses that are adaptive in the digital era.
(Putri, 2022)	Journal of Technology and Education	The implementation of an entrepreneurship curriculum with a digital approach strengthens the entrepreneurial mindset of students, which has positive implications for the development of MSMEs and economic development in Indonesia.
(Mahmudah et al., 2023)	Journal of Digital Economics and Business	Mastery of entrepreneurship competencies combined with information technology increases the productivity of MSMEs in the digital era, giving a significant impact on regional economic growth.
(Juhairiah & Yuwono, 2022)	Journal of Education and Development	Technology-based entrepreneurship education supports the improvement of the quality of innovative and adaptive human resources, thereby accelerating economic development and reducing unemployment in Indonesia.

Recent studies have shown that the development of entrepreneurship competencies through education integrated with digital technology is essential in driving Indonesia's economic development in the digital era. Digital-based entrepreneurship education is able to improve innovation capabilities, global competitive readiness, and productivity of MSMEs, which are the backbone of the national economy. Thus, strengthening entrepreneurship education not only equips individuals with practical skills, but also contributes significantly to economic growth and reducing unemployment rates in Indonesia.

5. Conclusion

Entrepreneurship competence is essential to drive Indonesia's economic growth in the digital era, although it is still constrained by access to capital, skills and infrastructure. Early education through practical curriculum, training, and collaboration with industry, such as at the State University of Malang and the development of MSMEs in Wonogiri, has proven effective in increasing the entrepreneurial spirit. Digital transformation through the use of e-commerce, digital marketing, and other technologies is also key, but requires digital literacy and strong policy support. Collaboration between the government, private sector, and educational institutions in creating a supportive ecosystem is needed to reduce unemployment and strengthen the contribution of MSMEs, resulting in a generation of innovative and globally competitive entrepreneurs.

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HUMAN RESOURCE DEVELOPMENT STRATEGY IN THE CREATIVE VILLAGE OF JAGOI BABANG, SEKIDA VILLAGE

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Abstract

This study aims to create a strategy for developing human resources (HR) in Jagoi Babang Creative Village, Sekida Village, Bengkayang Regency, West Kalimantan. This village has the potential for a creative economy based on local wisdom, especially rattan and bamboo handicrafts that are characteristic of the Dayak Bidayuh Tribe. The research method used is descriptive qualitative. Data were collected through observation, interviews, and documentation. Data were analyzed through SWOT analysis. The results of the study indicate that human resource development can be optimized through local culture-based skills training, strengthening business group institutions, and utilizing digital technology for marketing. This strategy is integrated with the principles of Sustainable Development Goals (SDGs) to improve community welfare and preserve local culture. With targeted human resource development, Jagoi Babang Creative Village is expected to become a model for creative villages in border areas.

Keywords: Human Resources, Creative Village, Local Wisdom

1. Introduction

The border region has a very strategic position and offers great economic potential. Its unique location makes it a gateway for trade and tourism between countries. However, this condition can also hinder economic growth and the welfare of the people in the area. One of the main factors that hinders economic growth is limited infrastructure. Inadequate road access makes it difficult to distribute creative products to a wider market. In addition, limited internet networks are an obstacle in digital marketing, even though technology-based marketing is very important in today's digital era.

To overcome the various challenges that exist, one solution that can be applied is the development of the creative village concept. This concept focuses on utilizing local potential and local cultural wisdom. Creative villages integrate economic, cultural, and environmental aspects into a sustainable ecosystem. By developing culture-based products, maintaining environmental balance, and increasing public awareness, creative villages can be a development model that is not only economically profitable, but also preserves cultural heritage and preserves nature (Sudiar, 2015; Dina, 2020).

Jagoi Babang Creative Village in Bengkayang Regency, West Kalimantan, is one of the border areas that has great potential for development. The majority of its population comes from the Dayak Bidayuh Tribe which is rich in traditions and skills, especially in rattan and bamboo handicrafts. These craft products not only have high artistic and cultural value, but are also able to attract the attention of tourists and consumers who are looking for typical and unique goods from the region (Beni et al., 2021; Gracia, 2021).

The determination of this area as a Creative Tourism Village by the local government is an acknowledgment of the importance of the craft industry based on local wisdom. The Ton Sowa IKM Center in Jagoi Kindau is a center for small and medium industries that support

local craftsmen in producing traditional woven products (Usaha et al., 2024). The development of human resources (HR) in Jagoi Babang Creative Village is very important to increase the capacity of the community in managing local potential optimally. Trained and competent human resources are able to increase creativity, innovation, and product competitiveness in local and global markets (Nurkarim & Anshori, 2024). Therefore, this study aims to analyze the human resource development strategy in Jagoi Babang Creative Village, Sekida Village, in order to support the growth of a creative economy based on local wisdom and improve the welfare of people in border areas.

2. Literature Review

Previous studies have shown that human resource (HR) development in border areas is very important to increase local economic potential and strengthen cultural preservation. Sudiar (2015) and Dina (2020) highlighted that limited infrastructure and access to technology are the main obstacles in developing the creative economy in border areas. However, by prioritizing local strengths and encouraging community creativity, creative villages can become an alternative source of income and encourage more inclusive economic development.

Beni et al. (2021) revealed that rattan and bamboo handicrafts produced by the Dayak Bidayuh community in Jagoi Babang have high artistic and cultural value and strong tourist attractions. Gracia (2021) added that good management of creative villages can improve the tourism sector and provide direct and indirect economic benefits to the local community. In addition, Usaha et al. (2024) highlighted the role of the Ton Sowa IKM Center as a center for small and medium industries that supports local craftsmen in producing traditional woven products and expanding markets through digitalization.

Theoretically, human resource development is a process of improving the quality and capabilities of individuals in a community so that they are able to adapt to change and contribute optimally to economic and social development. According to Nurkarim & Anshori (2024), trained and competent human resources can increase creativity, innovation, and product competitiveness in local and global markets. Ewid and Vuspitasari (2020) also emphasize the importance of local wisdom as a basis for human resource development, because traditional values born from the collective experience of the community are the foundation for building regional identity and excellence.

Micro, Small, and Medium Enterprises (MSMEs) are business groups that have limited scale and capacity but play a strategic role in the national economy. Based on Law Number 20 of 2008, MSMEs are divided into three categories, namely micro, small, and medium enterprises, with the main differences lying in the number of assets, turnover, and number of workers. MSMEs make a major contribution to creating jobs, increasing people's income, and strengthening national economic stability, especially at the local level. Along with the development of digital technology, MSMEs also have the opportunity to expand markets, increase operational efficiency, and build business resilience amidst global economic changes. However, MSMEs are also faced with various challenges such as limited access to technology, capital, and adequate human resources (Agustin et al., 2023).

The framework for thinking of this research is based on the integration of the principles of the Sustainable Development Goals (SDGs) in human resource development, especially SDG 4 (Quality Education), SDG 8 (Decent Work and Economic Growth), SDG 11 (Sustainable Cities and Settlements), SDG 12 (Responsible Consumption and Production), and SDG 17 (Partnerships to Achieve the Goals). The strategy for developing human resources in Jagoi Babang Creative Village is directed at local culture-based skills training, strengthening business institutions, utilizing digital technology, and collaborating with various parties.The hypothesis proposed in this study is: Human resource development based on local wisdom and

integration of SDGs principles has a positive effect on the growth of the creative economy and cultural preservation in Jagoi Babang Creative Village, Sekida Village.

3. Methodology

This study uses a descriptive qualitative method. The population of the study was the community, craft actors, and village officials in Jagoi Babang Creative Village, Sekida Village. The sample was selected purposively, namely key informants who were directly involved in the development of Human Resources and creative village activities. Data collection techniques were carried out through in-depth interviews, observations, and documentation. The main variables studied were Human Resource development, creative villages, and local wisdom. Data were analyzed using the SWOT analysis technique, namely identifying the main themes from the results of interviews and observations.

4. Results and Discussion

In analyzing the human resource development strategy (HRD) in Jagoi Babang Creative Village, Sekida Village, an approach was taken using SWOT analysis which includes aspects of strengths, weaknesses , opportunities, and threats. This analysis aims to formulate the right strategy in developing HRD based on local potential and local cultural wisdom.

From the Strengths (S) side, it was found that the community has high skills in the field of handicrafts, especially in rattan weaving activities. This expertise is a hereditary heritage that is still preserved to this day, and is a strong cultural identity among the Dayak Bidayuh community. In addition, the existence of institutions such as the Ton Sowa IKM Center, Pokdarwis and Bumdesma also strengthen the ecosystem for developing creative villages in the area.

However, the Weaknesses (W) that emerged was the low interest of the younger generation in continuing the weaving tradition. This causes a lack of regeneration of craftsmen, and has the potential to threaten the sustainability of local culture. In addition, limited access to technology, lack of modern skills training, and inadequate infrastructure such as damaged roads and minimal internet connection also weaken the capacity of local human resources to compete in the digital era.

In the Opportunities (O) category, there is great potential from the existence of the younger generation who still live in villages as well as support from local governments and educational institutions. In addition, the trend of culture-based tourism and the increasing interest in local craft products are opportunities that must be utilized optimally.

The Threats (T) that need to be watched out for include the development of palm oil companies around the village area which can shift the economic orientation of the community from the creative sector to the plantation industry sector. In addition, competition from more innovative creative products from outside the region can also threaten the sustainability of local products if design and marketing strategy updates are not immediately carried out.

From the four SWOT aspects, several strategies can be formulated: SO (Strength-Opportunities) strategy is carried out by optimizing existing community skills through training from educational institutions and government support to strengthen the tourism and creative economy sectors. The WO (Weaknesses-Opportunities) strategy can be carried out by inviting the younger generation to participate in creative business training and mentoring in order to be able to grow their interests and skills. Meanwhile, the ST (Strength-Threats) strategy focuses on strengthening branding and differentiation of local products to overcome threats from foreign products and economic shifts. Finally, the WT (Weaknesses-Threats) strategy aims to reduce dependence on certain raw materials by seeking local alternatives and avoiding inequality in the distribution of government attention to the creative sector.

This SWOT analysis provides a comprehensive overview of the internal and external conditions that influence HR development in the Sekida Village Creative Village. By

understanding this strategic position, more targeted and sustainable development can be designed to encourage economic progress, cultural preservation, and community welfare holistically.

The results of the study show that the human resource (HR) development strategy in the Jagoi Babang Creative Village, Sekida Village, has had a positive impact on increasing community capacity and the growth of the creative economy based on local wisdom. Data obtained through interviews and observations show that most of the community have participated in rattan weaving skills training, bamboo craft making, and digital marketing training facilitated by the village government and the Ton Sowa IKM Center.

The improvement of community skills and knowledge in the Jagoi Babang Creative Village has shown significant results, especially in the field of rattan and bamboo-based handicrafts. Through various trainings held, the community not only gains technical skills in production, but is also equipped with knowledge of business management and digital marketing. This allows local products to be marketed more widely, both offline in local markets and online through digital platforms. In addition, institutional strengthening through the formation of joint business groups and cooperatives has increased the bargaining position of MSME actors. Collaboration between the community, government, and educational institutions is increasingly intensive in supporting product development and expanding marketing networks (Usaha et al., 2024).

These findings are in line with the theory of Human Resource Development which emphasizes the importance of continuous training and strengthening the capacity of individuals and communities (Nurkarim & Anshori, 2024). This strategy also supports the achievement of sustainable development goals, especially SDG 4 (Quality Education) and SDG 8 (Decent Work and Economic Growth), which are significantly able to improve the quality of human resources and open up job opportunities based on local potential. From a practical perspective, the approach to human resource development in the Jagoi Babang Creative Village can be used as a model for other villages in border areas. Local culture-based skills training, institutional strengthening, and the use of digital technology have been proven to increase product competitiveness and expand market access. Cross-sector collaboration between the community, government, and educational institutions is a key factor in ensuring the sustainability of human resource development programs in the border area.

The managerial implications of this finding are the need for local governments to continue to support training programs, provide access to digital marketing, and strengthen creative economy institutions at the village level. For business actors, it is important to continue to innovate and maintain product quality in order to be able to compete in a wider market. Overall, the development of Human Resources based on local wisdom and the integration of SDGs principles have made a significant contribution to the growth of the creative economy, cultural preservation, and improving community welfare in the Jagoi Babang Creative Village.

5. Conclusion

Based on the research results, it can be concluded that the human resource (HR) development strategy in Jagoi Babang Creative Village, Sekida Village, has had a real impact in increasing community capacity and encouraging the growth of a creative economy based on local wisdom. Data shows that training in craft skills, business management, and digital marketing facilitated by the village government and the Ton Sowa IKM Center has succeeded in increasing community knowledge and skills. The formation of joint business groups and cooperatives also strengthens institutions and expands market access for local products.

The analysis of the results of this study is in line with the theory of HR development which emphasizes the importance of continuous training and strengthening community capacity (Nurkarim & Anshori, 2024). In addition, the integration of SDGs principles,

especially SDG 4 (Quality Education) and SDG 8 (Decent Work and Economic Growth), has proven effective in creating job opportunities based on local potential and improving community welfare.

Practically, this strategy can be replicated in other border villages by strengthening local culture-based training, supporting creative economy institutions, and utilizing digital technology for marketing. The resulting managerial implications are the need for ongoing support from local governments in providing training, market access, and strengthening business institutions. For business actors, product innovation and quality improvement are the keys to local products being able to compete in a wider market. Thus, targeted and local wisdom-based human resource development in the Jagoi Babang Creative Village has proven to be able to increase the creative economy, preserve culture, and make a significant contribution to the welfare of people in border areas.

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Sabinus Beni, Yosua Damas Sadewo, dan Blasius Manggu yang dimuat dalam *Inovasi Pembangunan: Jurnal Kelitbangan, Volume 9 No. 2, Agustus 2021*:

THE INFLUENCE OF *BRAND IMAGE,* PRODUCT QUALITY AND PRICE ON CONSUMER BUYING INTEREST IN JIMS HONEY PRODUCTS (CASE STUDY OF CONSUMERS IN BENGKAYANG CITY)

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Abstract

Nowadays, information and communication technology has a significant impact on both the industrial sector and daily life. The internet acts as an electronic device that facilitates various activities, such as communication, business, and shopping. By utilizing digital information technology, business people can easily market a variety of products in order to attract consumer attention. One of the fashion businesses that is currently developing and actively using the internet, especially social media and other platforms, is the fashion business of Jims Honey. In this case, the main focus of this study is to measure and analyze the extent to which the influence of brand image, product quality, and price on consumer buying interest in Jims Honey products. Using quantitative methods and analyzed by multiple linear regression, the research population refers to all people in Bengkayang City. The sample taken was 151 respondents using purposive sampling technique. The results showed that the brand image variable with a coefficient value of B = -0.032 and a sig value = 0.758, which means that the brand image variable has no positive and significant effect on buying interest in Jims Honey products, the product quality variable with a coefficient value of B = 0.549 and a sig value =< 0.001, which means that the product quality variable has a positive and significant effect on buying interest in Jims Honey products. Then, the price variable with a coefficient value B = 0.404 and a sig value =< 0.001, which means that the price variable has a positive and significant effect on buying interest in Jims Honey products.

Keywords: Brand image, product quality, price, and purchase intention.

1. Introduction

The fashion industry is one of the sectors that is growing rapidly as digital technology advances. Fashion products are now not only a necessity for appearance, but also a medium to express self-identity, especially for teenagers and adults. Jims Honey, as one of the local brands established since 2014, has managed to attract the attention of consumers with a variety of fashion products such as bags, wallets, watches, and other accessories. The main advantages of these products lie in fashionable designs, good quality materials, and affordable prices.

The three main factors that are considered to have an influence on consumer buying interest are *brand image*, product quality, and price. A strong brand image is able to create a positive perception of the product, good product quality increases consumer confidence, while price is a rational consideration in making purchasing decisions. (Endah Setiawati et al., 2021). Interestingly, in Bengkayang City, there are no official Jims Honey resellers, but consumers can still get their products through various online platforms such as Shopee, TikTok, and Instagram. This phenomenon indicates a large market potential while opening up research opportunities on how these marketing factors affect consumer buying interest in the region.

This research is not only motivated by the importance of understanding consumer behavior in a digital context, but also by the different results of previous research related to the influence of *brand image*, product quality, and price on purchase intention. Based on research conducted by Alifiyah, (2024) "The Effect of Brand Image, Product Design and Product Quality on Purchasing Decisions for Jims Honey Bag Products in Sampit" it is known that the variables of brand image, product design and product quality have a positive and significant effect on purchasing decisions for Jims Honey bag products in Sampit. And research conducted by Irawan et al., (2022) "Effect, Price, Brand Image, and Product Quality on Purchase Intention of Eiger Products (Case Study of Eiger Product Consumers in Malang)" it is known that the price variable has no positive and significant effect, the brand image variable and product quality have a positive and significant effect. This shows that consumers may prioritize other aspects such as product quality and brand image. Thus, this study aims to examine empirically the extent to which these three variables affect consumer buying interest in Jims Honey products in Bengkayang City.

2. Literature Review

2.1 Brand Image

Brand image is a collection of associations formed in the mind or mind of consumers. Brand image can be considered positive or negative, depending on the individual's perception of the brand, as well as the perspective that consumers have on the brand. (Arista & Astuti, 2019) . Meanwhile, according to Susanti & Tjahjono, (2015) suggests that brand image is the impression formed in the minds of consumers about a brand. The indicators of *brand image* according to Arista & Astuti, (2019) are brands that change consumer behavior, brands make it easier to take action, the benefits of brand association, the strength of brand association, and the uniqueness of brand association.

2.2 Product Quality

Product quality is the ability of a product to perform its functions, which include durability, reliability, accuracy, ease of use and repair and other artibutes. (Mahanani, (2018) . According to Rusdi, (2019) product quality is a series of characteristics possessed by a product or service, which has an important role in meeting customer needs and expectations. The indicators of product quality according to Winasis et al., (2022) are performance, reliability, conformance, durability, and asthetics.

2.3 Price

Price is one of the main components in marketing that can benefit the company. Pricing needs to be considered carefully, given the many competitors in the market. (Susanti & Tjahjono, 2015) . The price indicators according to Latour, (2018) are price according to quality, affordability, price competitiveness, and price according to benefits.

2.4 Purchase Intention

Purchase interest is a behavior that reflects the desire of consumers to buy, choose, use, or even just want a product. (Fauzan et al., 2023) . Meanwhile, according to Sutrisno & Haryani, (2017) purchase interest is the intention or desire of consumers to buy a product, which can develop from a sense of interest in the product. The indicators of buying interest according to Luthfiana, (2019) are attention, interest, desire, and action.

2.5 Research Conceptual Framework

The conceptual framework of this study was developed based on a predetermined hypothesis. The hypothesis is then used in the development of multiple linear regression equations, which are as follows:

$Y = \alpha + \beta 1\, X1 + \beta 2\, X2 + \beta 3 X3 + e$

Explanation of variables and their relationships:

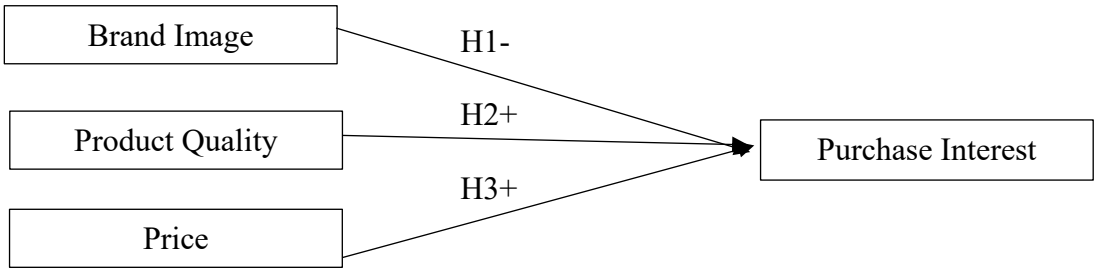

Figure 1. Research conceptual framework

1. *Brand Image* (X1)
   This variable does not have a positive effect on buying interest in Jims Honey products. Based on the results of research conducted by Nuriyah Oktavia Tri et al., (2023) shows that *brand image* has not been able to create strong or attractive perceptions in the minds of consumers, so it is not enough to influence their decision to buy.
2. Product Quality (X2)
   This variable has a positive effect on buying interest in Jims Honey products. Based on the results of research conducted by Oramesti & Wardhana, (2022) , shows that product quality can affect the extent to which consumers are satisfied with what they receive.
3. Price (X3)
   This variable has a positive effect on buying interest in Jims Honey products. Based on the results of research conducted by Fauzan & Rohman, (2020) shows that the price of a product is considered reasonable or comparable to the value or quality offered, consumers will tend to have a higher purchase interest. Thus, consumers feel that the product provides good value and they feel satisfied with what they pay.

3. Methodology

3.1 Research Design

This research is confirmatory research using a quantitative approach and survey method. The purpose of the quantitative approach is to analyze the effect of the independent variable on the dependent variable. (Ruky et al, 2018) . This study will examine the effect of *brand image*, product quality, and price on consumer buying interest in Jims Honey products in Bengkayang city.

3.2 Data Collection Methods

Data collection in this study used two methods of primary data and secondary data. Primary data is data obtained directly from distributing questionnaires. The questionnaire will be distributed to each respondent with a *google* form that will be filled in by participants, namely the community in Bengkayang City. Secondary data is data obtained indirectly, namely through reference sources or related literature obtained, this secondary data can be obtained through books, journal articles, and internet media that support research objectives.

3.3 Definition of Operational Variables

Variables	Operational Definition	Source	Size
Brand Image (X1)	Perceptions formed in the minds of consumers about a brand	(Arista & Astuti, 2019)	1. Maker Image 2. Product/consumer image 3. Brands change consumer behavior. 4. Brand power

			5. Brand uniqueness
Product Quality (X2)	Characteristics of a product that has the ability to satisfy customers	(Winasis *et al.*., 2022)	1. Performance 2. Reliability 3. Compatibility 4. Durability 5. Beauty
Price (X3)	The value of money to be paid by the consumer to the seller for the goods or services purchased.	(Susanti & Tjahjono, 2015)	1. Price conformity to product quality 2. Price affordability 3. Price competitiveness 4. Price compatibility with benefits 5. Price perception
Purchase Intention (Y)	Consumer tendency or intention to buy a product	(Sutrisno & Haryani, 2017)	1. Attention 2. Interest 3. Desire 4. Action 5. Referential interest

This study uses 20 question items so that based on the results of the calculation, 100 to 200 respondents are needed. The sample size in this study was 151 respondents. The research site was conducted in Bengkayang City, Bengkayang Regency, West Kalimantan.

3.4 Sampling Method

The sampling method in this study used *non-probability sampling* with *purposive sampling* technique. The samples taken in this study were people in Bengkayang City with the criteria in the age range 17-50 years and consumers who had purchased or had the intention or desire to purchase the product.

3.5 Research Instruments

This study uses classical assumption tests and multiple linear regression. Instrument testing in this study includes validity and reliability tests, then classical assumption tests are carried out, including normality tests, and multicollinearity tests. In addition, the model accuracy test, including the coefficient of determination ($R^{2)}$, partial test (t test) and simultaneous test (f test). This test is used to statistically evaluate the effect of the independent variable on the dependent variable. To process the data in this study using SPSS 27.0 software. (Husni Arifin, 2014) , (Ruky et al, 2018) .

4. Result and Discussion

4.1 Validity Test

In this study using the value of r table = 0.159 (the value of r table for a = 151). The value of r table is used to compare the value of r count with r table with the provisions of *degree of freedom* (df) = (N-2) in this study using the number of samples (n) = 151.

Table 1 Jims Honey Product *Brand Image* Validity Test Results

Indicator	r count	r table	Description
Brand Image_P1	0,820	0,159	Valid
Brand Image_P2	0,865		
Brand Image_P3	0,865		
Brand Image_P4	0,876		

Brand Image_P5	0,814		

The Brand Image_P1 statement obtained a calculated r value of 0.820, which means more than 0.159 is declared valid. The Brand Image_P2 statement obtained a calculated r value of 0, 865 which means more than 0.159 is declared valid. The Brand Image_P3 statement obtained a calculated r value of 0.865, which means more than 0.159 is declared valid. The Brand Image_P4 statement obtained a calculated r value of 0.876, which means more than 0.159 is declared valid. The Brand Image_P5 statement obtained a calculated r value of 0.814, which means more than 0.159 is declared valid.

Table 2 Jims Honey Product Quality Validity Test Results

Indicator	r count	r table	Description
Product Quality_P1	0,898	0.159	Valid
Product Quality _P2	0,869		
Product Quality _P3	0,918		
Product Quality _P4	0,901		
Product Quality _P5	0,855		

The Product Quality_P1 statement obtained a calculated r value of 0.898, which means more than 0.159 is declared valid. The Product Quality_P2 statement obtained a calculated r value of 0.869, which means more than 0.159 is declared valid. The Product Quality_P3 statement obtained an r value of 0.918, which means that it is more than 0.159 declared valid. The Product Quality_P4 statement obtained an r value of 0.901, which means that it is more than 0.159 declared valid. The Product Quality_P5 statement obtained an r value of 0.855, which means that it is more than 0.159 declared valid.

Table 3 Jims Honey Product Price Validity Test Results

Indicator	r count	r table	Description
Price_P1	0,831	0.159	Valid
Price _P2	0,844		
Price _P3	0,879		
Price _P4	0,909		
Price _P5	0,880		

The Price_P1 statement obtained a calculated r value of 0.831, which means that more than 0.159 is declared valid. The Price_P2 statement obtained a calculated r value of 0.844, which means more than 0.159 is declared valid. The Price_P3 statement obtained a calculated r value of 0.879, which means more than 0.159 is declared valid. The Price_P4 statement obtained a calculated r value of 0.909, which means more than 0.159 is declared valid. The Price_P5 statement obtained a calculated r value of 0.880, which means that it is more than 0.159 declared valid.

Table 4 Validity Test Results of Interest in Buying Jims Honey Products

Indicator	r count	r table	Description
Purchase Intention_P1	0,889	0,159	Valid
Purchase Intention _P2	0,919		
Purchase Intention _P3	0,914		
Purchase Intention _P4	0,867		
Purchase Intention _P5	0,847		

In the Purchase Interest_P1 statement, the calculated r value is 0.889, which means that more than 0.113 is declared valid. The Purchase Intention_P2 statement obtained a calculated

r value of 0.919, which means that more than 0.113 is declared valid. The Purchase Intention_P3 statement obtained an r value of 0.914, which means that it is more than 0.113 declared valid. The Purchase Intention_P4 statement obtained an r value of 0.867, which means that it is more than 0.113 declared valid. The Purchase Intention_P5 statement obtained a calculated r value of 0.847, which means that more than 0.113 is declared valid.

4.2 Reliability Test

Table 5 Reliability Test Results

Variables	Cronbach's Alpha	Description
Brand Image _(X1)	0,901	Reliable
Product Quality_(X2)	0,933	
Price_(X3)	0,918	
Purchase Intention_(Y)	0,933	

>The *brand image* variable has a *Cronbach's Alpha* value of 0.901, the product quality variable has a *Cronbach's Alpha* value of 0.933, the price variable has a *Cronbach's Alpha* value of 0.918 and the consumer purchase interest variable has a *Cronbach's Alpha* value of 0.933, which means that all variables in this study have a value of 0.60 or more than 0.60 and meet the reliability testing criteria.

4.3 Classical Assumption Test

Normality Test

Table 6 Normality Test Results

One-Sample Kolmogorov-Smirnov Test			
			Unstandardized Residual
N			151
Normal Parameters[a,b]	Mean		,0000000
	Std. Deviation		1,80191085
Most Extreme Differences	Absolute		,178
	Positive		,145
	Negative		-,178
Test Statistic			,178
Asymp. Sig. (2-tailed)[c]			,000
Monte Carlo Sig. (2-tailed)[d]	Sig.		,000
	99% Confidence Interval	Lower Bound	,000
		Upper Bound	,000

The normality test results show a significance value of 0.000, which means< 0.05, meaning that the data in this study are not normally distributed. Although the normality assumption in this study is not met, the data in this study are still continued to the next test, this is because the sample size in this study is included in the large sample category.

Multicollinearity Test

Table 7 Multicollinearity Test Results

Variables	Colliniearity Statistic	
	Tolerance	VIF
Brand Image	0,193	5,195
Product Quality	0,181	5,530
Price	0,342	2,928

In the *Brand Image* variable with a *tolerance* value = 0.193 and a VIF value = 5.195, in the Product Quality variable with a *tolerance* value = 0.181 and a VIF value = 5.530, while

in the Price variable with a *tolerance* value = 0.342 and a VIF value = 2.928. So it can be concluded that the variables in this study do not occur multicollinearity.

Multiple Linear Regression Analysis test

Table 8 Multiple Linear Regression Analysis Test Results

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1,416	,996		1,422	,157
	Brand Image	,032	,103	-,031	-,309	,758
	Product Quality	,404	,099	,418	4,076	<,001
	Price	,549	,081	,506	6,788	<,001
Dependent Variable: Minat Beli						

The values interpreted based on the research results in table 1 are as follows:

Y1 = 1,416 α + 0,032 X1 + 0,404 X2 + 0,549 X3 + e

a. The *constant* value (*constant* or α) of the regression results is 1.416. This shows that there is no influence between the independent variable and the dependent variable, even though it is not influenced by the three independent variables. If the value of *brand image,* product quality and price is 0, the value of consumer buying interest in Jims Honey products is 1.416. This shows that there is a basic influence or purchase interest even though it has not been influenced by the independent variables studied, this purchase interest is influenced by other factors such as promotional advertisements on social media, and others.
b. The regression coefficient value on the *brand image* variable is 0.032. This shows that the *brand image* variable has a relatively low value compared to other variables, so that the *brand image* variable has a very weak influence on buying interest. This is because this *brand* is still relatively unknown by the people in Bengkayang City.
c. The regression coefficient value on the product quality variable is 0.404. This shows a positive and quite significant value on consumer buying interest, which means that the better the product quality of Jims Honey that consumers feel, the greater their tendency to buy the product.
d. The regression coefficient value on the price variable is 0.549. This shows a positive and significant value on consumer buying interest, which means that the price is considered more affordable or in accordance with the quality, thus consumer perceptions of price are a factor that determines whether they will buy Jims Honey products or not, therefore, the right pricing strategy is very important to attract buying interest.

5. Conclusion

Based on the results of the research and discussion above, it can be concluded that this study uses a quantitative approach method. This study aims to examine the effect of *brand image*, product quality and price on consumer buying interest in Jims Honey products (case study of consumers in Bengkayang City). This research was conducted in the city of Bengkayang, West Kalimantan, with an age range of 17 years to 50 years with the criteria of consumers who have bought or have an interest or desire to buy Jims Honey products. The results showed that the *brand image* variable did not have a positive and significant effect on

buying interest in Jims Honey products, this is because the level of popularity of Jims Honey in Bengkayang City is still not too high. Even though Jims Honey is quite well known in several big cities, in Bengkayang City itself this *brand* is not fully recognized by the public. This makes the *brand image* that is built not very influential in encouraging consumer buying interest. The product quality variable has a positive and significant effect on buying interest in Jims Honey products. This is because consumers in Bengkayang City pay more attention to product quality before buying, such as durability, design, and function of the product. And the price variable has a positive and significant effect on buying interest in Jims Honey products. This is because the price offered by Jims Honey is considered comparable to the quality provided, so consumers feel the product is worth buying. The combination of good quality and affordable prices makes consumers more confident and interested in buying Jims Honey products.

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THE LEADERSHIP ROLE OF THE VILLAGE HEAD IN IMPROVING VILLAGE PHYSICAL DEVELOPMENT (UNTANG VILLAGE, BANYUKE HULU SUB-DISTRICT)

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Abstract

This research aims to understand the leadership role of the Village Head in improving physical development in Untang Village, Banyuke Hulu District, Landak Regency. This research uses qualitative methods with an ethnographic approach to obtain an in-depth understanding of the phenomenon under study. Data collection techniques were carried out through interviews, field observations and documentation. Research participants were selected using a purposive sampling method, involving the Untang Village Head, three village staff and three community leaders. The research results show that the leadership role of the Untang Village Head in the physical development of the village includes three main aspects, namely as a motivator, facilitator and mobilizer. The village head plays a role in encouraging community participation, facilitating development needs, and mobilizing available resources to create better infrastructure. The data obtained was analyzed using reduction, codification and interpretation methods to ensure the validity of the research results.

Keywords: *Village Head Leadership, Motivator, Facilitator and Mobilizer*

1. Introduction

An organization is a social entity that is consciously coordinated, with relatively sustainable boundaries, and clear identification of signs to achieve one or a group of common goals according to Bagus (2021) a group of individuals who collaborate with each other to achieve certain goals. In this case, the organization can be a company, government agency, foundation, or community. Today, leadership plays an important role in organizations, leaders have the ability to direct, motivate, and influence team members to work towards a common goal. Leaders are also responsible for creating collaboration and responsibility among organizational members.

Latifah (2021) states that the core role of a leader is to provide guidance and influence the team. The presence of an effective leader can encourage employees to work optimally to achieve organizational goals. According to Endrawati (2022) leadership is a form of domination based on personal ability to encourage or invite others to act; accepted by the group and has special skills that are appropriate to certain situations. This kind of leadership is basically informal and is always related to the needs of the group in achieving certain goals. This research covers human resources, namely: the village head and other village officials. In addition, the success of an organization is also highly dependent on the leadership exercised by its leader. Nining (2023) states that a village is an organization led by the village head, who plays an important role in leadership in the village environment. A village is also a legal community entity with certain territorial boundaries that has the authority to regulate and manage the interests of the local community, usually based on local origins and traditions. The

smallest unit of government, villages have an organizational structure that is closely related to the social life of the community. In the context of the Indonesian government system, villages are recognized as an important element that supports government programs and national development.

According to Law Number 3 of 2024 concerning villages in article 26, the Village Head has the task of carrying out governance, development, community development, and community empowerment in the village in accordance with the provisions of laws and regulations. The village head manages village finances and assets that are used for the welfare of the community. Community welfare can be improved through sustainable and equitable physical development in the village area. The village head functions in mobilizing the community to be actively involved in every village program, especially in self-help and mutual cooperation activities in village development, (Herlianawati 2022). Self-help and gotong royong activities can increase unity and a sense of kinship among village communities. The leadership of the village head is important in improving community welfare.

Government Regulation No. 37/2003 on the management of transfers to regions, mandates that the use of village funds is prioritized to fund development and community empowerment activities. Village funds, which are managed directly by the village head and village officials, are prioritized to improve community welfare through physical and non-physical development. Mismanagement of village funds will result in ineffective and inefficient development. Planning for the implementation, monitoring and reporting of the use of village funds must be carried out with transparency and good accountability. The leadership role of the village head needs special attention, as it is directly related to the welfare of the community under his leadership.

This research is based on an observation of the significant changes that occurred in Untang Village after the change of village head. During the leadership of the new village head, Untang Village underwent many changes. This can be seen from the fact that services to the community are in accordance with the operational schedule, and the Community Empowerment Agency (LPM) has also begun to be active in mobilizing, coordinating, and fostering various community empowerment activities at the village level. The implementation of infrastructure development such as the construction of concrete rebates for farming roads, bridge construction and toilet assistance for underprivileged residents and many more. With this development, of course, it is one of the efforts in the welfare of the Untang Village community. Untang Village also cooperates with the sub-district government to participate in the house renovation program held by the sub-district government, to support the construction of houses that are no longer suitable for habitation.

Untang Village also now has a clean water barrel to collect clean water for the residents of Untang Village, this is one of the means to meet the community's clean water needs and is very helpful for the community to obtain clean water to meet their daily needs. The construction of a sewer channel that is used to channel excess water mass from a residential area of villagers to prevent flooding. For the women's activities in Untang village, namely family welfare empowerment (PKK) and posyandu cadres. PKK activities in Untang Village are still running and now receive additional funding for PKK women. Untang Village also holds Village Consultative Meetings (MUSDES) which are held 5-6 times a year to reach consensus or mutual agreement.

This research was motivated by the significant changes in Untang Village after the change of village head. We can see that there has been a lot of progress, for example physical development. This makes it interesting to study, therefore the author raises the research title regarding the leadership role of the village head in improving the physical development of Untang Village.

2. Literatur review

Secondo Zuhriyati (2020), la leadership di una persona comprende almeno tre elementi fondamentali: valori socioculturali, strategie e interazioni. I valori sociali tradizionali sono l'obiettivo principale per equiparare i punti di vista dei membri. I piani includono l'etica del lavoro e i passi compiuti per raggiungere gli obiettivi. Secondo Sahadi (2020), la leadership può essere intesa come l'arte di influenzare le persone a fare cose considerate importanti. Syafitri (2019) spiega che il ruolo del capo villaggio nell'aumentare la partecipazione della comunità per lo sviluppo fisico del villaggio può essere visto attraverso fasi come la socializzazione, la deliberazione del villaggio e la pianificazione. Il ruolo del capo villaggio è quello di aumentare la partecipazione della comunità attraverso la socializzazione, la deliberazione e la pianificazione, in modo che i residenti siano più consapevoli dello sviluppo fisico realizzato nel loro villaggio.

La leadership è il processo di influenzare e dirigere gli altri a portare a termine i compiti previsti per raggiungere gli obiettivi prefissati. Secondo Santhi (2024) la leadership comprende le abilità e le competenze di una persona che occupa una posizione di comando. Per influenzare il comportamento degli altri, soprattutto dei subordinati, un leader deve pensare e agire con saggezza. Dimostrando comportamenti positivi, i leader possono effettivamente raggiungere gli obiettivi organizzativi. La leadership è spesso considerata un motore di varie attività e processi e può cambiare le opinioni o gli atteggiamenti dei gruppi, sia nelle relazioni ufficiali che in quelle non ufficiali.

Secondo Latif (2019) la leadership è un processo che ispira tutti i dipendenti a lavorare al meglio per raggiungere i risultati desiderati. Quindi una buona leadership è un leader in grado di ispirare i propri dipendenti a lavorare meglio. Secondo Fahmi (2022), la leadership è una scienza che studia come dirigere, influenzare e supervisionare gli altri per completare i compiti secondo il piano. Un leader deve essere in grado di dirigere i suoi dipendenti e di fornire una supervisione in modo che i suoi subordinati possano portare a termine i loro compiti in modo corretto.

Nurhaeda (2020) afferma che la leadership è un processo che dirige e influenza le attività dei membri del gruppo riguardo ai loro compiti. Nel frattempo. Una buona leadership è in grado di dirigere i propri subordinati e di influenzarli in modo da essere un esempio per i propri subordinati. Rahim (2022) spiega che la leadership è il modo in cui i leader influenzano il comportamento dei loro subordinati affinché lavorino insieme in modo efficace ed efficiente per raggiungere gli obiettivi organizzativi. Quindi un leader è un motivatore che può influenzare i suoi subordinati a lavorare efficacemente per raggiungere gli obiettivi comuni.

3. Methodology

This research uses qualitative methods. Pahleviannur (2022) explains that qualitative research is an approach to understanding phenomena in depth by collecting and analyzing non-numerical data, such as words, images, or sounds. This method focuses on interpreting and understanding the context, process, and meaning behind a phenomenon, and is often used in the social sciences, humanities, and other fields that require a deep understanding of the subject. Nasution (2023) adds that the qualitative approach aims to explore and understand the meaning of social or humanitarian issues that are considered important by individuals or groups.

The phenomenon studied is the role of the village head in improving physical development in the village, which is the main focus of this research. This research was conducted in Untang Village, Banyuke Hulu Sub-district, Landak Regency, with the aim of understanding the role of leadership in the physical development of the village. The data collection methods used were interviews and field observations.

Interviews were conducted with three village staff and three residents of Untang Village. Field observations were conducted to obtain detailed information about Untang Village and to understand the situation and conditions in Banyuke Hulu Sub-district, Landak Regency.

4. Results And Discussion

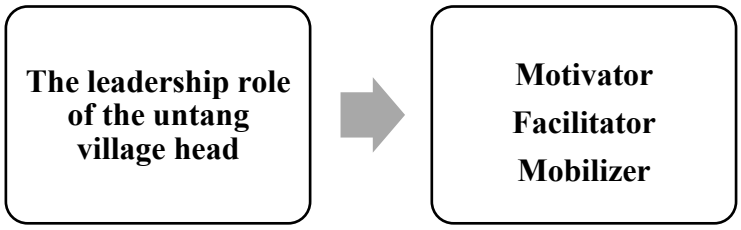
The interview results obtained from the results of statements given to 7 informants. This discussion refers to the leadership role of the village head in improving physical development which is then described or explained in more detail. In this section, researchers discuss the role of the village head in improving the physical development of the village. In this discussion, the researcher presents the findings of the data that has been collected. Motivator As a motivator, the head of Untang Village always sets a good example for other employees, such as being disciplined when coming to work and being able to carry out basic tasks properly. When physical construction is carried out, the village head always motivates the workers to work well. The village head also always encourages community involvement in discussions for village development to increase the sense of ownership among the village community. To find out the complaints and problems of the community, the village head gets closer to the community through daily activities such as having afternoon chats and so on so that the needs of the community can be identified and the difficulties faced by the residents can be conveyed. Some participants said that the village head often motivates village officials during village meetings so that they are always enthusiastic in developing Untang village.

Facilitator In village development, the village head facilitates development planning, development implementation and supervision. The village head provides a space to carry out discussions, forms the RKP APBDES drafting team in determining the APBDES. The village head actively accommodates complaints and input from the community in the village deliberation meetings in village development planning. He is open to communicating with the community on matters related to village interests. In addition to facilitating budget planning meetings and listening to community opinions, the village head also responds to every community complaint and is active in helping residents who are affected by disasters. The village head is able to build relationships between the village government and the kecamatan in improving village development. Thus, implementations such as ID card processing, social assistance distribution, house renovation and PKK activities can run smoothly. The role of the village head as a facilitator is in fact to provide facilities so that development can run well.

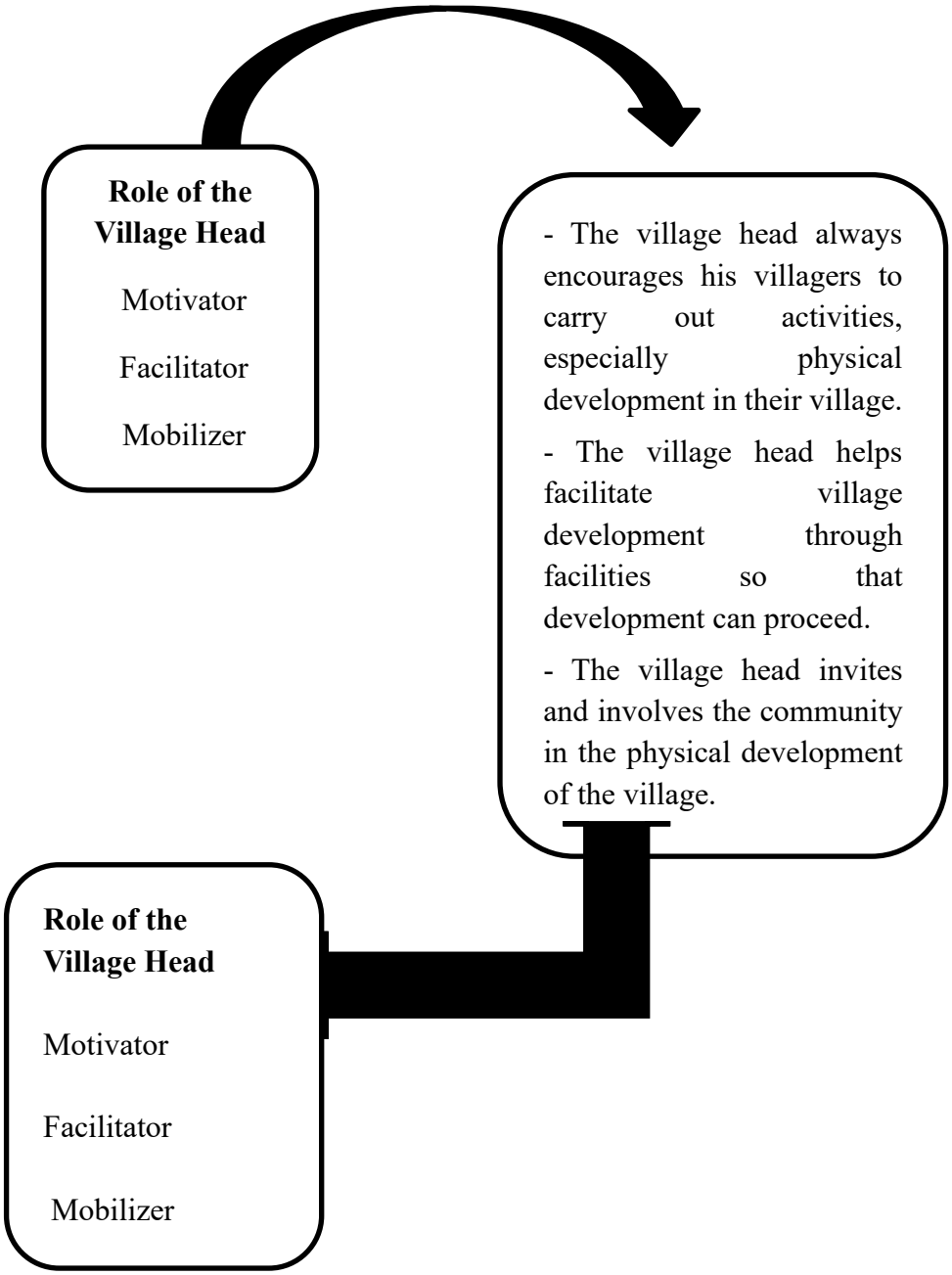
Mobilizers It can be seen that the village head always invites and involves the community in physical development, for example opening farm roads, concrete rebates, sewers, bridges and other physical developments. The community is always involved in development in the village, not only physical development but also non-physical development such as PKK activities. In making decisions, the head of untang village always discusses first, after that looking for a good solution in order to create a decision that is together not for individuals but for together. The village head has a driving role in village development activities. As a leader, the village head must be able to mobilize the community in the village development process, especially in developing community self-help to be able to carry out village programs such as development in the village. The village head always holds meetings and involves the community, which are attended by several elements that aim for the common interest. It can be seen that the village head always involves all communities in the implementation of village development, for example in the physical development of the village.

This can be seen from the statements of several residents who said that the village head always involves the community in physical development, with this development the community can get a job. To motivate the community to participate, the village head often involves the community, especially to be able to carry out meetings at the dusun and village

levels, which is done to get closer to the community. The village head also gathers with the community to meet directly to gather the necessary information by talking directly with the community so that the village head knows the needs in the village. All developments carried out are the result of deliberations held at the dusun level from the community proposing to the stage of carrying them out. The village head said that the most suitable empowerment is to involve the community directly, such as employing them in the physical development. It can be seen from Mr. Peli's statement that the village head makes decisions transparently, which means that the village head carries out his duties with honesty and responsibility.



From the results of the research that has been researched above, it shows that the leadership role of the Untang Village head in the physical development of Untang Village. The leadership role of the head of Untang Village focuses on the role of the village head as a motivator, facilitator, mobilizer. According to Caselia (2021) the role of the village head in improving physical development is very important. The village head always encourages his citizens to want to carry out activities, especially physical development in their village. It can be seen that the head of Untang Village provides motivation by starting with prayer, ice breaking, briefing before doing the task. Every briefing meeting the head of Untang Village always encourages all village officials not only during briefings but every working hour, the village head also provides direct and indirect motivation. According to Hidayati, et al., (2023) The Role of Village Head Leadership to Increase Citizen Participation in Physical Development in the Village. The village head helps facilitate village development through facilities so that development can run. We can see that before physical development in untang village, the village head formed a team to prepare the RKP APBDES in the implementation after the committee was formed and then held deliberations according to the hamlet. The village head always conducts consensus meetings with the community to make joint decisions. The head of Untang village cooperates with the village government, the community and various groups from the sub-district, village and regency. Mohulaingo (2022) the influence of transformational leadership on increasing community participation in village physical development. The village head invites and involves the community in the physical development of the village. It can be seen that the village head always invites and involves the community in physical development, for example opening farm roads because farm roads, concrete rebates, sewers, bridges, house renovations and wc because the land used belongs to the community they are also involved in every development carried out in Untang Village. The village head uses a personal approach to invite the community to be involved in physical development in the village, by employing the community directly so that the community feels more empowered. That way the community is also a supervisor and the implementation is not only village officials but involves the entire community in untang village. With these three elements being the motivator, facilitator and mobilizer, this research goes into great depth on how these three roles interrelate and support physical development. It is this approach that sets this study apart from others that may only focus on the role of the village head or a particular aspect of development.


Role of the Village Head
Motivator
Facilitator
Mobilizer
- The village head always encourages his villagers to carry out activities, especially physical development in their village.
- The village head helps facilitate village development through facilities so that development can proceed.
- The village head invites and involves the community in the physical development of the village.
Role of the Village Head
Motivator
Facilitator
Mobilizer

The chart above is a finding depicted in the form of a model that shows the leadership role of the village head plays a positive role in increasing physical development in the village. The village head always encourages his people to carry out activities, especially physical development in their village. The village head helps facilitate village development through facilities so that development can proceed. The village head invites and involves the community in the physical development of the village.

5. Conclusion

It shows that the leadership of the Untang Village Head plays an important role in improving the physical development of the village through three main aspects As a motivator, the village head encourages the work enthusiasm of village officials and the community through personal approaches, providing motivation in every meeting, and actively interacting with the community to understand their needs. As a facilitator, the village head facilitates the development process by providing space for discussion, forming a planning team (RKP APBDES), and establishing good communication with the community and government at the kecamatan and kabupaten levels. As a mobilizer, the village head not only mobilizes the community to be involved in physical development but also ensures that every development program is transparent and involves all elements of the community. This research confirms that effective leadership in village development depends not only on policies, but also on interpersonal approaches and active involvement of leaders in mobilizing existing resources. With an approach that prioritizes deliberation and mutual cooperation, physical development in Untang Village can run well and provide benefits to the community at large.

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THE INFLUENCE OF SOCIAL MEDIA AND BRAND AWARENESS ON INCREASING THE NUMBER OF CONSUMERS (CASE STUDY OF MSMES GETUK TAKE TAWANGMANGU)

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Abstract

Getuk Take MSMEs in Tawangmangu are one of the local business actors that are able to survive and develop in the midst of increasingly fierce business competition. In the digital age, the use of social media and brand awareness plays an important role in marketing strategies. This study aims to analyze the extent of the influence of social media and brand awareness on the increase in the number of consumers. This study uses a quantitative method with a survey approach, involving 96 respondents. The results of the analysis show that social media significantly affects the increase in the number of consumers, while brand awareness does not have a significant influence partially, but has a simultaneous influence with social media. This research makes an important contribution to understanding MSME marketing strategies through social media.

Keywords: Social Media, Brand Awareness, Increasing Number of Consumers, MSMEs, Getuk Take

1. Introduction

1.1 Background

Micro, Small, and Medium Enterprises (MSMEs) are the backbone of the Indonesian economy. In the face of the times and technology, MSMEs are required to innovate in marketing strategies. One approach that has proven effective in increasing product visibility is the use of social media. In addition, brand awareness is an important factor in building customer loyalty.

Getuk Take MSMEs in Tawangmangu have utilized social media such as TikTok, Instagram, and Google Review to reach a wider range of consumers. However, it is necessary to examine whether this strategy is really effective in significantly increasing the number of consumers.

1.2 Problem Formulation

1. How does social media affect the increase in the number of consumers of Getuk Take MSMEs?
2. How does awareness affect the increase in the number of consumers?
3. How do social media and brand awareness simultaneously affect the increase in the number of consumers?

1.3 Research Objectives

This research aims to:

1. Knowing the influence of social media on the increase in the number of consumers.
2. Knowing the influence of brand awareness on increasing the number of consumers.
3. Knowing the influence of social media and brand awareness simultaneously on the increase in the number of consumers.

1.4 Research Benefits

Theoretically, this research strengthens the theory of digital marketing and consumer behavior. Practically, the results of the research can be used as a reference for MSMEs in optimizing marketing strategies through social media

2. Literature Review

2.1. Grand Theory

This study uses the theory of *Social Media Marketing* developed by Philip Kotler and Chris Heuer. This theory explains that social media is not only a place to communicate, but also an important tool for building good relationships with customers and adding value to a brand. This is also supported by the opinion of Moriansyah (2015), who states that social media can increase brand *awareness*, influence purchasing decisions, and create a closer relationship between business actors and consumers.

If social media is used well—for example, through engaging content, direct interactions such as comments and discussions, endorsements from influencers, and reviews from other customers (*e-WOM)*—it can build customer trust and loyalty. The success of a marketing strategy on social media also depends on how well the business owner understands how the platform works and how they make use of the available data.

As technology advances, the goal of marketing through social media is now more emphasized on long-term relationships, not just quick sales. Therefore, this theory is very important to explain how social media can be used strategically to attract more consumers, expand market reach, and strengthen brand position, especially for MSMEs such as Getuk Take in Tawangmangu.

2.2. Social Media

Social media is a digital platform that allows people to share information and communicate with each other without time and place limits. Because it can be accessed directly and widely by anyone, social media is now not only used for communication, but also an important tool in promotional and buying and selling activities.

Research shows that social media has a great influence on people's desire to buy a product, and can even directly influence purchasing decisions. Business actors, especially MSMEs, can take advantage of social media to expand their market. One effective way is to create a compelling and convincing promotional message to attract potential buyers.

In Indonesia itself, internet usage continues to increase. In 2020, more than 175 million people were already using the internet, mostly through mobile phones. This is a great opportunity for MSMEs to market products cheaper and reach a wider range of consumers. Social media also facilitates direct communication with customers, so that business actors can quickly receive input and build good relationships.

Even so, social media is not the only factor that determines the buying decision. Many people still choose products based on quality, price, or recommendations from people they trust. In addition, there are still many MSMEs who do not have enough knowledge or skills in using social media to the fullest.

Therefore, MSMEs need to learn and improve their skills in digital marketing. If used well, social media can be a very useful tool for growing your business, attracting more customers, and competing with other businesses in the market.

2.2.1. Social Media Factors

1. Platform suitability, meaning that the platform used must be in accordance with business needs.
2. Cheaper costs, compared to promotions in traditional media such as TV or radio.
3. Ease of interaction, because social media has features such as comments and direct messages that make communication faster.
4. Internet access, which makes it easier for businesses to reach a wider market.
5. Immediate benefits, such as increased sales or quick feedback from customers.
6. Social influences, such as encouragement from consumers, competitors, or the business community.
7. Supporting facilities, such as adequate training and technology.
8. Lack of digital knowledge, which can be an obstacle for MSME actors.

2.2.2. Social Media Indicators

1. Brand awareness, seen from the number of followers, how often the brand is mentioned, and how far the content is spread.
2. Engagement rates, such as the number of likes, comments, and people sharing the content.
3. Conversions and sales, which are how many people buy after viewing content on social media.
4. Customer loyalty, seen from how often customers repurchase and leave reviews or recommend products to others.
5. Overall, social media can be a very useful tool for MSMEs if used properly. In the case of Getuk Take MSMEs in Tawangmangu, social media not only helps introduce products, but also strengthens relationships with customers, increases sales, and increases consumer loyalty.

2.3. Brand Awareness

Brand awareness is a person's ability to recognize and remember a brand in various situations. This is very important in marketing strategy, because the more a brand is known, the more likely people are to buy the product.

Brand awareness helps create a strong image and differentiate the brand from competitors. Brands that are often remembered by consumers will be easier to choose when they want to buy similar products. Therefore, business actors need to ensure that their brand is easily recognizable and always appears in the minds of consumers.

2.3.1. Brand awareness factor

1. Marketing strategies, such as advertising, promotions, content on social media, and collaborations with influencers, that help introduce the brand to more people.
2. The quality of products and services, where unique, quality, and good service products will make consumers trust and loyal.
3. Clear brand identity, such as logos, slogans, and other easily recognizable visual displays.
4. Customer experience, because a good experience will make consumers happier and may recommend to others.
5. Social media activity, with regular and engaging posts on platforms like Instagram or Facebook can expand the brand's reach.
6. Participation in events and sponsorships, which help introduce the brand to more people through the activities they attend.

2.3.2. Brand awareness indicator

1. Brand recognition, how quickly consumers can recognize the brand from its logo or packaging.
2. A reminder again, how easy it is for consumers to mention brand names without help.
3. Top of mind, when a brand immediately comes to the consumer's mind when they think of a particular product.
4. Brand aware, a condition in which consumers have never heard of or recognized the brand at all.

2.4. Increasing Number of Consumers

The increase in the number of consumers is an important sign that shows whether a business is successful or not, whether it is a large business or MSMEs such as Getuk Take. The number of consumers describes how many people buy or use a product in a given time. In the business world, the number of consumers can increase due to strategies from within the company and also due to external influences such as consumer habits and tastes.

2.4.1. Factors of Increasing the Number of Consumers

1. Product quality: A good and satisfactory product will make people happy to buy again and even recommend it to others.
2. Price: The price that matches the quality will be considered reasonable by consumers. If the price is right and competitive, then more people are interested in buying.
3. Promotions: Attractive promotions, especially through social media, can introduce the product to more people. For example, with videos, customer testimonials, or attractive discounts.
4. Quality of service: Fast, friendly, and helpful service to make consumers feel valued and more comfortable to buy again.
5. Easy location and access: Businesses that are strategically located and easily accessible will be visited more often by buyers.
6. Product innovation: Businesses that continue to make updates, whether in terms of products, packaging, or production methods, can more easily attract consumer attention and compete in the market.
7. Social and cultural factors: Most of the time, people buy products because of the influence of their family, friends, or social environment. For example, a person buys something because it is commonly used in his home since childhood.

2.4.2. Indicators of Increasing the Number of Consumers

1. Customer satisfaction: Consumers are satisfied that the product meets their expectations. This can be seen from positive reviews, repeat purchases, and comments on social media.
2. Successful promotions: Promotions are considered successful if they attract a lot of attention, increase sales, and keep people interested even after the promotion is over.
3. Good product: A product is rated good if it gets good reviews and is rarely returned due to problems.
4. Good service: Service is rated good if the customer is served quickly, their questions are answered, and they feel valued when interacting with the business

2.5. Previous Research

Several previous studies have shown mixed results related to the influence of social media

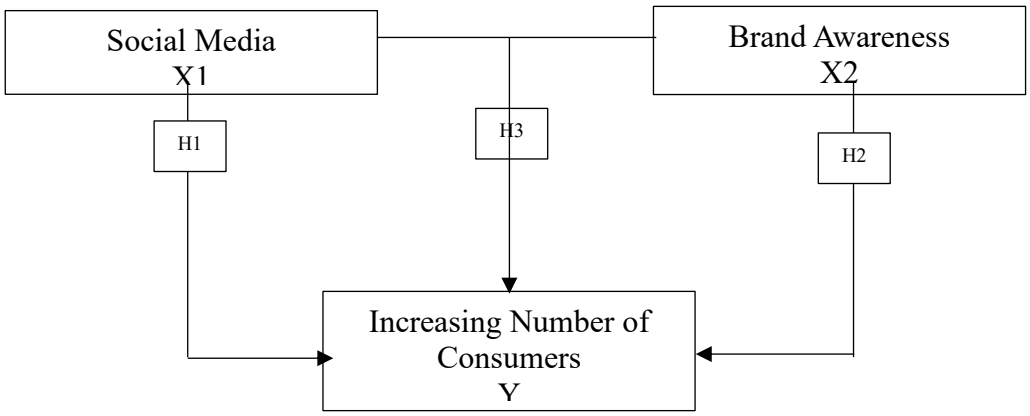
and brand awareness on purchase decisions and customer loyalty.

2.6 Hypothesis Development

1. H1: Social media has an effect on increasing the number of consumers.
2. H2: Brand awareness has an effect on increasing the number of consumers.
3. H3: Social media and brand awareness simultaneously affect the increase in the number of consumers.

2.7. Frame of mind

The framework of thought shown in the figure below illustrates the relationship between the independent variables and the dependent variables that the research focuses on



3. Research Methods

3.1. Population and Sample

The population in this study is all consumers of Getuk Take MSMEs which are recorded through social media and Google Reviews as many as 2,416. The sample was determined using the Slovin formula with an error rate of 10%, so that 96 respondents were obtained.

$$n = \frac{N}{1 + N(e)^2}$$

n = $2416/(1+2416 \times (0,1)^2)$

n = $2416/25,16$

n = $96,02$

3.2. Types and Data Sources

The data type consists of primary data (questionnaires and interviews) and secondary data (literature and documentation).

3.3. Data Collection Techniques

Data were collected through questionnaires with a Likert scale and interviews with key informants.

3.4. Data Analysis Techniques

The analysis was carried out using SPSS 26 with validity, reliability, classical assumption test, multiple linear regression analysis, t-test, F-test, and determination coefficient (R^2).

4. Results and Discussion

4.1. Characteristics of Respondents

This research was conducted in Tawangmangu District, Karanganyar Regency, Central Java, with the aim of determining the influence of social media and brand awareness on the increase in the number of consumers of Getuk Take MSMEs. To obtain the appropriate data, the researcher distributed questionnaires to 96 respondents who had bought Getuk Take products at least once in the past year.

The characteristics of the respondents help to describe who any Getuk Take consumer is. From the questionnaire data, it is known that most of the respondents are students (43 people), followed by private employees (24 people), and the rest come from other work backgrounds such as civil servants, farmers, students, and others. When viewed from gender, the number of male respondents was 62 people, and 34 women were women.

In terms of age, the majority of respondents were aged 18–29 years old with a total of 65 people. This shows that Getuk Take consumers are dominated by young people. There were 17 people aged 30–39 years, 10 people aged 40–49 years, and 4 people aged 50–59 years.

Based on how they knew Getuk Take's social media, most of the respondents knew him through Instagram (45 people), then TikTok (38 people), and the rest through Google Maps (13 people). This shows that social media, especially Instagram and TikTok, play a very important role in helping introduce Getuk Take to the public, especially young people.

4.2. Validity and Reliability Tests

All variable indicators have a correlation value above the r-table (0.2006), indicating validity. Cronbach's Alpha value > 0.7 indicates the reliability of the instrument.

Variabel Media Sosial

Pernyataan	r Hitung	r Tabel	Keterangan
X1.1	0,683	0,2006	Valid
X1.2	0,730	0,2006	Valid
X1.3	0,679	0,2006	Valid
X1.4	0,758	0,2006	Valid
X1.5	0,758	0,2006	Valid
X1.6	0,754	0,2006	Valid
X1.7	0,761	0,2006	Valid
X1.8	0,774	0,2006	Valid

Variabel Brand Awareness

Pernyataan	r Hitung	r Tabel	Keterangan

X2.1	0,762	0,2006	Valid
X2.2	0,749	0,2006	Valid
X2.3	0,817	0,2006	Valid
X2.4	0,765	0,2006	Valid
X2.5	0,691	0,2006	Valid
X2.6	0,755	0,2006	Valid
X2.7	0,725	0,2006	Valid
X2.8	0,591	0,2006	Valid

Variabel Peningkatan Jumlah Konsumen

Pernyataan	r Hitung	r Tabel	Keterangan
Y1	805	0,2006	Valid
Y2	805	0,2006	Valid
Y3	783	0,2006	Valid
Y4	823	0,2006	Valid
Y5	774	0,2006	Valid
Y6	791	0,2006	Valid
Y7	844	0,2006	Valid
Y8	759	0,2006	Valid

4.3. Classical Assumption Test

The data were declared normal, there was no multicollinearity (VIF < 10), and there was no heteroscedasticity.

One-Sample Kolmogorov-Smirnov Test		
		Unstandardized Residual
N		96
Normal Parameters[a,b]	*Mean*	0
	Std. Deviation	1,87837041
Most Extreme Differences	*Absolute*	0,064
	Positive	0,061
	Positive	-0,064
Test Statistic		0,064
Asymp. Sig. (2-tailed)		,200[c,d]

4.4 Multiple Linear Regression Test

Model regresi: Y = 1.548 + 0.811X1 + 0.160X2

1. X1 (Social Media) significant (t count = 7,265 > t table = 1,985; sig = 0.000)

2. X2 (Brand Awareness) is insignificant (t count = 1.519 < t table = 1.985; sig = 0.132)
3. The F test shows F count = 160.848 and sig = 0.000 < 0.05, meaning a significant simultaneous influence.
4. The R^2 value is 0.776, meaning that 77.6% of the variation in the increase in the number of consumers is explained by social media and brand awareness.

	Standardized coefficient				
Model	B	Std Erorr	Beta	t	sig
Constant	1,548	1,423		1,088	0,279
X1	0,811	0,112	0,742	7,265	0,000
X2	0,160	0,105	0,155	1,519	0,132

Model	F	Sig
Regression	160,848	0,000[b]

Model	R	*R Square*	*Adjusted R Square*	*Std Error of the Estimate*
1	,881[a]	0,776	0,771	1,89846

4.5. Discussion

The results of the study show that the active and appropriate use of social media has proven to have a great and real influence in increasing the number of consumers of Getuk Take MSMEs in Tawangmangu. This can be seen from the results of statistical calculations, namely *the calculated t* value of 7.265 which is greater than *the t table of 1.985*, and the significance value of 0.000 which is much smaller than 0.05. This means that social media helps introduce products to more people, make products look attractive, and open direct communication between business actors and customers. These findings are also supported by various previous studies that state that social media is very effective in marketing products and influencing consumers' decisions to buy.

Meanwhile, brand awareness or brand awareness in this study did not have a significant influence on the increase in the number of consumers. This is shown from the *calculated t* value of 1.519 which is smaller than *the t table of* 1.985 and the significance value of 0.132 which is greater than 0.05. This means that even though many people know and know the Getuk Take brand, it is not strong enough to make them immediately decide to buy the product. The findings are also in line with other research that suggests that just knowing a brand isn't always enough to encourage people to buy, especially if it's new or not yet widely known.

However, if social media and brand awareness are used together, both can have a strong impact on increasing the number of consumers. This is proven through the F test with an *F* result of 160.848 and a significance value of 0.000, which means that together these two factors do have a significant effect.

In general, this study confirms that social media is an important key to attracting more consumers, especially because social media can reach many people and deliver promotional messages quickly and engagingly. Although brand awareness has not shown a direct influence, building brand awareness is still important, because if it continues to be done well and combined with promotion on social media, this can have a positive impact on increasing the number of consumers in the future.

5. Conclusion and Suggestions

5.1. Conclusion

1. Social media has a significant effect on increasing the number of consumers.
2. Brand awareness has no significant effect partially.
3. Simultaneously, social media and brand awareness have a significant effect on increasing the number of consumers.

5.2. Suggestions

It is recommended that Getuk Take MSMEs focus more on optimizing social media content such as promotional videos and discounts. Regular evaluation of social media performance and brand awareness is also needed so that the strategies used can be adjusted to market dynamics.

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AN INTEGRATIVE MODEL OF THE IMPACT OF CUSTOMER ENGAGEMENT ON SOCIAL MEDIA USAGE INTENTION: THE MEDIATING ROLE OF VALUE CO-CREATION, RELATIONSHIP QUALITY, AND CUSTOMER INVOLVEMENT

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Abstract

Social media has evolved from a mere communication tool into a dynamic participatory space where users actively contribute to the creation of experiences, relationships, and value. In this digital landscape, concepts such as Customer Engagement, Value Co-Creation, Relationship Quality, and Customer Involvement have become increasingly critical in understanding user behavior, particularly within highly connected urban communities. Despite their relevance, limited studies have comprehensively examined the interrelationships among these constructs within a single integrative model—especially in the context of emerging digital societies such as Jakarta, Indonesia. This study seeks to fill this gap by developing an integrative model that investigates how customer engagement influences social media usage intention, mediated by value co-creation, relationship quality, and customer involvement. Using a quantitative approach and targeting active Instagram users in Jakarta, the research provides empirical evidence on how psychological, relational, and participatory factors shape continued use of social media platforms. The findings aim to advance both theoretical understanding and practical strategies for digital marketing by emphasizing user-driven, experiential, and relationship-based approaches.

Keywords: Customer Engagement, Value Co-Creation, Relationship Quality, Customer Involvement, Social Media Usage Intention

1. Introduction

Over the past two decades, digital transformation has fundamentally reshaped how individuals, organizations, and societies communicate, interact, and create value. These changes are not only technological but also sociological and behavioral in nature. Users are no longer passive recipients of information; instead, they actively co-create value within digital ecosystems (Vargo & Lusch, 2004; Ramaswamy & Ozcan, 2016).

Within this evolving context, concepts such as Customer Engagement (CE), Value Co-Creation (VCC), Customer Involvement (CI), and Relationship Quality (RQ) have become critical to understanding consumer behavior in social media environments. These constructs are intricately interconnected and contribute to shaping Social Media Usage Intention (SMUI) as a function of both social interaction and economic utility (Dessart et al., 2015; Hollebeek et al., 2014).

Indonesia provides a rich context for studying these relationships, as it ranks among the top countries globally in terms of social media use. According to We Are Social (2025), over 72% of the Indonesian population are active social media users, spending an average of over three hours per day online. Social media platforms, therefore, serve not only as communication channels but also as spaces for collaboration, community building, and digital commerce (Kemp, 2025).

The concept of Value Co-Creation, rooted in Service-Dominant Logic (S-D Logic), emphasizes that value is no longer produced solely by companies but is co-created in interaction with consumers (Vargo & Lusch, 2008). In digital contexts, value is co-produced through feedback, user-generated content, brand advocacy, and shared experiences (Prahalad & Ramaswamy, 2004).

Customer Engagement plays a pivotal role in these processes. It serves as a psychological and behavioral bridge between the user and the brand or service provider. CE is multi-dimensional encompassing cognitive, emotional, and behavioral dimensions and is often triggered by immersive digital experiences (Brodie et al., 2011; Hollebeek, 2011). These experiences foster greater user participation in value co-creation activities.

Customer Involvement extends this idea by emphasizing the active contribution of users to design, adapt, and enhance digital services. Lead users, as introduced by von Hippel (1986), often serve as innovators in shaping services and content. In social media platforms, CI includes not just feedback but direct influence over platform features, community norms, and even brand narratives (Zhang et al., 2024).

Relationship Quality, comprising elements such as trust, satisfaction, and commitment, provides the relational foundation for sustained interactions (Morgan & Hunt, 1994). High RQ enhances user loyalty and the willingness to maintain long-term digital engagement (Liang et al., 2011; Suhartanto & Dean, 2024).

Ultimately, these constructs jointly shape Social Media Usage Intention. Users' continued engagement with social platforms is driven not merely by functional benefits but also by the psychological, emotional, and social value they derive (Yang et al., 2024; Rafi et al., 2023).

This study proposes an integrative model that investigates how CE, VCC, CI, and RQ influence SMUI among active Instagram users in Jakarta. By adopting a quantitative approach, this research aims to fill empirical and contextual gaps in the literature while offering strategic insights for user-centered and relational digital marketing.

2. Literature Review

2.1 Value Co-Creation (VCC)

The concept of Value Co-Creation (VCC) has undergone a paradigmatic shift, moving from a producer-centric view to a collaborative interaction model involving customers as active co-creators of value. This transition is rooted in the Service-Dominant Logic (S-D Logic), which emphasizes that value is no longer embedded in products alone but is co-created through interactions between firms and customers (Vargo & Lusch, 2004; Lusch & Vargo, 2006).

Prahalad and Ramaswamy (2004) further advanced the notion of VCC by highlighting the role of dialogue, transparency, access, and risk assessment as pillars of co-creation experiences. In digital contexts—especially social media—VCC manifests through shared content, customer reviews, personalized feedback, and collaborative product development (Chen et al., 2023). Recent studies emphasize that VCC positively influences relationship quality and platform loyalty. Yang et al. (2024) found that co-creation strengthens users' emotional and social attachment to platforms, ultimately increasing usage intentions.

2.2 Customer Engagement (CE)

Customer Engagement (CE) is conceptualized as a multidimensional construct encompassing cognitive, emotional, and behavioral elements (Brodie et al., 2011). Engagement is triggered by value-driven, participative experiences and involves actions such as sharing content, participating in discussions, and brand advocacy (Hollebeek, 2011). In the digital age,

CE has become a key determinant of customer loyalty and brand co-creation. Dessart et al. (2015) found that emotionally engaged users are more likely to become content contributors, community advocates, and loyal consumers. Khan et al. (2023) emphasized that CE contributes significantly to the formation of Relationship Quality (RQ) and Usage Intention, particularly in social media ecosystems.

2.3 Customer Involvement (CI)

Customer Involvement (CI) refers to the extent to which users participate in decision-making and content creation, often influencing the design and delivery of products or services. Von Hippel (1986) introduced the concept of "lead users" who proactively contribute ideas and innovations. In digital platforms, CI fosters innovation and enhances user satisfaction. Li et al. (2020) suggest that CI positively moderates the link between Relationship Quality and organizational performance, especially in high-involvement industries. However, Ma et al. (2017) warn that unmanaged CI can lead to increased operational pressure and complexity.

2.4 Relationship Quality (RQ)

Relationship Quality (RQ) is a strategic component of relationship marketing and comprises trust, satisfaction, and commitment (Morgan & Hunt, 1994). High RQ leads to increased loyalty, advocacy, and voluntary participation in co-creation (Liang et al., 2011; Suhartanto et al., 2024). In social media settings, strong relationships enhance users' willingness to engage in discussions, give feedback, and co-develop brand narratives (Kamangarpoor & Shahmoradi, 2017). RQ thus serves not only as an emotional buffer but also as a driver of long-term engagement.

2.5 Social Media Usage Intention (SMUI)

Social Media Usage Intention (SMUI) refers to users' psychological tendency to continue using social platforms based on perceived utility, social connection, and value experience (Davis, 1989; Yuan et al., 2021). The Uses and Gratifications Theory (Katz et al., 1973) offers a foundational explanation, highlighting users' motivation to fulfill entertainment, information, and social interaction needs.

Recent studies (Rafi et al., 2023; Yang et al., 2024) show that both Value Co-Creation and Relationship Quality significantly predict continued use of platforms like Instagram, especially when users feel empowered and connected in community settings.

3. Methodology

3.1 Research Paradigm

This study adopts a positivist research paradigm grounded in a quantitative approach, aiming to explain the causal relationships among variables through statistical testing (Creswell, 2014). The model examines how Customer Engagement (CE) influences Social Media Usage Intention (SMUI), with Value Co-Creation (VCC), Customer Involvement (CI), and Relationship Quality (RQ) serving as mediating variables. The approach allows the researcher to test hypotheses based on empirical data collected from a specific population, thereby ensuring objectivity and generalizability.

3.2 Unit of Analysis and Observation

The unit of analysis in this research is the individual user of social media, specifically active Instagram users in Jakarta aged 18 and above. These users are considered relevant given Indonesia's high rate of social media adoption (Kemp, 2025). The unit of observation is each

respondent's perception and behavior as captured through survey responses, representing their level of engagement, co-creation, relationship quality, involvement, and intention to continue using Instagram.

3.3 Research Method

A survey research method was employed using a structured questionnaire as the primary data collection instrument. This method is appropriate for measuring attitudes, perceptions, and behavioral intentions in large populations (Malhotra, 2010). A non-probability purposive sampling technique was used to target Instagram users who had experience interacting with brands, communities, or influencers.

The sample size was determined using the rule of thumb for Structural Equation Modeling (SEM), where a minimum of 5–10 respondents per indicator is required (Hair et al., 2019). With approximately 30 indicators used in this study, a minimum sample of 300 was targeted to ensure model fit and generalizability.

3.4 Operationalization of Variables

All variables in this study were measured using validated multi-item scales adapted from previous studies and adjusted to fit the Instagram context. A **five-point Likert scale** was used for all items, ranging from 1 = "Strongly Disagree" to 5 = "Strongly Agree."

- **Customer Engagement (CE)** was measured through cognitive, emotional, and behavioral dimensions (Brodie et al., 2011).
- **Value Co-Creation (VCC)** was assessed based on interaction, feedback, co-design, and advocacy behaviors (Prahalad & Ramaswamy, 2004).
- **Customer Involvement (CI)** was measured based on user participation in content creation and service improvement (Von Hippel, 1986).
- **Relationship Quality (RQ)** included trust, satisfaction, and commitment dimensions (Morgan & Hunt, 1994).
- **Social Media Usage Intention (SMUI)** was measured using intention to continue, recommend, and intensify usage (Yuan et al., 2021).

All constructs were pretested for reliability and clarity before the full-scale data collection.

3.5 Questionnaire Design

The questionnaire was divided into three sections:

- **Demographic information**: Age, gender, occupation, education, frequency of Instagram use.
- **Screening questions**: Confirming active Instagram use and interaction with content or communities.
- **Main constructs**: Measurement items for CE, VCC, CI, RQ, and SMUI.

The survey was distributed **online using Google Forms**, targeting Instagram communities, digital marketing groups, and university student networks in Jakarta.

3.6 Data Collection Procedure

Data collection took place over a four-week period. Respondents participated voluntarily and anonymously. To ensure validity:

- Each participant could only submit the survey once (by restricting IPs).
- Responses were reviewed for completeness before inclusion in the dataset.

Ethical approval was obtained from the university's research board, and all participants provided **informed consent**.

3.7 Data Analysis Techniques

The collected data were analyzed using **Structural Equation Modeling (SEM)** with the **Partial Least Squares (PLS)** method via **Smart PLS** software. PLS-SEM is suitable for predictive modeling and complex relationships involving multiple mediating variables (Hair et al., 2019).
The analysis steps included:

- **Descriptive statistics** for demographic profiles.
- **Outer model evaluation**: Reliability (Cronbach's Alpha, Composite Reliability), Validity (AVE, Cross-loadings), Discriminant validity (Fornell-Larcker criterion).
- **Inner model evaluation**: Path coefficients, R^2, and predictive relevance (Q^2).
- **Hypothesis testing** using bootstrapping to assess significance of paths.

4. Results and Discussion

4.1 Results

This study employed **Partial Least Squares Structural Equation Modeling (PLS-SEM)** using SmartPLS 4.0. The data collected from 322 valid respondents were processed to evaluate both the measurement and structural models. The results are presented in two stages: the outer model (validity and reliability) and the inner model (hypothesis testing).

4.1.1 Measurement Model (Outer Model) Evaluation

The outer model was assessed through:

- Convergent Validity: All item loadings were above 0.7, and Average Variance Extracted (AVE) values exceeded the minimum threshold of 0.50, confirming that indicators measured the intended constructs (Hair et al., 2019).
- Composite Reliability and Cronbach's Alpha values for all constructs were above 0.70, indicating high internal consistency (Nunnally & Bernstein, 1994).

4.1.2 Structural Model (Inner Model) Evaluation

Path coefficients were tested using bootstrapping (5,000 samples). The R^2 value for Social Media Usage Intention (SMUI) was 0.693, meaning that 69.3% of the variance in SMUI could be explained by the model.

The summary of hypothesis testing is shown below:

Hypothesis	Path	Coefficient	t-value	Result
H1	VCC → RQ	0.432	8.721	Supported
H2	CE → VCC	0.378	7.462	Supported
H3	CI → VCC	0.271	5.108	Supported
H4	RQ → CI	0.294	5.355	Supported
H5	VCC → SMUI	0.349	6.709	Supported
H6	RQ → SMUI	0.326	6.132	Supported

All hypotheses were statistically significant ($t > 1.96$, $p < 0.05$), confirming the strength of the conceptual framework.

4.2 Discussion

4.2.1 Value Co-Creation Enhances Relationship Quality
The findings confirm that Value Co-Creation (VCC) significantly enhances Relationship Quality (RQ). This supports the Service-Dominant Logic, which posits that value is co-produced through interaction rather than delivered unilaterally (Vargo & Lusch, 2004). As users engage in feedback, content contribution, and brand advocacy, they feel emotionally and socially connected to the platform, thereby strengthening their perceived relationship with the brand or community (Jashari-mani et al., 2024).

4.2.2 Customer Engagement as a Driver of Co-Creation
Customer Engagement (CE) positively affects VCC, aligning with Brodie et al. (2011) who argue that CE is the foundation of participatory behavior in digital settings. Instagram users who experience emotional and cognitive engagement are more likely to collaborate in content development, discussions, and value generation (Hollebeek, 2011; Sudarti & Fachrunnisa, 2022).

4.2.3 The Role of Customer Involvement in Co-Creation
Customer Involvement (CI**)** also significantly influences VCC. Active participation in shaping service offerings reinforces users' sense of ownership and satisfaction (von Hippel, 1986). In social media contexts, CI manifests through user-generated content, idea sharing, and design feedback, all of which promote deeper involvement in co-creation activities (Ma et al., 2017; Dewarani & Alversia, 2023).

4.2.4 Relationship Quality Encourages Involvement
The study finds that high RQ encourages greater Customer Involvement. Trust and commitment enable users to engage more openly and frequently with the platform, thereby increasing their contribution to value creation (Li et al., 2020). This supports the idea that RQ acts as a psychological safety net that fosters active user participation.

4.2.5 VCC and RQ Drive Social Media Usage Intention
Both VCC and RQ significantly impact Social Media Usage Intention (SMUI). Users who experience co-creation and perceive strong relationships are more likely to continue using the platform. This aligns with findings from Yang et al. (2024), who highlight the importance of social bonding and mutual value creation in sustaining digital platform usage.
The relationship between RQ and SMUI also supports previous work by Liang et al. (2011), showing that emotional satisfaction and trust are vital determinants of continued digital engagement.

4.3 Theoretical and Practical Implications
Theoretically, this study reinforces the integration of S-D Logic, Engagement Theory, and Uses and Gratifications Theory in explaining digital behavior. It validates the multi-pathway influence of psychological and relational constructs on platform usage.
Practically, social media platforms and digital marketers should design strategies that:

- Encourage two-way communication and user-generated content.
- Build trust-based, emotionally resonant interactions.
- Involve users in brand narrative development and product innovation.

Such strategies can strengthen loyalty, extend user lifetime value, and create vibrant digital communities.

5. Conclusion

5.1 Conclusion

This study aimed to develop and empirically test an integrative model linking Customer Engagement (CE) to Social Media Usage Intention (SMUI), mediated by Value Co-Creation (VCC), Customer Involvement (CI), and Relationship Quality (RQ). Using a quantitative approach and data from 322 active Instagram users in Jakarta, the findings offer several important insights into digital user behavior.

First, the research confirms that Customer Engagement significantly enhances Value Co-Creation, supporting prior theories that emotional, cognitive, and behavioral engagement drives participatory behavior (Brodie et al., 2011; Hollebeek, 2011). Engaged users are more likely to co-create value by contributing content, providing feedback, and interacting meaningfully with brands and communities.

Second, both Customer Engagement and Customer Involvement play vital roles in enhancing Value Co-Creation. Involved users, when given space to participate in shaping digital experiences, feel more empowered and committed, aligning with findings from von Hippel (1986) and Dewarani & Alversia (2023).

Third, the study demonstrates that Value Co-Creation positively influences Relationship Quality, which in turn strengthens Customer Involvement. High levels of trust, satisfaction, and commitment act as emotional bridges that sustain long-term relationships with digital platforms (Morgan & Hunt, 1994; Liang et al., 2011).

Lastly, Value Co-Creation and Relationship Quality significantly influence Social Media Usage Intention. This confirms that digital platform usage is not merely driven by functionality, but also by the emotional and social value experienced during interaction (Yang et al., 2024; Rafi et al., 2023).

Collectively, the findings affirm that digital behavior is shaped by user-driven, relational, and participatory dynamics. The proposed integrative model thus offers a comprehensive lens for understanding the psychological and social mechanisms underlying sustained social media engagement.

5.2 Theoretical Implications

This research contributes to the literature in several ways:

- It integrates concepts from Service-Dominant Logic (Vargo & Lusch, 2004), Engagement Theory, and Relationship Marketing into a single empirical model, offering a broader framework to analyze user behavior in digital ecosystems.
- It empirically validates the mediating role of Value Co-Creation, Customer Involvement, and Relationship Quality in shaping Social Media Usage Intention, thereby addressing gaps in previous studies that examined these variables in isolation (Brodie et al., 2011; Hollebeek, 2011).
- It contributes contextually to emerging markets, particularly Indonesia, by examining user behavior in an urban, high-engagement social media environment.

5.3 Practical Recommendations

For digital marketers, platform designers, and content creators, the findings offer the following strategic implications:

- Foster Customer Engagement
  Create immersive, emotionally resonant experiences that invite user interaction—such as polls, gamified content, and real-time feedback tools.
- Encourage Value Co-Creation
  Provide opportunities for users to contribute ideas, co-design features, and co-develop brand stories. UGC (user-generated content) campaigns are one effective approach.

- Strengthen Relationship Quality
  Invest in building trust and responsiveness. Humanized communication, fast replies, and transparency in digital services help build relational equity.
- Leverage Customer Involvement
  Involve users in decisions—not just as consumers, but as collaborators. For example, letting users vote on new features or products can boost involvement and loyalty.
- Personalize and Localize Content
  Use data analytics to tailor content to users' needs and cultural contexts, as personalization drives both engagement and satisfaction.

5.4 Limitations and Future Research

While the study yields robust findings, several limitations should be acknowledged:

- The sample is limited to active Instagram users in Jakarta, which may affect generalizability to other regions or platforms.
- The cross-sectional design restricts causal inference over time.
- Cultural factors and personality traits were not examined in this model.

Future studies could:

- Use longitudinal data to analyze behavioral changes over time.
- Compare user behavior across platforms (e.g., Istagram, TikTok, YouTube).
- Integrate cultural, emotional intelligence, or digital literacy variables into the model.

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UNDERSTANDING ENTREPRENEURIAL INTENTION IN EMERGING ECONOMIES: A STUDY OF MSME ACTORS IN INDONESIA.

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Abstract

This study examines the factors influencing entrepreneurial intention among Micro, Small, and Medium Enterprises (MSMEs) in Indonesia. In this emerging economy, entrepreneurship is crucial for economic advancement. This research utilizes the theory of planned behavior (TPB) to investigate the impact of entrepreneurial attitude, self-efficacy, and learning on entrepreneurial intention. Additionally, it examines the moderating influence of subjective norms to elucidate how perceived social pressure affects the link between internal factors and intention. Data were gathered via structured surveys administered to MSME participants who had completed entrepreneurial training programs. The findings, derived from structural equation modeling (SEM), indicate that entrepreneurial attitude, self-efficacy, and learning strongly affect entrepreneurial intention. Additionally, subjective norms influence the intensity of these associations, indicating that social contexts are crucial in entrepreneurial decision-making. The research enhances the comprehension of intention formation in the context of developing countries and provides practical insights for policymakers and entrepreneurship educators in Indonesia.

Keywords: *entrepreneurial learning, entrepreneurial attitude, entrepreneurial self-efficacy, subjective norms, entrepreneurial intention*

1. Introduction

Entrepreneurship is widely recognized as a key driver of economic growth, job creation, and innovation, particularly in developing countries (Acs et al., 2012; Audretsch & Keilbach, 2004). In Indonesia, micro, small, and medium enterprises (MSMEs) are the backbone of the national economy, contributing approximately 61% to the gross domestic product (GDP) and employing nearly 97% of the national workforce. Despite their significance, the entrepreneurial ratio in Indonesia remains relatively low at 3.35%, far behind countries like the United States (12%), Singapore (8.76%), and Malaysia (4.74%) (GEM, 2022). This gap highlights the urgency of fostering entrepreneurial intention, particularly among MSME actors participating in entrepreneurship training programs. However, structural challenges such as limited risk tolerance, low entrepreneurial confidence, and weak learning ecosystems hinder sustainable entrepreneurial behavior (Hofstede, 1984; Zarnadze et al., 2022).

To better understand the drivers of entrepreneurial behavior, many studies have adopted the theory of planned behavior (TPB), which posits that intention is the most proximal determinant of behavior and is shaped by attitude, perceived behavioral control (often operationalized as self-efficacy), and subjective norms (Ajzen, 1991). In the context of Indonesian MSMEs, these factors are particularly relevant given the cultural tendency toward uncertainty avoidance, which can suppress entrepreneurial risk-taking (Hofstede, 1984). While entrepreneurship training has proliferated across regions to address technical and managerial

gaps, its effectiveness in fostering long-term entrepreneurial intention remains inconsistent. Prior research suggests that entrepreneurial learning can enhance individual confidence and shape positive attitudes toward entrepreneurship (Huang et al., 2023; Yang et al., 2023). However, few studies have integrated these cognitive variables with normative social influences to explain intention among MSME actors. Therefore, this study aims to fill that gap by examining how entrepreneurial learning, attitude, and self-efficacy influence entrepreneurial intention, and how subjective norms moderate these relationships within the post-training context of Indonesian MSMEs.

2. Literature Review

2.1 Entrepreneurial learning as a foundational driver of entrepreneurial intention

Entrepreneurial learning is a crucial cognitive and experiential process through which individuals acquire, internalize, and apply knowledge to recognize and act upon business opportunities. According to Kolb (1984), learning is a cyclical process involving concrete experience, reflective observation, abstract conceptualization, and active experimentation. In the entrepreneurial context, learning is not only limited to formal education but also occurs through informal interactions, trial-and-error, and social engagement (Cope, 2005; Politis, 2005). Huang et al. (2023) emphasize three dimensions of entrepreneurial learning: school-based learning, social learning through peers and mentors, and family-based learning from exposure to entrepreneurial activities within households. These learning modalities shape entrepreneurial cognition, enabling individuals, especially MSME actors, to develop adaptive competencies, resilience, and opportunity recognition skills necessary for sustained business engagement.

In the context of MSMEs in Indonesia, entrepreneurial learning is a foundational construct that bridges knowledge acquisition and behavioral intention. As posited in the Theory of Planned Behavior (Ajzen, 1991), intention is influenced by attitudinal beliefs, perceived behavioral control (often measured as entrepreneurial self-efficacy), and normative pressures. Entrepreneurial learning strengthens attitude and efficacy by enhancing confidence, reducing uncertainty, and providing practical frameworks for action. Empirical evidence supports that learning-oriented interventions increase individuals' readiness to pursue entrepreneurial activities (Barba-Sánchez et al., 2022; Yang et al., 2023). However, despite the proliferation of entrepreneurship training programs across Indonesia, many MSME actors still operate at a subsistence level, often lacking the confidence or cognitive flexibility to scale their ventures. This underscores the need to understand how different forms of entrepreneurial learning contribute to intention formation, particularly when moderated by social and cultural factors such as subjective norms.

2.2 Entrepreneurial attitude as a key predictor of entrepreneurial intention

Entrepreneurial attitude refers to an individual’s evaluative disposition, positive or negative, toward engaging in entrepreneurial activities. Within the theory of planned behavior (Ajzen, 1991), attitude toward behavior represents the degree to which a person has a favorable or unfavorable evaluation of performing the behavior in question, in this case, starting and managing a business. A strong positive attitude typically reflects high personal value placed on autonomy, innovation, risk-taking, and self-achievement, which are crucial psychological traits

for entrepreneurs (Lüthje & Franke, 2003). Entrepreneurial attitude is thus a cognitive-affective orientation that mediates the translation of learning and experience into concrete entrepreneurial intention.

Research has consistently shown that an entrepreneurial attitude is central to predicting entrepreneurial intention across various contexts. He et al. (2024) and Kaur & Chawla (2023) found that individuals with a more positive attitude toward entrepreneurship are likelier to engage in opportunity identification and venture creation. Moreover, Karimi (2019) and Shah et al. (2020) established that an entrepreneurial attitude significantly predicts entrepreneurial intention among university students, even more than external environmental factors. In the context of MSMEs, an entrepreneurial attitude is particularly important, as it serves as a motivational driver that sustains entrepreneurial action beyond mere exposure to training or external support mechanisms.

In developing countries like Indonesia, where structural barriers and cultural constraints, such as high uncertainty avoidance, persist (Hofstede, 1984), a positive entrepreneurial attitude can serve as a psychological buffer. It empowers MSME actors to view entrepreneurship as a means of subsistence and a pathway for self-actualization and long-term value creation. Entrepreneurial training, incorporating attitude development through mentorship, self-reflection, and experiential activities, has fostered more persistent and proactive entrepreneurial behaviors (Rapina et al., 2023). Therefore, fostering a strong entrepreneurial attitude is not only a theoretical imperative but also a practical necessity for enhancing the entrepreneurial ecosystem among Indonesian MSMEs.

2.3 Entrepreneurial self-efficacy and the perception of behavioral control in entrepreneurial intention

Entrepreneurial self-efficacy (ESE) is defined as an individual's belief in their capability to successfully perform entrepreneurship-related tasks, such as identifying opportunities, mobilizing resources, managing risks, and sustaining business growth (Chen et al., 1998). Rooted in Bandura (1977) in social cognitive theory, self-efficacy influences how people think, feel, and act. Within the theory of planned behavior (Ajzen, 1991), self-efficacy aligns with the concept of perceived behavioral control, representing the degree to which individuals believe they have control over engaging in entrepreneurial actions. Individuals with high ESE are more likely to pursue entrepreneurial careers, overcome challenges, and remain resilient in uncertain environments.

In the context of MSMEs in Indonesia, entrepreneurial self-efficacy becomes a critical factor influencing entrepreneurial intention, especially amid structural and cultural challenges such as limited access to resources and high uncertainty avoidance (Hofstede, 1984). Prior empirical studies have shown a consistent positive relationship between ESE and entrepreneurial intention (Krueger & Brazeal, 1994; Shinnar et al., 2014). In particular, Huang et al. (2023) emphasize that entrepreneurial learning contributes significantly to the development of ESE through increased exposure to experiential activities and practical decision-making. The higher the individual has confidence in handling entrepreneurial tasks, the more likely they are to commit to launching or expanding a business venture.

Furthermore, self-efficacy does not operate in isolation but often interacts with other psychological and social factors. For instance, (Barba-Sánchez et al., 2022) argue that ESE can mediate between learning experiences and intention, as well as between subjective perceptions and actual behavior. In the Indonesian MSME landscape, where many entrepreneurs begin from necessity rather than opportunity, enhancing ESE is about skill-building, reframing internal beliefs, and reducing fear of failure. Consequently, entrepreneurship education and training must incorporate confidence-building mechanisms, such as mentoring, role-model exposure, and small-scale business simulations, to ensure that ESE translates into genuine entrepreneurial engagement.

2.4 Subjective norms and social influence in shaping entrepreneurial intention

Subjective norms refer to the perceived social pressure an individual feels regarding whether or not they should perform a specific behavior, in this case, the decision to become an entrepreneur (Ajzen, 1991). Within the theory of planned behavior (TPB), subjective norms represent one of the three core predictors of behavioral intention, alongside attitude and perceived behavioral control. This construct captures the influence of significant referent groups, such as family, peers, mentors, and community members, on an individual's intention to engage in entrepreneurship. In collectivist societies like Indonesia, where group approval and social conformity are culturally emphasized, the role of subjective norms is particularly salient in entrepreneurial decision-making (Hofstede, 1984).

Several empirical studies have highlighted the significance of subjective norms in shaping entrepreneurial intention. For instance, Lyu et al. (2024) and Nguyen (2020) that supportive social environments positively influence entrepreneurial attitudes and increase individuals' likelihood of pursuing entrepreneurial activities. These norms often act as external validations or deterrents, reinforcing or inhibiting the internal motivations of aspiring entrepreneurs. In the case of MSME actors who have undergone entrepreneurship training, the extent to which their immediate social circles support or discourage their entrepreneurial aspirations can critically affect whether training outcomes are translated into action.

Despite its theoretical relevance, subjective norms have shown inconsistent results in empirical research. Some studies report weak or non-significant effects on intention, especially in individualistic cultures, whereas in collectivist contexts, such as in many Asian societies, its influence tends to be more pronounced (Karimi, 2019; Shah et al., 2020). Moreover, subjective norms may not only exert a direct influence on intention. They may also function as a moderator, enhancing or diminishing the strength of relationships between internal variables (e.g., attitude, self-efficacy) and intention. This moderating role is particularly relevant when individuals face internal ambivalence; strong social support or expectation can either validate or suppress their entrepreneurial inclinations.

2.5 Entrepreneurial intention as a precursor to entrepreneurial behavior

Entrepreneurial intention refers to an individual's conscious state of mind that directs attention, experience, and action toward the initiation of a new business venture (Krueger & Brazeal, 1994). It is widely regarded as the most immediate antecedent of entrepreneurial behavior and has become a central focus in entrepreneurship research, particularly in intention-based models such as the theory of planned behavior (Ajzen, 1991) according to this theory,

intention is shaped by three key psychological constructs: attitude toward the behavior, perceived behavioral control (often operationalized as self-efficacy), and subjective norms. Thus, understanding entrepreneurial intention is critical to predicting who is likely to become an entrepreneur, especially in emerging economies like Indonesia.

Numerous studies have affirmed that entrepreneurial intention serves as a robust predictor of entrepreneurial actions, such as business registration, venture initiation, and opportunity exploitation (Barba-Sánchez et al., 2022; Zapkau et al., 2017). However, intention alone does not guarantee entrepreneurial action; appropriate capabilities, enabling environments, and motivational consistency must support it. In this regard, intention is not only a psychological orientation but also a reflection of one's readiness to undertake entrepreneurial risks and responsibilities. In the case of MSMEs in Indonesia, where structural and cultural constraints often limit entrepreneurial action, intention becomes even more critical; it represents the bridge between awareness and action.

3. Methodology

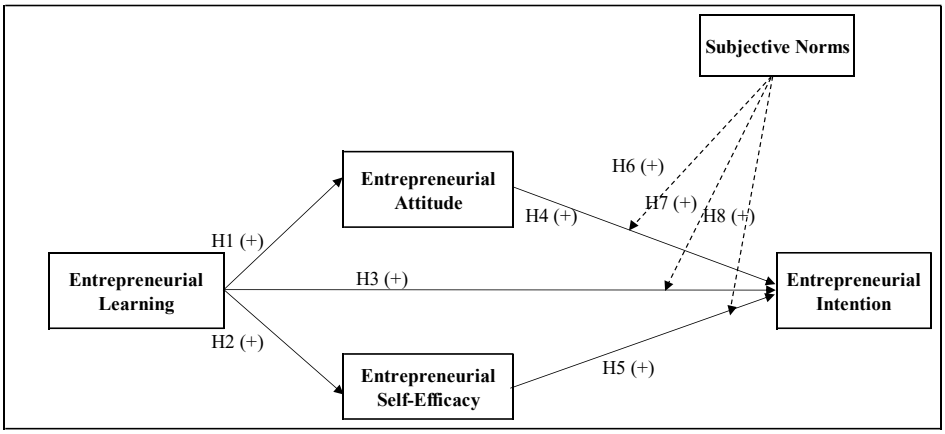
This study employed a quantitative research design using the partial least squares structural equation modeling (PLS-SEM) approach to examine the relationships among entrepreneurial learning, entrepreneurial attitude, entrepreneurial self-efficacy, subjective norms, and entrepreneurial intention. The unit of analysis comprised micro, small, and medium enterprises (MSMEs) in the greater Jakarta area (Jabodetabek), which had previously participated in formal entrepreneurship training programs. Data were collected through a structured questionnaire distributed to 380 respondents using purposive sampling. Measurement instruments were adapted from validated scales in previous literature and subjected to reliability and validity testing before full-scale analysis. The PLS-SEM method was selected for its suitability for predictive modeling and handling complex relationships among latent constructs in behavioral research.

3.1 Theoretical framework

The theoretical framework of this study draws upon social cognitive theory (Bandura, 1986), which emphasizes the reciprocal interaction between personal factors, behavior, and environmental influences in shaping human action. Within this perspective, entrepreneurial learning is viewed as a socially situated process where individuals acquire knowledge and develop beliefs about their capabilities (self-efficacy) through observation, experience, and feedback. Entrepreneurial self-efficacy, in turn, becomes a central cognitive mechanism that affects motivation and goal-setting. Entrepreneurial attitude reflects the affective and evaluative response resulting from learned experiences, while subjective norms are interpreted as perceived social reinforcement that can either facilitate or constrain entrepreneurial action. This theoretical lens is particularly relevant in the context of MSMEs in Indonesia, where cultural norms, social approval, and experiential learning through community-based training strongly influence the formation of entrepreneurial intention. By positioning self-efficacy and learning as key drivers and subjective norms as a contextual amplifier, the framework captures the dynamic interplay between cognition, affect, and social environment in entrepreneurial decision-making.

3.2 Conceptual framework

Figure 1. Conceptual Framework and Research Hypotheses



The conceptual framework of this study illustrates the hypothesized relationships among five key constructs: entrepreneurial learning, entrepreneurial attitude, entrepreneurial self-efficacy, subjective norms, and entrepreneurial intention. Drawing upon social cognitive theory (Bandura, 1986), the model positions entrepreneurial learning as a foundational variable influencing both entrepreneurial attitude (H1) and entrepreneurial self-efficacy (H2). Entrepreneurial learning is a multidimensional process; its formal, social, and experiential dimensions equip individuals with the cognitive and emotional resources necessary to shape positive attitudes and self-belief in pursuing entrepreneurship.

In turn, entrepreneurial attitude (H4) and entrepreneurial self-efficacy (H5) are hypothesized to affect entrepreneurial intention positively. This aligns with the literature suggesting that evaluative dispositions and perceived capability are critical antecedents to entrepreneurial action. Furthermore, Entrepreneurial Learning is also expected to impact Entrepreneurial Intention (H3) directly, reflecting the possibility of both direct and mediated effects through attitude and self-efficacy.

Subjective norms are integrated into the framework as independent variables and moderators. As an independent factor, subjective norms are hypothesized to influence entrepreneurial intention (H6) directly, reflecting the social and normative pressures MSME actors perceive in their entrepreneurial decisions. Additionally, subjective norms are posited to moderate the relationship between entrepreneurial attitude and entrepreneurial intention (H7) and between entrepreneurial self-efficacy and entrepreneurial intention (H8). These moderating paths aim to capture how social approval or disapproval can strengthen or weaken the internal psychological drivers of entrepreneurial behavior.

3.3 Instrumentation

The measurement instruments employed in this study were adapted from well-established and validated scales to ensure theoretical robustness and contextual relevance for MSME actors in Indonesia. Each construct was operationalized using multiple indicators rated on a four-point Likert scale ranging from “strongly disagree” (1) to “strongly agree” (4), in order to minimize neutral responses and encourage clear judgments. Entrepreneurial attitude, subjective norms, and entrepreneurial intention were measured using scale items developed by Liñán & Chen (2009), which have been widely used in studies applying the theory of planned behavior in entrepreneurial contexts. Entrepreneurial self-efficacy was measured using items

from Wilson et al. (2007), focusing on individuals' confidence in performing tasks related to opportunity recognition, innovation, and business management. Meanwhile, entrepreneurial learning was measured based on the multidimensional framework proposed by Huang et al. (2023), including school-based, social, and family learning components. Before data collection, all instruments were translated and pre-tested to ensure clarity, cultural appropriateness, and content validity, followed by reliability and validity assessments during the pilot phase.

4. Results and discussions

This section presents the results of the data analysis and discusses their implications for the research objectives and existing literature. Data were analyzed using partial least squares structural equation modeling (PLS-SEM) to test the hypothesized relationships among entrepreneurial learning, entrepreneurial attitude, entrepreneurial self-efficacy, subjective norms, and entrepreneurial intention. The analysis included evaluating the measurement model (outer model) and the structural model (inner model). The measurement model confirmed that all constructs met acceptable levels of reliability and validity, as indicated by composite reliability, average variance extracted (AVE), and outer loadings. Subsequently, the structural model analysis revealed significant and positive effects of entrepreneurial learning on both entrepreneurial attitude and self-efficacy, significantly affecting entrepreneurial intention. Furthermore, the results showed that subjective norms not only had a direct influence on entrepreneurial intention but also moderated the relationships between internal cognitive variables and intention.

Table 1. Results of reliability and convergent validity assessment for latent constructs

Variable	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
EA	0.862	0.863	0.901	0.644
EI	0.908	0.909	0.929	0.685
EL	0.952	0.953	0.958	0.657
ESE	0.895	0.896	0.919	0.656
SN	0.799	0.801	0.882	0.713

Table 2. R-square result

Variable	R-square	R-square adjusted
EA	0.134	0.132
EI	0.662	0.656
ESE	0.478	0.476

As shown in Table 1, all constructs demonstrate satisfactory levels of reliability and convergent validity. The cronbach's alpha values for all latent variables exceed the acceptable threshold of 0.70 (Hair et al., 2019), indicating strong internal consistency across the measurement items. The highest alpha value is observed for entrepreneurial learning (EL = 0.952), while subjective norms (SN = 0.799) is still within the acceptable limit, suggesting adequate reliability even for constructs with relatively fewer indicators.

In addition to internal consistency, the constructs also show excellent composite reliability (rho_c) scores, all of which exceed the recommended cut-off value of 0.70, with values ranging from 0.882 (SN) to 0.958 (EL). This reinforces the robustness of the measurement items in capturing the intended constructs. Furthermore, all average variance extracted (AVE) values are well above the threshold of 0.50, confirming convergent validity; that is, each construct explains more than half of the variance of its indicators. The highest AVE is found in subjective norms (0.713), reflecting strong shared variance among its indicators.

Table 2 presents the R-square (R^2) and adjusted R-square values for the three endogenous variables: entrepreneurial attitude (EA), entrepreneurial intention (EI), and entrepreneurial self-efficacy (ESE). These values represent the proportion of variance in the dependent constructs that can be explained by their respective predictors. Entrepreneurial intention (EI) has the highest R^2 value of 0.662 (adjusted R^2 = 0.656), which indicates that 66.2% of the variance in entrepreneurial intention is explained by the model's predictors; namely, entrepreneurial attitude, entrepreneurial self-efficacy, and subjective norms. This value falls within the moderate to substantial range, suggesting a strong explanatory power of the structural model.

Meanwhile, entrepreneurial self-efficacy (ESE) yields an R^2 of 0.478 (adjusted 0.476), implying that entrepreneurial learning explains 47.8% of the variance in ESE. Entrepreneurial attitude (EA), with an R^2 of 0.134, is the least explained construct in the model, though this still reflects a small-to-moderate effect consistent with complex behavioral constructs. Overall, these results support the predictive relevance of the proposed model and validate the theoretical interconnections among entrepreneurial learning, attitude, efficacy, norms, and intention.

Figure 2. Structural Model Results with Path Coefficients and R^2 Values

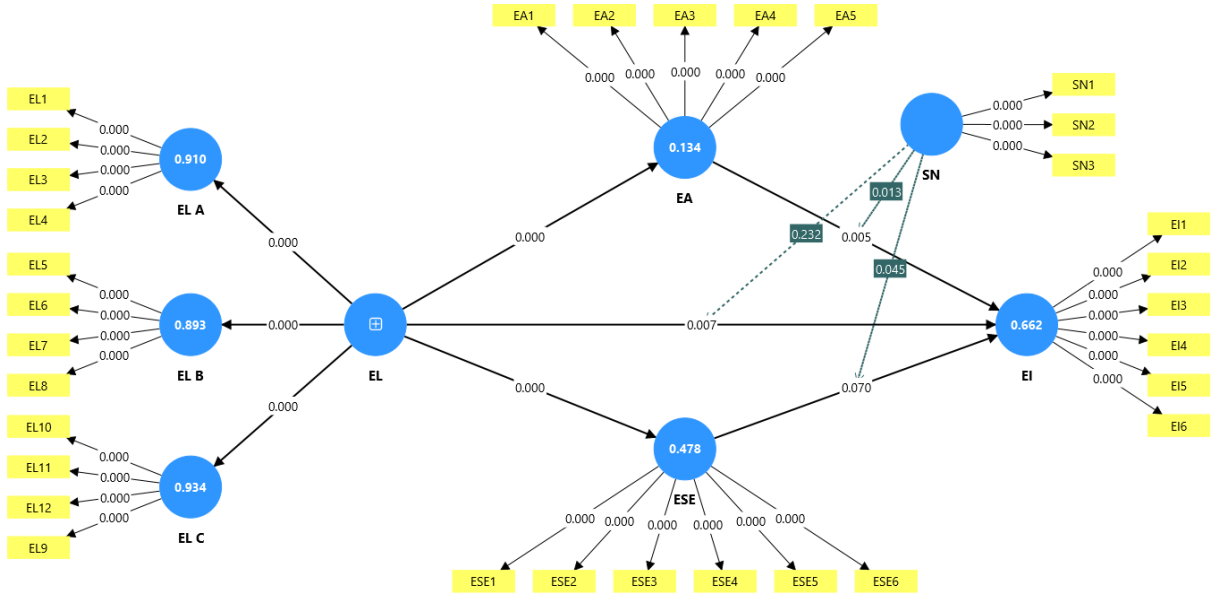


Figure 2 illustrates the final structural model estimated using partial least squares structural equation modeling (PLS-SEM), including standardized path coefficients, R^2 values for endogenous constructs, and the moderating effects of subjective norms (SN). The model demonstrates the multidimensional structure of entrepreneurial learning (EL), which is

reflected by three formative components: EL-A (school entrepreneurial learning), EL-B (social entrepreneurial learning), and EL-C (family entrepreneurial learning), with strong outer weights (0.910, 0.893, and 0.934, respectively). This confirms that entrepreneurial learning among MSME actors in this study is shaped by diverse and complementary learning experiences.

Table 3. Path Coefficients

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
EA -> EI	0.125	0.130	0.045	2.806	0.005
EL -> EA	0.366	0.367	0.058	6.269	0.000
EL -> EI	0.191	0.189	0.070	2.707	0.007
EL -> ESE	0.691	0.691	0.042	16.604	0.000
ESE -> EI	0.144	0.145	0.079	1.813	0.070
SN -> EI	0.419	0.414	0.076	5.536	0.000
SN x EA -> EI	-0.100	-0.101	0.040	2.490	0.013
SN x EL -> EI	-0.070	-0.069	0.058	1.195	0.232
SN x ESE -> EI	0.123	0.122	0.061	2.007	0.045

Table 3 presents the results of the path coefficient analysis used to test the proposed hypotheses in the structural model. The results reveal several significant relationships among the core variables, supporting the central assumptions of the research model. First, entrepreneurial attitude (EA) has a significant positive effect on entrepreneurial intention (EI) ($\beta = 0.125$, $t = 2.806$, $p = 0.005$), indicating that individuals with a favorable attitude toward entrepreneurship are more likely to intend to start a business. This finding is consistent with previous studies such as Liñán & Chen (2009), reinforcing the notion that attitude is a strong predictor of intention.

Similarly, entrepreneurial learning (EL) shows a significant positive effect on both entrepreneurial attitude (EA) ($\beta = 0.366$, $p < 0.001$) and entrepreneurial self-efficacy (ESE) ($\beta = 0.691$, $p < 0.001$), supporting the notion that learning experiences gained through formal training and social exposure enhance both cognitive and affective drivers of entrepreneurial behavior. EL also directly influences entrepreneurial Intention (EI) ($\beta = 0.191$, $p = 0.007$), albeit with a lower magnitude, suggesting that learning can have both direct and indirect effects on intention formation.

Interestingly, the relationship between entrepreneurial self-efficacy (ESE) and entrepreneurial intention (EI) is not statistically significant at the 5% level ($\beta = 0.144$, $p = 0.070$). While the effect is positive and the t-statistic is close to the cutoff, this marginal result may indicate that self-efficacy alone is insufficient to drive intention without reinforcement from other factors such as social support or attitude. In contrast, subjective norms (SN) exert a strong and significant influence on entrepreneurial intention ($\beta = 0.419$, $p < 0.001$), confirming the importance of social expectations and normative pressure in shaping entrepreneurial behavior, particularly in collectivist societies such as Indonesia.

With regard to moderation, the interaction between subjective norms and entrepreneurial attitude (SN × EA → EI) yields a significant negative effect (β = -0.100, p = 0.013), suggesting a suppressing or offsetting effect. This result may reflect a tension between personal beliefs and perceived social expectations; when social pressure is strong, it might override individual attitude. On the other hand, the moderation effect of subjective norms on the EL–EI relationship is not significant (β = -0.070, p = 0.232), indicating that the influence of learning on intention is relatively stable across different levels of social pressure. However, the moderating effect of subjective norms on the ESE–EI relationship is significant (β = 0.123, p = 0.045), implying that perceived social support can enhance the impact of self-efficacy on entrepreneurial intention.

These findings demonstrate that while cognitive and learning-based factors are central to fostering entrepreneurial intention, their impact is often contextualized by the surrounding social environment. Thus, programs aimed at increasing entrepreneurial engagement among MSMEs must consider both individual development and social reinforcement mechanisms to achieve sustainable behavioral outcomes.

5. Conclusion

This study set out to investigate the key determinants of entrepreneurial intention among micro, small, and medium enterprises (MSMEs) in Indonesia, with a particular focus on the influence of entrepreneurial learning, attitude, self-efficacy, and subjective norms. By employing a structural equation modeling approach (PLS-SEM), the research provides robust empirical evidence supporting the interconnectedness between learning-driven cognition, personal beliefs, and social context in shaping entrepreneurial intention.

The findings confirm that entrepreneurial learning plays a foundational role in enhancing both entrepreneurial attitude and self-efficacy, which subsequently contribute to the development of entrepreneurial intention. Notably, while entrepreneurial attitude significantly predicts intention, the effect of self-efficacy, though positive, was not statistically significant at conventional levels, indicating that confidence alone may not be sufficient without supportive attitudes or environments. Furthermore, subjective norms emerged as a critical social determinant, exerting both direct and moderating effects, highlighting the importance of cultural and relational support in the entrepreneurial process.

These results underline the need for entrepreneurship training programs that go beyond skill development, by also cultivating positive attitudes and reinforcing supportive social networks. For policymakers and practitioners, fostering environments that validate entrepreneurial efforts; through mentorship, community engagement, and value recognition, can amplify the outcomes of learning-based interventions. In a broader sense, entrepreneurial intention among MSMEs should be viewed as the product of both individual agency and collective endorsement, particularly in emerging economies where social expectations significantly shape personal aspirations.

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MANAGING MUSLIM-FRIENDLY TOURISM THROUGH RELIGIOUS-CULTURAL INTEGRATION: THE CASE OF KAMPUNG GELGEL, BALI

POLICY INSIGHTS FOR INCLUSIVE AND SUSTAINABLE TOURISM GOVERNANCE

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Abstract

This study examines the management of Muslim-friendly tourism in the culturally diverse setting of Kampung Gelgel, Klungkung, Bali, where a Muslim community coexists within a predominantly Hindu region. The research explores how religious and cultural integration influences tourism policy and governance, aiming to develop an inclusive and sustainable model. Using a qualitative case study approach, data were collected through interviews with community leaders, local government officials, tourism stakeholders, and visitors. Findings reveal that effective collaboration between religious communities, inclusive local policies, and cultural sensitivity are key to fostering mutual respect and sustainable tourism growth. The study proposes policy recommendations that emphasize participatory governance, interfaith dialogue, and the integration of local wisdom into tourism development. These insights contribute to the broader discourse on managing religious diversity in tourism and provide a replicable framework for Muslim-friendly tourism in other multicultural destinations.

Keywords: Muslim-friendly tourism, Religious-cultural integration, Tourism policy, Community-based tourism, Sustainable tourism

1. Introduction

Tourism in multicultural societies presents both opportunities and challenges, especially when it intersects with religious sensitivities and cultural diversity. In recent years, the demand for **Muslim-friendly tourism (MFT)** has grown significantly in response to the increasing number of Muslim travelers worldwide seeking destinations that accommodate their religious needs. While Muslim-majority countries have led this development, non-Muslim-majority destinations, including Indonesia's popular island of Bali, are also exploring inclusive strategies to attract this growing segment.

Kampung Gelgel, located in Klungkung Regency, Bali, presents a unique case for Muslim-friendly tourism development. As a historically significant Muslim enclave situated within the predominantly Hindu cultural landscape of Bali, Kampung Gelgel offers a living example of **religious and cultural coexistence**. Its heritage, shaped by centuries of interfaith interaction, provides a strong foundation for inclusive tourism practices. However, balancing the preservation of local traditions with the needs of Muslim tourists requires thoughtful policy design and participatory management.

The global MFT sector has evolved into a robust economic domain. While the increasing number of Muslim travelers remains a fundamental driver, several additional factors explain this expansion. Rising disposable income among middle-class Muslims, particularly in OIC countries like Indonesia, Malaysia, Turkey, and Gulf nations has boosted demand for religiously aligned services (Sumardi & Osman, 2025). The proliferation of low-cost airlines, easier visa regimes, and improved airport infrastructure have also contributed to higher

mobility among Muslim tourists (Rahmawati et al., 2023). Notably, the role of social media influencers, travel vlogs, and digital halal travel platforms such as Muslim Pro and HalalTrip has significantly increased destination visibility.

According to the Global Muslim Travel Index (GMTI) 2023, the MFT market was valued at USD 225 billion and is forecasted to reach USD 300 billion by 2028, reflecting sustained annual growth (CrescentRating & Mastercard, 2023). MFT is no longer a niche, but a globally recognized tourism segment with growing influence over public and private sector investment.

Historically, Bali's tourism identity has been anchored in mass tourism, shaped around spiritual landscapes, Hindu rituals, yoga retreats, beach culture, and international nightlife scenes. The primary market has been Western and East Asian tourists seeking cultural enrichment or leisure experiences (Ismail, 2021). This model, while economically successful, has led to several issues: environmental degradation, overtourism, and cultural erosion.

Recognizing these limitations, Bali's tourism authorities are exploring market diversification through niche offerings like Muslim-friendly tourism, wellness tourism, and eco-tourism. In the case of MFT, the motivation is twofold: to capture a larger share of the Southeast Asian and Middle Eastern Muslim travel market, and to promote inclusive practices that reflect Indonesia's pluralist national identity. Promoting MFT in Bali represents not only an economic strategy but also a political gesture towards tolerance and social harmony.

The Muslim community in Kampung Gelgel dates back to the 16th century, during the rule of the powerful Gelgel Kingdom. Historical records and oral traditions suggest that Muslim traders and clerics from Java, Kalimantan, and Gujarat were welcomed by the Hindu-Balinese court and were given land to settle. These early Muslims established mosques, educational institutions, and intermarried with local populations, laying the foundations for centuries of religious pluralism. This unique historical legacy distinguishes Kampung Gelgel from other Muslim settlements in Indonesia. Its interfaith traditions, dual heritage identity, and continued respect between religious communities offer a model of cultural resilience and religious diplomacy.

Developing MFT in Kampung Gelgel presents significant opportunities. The village can serve as a model for community-based interfaith tourism, showcasing how Muslim and Hindu values coexist in architecture, rituals, and everyday life. Additionally, the area's strategic location, close to Klungkung's cultural centers and Bali's southern tourism corridor, adds logistical appeal for tourism development.

However, challenges persist. These include limited halal-certified food outlets, lack of standardized Muslim-friendly facilities, and potential tensions if development is perceived as privileging one group over another. As such, the study emphasizes the importance of participatory tourism governance, where local voices from both Muslim and Hindu communities are central to planning and implementation. Interfaith dialogue and local wisdom must guide the design of tourism infrastructure, services, and narratives.

By using Kampung Gelgel as a case study, this study aims to explore **how religious-cultural integration contributes to the management of Muslim-friendly tourism in Kampung Gelgel,** and what policy insights can be drawn to support **inclusive and sustainable tourism governance** in similar multicultural settings. The research seeks to contribute to both academic discourse and policy practice by identifying best practices, community roles, and institutional strategies that support MFT in a culturally plural society.

2. Literature review

2.1 Muslim-Friendly Tourism (MFT): Concepts and Trends

Muslim-friendly tourism refers to tourism services and destinations that accommodate the religious and cultural needs of Muslim travelers, such as halal food, prayer facilities, modesty considerations, and religious holiday awareness (Battour & Ismail, 2016). With the rise of the global Muslim middle class, MFT has become a key growth area in international tourism (CrescentRating, 2023). While predominantly practiced in Muslim-majority countries, non-Muslim destinations have increasingly developed policies to attract Muslim visitors without compromising their own cultural identities.

Further clarification is needed between the terms *Halal Tourism* and *Muslim-Friendly Tourism*, which are often used interchangeably but diverge in conceptual depth. Halal tourism emphasizes strict adherence to Islamic jurisprudence in all aspects covering food, services, and behavior, while Muslim-friendly tourism adopts a more flexible and inclusive approach, especially suitable for non-Muslim destinations (Hanafiah et al., 2022). This distinction affects both policy design and destination marketing.

The key components of MFT include:

1. Halal food and beverage availability
2. Prayer spaces in public areas
3. Gender-sensitive facilities (e.g., separate swimming times or areas)
4. Awareness of Islamic holidays and prayer times
5. Marketing using culturally appropriate visuals and language (Khairuldin & Anas, 2024).

Scholars have debated issues in MFT development, particularly the tension between authenticity and commercialization. Critics argue that over-commercialization of Muslim identity risks reducing Islam to a consumer brand, undermining cultural and spiritual authenticity (Fauzi & Battour, 2025). Others emphasize bottom-up approachescommunity-driven, locally grounded models over top-down, government-imposed branding, especially in multicultural societies where religious dynamics are sensitive (Kamal, 2020).

2.2 Tourism Governance in Multicultural Societies

Effective tourism governance in multicultural environments requires policies that recognize cultural and religious pluralism. The integration of minority communities into tourism development must go beyond infrastructure provision and include meaningful participation, cultural sensitivity, and institutional inclusivity (Dredge & Jamal, 2015). In regions like Bali, where Hindu cultural heritage is dominant, crafting policies that also accommodate Muslim tourist needs presents a complex but vital task.

To advance this governance, different models have emerged, including:

1. Centralized governance, dominated by state institutions
2. Decentralized systems, where local actors take initiative
3. Collaborative governance, where government, community, and private sectors share responsibility
4. Participatory governance, emphasizing inclusivity and deliberation (Cuesta-Valiño et al., 2020)

The application of Stakeholder Theory is critical in multicultural tourism governance. This approach identifies all parties impacted by tourism from local communities and religious leaders to tourists, businesses, and policymakers, and promotes dialogue to ensure that no group is marginalized in decision-making (Hanafiah et al., 2022; Muslim & Harun, 2022).

2.3 Religious-Cultural Integration as a Policy Tool

Religious-cultural integration involves harmonizing religious practices and cultural expressions within a shared socio-political and economic framework. In tourism, this

integration can enhance destination attractiveness, community resilience, and interfaith understanding (Timothy & Olsen, 2006). Policies promoting interreligious cooperation, mutual respect, and cultural inclusiveness are essential to building tourism that reflects local values while meeting global demands.

From a theoretical perspective, this concept is informed by Cultural Pluralism Theory and Intergroup Contact Theory (Allport, 1954), which posit that structured intergroup encounters reduce prejudice and foster cooperation. Importantly, "integration" differs from assimilation, where one group absorbs into another, and segregation, where groups live separately. Integration supports equal visibility and mutual recognition, making it especially beneficial for sustainable, inclusive tourism in plural societies (Saffinee & Jamaludin, 2023).

Examples from South Korea and Japan illustrate these dynamics. Both countries, while non-Muslim-majority, have introduced Muslim-friendly services such as halal restaurants, multilingual signage, and prayer spaces yet challenges remain regarding cultural training of staff and deeper inclusion of Muslim values (Harun et al., 2024). Thailand's Andaman Coast has similarly piloted Muslim-friendly destination planning through stakeholder clustering and local engagement (Pongsakornrungsilp, 2024).

2.4 Kampung Gelgel: A Context of Historical Coexistence

Kampung Gelgel represents one of the oldest Muslim settlements in Bali, tracing its origins back to the Gelgel Kingdom period in the 16th century. The community has long practiced cultural adaptation while maintaining Islamic traditions in harmony with surrounding Hindu-Balinese customs. This social and historical context positions Kampung Gelgel as an ideal case study for exploring religious-cultural integration in tourism policy and practice.

Its legacy illustrates the potential of localized interfaith models that blend spatial proximity with religious distinctiveness. Kampung Gelgel has historically fostered coexistence rather than convergence, making it a living example of peaceful pluralism. This distinct identity offers a foundation for community-based tourism governance, where cultural heritage is both preserved and presented to visitors seeking meaningful, respectful engagement (Putri, 2021).

3. Methodology

3.1 Research Design

This study adopts a qualitative descriptive approach to explore how religious-cultural integration shapes the management of Muslim-friendly tourism in Kampung Gelgel, Klungkung, Bali. The qualitative descriptive method is well-suited for studies seeking to provide a comprehensive, context-rich understanding of real-world practices and social dynamics without imposing complex theoretical interpretations (Sandelowski, 2000). This approach allows for a clear representation of the perspectives, experiences, and actions of local stakeholders involved in tourism governance.

3.2 Study Site

The research was conducted in Kampung Gelgel, one of the oldest Muslim communities in Bali, located within a predominantly Hindu region. The village presents a living example of cultural pluralism and interreligious harmony, making it an ideal site for examining the intersection of Muslim-friendly tourism and religious-cultural integration.

3.3 Data Collection

Primary data were collected through semi-structured interviews, participant observation, and document analysis over a period of three months (specify actual months if applicable). The following methods were employed:

- Interviews: A total of 15 key informants were interviewed, including:

  - Local government officials from the tourism and religious affairs departments
  - Leaders from both the Muslim and Hindu communities
  - Local tourism actors (e.g., homestay owners, tour guides, halal food providers)
  - Muslim tourists visiting Kampung Gelgel
- Observations: The researcher engaged in direct observation of daily community interactions, tourism activities, prayer practices, and cultural ceremonies. Field notes were recorded to capture contextual details relevant to religious-cultural integration.
- Document Analysis: Relevant policy documents, tourism plans, local regulations, community archives, and promotional materials were analyzed to understand the institutional framework and narratives surrounding Muslim-friendly tourism development.

3.4 Data Analysis

Data were analyzed using **thematic analysis**, following Braun and Clarke's (2006) framework. The steps included:

- Transcribing interviews and organizing field notes
- Initial coding of textual data
- Identifying recurring patterns and key themes related to religious-cultural integration, tourism policy, and community engagement
- Reviewing and refining themes in relation to the study's objectives

Themes were interpreted in light of both academic literature and the socio-cultural context of Kampung Gelgel to maintain analytical rigor and cultural sensitivity.

3.5 Trustworthiness of Data

To enhance the credibility and reliability of findings, the study employed several strategies:

- Triangulation: Data from interviews, observations, and documents were cross-validated
- Member checking: Selected participants were consulted to confirm the accuracy of interpreted data
- Thick description: Contextual details were emphasized to allow transferability and provide insight into the unique characteristics of Kampung Gelgel

3.6 Ethical Considerations

The study received informed consent from all participants. Identities of respondents are anonymized to ensure confidentiality. The research respected local customs and religious practices, and all activities were conducted in alignment with community norms and values.

4. Results and discussions

4.1 Religious-Cultural Coexistence as a Foundation for Muslim-Friendly Tourism

The long-standing presence of a Muslim community in Kampung Gelgel has fostered deep-rooted interfaith tolerance and cooperation with the surrounding Hindu-Balinese population. Respondents described how daily life is marked by mutual respect, including shared participation in local rituals and events.

One Hindu community leader stated:

"Kami sudah hidup berdampingan sejak zaman nenek moyang. Tidak ada masalah. Kami saling menghormati saat upacara agama."("We've lived side by side since the time of our ancestors. No problem at all. We respect each other during religious ceremonies.")

Specific examples of coexistence include shared involvement in Nyepi preparations, assistance during Islamic Eid celebrations, and joint youth sports and arts programs organized through the village banjar. These events not only foster social bonds but also create an environment of trust that allows Muslim-friendly tourism (MFT) to evolve without religious conflict.

Historical narratives collected during fieldwork mention the original settlement of Muslim traders in the 16th century who were welcomed by the Gelgel royal court, a legacy still commemorated by an annual interfaith festival co-hosted by both communities. This aligns with Timothy and Olsen's (2006) assertion that interfaith social capital is a key enabler of inclusive tourism. Raya (2022) further argues that such "invented harmonies" form the basis for halal tourism experimentation in Bali, giving rise to unique hybrid practices that resonate with both locals and tourists.

Figure 1. Intercultural interaction in Kampung Gelgel
(Source: Author's own illustration)

Local religious and cultural integration can shape sustainable and inclusive Friendly Tourism governance by fostering mutual respect, reinforcing community identity, and aligning tourism development with local socio-religious values, thereby enhancing destination authenticity, stakeholder collaboration, and long-term socio-cultural resilience.

4.2 Community Participation and Informal Governance

Tourism in Kampung Gelgel is largely community-driven. Muslim and Hindu community leaders collaborate on tourism-related matters informally, ensuring that local values are respected. For example, prayer facilities for Muslim tourists have been made available in public spaces with the support of both communities.

One Muslim elder explained:

"Kami tidak punya banyak bantuan dari pemerintah, tapi kami saling bantu agar tamu Muslim bisa nyaman di sini." ("We don't get much help from the government, but we support each other so that Muslim guests feel welcome here.")

Informal tourism governance in the village relies on a council of elders (tokoh masyarakat), youth organizations (karang taruna), and mosque and temple committees who reach consensus through community meetings (musyawarah). These groups manage:

- Allocation of space for Muslim prayers in shared buildings
- Regulation of homestay decorum aligned with modesty
- Community-run halal food events

Yet, the absence of formal structures also brings challenges:

- Scalability is limited without official support
- Funding relies heavily on donations and volunteerism
- Recognition in provincial tourism strategies is lacking

These dynamics echo Dredge & Jamal's (2015) critique of top-down policy blindness and the insights of Hasaniy & Azisurrohman (2024) on how informal religious governance often substitutes for the absence of inclusive state planning in plural contexts.

4.3 Institutional Gaps in Formal Tourism Policy

Despite the strong social foundation and community initiatives, there is no formal policy framework at the district or provincial level that explicitly supports Muslim-friendly tourism in Kampung Gelgel. While general tourism policies emphasize cultural tourism and community participation, they lack specific references to religious inclusivity or halal tourism standards.

Local officials admitted that:

"Masih belum ada kebijakan spesifik tentang wisata ramah Muslim, karena fokus kami masih pada desa adat dan pariwisata budaya Bali." ("There are still no specific policies on Muslim-friendly tourism, as our focus remains on traditional villages and Balinese cultural tourism.")

The Klungkung Tourism Master Plan 2020–2025 and Bali Provincial Cultural Tourism Strategy (2022) mention community-based tourism and traditional arts, but make no provision for:

- Halal certification guidelines
- Multifaith accommodation standards
- Religious diversity indicators

Reasons for this gap include:

- A dominant focus on "Tri Hita Karana" (Balinese cosmology of three causes of well-being: harmony with God, harmony among people, and harmony with nature) as a framework for tourism
- Limited interdepartmental coordination between religious and tourism bodies
- Political sensitivities around religious categorization

The consequence is a policy vacuum that:

- Undermines scalability of Muslim-friendly services
- Reduces visibility in tourism promotion
- Limits access to funding or certification

This policy gap indicates a missed opportunity for integrating religious-cultural inclusivity into formal tourism planning echoing concerns in the literature about top-down policy blind spots in multicultural tourism settings (Dredge & Jamal, 2015). Seyfi & Rasoolimanesh (2023) note similar blind spots in other multicultural destinations where "cultural tourism orthodoxy" overshadows pluralist engagement.

4.4 Emerging Practices of Muslim-Friendly Tourism in a Hindu Cultural Context

Despite the absence of official policy, Muslim-friendly tourism practices are emerging organically, demonstrating the community's adaptive capacity and bottom-up innovation. These include:

Practice	Example
Halal Food Provision	Local warung "Mekar Rasa" now certified by MUI and offers ayam penyet, nasi padang
Prayer Facilities	Prayer rooms created in Balai Banjar and two community homestays
Heritage Walks	Islamic site visits include Gelgel Mosque (est. 1669) and interfaith heritage mural project

One tourist from Malaysia shared:

"It's rare to find such sincerity. I was surprised to see prayer mats ready at our guesthouse."

These practices demonstrate a context-sensitive adaptation of global MFT standards to the Balinese cultural environment, reinforcing the idea that religious and cultural diversity can coexist without conflict in tourism development. It also highlights the potential for developing localized Muslim-friendly tourism frameworks grounded in community values. They also align with Hasaniy & Azisurrohman's (2024) idea of "spatial integration", where religious diversity coexists peacefully through informal urban planning. This demonstrates the village's potential as a replicable model of inclusive destination governance.

5. Conclusion

This study examined how Muslim-friendly tourism (MFT) can be effectively managed through religious-cultural integration in the unique setting of Kampung Gelgel, Bali. Drawing on a qualitative descriptive approach, the research revealed that centuries-old coexistence between Muslim and Hindu communities has cultivated mutual respect and informal collaboration, conditions that have enabled community-driven MFT practices to emerge despite the absence of formal policies. Key contributions include highlighting how interfaith harmony fosters local innovations such as halal-certified eateries, shared prayer spaces, and Islamic heritage walks, which adapt global MFT principles to a Hindu-majority cultural landscape. The study also identified critical gaps in regional tourism policy frameworks, emphasizing the need for institutional recognition, standardized practices, and participatory governance models to support inclusive tourism development in multicultural societies, particularly as the scalability of these valuable community-led initiatives remains constrained without such formal support.

These findings contribute to academic discourse by demonstrating the strategic value of religious-cultural integration and bottom-up governance in shaping sustainable, inclusive tourism. Practically, they offer a replicable model for other non-Muslim-majority destinations aiming to diversify their tourism sectors. Future research should explore the economic impact of MFT in Kampung Gelgel, conduct comparative studies with similar multicultural contexts, and assess long-term sociocultural outcomes of MFT on intergroup relations. As global tourism shifts toward ethical and culturally responsive practices, the Kampung Gelgel experience affirms that religious diversity, when embraced through community leadership and integrated governance, can serve as a powerful asset in inclusive destination planning.

Nevertheless, the case of Kampung Gelgel offers valuable insights into how grassroots, culturally grounded approaches can inform more inclusive and sustainable tourism governance. It demonstrates that religious-cultural integration is not only feasible but can be a strategic asset in diversifying Bali's tourism landscape and addressing the growing demand for Muslim-friendly travel experiences in non-Muslim-majority destinations.

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SUSTAINABLE TOURISM DEVELOPMENT OF PURI ANYAR HERITAGE AS ONE OF THE FIRST HOTELS IN UBUD BALI WITH THE CONCEPT OF LOCAL WISDOM

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Abstract

This research discusses the development of one of the first hotels in Ubud that carries the principles of sustainable tourism by highlighting Balinese local wisdom as the main identity. Through environmentally friendly architectural design, efficient use of natural resources, and involvement of local communities in hotel operations, the hotel aims to have a positive impact on the local environment and socio-economy. This research shows that local wisdom-based tourism development not only provides an authentic experience for tourists, but also supports cultural preservation and improves the quality of life of local communities. Thus, this hotel can be a model of sustainable tourism development in Bali, which can be adopted by other tourism entrepreneurs in creating a more environmentally and socially friendly destination. The research method used is qualitative. Qualitative method is an approach used to understand social phenomena in depth through interpretation, analysis, and description of non-numerical data. This method focuses on descriptive data collection, such as interviews, observations, and document analysis, with the aim of understanding the context, meaning, and experiences of the research subjects.

Keywords: Local Wisdom, Sustainable, Ubud Bali, Heritage, Tourism.

1. Introduction

Ubud is one of the tourist destinations in Gianyar Regency which is known as a place for the development of Balines art and culture throught the concept of local wisdom. Throught this attraction, Ubud is able to attract tourists to visit and stay. Head of Tourism Destination Division of Gianyar Regional Tourism Office, Ni Ketut Mariatni Sukadewi revealed that tourist visits to Gianyar Regency, especially Ubud, have increased every year (NusaBali.com, 2018). The growing number of tourists visiting Ubud is in line with the growth in the number of accommodation in the area. One type of accommodation that is growing rapidly in Ubud is Homestay. Homestay has different characteristics from other lodging because it is a residential building that is still inhabited by the owner, while some of the rooms are rented out to tourists. Homestay is not only a place to stay, but also a place to learn because tourists can feel new experiences related to culture and understanding of the way of life of local people in their daily lives (Wijaya et al., 2017). Besides the increasing number of homestay in Ubud, there are other interesting aspects to consider about Ubud as a tourist destination. Some news about Ubud includes congestion issues and infrastructure damage that are still a concern (Bali Express, 2017).

Along with that, one of the characteristics of buildings in the province of Bali is the presence of religiously oriented ornaments on residential buildings. Traditional village practices in Bali also contribute to Bali's unique identity in the arrangement of village patterns and forms. Traditional Balinese cultural architecture is the resulte of the implementation of

human thought and morality influenced by views of the universe, lifestyle, religious norms, beliefs, and the heritage of past civilization. Balinese local wisdom creates a harmonious patterns of social life, where good relationship with God Almighty, relationship between people, and relationship with the environment are directly related to the concept of Tri Hita Karana. This concept also affects the spatial order, providing a significant positive impact on the village and community (Widyastuty, 2018). This social and spatial state of Balinese society is a unique attraction for local and international tourists, creating a distinctive village identity that needs to be maintained and preserved in a sustainable manner (Kasuma & Suprijanto, 2010).

Through the application of the Local Wisdom concept, Puri Anyar Heritage is the first boutique hotel in Ubud that tries to preserve Bali's unique cultural identity. Puri can also be associated with a symbol of local wisdom, where puri is depicted in the preservation of noble values that exist in society both physically and non-physically (Sudiarta et al 2020). The concept emphasizes cultural preservation and environmental sustainability in Bali, by applying this principle, Puri Anyar Heritage shows its seriousness in supporting the culture and environment in Bali. In addition, the hotel also strives to provide an authentic and unique stay experience for tourists by highlighting Balinese culture and local wisdom. It is hoped that this Local Wisdom approach provides added value for travelers and differentiates Puri Anyar Heritage from other hotels in Ubud Bali.

In general, Puri has three main social roles, that is, (1) a cultural role in the preservation and conservation of arts and culture, (2) an economic role related to the welfare of the community under its auspices, and (3) a political role in directing certain figures (Sudiarta et al, 2022). Puri is a traditional Balinese architectural building that has a different function from a temple. Puri and Pura in Sanskrit mean city, king's palace, capital, kingdom, or walled settlement. But then Pura has a different meaning which is a sacred place for Balinese Hindus, while Puri means palace. Puri is not only where the King Resides, but also where the King lives with his family (Sedyawati 2010).

In addition, Puri also serves as a source of role models for the community related to Hindu religious customs and rituals in Bali. Thus, Puri is a cultural heritage that is always preserved by the community and the Royal Family. As a heritage, the castle (Puri) can be used as a heritage tour because it functions as a center for the conservation of cultural values of the Balinese people (Sudiarto et al. 2022). In addition, Puri Anyar Heritage applies the Local Wisdom concept as a whole, including efforts to preserve culture, the environment, and empower local communities (Kadek Wirawan & Dewi, 2019). This is in line with the principles of Local Wisdom and Tri Hita Karana that have been an integral part of Balinese culture for many years, which is reflected in the hotel's business practices (Ernawati, Sugianingrat, & Widhari, 2017). Puri Anyar Heritage's success in implementing the Local Wisdom concept can also serve as an example for tourism development in Bali, where the preservation of culture and natur is key to the sustainanility of tourism on the island (Ramirez, Varxis, & Ramdhony, 2019). In this context, Puri Anyar Heritage models the implementation of best practices in sustainable tourism that integrates social, cultural, economic, and environmental aspects (Yuanita, Rijanta, & Mulyanim, 2018).

This research will discuss the importance of applying the concept of local wisdom and preserving culture is very important in the development of tourism in Bali. Local wisdom itself is a way of life and knowledge as well as various life strategies in the form of activities carried out by local communities in answering various problems in fulfilling their needs (Njatrijani, 2018). This is done so that tourism in Bali can be sustainable and still maintain its cultural identity. In addition, integrating social, cultural, economic and environmental aspect is also important in the development of sustainable tourism in Bali. One of them, Puri Anyar Haritage,

is an example of the application of sustainable tourism in Bali. They apply the concept of local wisdom and preserve Balinese culture, while also paying attention to social, economic, and environmental aspects. In this research, a qualitative method will be used with data collection teachniques through interviews, observations, and documentation studies.

It is hoped that the result of this research can contribute to the development of tourism potential in Ubud, Bali, ecpecially in Puri Anyar. In addition, the result of this study can also be a reference for relevant parties in developing tourism in other regions in Indonesia. In the development of tourism to increase the tourism potential of an area, such as infrastructure development, tourism promotion, environmental preservation and sustainable tourism industry development, it also includes various approaches that focus on the tourist experience, local economic growth and preservation of culture and nature.

The objectives in this study are as follows :

1. Analyzing the potential of tourism in Ubud, Bali. Especially the potential possessed by Puri Anyar Heritage as the first hotel with the concept of local wisdom
2. Evaluate the impact of the development of Puri Anyar Heritage on the local economy and the improvement of economic activities around the area
3. Assess the effectiveness of the Local Wisdom concept in maintaining and promoting local cultural heritage, as well as strengthening the identity and sustainability of tourism in Ubud, Bali.

2. Literature review

The development of tourism in Indonesia has continued to experience significant growth in recent years. This is supported by various factors, including intensive tourism promotion, infrastructure improvement, and the diversity of natural, cultural, and culinary attractions across the archipelago. In addition, technological developments have also contributed to making access to information and booking easier for tourist. Nonetheless, challenges such as environmental stewardship and sustainablility management remain an important focus in maintaining sustainable tourism growth in the future.

Development is a strategic effort to increase, improve, and develop tourism attractions so that the number of tourists increase, which ultimately has a positive impact on society and government (Paturusi, 2001). According to Yoeti (2001) in Suwarti and Yuliamir (2017) explaians that tourism development is an effort to improve the qulity and increase the types of tourism products offered.

According to Yoeti (2006), in the development of a tourism there are 4 basic principles, which are as follows :

1. Ecological sustainability means that a development in tourism can ensure the maintenance of the tour.
2. Sustainability of life and culture means that the development of tourism makes an increase in the role of society in everyday life and culture.
3. Economic sustainability means that a tourism development that ensures the sustainability of economic activities.
4. Improving and improving the quality of life of the community means providing a forum for them to develop tourism in the area.

Planning is very important in tourism development to ensure that the development process goes according to plan and achieves the desired goals. The main reson for doing a tourism development is to improve the economy of the region or country (Santi, 2010). According to I Gusti Bagus (2017) cited in (Asmara, 2020), tourism development has the potential to expand business activities and provide positive social, cultural, and economic impacts at the national

level. When tourism development is well planned, it should be able to provide significant benefits to the community in a destination. This section includes analysis, reviews of previous research and relevant theories.

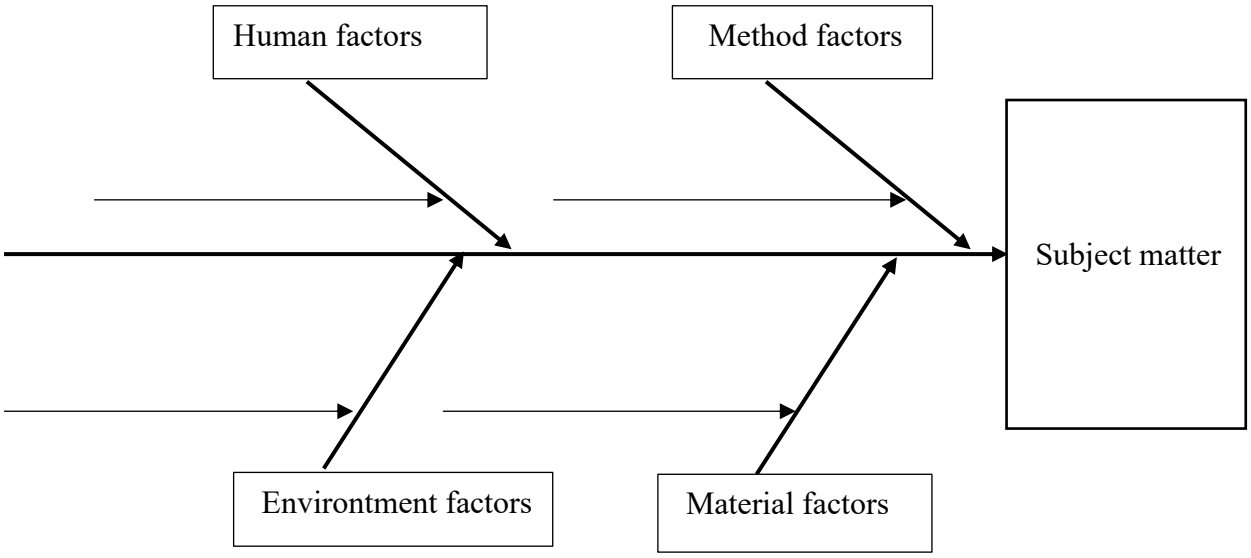
3. Methodology

The research method used is qualitative research method. Qualitative method is an approach used to understand social phenomena in depth through interpretation, analysis, and description of non-numerical data. This method focuses on descriptive data collection, such as interviews, observations, and document analysis, with the aim of understanding the context, meaning, and experience of the research subject. The data collection method used is the primary data collection method. Primary data collection methods that will be used in this research are observation, interviews and documentation studies.

The research location was at Puri Anyar Hotel, Ubud. Observation was conducted to directly observe the conditions and activities at the hotel, while the interview method was conducted directly to the research subject to gain a deeper understanding. The method used is in the form of (SWOT) analysis, namely Strengths, Weaknesses, Opportunities and Threats. Strength, Weakness, Opportunity, and Threat (SWOT). This method analyzes the strengths, weaknesses, opportunities, and threats related to tourism development, by considering aspects of local wisdom at Puri Anyar Heritage Hotel which has unique potential. This helps in formulating development strategies that are in accordance with the cultural context and local wisdom values and increase the potential for local tourism development. The SWOT matrix is used in compiling strategic factors in the development of an area. This matrix clearly illustrates how the internal opportunities and threats faced can be matched with the internal strengths and weaknesses possessed. This matrix can produce four sets of possible strategic alternatives that can be used.

IFE / **EFE**	***Strength* (S)** (Determine internal strength factors)	***Weakness* (W)** (Determine internal weakness factors)
***Opportunities* (O)** (Determine external opportunity factors)	**Strategi SO** list strengths to seize opportunities	**Strategi WO** list to minimize weaknesses by taking advantage of opportunities
***Threats* (T)** (Determine external threat factors)	**Strategi ST** list strengths to avoid threats	**Strategi WT** list to minimize weaknesses and avoid threats.

A fishbone analysis is a structural analysis that allows for a more detailed analysis of the causes of problems, discrepancies, and challenges. Fishbone analysis is usually called a fishbowl diagram or fishbone diagram which is one of the methods used to analyze the causes of a problem or condition (Suharto et al 2022).



4. Results and discussions

Ubud Village is one of the villages in the Ubud tourism area which is located in the plain area and has been developing for quite a long time until now it is still visited by many local and foreign tourists. There is one castle that is a destination and attraction for tourists, namely Puri Anyar Heritage, precisely located on Suweta Street, No.6 Ubud, Bali.

Puri Anyar Heritage is a castle located in the center of Ubud and is one of the attractions that attracts tourists both local and foreign. This castle offers rooms with traditional nuances. This castle is located in a strategic location which is close to Ngurah Rai International Airport with a distance to the airport of about 28.7 Km. By staying at Puri Anyar Heritage in Ubud Town, you are only a 5-minute drive from Ubud Monkey Forest and Puri Saren Agung. The castle is 22.1 km from Sanur Beach and 0.2 km from Ubud Traditional Art Market.

The location of this Puri is also very close to the city center which is about 300 meters. Public transportation available in Ubud includes the Loka Srana Bus terminal, and Ubung Bus Terminal. The castle offers several facilities such as restaurant, free breakfast, continental breakfast, free wi-fi, bicycle rental, free breakfast, airport transportation, laundry service, shuttle bus service, car rental, non-smoking room, spa room. The leisure activities and facilities available at this castle include ticketing services, hiking, massage, yoga room, garden, and tour services.

In addition, the castle illustrates the importance of preserving the noble values that exist in society in both physical and non-physical forms. The shape of the castle building is a form of physical heritage that can be a tourist attraction and existing values such as history and the way of life of the castle are also a concern for educational tourism and function as a conservation for the sustainability of existing values.

Puri anyar is also a performance venue, the entire Puri area is used and in response there is no boundary between the dancers and the audience, which is presented in the middle of the community all the elements around the place become part of the performance structure.

4.1. SWOT analysis as a development strategy

4.1.1. Strengths

4.1.1.1. Strategic location

The castle is strategically located near Ngurah Rai International Airport with a distance of 28.7 km to the airport. By staying at Puri Anyar Heritage in Ubud Town, you will be only a 5-minute drive from Ubud Monkey Forest and Puri Saren Agung. The castle is 22.1 km from Sanur Beach and 0.2 km from Ubud Traditional Art Market. The location of this Puri is also very close to the town center which is about 300 meters.

4.1.1.2. Strategic location

The prices offered at this inn vary greatly, starting from Rp300,000/night to Rp1,000,000/night. The price offered can be said to be quite affordable for a castle inn in a well-known tourist spot, especially Bali.

4.1.2. Weaknesess

4.1.2.1. Three star hotel

Based on the information and reviews displayed on the booking.com website (online ticket booking website) that Puri Anyar Heritage Ubud is one of the 3-star hotels in Ubud Bali. This can be a weakness for Puri because in Ubud itself quite a lot of 4 and even 5 star hotels are offered.

4.1.2.2. Child unfriendly price

Based on information on the booking.com website, children aged 6 years and over will be charged adult prices, while we know that ages 6 - 11 years are still children.

4.1.3. Opportunities

4.1.3.1. Many Travelers stay overnight

In the past, this Puri was intended for lodging for friends and relatives of high-ranking officials and respected people in Bali, but until now because of the rapid development of tourism in Bali, this Puri has also developed as a larger lodging accommodation because the demand for tourists to stay is also getting bigger, both local and foreign tourists.

4.1.3.2. Close to Bali's iconic tourist attractions

The location of this Puri is close to various tourist attractions in Bali such as Yeh Gangga Beach, Campuhan Ridge Walk, Ubud Monkey Forest, Batu Bolong Temple. This is an opportunity for Puri Anyar because it is possible that tourists who travel to these tourist attractions for a long period of time will look for lodging around it.

4.1.4. Threats

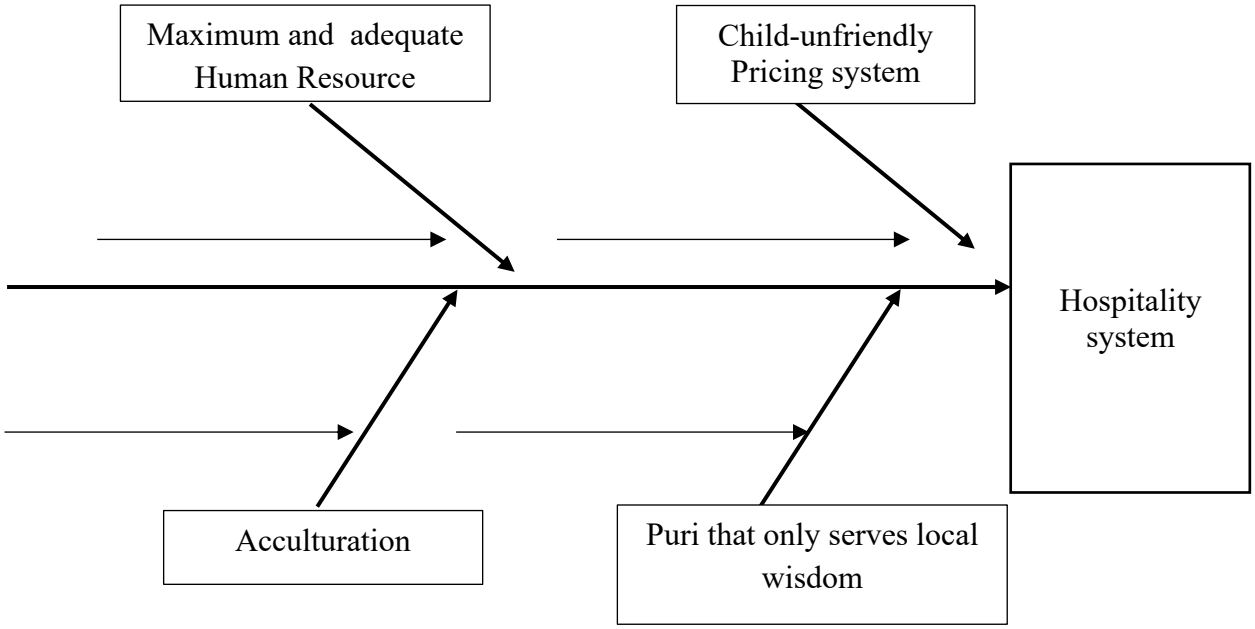
4.1.4.1. Many hotels and lodgings are more modern

Currently, many hotels in Ubud provide lodging with a more modern feel and better service. This can be a threat to the development of Puri Anyar. However, this does not apply to tourists who want to get the feel of local wisdom.

4.1.4.2. The occurrence of acculturation

As we all know that Bali is a tourist spot that is already known in the international realm. There are many foreign tourists who bring foreign cultures into Indonesia, including in Bali. This does not rule out the possibility that if the local wisdom in Ubud, especially the environment around Puri Anyar Ubud, is not well maintained, there will slowly be a very significant acculturation.

4.2. Fishbone analysis as a development strategy



This problem analysis is carried out based on weaknesses and threats based on the results of the SWOT analysis of Puri Anyar Heritage which will have an impact on the development of the castle. The problem analysis was conducted using a fishbone diagram. Based on the existing problems in the SWOT analysis, it can be seen that the main problems that exist in Puri are related to the hotel system such as the pricing system that is not child-friendly, as well as several other factors that make this hotel only classified as a 3-star hotel.

5. Conclusion

Based on the results of this research, several conclusions can be drawn which are described in accordance with the formulation of the problem and the objectives of the research with a qualitative description of "Sustainable Tourism Development of Puri Anyar Heritage as One of the First Hotels in Ubud Bali with the Concept of Local Wisdom", where Puri Anyar Hritage succeeded in becoming a pioneer in applying the concept of Local Wisdom in the Ubud hotel industry. The hotel proves that the preservation of Balinese traditional culture through the Tri Harta Karana philosophy can be juxtaposed with modern business practices to create sustainable tourism. Not only a modern hospitality industry, but also a strong differentiator in the market competition.

Puri Anyar Haritage has a competitive advantage through its strategic location and unique authentic concept. This research explains the importance of a development strategy that optimizes strengths to take advantage of opportunities, while maintaining local cultural identity. The success of this business model can be a reference for the development of sustainable tourism in other destinations in Indonesia, showing that the preservation of local wisdom and economic development can go hand in hand to create added value for all stakeholders.

Puri Anyar Heritage also faces challenges such as competition with higher star hotels and the risk of cultural acculturation, then also related to the pricing system which is currently not friendly to children. However, the existing problems can change as the times change and develop, so further research needs to be done on this matter.

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THE MODERATING ROLE OF SEARCH ENGINE OPTIMIZATION ON THE INFLUENCE OF ONLINE WORD OF MOUTH, SOCIAL STATUS, AND LIFESTYLE ON THE PURCHASE DECISION OF DIGITAL PRODUCTS IN GAME

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Abstract

This study analyzes the influence of online word of mouth (eWOM), social status, and lifestyle on purchasing decisions for digital products in the Rise of Castles game, with search engine optimization (SEO) as a moderating variable. The research sample of 100 respondents was selected through purposive sampling, and the data were analyzed using PLS-SEM with WarpPLS 8.0. The results showed that social status and lifestyle have a positive and significant effect on purchasing decisions, while eWoM has no effect on purchasing decisions. SEO has a direct influence on purchasing decisions and acts as a moderating variable that strengthens the influence of social status and lifestyle but weakens the influence of social status on purchasing decisions.

Keywords: online word of mouth, social status, lifestyle, search engine optimization, purchase decision.

1. Introduction

Purchase decision is a crucial process in marketing that determines whether a consumer will buy a particular product or service. It involves selecting a brand based on various internal and external factors (Kotler & Keller, 2016). Schiffman and Kanuk (2010) state that the purchase decision includes evaluating alternatives and choosing the product that best meets consumer needs. Hawkins and Mothersbaugh (2013) add that emotional and psychological factors also play significant roles, making the purchase decision a complex and multi-dimensional variable in marketing studies.

Understanding consumer purchase decisions is essential for business performance. These decisions reflect the effectiveness of marketing strategies and directly impact a company's revenue and profitability. According to Aaker (2014), companies that understand these dynamics can better design products, set competitive prices, and select effective distribution channels. Porter (2008) emphasizes that effective purchasing decisions can foster customer loyalty, enhance market positioning, and support long-term growth.

In the context of the growing digital game industry, understanding what influences consumer purchase decisions of in-game digital products has become increasingly relevant. These digital products—such as virtual items, characters, and premium features—enhance user experience. Thus, exploring the influencing factors offers valuable insights for game developers and marketers. In-game purchase decisions are affected by online word of mouth (eWOM), lifestyle, and social status, as well as user experience and perceived value.

The fluctuating trends in in-game purchase revenue rankings over time indicate inconsistency in consumer buying behavior. One of the factors that could influence purchasing decisions is eWOM. According to Statista (2021), 70% of gamers are likely to purchase a

product based on recommendations from friends or online communities. This confirms the importance of eWOM in digital product marketing. eWOM refers to communications between consumers about products or services. Cheung and Thadani (2019) assert that eWOM significantly shapes perceptions and purchasing decisions, especially in competitive industries like gaming. Consumers tend to trust peer recommendations more than traditional advertising, making eWOM an effective promotional tool.

Research by Yulindasari & Fikriyah (2022) and Prasad et al. (2017) supports a significant positive influence of eWOM on purchase decisions. In contrast, Wijaya et al. (2022) found no significant effect of eWOM. Social status within online gaming communities also influences purchasing behavior. Players who own exclusive digital items are often perceived as having higher status. Kim et al. (2018) note that social status plays a vital role in shaping consumer preferences and purchase behavior. However, research results regarding this influence have been inconsistent.

Lifestyle also plays an important role in shaping consumer purchasing decisions. Lifestyle reflects how individuals spend their time and money, which influences their preferences for digital products. Solomon et al. (2020) highlight that gamers' lifestyles are often associated with community, social interaction, and immersive experiences. Some studies (Philip, 2019; Aini & Andjarwati, 2020) found lifestyle has a positive influence on purchase decisions, while others (Zaezatun, 2022) report no significant effect.

The inconsistency in previous findings presents a research gap, suggesting the need to develop a more comprehensive empirical model. This study introduces Search Engine Optimization (SEO) as a moderating variable. SEO is a vital digital marketing strategy that enhances the visibility of digital products in search results. Chaffey and Smith (2021) and Moz (2022) found that SEO improves product accessibility and influences consumer purchasing behavior.

Accordingly, this study examines the moderating role of SEO on the influence of eWOM, social status, and lifestyle on digital product purchase decisions in games.

2. Literature review

2.1 Marketing Management

Marketing management is a systematic approach to planning, executing, and controlling marketing strategies that align with an organization’s objectives. According to Kotler and Keller (2021), marketing management involves the design, pricing, promotion, and distribution of products or services to facilitate transactions that satisfy both customer needs and organizational goals. Haryanto (2022) defines it as a process of organizing, directing, and supervising marketing activities effectively and efficiently. The primary goals of marketing management include long-term business growth, profitability, employment generation, and sustainability (Purnomo, 2023).

2.2 TheoryofPlannedBehavior(TPB)

The Theory of Planned Behavior (Ajzen, 1991) explains the relationship between individual attitudes, subjective norms, and perceived behavioral control in shaping behavioral intentions. It is a development of the Theory of Reasoned Action (TRA) and is particularly useful in contexts where behavior is influenced by internal beliefs and external factors. TPB asserts that individuals are more likely to perform a behavior if they have a positive attitude toward it, believe that important others think they should perform it, and feel capable of performing it.

2.3 Purchase Decision

Purchase decision is defined as the consumer's action to buy or not to buy a product, involving several stages such as need recognition, information search, evaluation of alternatives, and final decision. Kotler, Armstrong, and Balasubramanian (2023) state that the process is influenced by cultural, social, personal, and psychological factors. These include age, lifestyle, economic conditions, motivation, perception, and social status. Nugroho (2010) emphasized that understanding these variables allows marketers to design more effective strategies.

2.4 Online Word of Mouth (eWOM)

eWOM is the process of spreading consumer opinions and recommendations via digital platforms. It is characterized by permanence, rapid accessibility, platform dispersion, and anonymity (King et al., 2014). According to Kotler and Keller (2016), eWOM can influence consumer behavior both positively and negatively based on their online experiences. Goyette et al. (2012) identify key indicators such as reading online reviews, collecting review information, consulting online, concern over not reading reviews, and increased confidence after reading reviews.

2.5 Social Status

Social status refers to one's position in the social hierarchy, often expressed through ownership of prestigious goods. In digital contexts, social status may be linked to exclusive virtual items or community recognition. Kim et al. (2018) and Bourdieu (1984) argue that symbolic assets—such as premium features—reinforce one's status. Indicators of social status include use of products as status symbols, preference for premium brands, desire to stand out, group influence, and purchase for recognition (Tung et al., 2020).

2.6 Lifestyle

Lifestyle represents a person's pattern of living, shaped by values, interests, and activities. Solomon (2009) notes that lifestyle is reflected in consumption behavior, while Kotler (2002) describes it as manifested in one's daily activities and opinions. According to Arnould et al. (2019), lifestyle is affected by demographic and social factors. Key indicators include hedonistic consumption, social value influence, preference for experiential consumption, engagement in digital consumption, and use of consumption to signal social image (Fitzgerald et al., 2018).

2.7 Search Engine Optimization (SEO)

SEO refers to strategies and techniques aimed at increasing a website's visibility on search engine results. Lee et al. (2020) and Kotler (2021) highlight the role of SEO in enhancing digital marketing effectiveness and influencing consumer discovery and purchase behavior. Important SEO components include on-page and off-page optimization, technical SEO, and

user experience. Key indicators include search ranking, site speed, mobile optimization, content quality, and simple URL structure.

2.8 Prior Studies and Research Gap

Previous studies on eWOM, social status, lifestyle, and SEO show inconsistent results regarding their influence on purchase decisions. For example, some studies found that eWOM significantly influences purchase behavior (Hardiansyah & Khuzaini, 2023; Murti et al., 2024), while others reported no significant effect (Wijaya et al., 2022). Similar inconsistencies appear in studies related to social status (Yulianti, 2023; Susanti, 2020) and lifestyle (Kusuma, 2023; Suryani, 2022). Meanwhile, research on SEO (Hasugian, 2024; Devano et al., 2023) consistently shows a positive effect.

3. Methodology

3.1 Research Design

This study employs a quantitative research design using a descriptive and causal approach. The research was conducted to identify causal relationships between independent variables (online word of mouth, social status, lifestyle), the dependent variable (purchasing decision), and the moderating variable (SEO).

3.2 Population and Sample

The population in this study consisted of individuals who had played the game and made in-game purchases. A purposive sampling technique was used to collect data from 100 respondents who met these criteria.

3.3 Data Collection Methods

Primary data were collected through questionnaires distributed online via Google Forms. Each item was measured using a five-point Likert scale ranging from "strongly disagree" to "strongly agree."

3.4 Data Analysis Technique

Structural Equation Modeling (SEM) was used through WarpPLS 8.0 software. The analysis included outer model and inner model.

3.5 Research Model

The research model developed in this research can be seen in Figure 1.

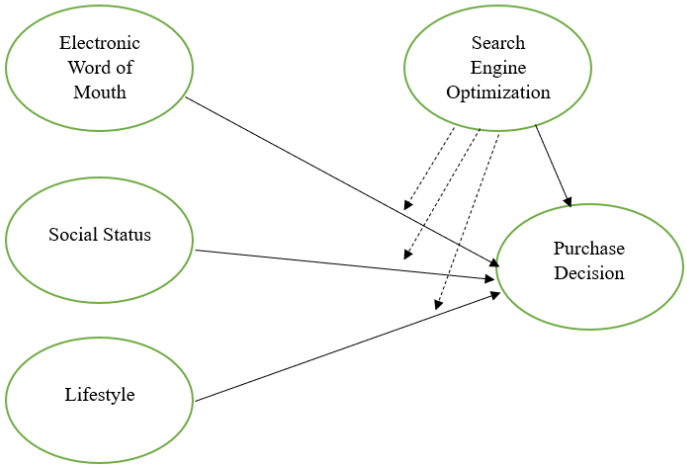

Figure 8

4. Results and discussions

The research findings indicate that social status and lifestyle have a positive and significant influence on purchase decisions, while eWOM does not affect purchase decisions. SEO has a direct influence on purchase decisions and also acts as a moderating variable that strengthens the influence of social status and lifestyle, but weakens the influence of eWOM on purchase decisions

4.1 Measurement Model Analysis (Outer Model)

a. Convergent Validity

Convergent validity is assessed based on the loading factor value of each indicator in the study. An indicator is considered valid if its loading factor reaches or exceeds 0.7. The calculated loading factor values for each indicator are presented in Figure 2 below.

Indicator	eWOM	Social Status	Lifestyle	SEO	Purchase Decision	Description
WOM1	0.743	0.549	0.344	0.578	0.444	Valid
WOM2	0.793	0.440	0.131	0.550	0.273	Valid
WOM3	0.733	0.523	0.425	0.489	0.414	Valid
WOM4	0.726	0.455	0.406	0.510	0.370	Valid
WOM5	0.743	0.451	0.309	0.533	0.412	Valid
SS1	0.580	0.717	0.422	0.363	0.498	Valid
SS2	0.422	0.719	0.407	0.628	0.552	Valid
SS3	0.507	0.828	0.441	0.592	0.537	Valid
SS4	0.376	0.610	0.518	0.362	0.511	Valid
SS5	0.492	0.801	0.570	0.541	0.618	Valid
GH1	0.263	0.497	0.729	0.440	0.590	Valid
GH2	0.383	0.579	0.748	0.458	0.609	Valid
GH3	0.502	0.525	0.803	0.522	0.571	Valid
GH4	0.155	0.397	0.752	0.183	0.462	Valid
GH5	0.316	0.407	0.715	0.229	0.540	Valid
SEO1	0.519	0.604	0.602	0.534	0.620	Valid
SEO2	0.508	0.521	0.372	0.840	0.463	Valid
SEO3	0.509	0.460	0.308	0.814	0.384	Valid
SEO4	0.607	0.541	0.289	0.865	0.475	Valid
SEO5	0.565	0.449	0.288	0.752	0.420	Valid
KP1	0.265	0.437	0.585	0.304	0.708	Valid
KP2	0.261	0.602	0.610	0.418	0.775	Valid
KP3	0.561	0.655	0.594	0.597	0.866	Valid
KP4	0.568	0.696	0.601	0.688	0.885	Valid

Figure 9

Based on Figure 2, it can be seen that all indicators have loading factor values above 0.7, indicating that each indicator meets the requirements for convergent validity. The indicator with the highest value is KP4 with a loading factor of 0.885, meaning this indicator has the strongest contribution in representing the latent variable Purchase Decision. Meanwhile, the

indicator with the lowest value that is still considered valid is SEO1 with a loading factor of 0.534.

b. Discriminant Validity

Discriminant validity is tested by examining the Average Variance Extracted (AVE) values. The AVE calculation results are presented in Figure 3 below.

Latent Variable	AVE	Description
Online Word of Mouth (eWoM)	**0.748**	Valid
Social Status	**0.739**	Valid
Lifestyle	**0.750**	Valid
Search Engine Optimization (SEO)	**0.770**	Valid
Purchase Decision	**0.812**	Valid

Figure 10

Based on Figure 3, it can be seen that all latent variables have AVE values above 0.5, indicating that each variable meets the requirements for discriminant validity. The variable with the highest AVE value is Purchase Decision (0.812), which means this variable has the highest clarity of indicators in explaining its construct. Meanwhile, the variable with the lowest AVE value that is still valid is Social Status (0.739), which still demonstrates a good ability to explain its indicators.

These results indicate that all latent variables in this study have met the criteria for discriminant validity and can be used for further analysis.

c. Reliability Test

The reliability test is used to assess the accuracy, consistency, and precision of the measurement tool in measuring a construct. Reliability testing consists of two methods: Cronbach's Alpha and Composite Reliability. A construct is considered reliable if the Cronbach's Alpha value is greater than 0.5, while the Composite Reliability value must be greater than 0.7. The Cronbach's Alpha and Composite Reliability values for each variable in this study are presented in Table Figure 4 below.

Variabel Laten	Cronbach's Alpha (CA)	Composite Reliability (CR)	Description
Online Word of Mouth (eWOM)	**0.803**	**0.864**	Reliable
Social Status	**0.787**	**0.856**	Reliable
Lifestyle	**0.805**	**0.865**	Reliable
Search Engine Optimization (SEO)	**0.818**	**0.877**	Reliable
Purchase Decision	**0.823**	**0.884**	Reliable

Figure 11

Based on Figure 4, all latent variables in this study have Cronbach's Alpha values greater than 0.5 and Composite Reliability values greater than 0.7, indicating that each construct has a good level of accuracy, consistency, and precision in measuring its respective variable.

4.2 Structural Model Analysis (Inner Model)

a. Model Fit Test

The evaluation of the inner model is conducted by analyzing the Model Fit and Quality Indices values. In the analysis using WarpPLS 8, several indicators are used to assess the quality of the model. The values of the Model Fit and Quality Indices are presented in Figure 5 below.

Model Fit and Quality Indices	Model Fit	Score	Description
Average Path Coefficient (APC)	P < 0,05	P = 0,002	Good
Average R-squared (ARS)	P < 0,05	P < 0,001	Good
Average Adjusted R-Squared (AARS)	P < 0,05	P < 0,001	Good
Average Block VIF (AVIF)	Acceptable if <= 5, ideally <= 3,3	3,198	Acceptable
Tenenhaus GoF (GoF)	Small >= 0,1; Medium >= 0,25; Large >= 0,36	0,743	Large

Figure 12

The results of the model fit test indicate that the research model has a good fit with the data. The values of the Average Path Coefficient (APC) = 0.207 (p = 0.002) and Average R-squared (ARS) = 0.746 (p < 0.001) show that the relationships between variables are significant and that the model has high predictive power. Additionally, the Goodness of Fit (GoF) = 0.743 falls into the large category (> 0.36), indicating that the model is very effective in explaining the dependent variable.

In terms of multicollinearity, the Average Block Variance Inflation Factor (AVIF) = 3.198 is still within the acceptable threshold (≤ 5), suggesting that there is no strong indication of multicollinearity among latent variables. Therefore, this research model has a high degree of fit and can be reliably used to analyze the factors influencing digital product purchasing decisions in games.

b. Path Coefficient

Path coefficient evaluation aims to measure the strength of the influence of independent variables on the dependent variable. Based on the relationships between electronic word of mouth (eWOM), social status, and lifestyle on purchase decisions with search engine optimization (SEO) as a moderating variable, the resulting path relationships can be seen in the following figure.

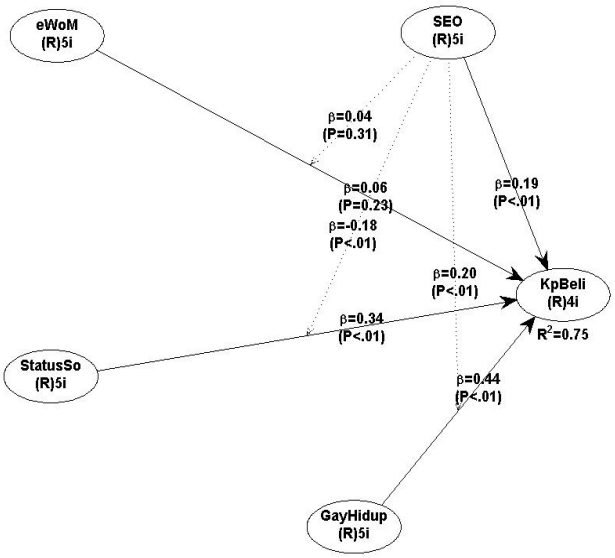

Figure 13

c. Hypotheses and Analysis

Hypothesis testing is determined based on the p-value. If the p-value ≤ 0.05, then H0 is rejected and H1 is accepted, indicating a significant effect. Conversely, if the p-value > 0.05, then H0 is accepted and H1 is rejected, meaning there is no significant effect. To measure the strength of the relationships between variables, path coefficients are used. The following table presents the path coefficient values along with the corresponding p-values as indicators of significance.

Based on the analysis results, the hypothesis testing in this study yielded the following findings:

Hypotheses	Path Coefficient	P-Value	Conclusion	Description
H1: eWOM → Purchase Decision	0,056	0,231	Not Significant	Rejected
H2: Social Status → Purchase Decision	0,344	< 0,001	Significant Positive	Accepted
H3: Lifestyle → Purchase Decision	0,442	< 0,001	Significant Positive	Accepted
H4: SEO → Purchase Decision	0,187	0,008	Significant Positive	Accepted
H5: SEO * eWOM → Purchase Decision	0,038	0,309	Not Significant	Rejected
H6: SEO * Social Status → Purchase Decision	-0,181	0,010	Significant Negative	Accepted
H7: SEO * Lifestyle → Purchase Decision	0,203	0,005	Significant Positive	Accepted

Figure 14

a. *Hypothesis Testing 1*

Based on Figure 7, the hypothesis test results show that the path coefficient value for eWOM on purchase decision is 0.056 with a p-value of 0.231. Since the p-value > 0.05, H1 is rejected, which means that electronic word of mouth (eWOM) does not have a significant influence on purchase decisions. This indicates that recommendations and reviews from other players in the *Rise of Castles* game do not directly drive the decision to purchase digital products in the game.

b. *Hypothesis Testing 2*

The hypothesis test results show that the path coefficient value for social status on purchase decision is 0.344 with a p-value < 0.001. Since the p-value < 0.05, H2 is accepted, which means that social status has a positive and significant influence on purchase decisions. This suggests that players with higher social status in the gaming community are more likely to purchase digital products to maintain or enhance their image in the game.

c. *Hypothesis Testing 3*

The hypothesis test results show that the path coefficient value for lifestyle on purchase decision is 0.442 with a p-value < 0.001. Since the p-value < 0.05, H3 is accepted, which means that lifestyle has a positive and significant influence on purchase decisions. Players with a consumptive lifestyle are more likely to purchase exclusive items to enhance their gaming experience.

d. *Hypothesis Testing 4*

The hypothesis test results show that the path coefficient value for SEO on purchase decision is 0.187 with a p-value of 0.008. Since the p-value < 0.05, H4 is accepted, indicating that SEO has a positive and significant influence on purchase decisions. This suggests that effective search optimization can increase the likelihood of players finding and purchasing digital products in the game.

e. *Hypothesis Testing 5*

The hypothesis test results show that the path coefficient value for the interaction between SEO and eWOM on purchase decision is 0.038 with a p-value of 0.309. Since the p-value > 0.05, H5 is rejected, which means that SEO does not moderate the effect of eWOM on purchase decisions. This indicates that the presence of SEO neither strengthens nor weakens the relationship between player recommendations and purchase decisions.

f. *Hypothesis Testing 6*

The hypothesis test results show that the path coefficient value for the interaction between SEO and social status on purchase decision is -0.181 with a p-value of 0.010. Since the p-value < 0.05, H6 is accepted, but with a negative effect, meaning that SEO weakens the influence of social status on purchase decisions. In other words, the higher the level of search optimization, the lesser the impact of social status on players' purchasing decisions.

g. *Hypothesis Testing 7*

The hypothesis test results show that the path coefficient value for the interaction between SEO and lifestyle on purchase decision is 0.203 with a p-value of 0.005. Since the p-value < 0.05, H7 is accepted, which means that SEO strengthens the influence of lifestyle on purchase decisions. In other words, the better the search optimization, the greater the impact of a consumptive lifestyle on the purchase of digital products in the game.

5. Conclusion

5.1 Conclusion

Based on the analysis conducted, this study presents several key findings regarding the influence of online word of mouth (eWOM), social status, lifestyle, and search engine optimization (SEO) on purchasing decisions for digital products in the game. The main conclusions of this research are as follows:

a. eWOM has no significant effect on digital product purchasing decisions in the game, indicating that reviews and recommendations from other players are not the main factors driving purchases.

b. Social status has a positive and significant influence on purchasing decisions, meaning that the higher a player's social status in the game community, the more likely they are to buy digital items to enhance their in-game image.

c. Lifestyle has the most dominant influence on purchasing decisions, showing that players with a consumptive lifestyle are more inclined to buy digital products in-game to enhance their gaming experience.

d. SEO has a direct effect on purchasing decisions, meaning that search optimization can increase the likelihood of players finding and purchasing digital products in the game.

e. SEO does not moderate the relationship between eWOM and purchasing decisions, indicating that the effectiveness of player recommendations on purchasing decisions is not influenced by the level of search optimization.

f. SEO moderates the relationship between social status and purchasing decisions negatively, meaning that the higher the search optimization, the lower the influence of social status on purchasing decisions.

g. SEO moderates the relationship between lifestyle and purchasing decisions positively, indicating that SEO strengthens the relationship between a consumptive lifestyle and in-game purchase decisions.

Overall, the results of this study affirm that social status and lifestyle are the main factors influencing digital product purchasing decisions in games, with SEO acting as a moderating variable that can either strengthen or weaken the relationships among these variables.

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SKINTIFIC ATTRACTIVENESS: ANALYSIS OF FACTORS AFFECTING MOISTURIZER PURCHASING DECISIONS BY UNISMA 2021 STUDENTS

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Abstract

This study aims to determine and analyze the relationship between the influence of digital marketing, brand awareness and brand image on purchasing decisions on skintific skincare. This study uses a case study on Unisma students where data is obtained by distributing questionnaires via g-form to Unisma students selected by purposive sampling. Determination of the number of samples in this study using the Slovin formula and the results obtained were 96 respondents. The analysis methods used in this study are instrument testing, (validity testing, reliability testing), normality testing, classical assumption testing (multicollinearity testing, heteroscedasticity testing), multiple linear regression analysis, hypothesis testing (F test and t test), determination coefficient testing (Adjusted R2) data processing using the IBM SPSS 26 program. The results of this study indicate that the influence of digital marketing, brand awareness, brand image simultaneously influences purchasing decisions. Digital Marketing partially influences purchasing decisions, Brand Awareness partially influences purchasing decisions, Brand Image partially influences purchasing decisions.

Keywords: Digital Marketing, Brand Awareness, Brand Image, Purchase Decision

1. Introduction

The skincare industry in Indonesia is experiencing significant growth, especially among teenagers. New brands are emerging with a variety of innovative products, and Skintific is one that is known for its technology-driven approach to product development. Amidst this fierce competition, marketing strategies are successful and crucial to attract customers' attention. To increase brand awareness and brand image, digital marketing is one of the key strategies. Purchasing decisions can be influenced by these two important factors. The way companies market their goods has changed due to the rapid advancement in information and communication technology.

Skintific is a skincare brand that emphasizes products with formulations based on scientific and dermatological research, aiming to provide skincare solutions that are effective, safe, and tailored to various skin needs. One of its flagship products is moisturizer, which is designed to provide optimal and deep moisture to the skin, while improving texture and maintaining overall skin health.

A study by Nielsen shows that 59% of consumers are more likely to buy products from brands they are familiar with. In the context of college students, high brand awareness of skincare brands such as skintific increases the likelihood of making a purchase. The purchase decisions made by consumers provide valuable insights for marketers regarding effective strategies in utilizing digital marketing. This aims to increase their awareness and brand image and drive better purchase decisions.

In the opinion of Kotler, (2019) digital marketing includes various strategies to reach target audiences through digital media, including the internet, mobile devices, social media, and various other digital platforms. Basically, digital marketing emphasizes how important it is to use digital technology to interact personally and effectively with customers. Dafid's opinion, (2018) argues that the ability of consumers to identify that a particular brand is one of the characteristics of the product offered, and this is recognized by a particular brand. And a measure of how far a brand is known and remembered by consumers. This involves a process from the initial stage when consumers are not yet aware of the existence of the brand to the final stage where the brand is the first to come to mind when talking about a particular product or service.

In the opinion of Keller, (2020) argues that brand image, or better known as brand image, is one of the crucial components in brand management that explains how consumers perceive a product or service based on its quality and appearance, in this definition, brand image can create consumer memories that are certainly formed by consumers about a brand. As stated by Mangkunegara, (2019) reveals that purchasing decisions are a framework related to work or something that consumers do when they make purchases. The behavior of others and unexpected situations are the two main components that influence this type of work. Consumers tend to be dissatisfied if performance is below expectations, on the other hand they will be happy and satisfied if performance exceeds expectations.

This, this research provides benefits not only from an academic perspective, but also practically for the skincare industry. So that researchers conducted a study with the title "The Influence of Digital Marketing, Brand Awareness and Brand Image on Purchasing Decisions for Moisturizer Products at Skintific Skincare (Study on Islamic University of Malang students class of 2021)".

2. Literature Review

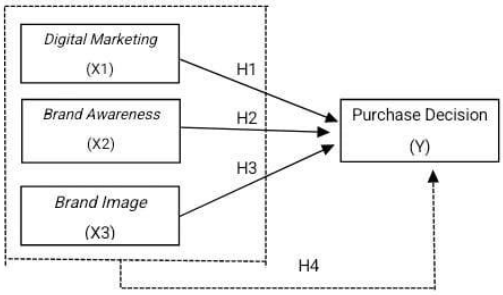
According to Mangkunegara (2019) purchasing decisions can be considered as a framework that influences performance, which shows customer beliefs when they make purchasing decisions. This structure is influenced by two main components, namely perceptions of others and expected circumstances. If the perceived performance is below expectations, consumers will feel dissatisfied. Conversely, if the performance is in accordance with consumer expectations, there will be a feeling of satisfaction and happiness.

According to Daengs, Achmad (2016) states that the digital marketing understanding of an entrepreneur or businessman focuses more on the marketing system through internet media, this definitely includes cell phones and various social networking sites. However, for this technique to be more effective, it seems that promotional techniques are less prioritized and more focused on communication. Building personalized relationships with consumers through listening to their complaints or suggestions can make customers feel more valued.

Brand Awareness according to Harjadi, (2024), the level of consumer recognition and awareness of a brand is an important aspect in the world of marketing and branding. This concept has a direct impact on purchasing decisions made by consumers. Brand awareness not only includes how much consumers are familiar with a brand, but also how deeply they understand the characteristics, quality and value offered by the brand.

Brand Image according to Leksono, (2023) that brand image is needed by a company, especially in facing increasingly competitive business competition. With a positive product

image, the company will be able to make its products different from its competitors who have other similar products.



Gambar 1. Research Model

Hypothesis

H1 : It is suspected that digital marketing has a significant impact on purchasing decisions.

H2 : It is suspected that brand awareness has a significant influence on purchasing decisions.

H3 : It is suspected that brand image has a significant influence on purchasing decisions.

H4 : It is suspected that Digital Marketing, Brand Awareness and Brand Image simultaneously have a significant influence on purchasing decisions.

3. Methodology

A quantitative approach with an associative research type is used in this study. Where, associative research is conducted to understand how two or more variables interact with each other (Sugiono, 2013). In this context, they will be able to observe the effect of digital marketing, brand awareness, and brand image on purchasing decisions. Research on a specific population or sample is called a quantitative approach and is conducted randomly using instruments, analysis, and statistics Sugiyono, (2015).

The research population is a generalization area consisting of subjects and objects with certain characteristics and qualities Sugiyono, (2017). These characteristics have been determined by the researcher to be the object of study, in the hope of drawing relevant conclusions. As a result, the population in this study is college students at the Islamic University of Malang Class of 2021.

Sugiyono, (2017) suggests that the sample is a part taken from the entire population that represents the various characteristics possessed by the population. In this study, the sampling method applied was purposive sampling, or what is often referred to as judgmental sampling. The purposive sampling technique is a nonprobability sampling method, in which the researcher sets certain criteria that must be met by individuals or objects in order to be included in the sample, and it is known that the population is 2,201 female students, with calculations using the slovin formula, the sample size is 96 female students.

$$n = \frac{N}{1 + N(e)^2}$$

Gambar 2 Slovin's formula

$n = N / (1 + N e^2)$

$= 2.201 / (1 + 2.201 \times 0{,}1^2)$

$= 95{,}6$ = rounded to 96

4. Result And Discussion

Tabel 1 Validity Test Result

Variabel	Item	R hitung	R tabel 5% (96)	Sig.	Kriteria
X1	X1.1	0,578	0,204	0,000	Valid
	X1.2	0,645	0,204	0,000	Valid
	X1.3	0,696	0,204	0,000	Valid
	X1.4	0,606	0,204	0,000	Valid
	X1.5	0,613	0,204	0,000	Valid
	X1.6	0,674	0,204	0,000	Valid
X2	X2.1	0,758	0,204	0,000	Valid
	X2.2	0,593	0,204	0,000	Valid
	X2.3	0,757	0,204	0,000	Valid
	X2.4	0,683	0,204	0,000	Valid
X3	X3.1	0,646	0,204	0,000	Valid
	X3.2	0,538	0,204	0,000	Valid
	X3.3	0,515	0,204	0,000	Valid
	X3.4	0,735	0,204	0,000	Valid
	X3.5	0,544	0,204	0,000	Valid
	X3.6	0,634	0,204	0,000	Valid
	X3.7	0,619	0,204	0,000	Valid
	X3.8	0,710	0,204	0,000	Valid
Y	Y.1	0,694	0,204	0,000	Valid
	Y.2	0,606	0,204	0,000	Valid
	Y.3	0,696	0,204	0,000	Valid
	Y.4	0,770	0,204	0,000	Valid
	Y.5	0,632	0,204	0,000	Valid

Source: Primary data processed 2025

Based on the table, it can be seen that the calculated r values of all variables are positive and exceed the r table value. Consequently, all indicators of this research pass the validity test and are verified as valid.

Tabel 2 Reliability Test Result

No.	Variabel	*Cronbach Alpha*	Standar Reliabilitas	Keterangan
1.	*Digital Marketing* (X1)	0,704	0,60	Reliabel
2.	*Brand Awareness* (X2)	0,652	0,60	Reliabel
3.	*Brand Image* (X3)	0,772	0,60	Reliabel
4.	Purchase Decision (Y)	0,711	0,60	Reliabel

Source: Primary data processed 2025

The reliability test results listed in the table show the Cronbach Alpha value for each variable. For the Digital Marketing variable, the value obtained is 0.704, while for Brand Awareness it is 0.652. The Brand Image variable recorded a value of 0.772, and the Purchasing Decision received a value of 0.711. From the data obtained, it appears that all variables have a Cronbach Alpha coefficient of more than 0.60. This shows that each measurement concept in these variables can be considered as reliable. Thus, the questionnaire used in this study can be trusted. This means that if the questionnaire is used again at a different time, the results obtained in this study.

Tabel 3 Normality Test Result

One – Sample Kolmogorov – Smirnov Test			
			Untandardised Residual
N			96
Normal Parameters[a,b]	Mean		.0005194
	Std. Deviation		1.46360686
Most Extreme Differences	Absolute		.056
	Positive		.056
	Negative		-.046
Test Statistic			.056
Asymp. Sig. (2-tailed)			.200[c,d]
Monte Carlo Sig (2-tailed)	Sig		.905[e]
	99% Confidence Interval	Lower Bound	.897
		Upper Bound	.912

Source: Primary data processed 2025

Based on the table of Kolmogorov-Smirnov OnSample test results with Asymp. Sig. (2-tailed) of 200. Based on the Kolmogorov-Smirnov normality test decision-making criteria, the data is declared normally distributed if the Asymp. Sig. (2-tailed) is greater than 0.05 or 5%. The Monte Carlo Sig (2-tailed) value was also found to exceed 0.05. Therefore, it can be concluded that the residual data is normally distributed because the value of 200 is greater than 0.05, which indicates that the residuals follow a normal distribution.

Tabel 4 Multicollinearity Test Result

Coefficients								
Model		Unstandardzed Coefficients		Standardzed Coefficients	T	Sig	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.733	1.473		.498	.620		
	Digital Marketing	.247	.088	.276	2.797	.006	.373	2.684
	Brand Awareness	.285	.114	.230	2.501	.014	.427	2.340
	Brand Image	.279	.072	.393	3.881	.000	.353	2.833

Source: Primary data processed 2025

Based on the table above, the tolerance value for all variables analyzed is greater than 0.10, while the VIF value is less than 10, as shown in the table. Therefore, the results of this study indicate that there is no multicollinearity problem.

Tabel 5 Heteroscedasticity Test Result

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig
		B	Std. Error	Beta		
1	(Constant)	.439	.952		.462	.645
	Digital Marketing	.050	.057	.150	.885	.378
	Brand Awareness	-.007	.074	-.016	-.102	.919
	Brand Image	-.014	.046	-.052	-.300	.765

Source: Primary data processed 2025

Based on the table above the results of the heteroscedasticity test, the researchers conducted the Glejser test. In accordance with the existing provisions, if the significance value between the dependent variable and the absolute residual exceeds 0.05, it is concluded that there are no symptoms of heteroscedasticity. Based on the table provided, it can be seen that all variables show a significance value greater than 0.05.

Tabel 6 Multiple Linear Analysis

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig
		B	Std. Error	Beta		
1	(Constant)	.733	1.473		.498	.620
	Digital Marketing	.247	.088	.276	2.797	.006
	Brand Awareness	.285	.114	.230	2.501	.014
	Brand Image	.279	.072	.393	3.881	.000

Source: Primary data processed 2025

From the values contained in the table above, a linear equation can be made as follows:

$Y = a + b1.X1 + b2.X2 + b3.X3 + e$

$Y = 0.733 + 0.247.X1 + 0.285.X2 + 0.279.X3 + e$

Description:

Y = Purchase Decision

a = Constant

β = Regression Coefficient

X1 = Digital Marketing

X2 = Brand Awareness

X3 = Brand Image

a. The value of 0.733 as a constant indicates that the value of digital marketing, brand awareness, and brand image variables has a significant correlation, which is 0.733.

b. Purchasing decisions are positively influenced by the implementation of digital marketing, with a regression coefficient of 0.247. This indicates that each one unit increase in digital marketing contributes to a 0.247 unit increase in the value of purchasing decisions. Thus, it can be concluded that the better the implementation of digital marketing, the greater the opportunity for consumers to make purchasing decisions.

c. The regression coefficient obtained shows that the purchase decision has a value of 0.285. This shows that every one unit increase in brand awareness will have an impact on increasing the value in the purchasing decision-making process by 0.285. This positive coefficient position confirms the existence of a favorable relationship between brand awareness and purchasing decisions.

d. Purchasing decisions are increased by 0.279 by every one unit increase in brand image, with a regression coefficient of 0.279 recorded for the brand image variable on purchasing decisions. This increase in purchasing decisions is indicated by the positive coefficient value, which indicates that the compatibility of brand image with consumer expectations and abilities plays an important role in increasing it.

Tabel 7 F Test Result

Anova					
Model	Sum of Squares	Df	Mean Square	F	Sig
Regression	407.653	3	135.884	61.431	.000[b]
Residual	203.504	92	2.212		
Total	611.156	95			

Source: Primary data processed 2025

Based on the results of the F test, the calculated F value is 61.431 and the F table value is 3.10. It can be concluded that the calculated F value is greater than the F table value (61.431> 3.10). Furthermore, the significance value obtained is 0.000, which is also smaller than 0.05 (0.000 < 0.05). Therefore, it can be stated that digital marketing, brand awareness, and brand image together affect purchasing decisions.

Tabel 8 Result of the t-test

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig
		B	Std. Error	Beta		
1	(Constant)	.733	1.473		.498	.620
	Digital Marketing	.247	.088	.276	2.797	.006
	Brand Awareness	.285	.114	.230	2.501	.014
	Brand Image	.279	.072	.393	3.881	.000

Source: Primary data processed 2025

a. Purchasing decisions are positively and significantly influenced by digital marketing. This is supported by the calculated t value of 2.797, exceeding the t table value of 1.662. The recorded significance of 0.006 also indicates that H1 is accepted because it is below 0.05.

b. Purchasing decisions are positively and significantly influenced by brand understanding. This is supported by the results of the data analysis, where the calculated t value (2.501) of Brand Awareness is found to be higher than the table t value (1.662). The significance of less than 0.05 (i.e. 0.014) further strengthens this conclusion, thus H2 can be accepted.

c. Purchasing decisions are proven to be positively and significantly influenced by brand image. This is supported by statistical data with a calculated t value of 3.881 which is greater than the t table of 1.662 and a significance level below 0.05, namely 0.000. Therefore, H3 is accepted.

Tabel 9 Coefficient of Determination Test Result (Adjusted R^2)

Model	R	R Square	Adjusted R Squajre	Std. Error of the Estimajte
1	.817[a]	.667	.656	1.487

Source: Primary data processed 2025

Based on the table above, it is known that the Adjusted R Square value is 0.656 or 65.6%, meaning that the independent variables, namely Digital Marketing (X1), Brand Awareness (X2), and Brand Image (X3), provide 65.6% of purchasing decisions.

Based on the results of the research that has been conducted, it is found that the Digital Marketing variable (X1) has a significant influence on Purchasing Decisions (Y) on Skintific skincare products, especially among female students at the Islamic University of Malang. This finding highlights the crucial role of digital marketing (X1) in influencing consumers in the purchasing decision-making process (Y). The results of this study are in line with the findings

obtained by Rika, (2020), Dwiputri et al., (2024), and Hubbina, (2023) which state that digital marketing variables have a positive and significant effect on purchasing decisions.

Based on the research results, it is known that brand awareness is accepted, which means that the brand awareness variable (X2) has a positive and significant effect on the purchasing decision variable (Y) of Skintific products for female students at the Islamic University of Malang. The results of this study show similarities with research revealed by Adriyanto et al., (2023), Sari et al., (2021), Vevi, (2015) which states that the brand awareness variable has a positive and significant effect on purchasing decisions.

Based on the research results, it is known that the brand image variable is accepted, which means that the brand image variable (X3) has a positive and significant effect on the purchasing decision variable (Y) of Skintific products for female students at the Islamic University of Malang. The results of this study are in line with the findings obtained by Putri & Selviana, (2023), Kusuma et al., (2022), and Widjaja & Wijayadne, (2023) which show that the brand image variable has a positive and significant influence on purchasing decisions.

5. Conclusion

After analyzing the data with various series of statistical tests and hypotheses, the results of the discussion can be concluded as follows: Digital marketing, brand awareness, and brand image have a significant influence on purchasing decisions. These three variables are interrelated and contribute, therefore companies need to integrate marketing strategies that include digital marketing, increasing brand awareness, and strengthening brand image to achieve greater success in the market. The results of the analysis show that digital marketing has a significant influence on purchasing decisions. This indicates that an effective digital marketing strategy can increase consumer interest and desire to buy products.

Brand awareness has a significant influence on purchasing decisions. High brand awareness among consumers can increase their likelihood of choosing that product, indicating the importance of marketing efforts in building brand recognition. Brand image has a significant influence on purchasing decisions. A positive brand image can increase consumer trust and loyalty, which in turn encourages them to make purchases. In this study, there are a number of limitations that cannot be avoided, because every research must have limitations. Nevertheless, it is hoped that this research will still provide meaningful benefits. The limitations in this study are that it only uses 3 independent variables, namely digital marketing, brand awareness, and brand image. This can limit understanding of other factors that may also affect purchasing decisions. There are still many other variables, such as price, product quality, and customer service, which can provide deeper insight into consumer behavior. The researcher has reached some conclusions from this research and hopes that it can help the development of science, related institutions, and everyone involved in this research. The following are some suggestions that can be taken from the research findings:

For future researchers, it is recommended to consider adding variables that have not been listed in this study. The goal is that the next research can be more comprehensive and provide deep insight. For the Islamic University of Malang, the results of this study can be a valuable reference archive for lecture materials, especially those related to marketing. Academics can also document these findings to make it easier for future researchers to find references, especially related to the various factors that influence purchasing decisions among female students.

The Skintific company is expected to continue to strive to improve the quality of its products to suit consumer needs. In other ways, they will be able to build a positive brand image and maintain consumer loyalty to all products offered. Given the increasingly fierce competition, Skintific needs to maintain the quality of the products they have in order to remain competitive in the market.

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THE IMPACT OF DIGITAL TAX SYSTEM IMPLEMENTATION ON TAXPAYER COMPLIANCE MODERATED BY DIGITAL LITERACY

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Abstract

This study aims to analyze the impact of implementing a digital taxation system on taxpayer compliance moderated by digital literacy on individual taxpayers registered at KPP Pratama Tegal in the Brebes Regency area. This type of research uses a quantitative approach method with a type of cause-and-effect relationship. This study uses primary data obtained from questionnaires. The population in this study were individual taxpayers registered at KPP Pratama Tegal in the Brebes Regency area with a sample size of 100 respondents. The method used in this research is moderation regression analysis using SPSS software version 27. The results of this study indicate that the application of the digital taxation system has a positive effect on taxpayer compliance and digital literacy moderates, but has a weakening effect on the application of the digital taxation system on taxpayer compliance. The implications of this study contribute to the literature in the fields of taxation and technology, and can assist the Directorate General of Taxes in designing policies for implementing an effective and easy-to-use digital taxation system.

Keywords: Digital tax system, taxpayer compliance, and digital literacy

1. Introduction

Taxes are mandatory contributions paid by individuals or entities to the state, which are compelling and regulated by law. Tax revenue is one of the largest sources of revenue for state revenue (Putri, 2022). Taxes have a crucial role in the country's economy, as the main source of revenue used to finance government spending. According to Lado & Budiantara (2018) in Djo (2022) research, tax revenue is used to finance government spending, regulate economic growth, maintain a balance between prices and inflation rates, and implement development in various fields evenly. Although taxes are the main source of state revenue, the level of tax compliance in Indonesia is still a complex problem. According to Yuliati & Huda (2022), people are still not familiar with taxes and many still do not understand the importance of paying taxes so that people's willingness to pay taxes is still relatively low.

Based on statistical data from the ministry of finance as of December 31, 2023, tax revenue in Indonesia in 2022 reached IDR 1,716.77 trillion, growing significantly compared to 2021. However, in 2023, it experienced a slight slowdown with tax growth of 8.9%, but this still reflects a stable and sustainable level of compliance from the community in fulfilling their tax obligations. According to Richard & Lastanti (2024), government efforts and public awareness of the importance of tax compliance continue to grow, contributing to the stability and sustainable economic growth in Indonesia. However, this slowdown shows that there is a need to evaluate and improve the tax system so that in the following year this tax growth will increase again. The use of technology is a must for every government agency, especially within the Ministry of Finance (Fitrianti et al., 2024). Therefore, the Directorate General of Taxes (DGT) has made efforts to innovate and reform, including the development of a tax digitalization system to simplify the process of reporting and paying taxes.

The Directorate General of Taxes created DGT Online to facilitate taxpayers in fulfilling their obligations. This system utilizes information and communication technology to manage the entire taxation process, from taxpayer registration, to tax reporting and tax

payment. This system is expected to increase accountability, transparency, and public participation in tax compliance. Digitalization in tax management not only accelerates the service process, but also digital technology allows tax authorities to collect data in real time. With the development of technology, DGT also needs to educate the public on the use of information technology in taxation to increase public awareness and understanding of taxation. However, in its implementation, there are challenges that must be faced, such as limited infrastructure, low digital literacy, and system security that still needs to be improved (Vientiany et al., 2024).

Digital literacy plays an important role in increasing taxpayers' awareness and understanding of taxation. According to Yuliati & Huda (2022), digital literacy makes it easy for readers to access information anytime and anywhere using devices connected to the internet network. Good digital skills can make it easier for taxpayers to access tax-related information through various online platforms such as the official website of the Directorate General of Taxes, tax applications, and social media. Digital literacy has great potential to improve tax compliance, but there are still challenges that need to be overcome. Not everyone has equal access to technology and information. Therefore, it is important for the government and related institutions to make efforts to improve digital literacy, especially in underserved areas. Digital-based tax training and education programs can be a solution to increase public understanding of tax obligations.

This study examines how the implementation of the digital tax system affects taxpayer compliance, moderated by digital literacy. The purpose of this study was to analyze and determine the effect of the application of the digital tax system on taxpayer compliance, moderated by the level of digital literacy. The results of this study are expected to contribute to the development of accounting science, especially the fields of taxation and technology, and can be used as a reference or guide for future researchers in understanding digital tax systems, taxpayer compliance, and digital literacy. In addition, this study also aims to assist the Directorate General of Taxes in designing the implementation of the digital tax system, as well as increasing taxpayer awareness of the importance of taxpayer compliance and encouraging taxpayers to utilize technology in their taxation process.

2. Literature Review

2.1 Technology Acceptance Model

The Technology Acceptance Model is a framework used to understand how users accept and adopt technology (Wicaksono, 2022). The Technology Acceptance Model aims to describe users' acceptance of new information technology, such as management information systems and software. In the technology acceptance model theory, this model emphasizes two main factors that influence technology acceptance: perceived usefulness and perceived ease of use.

2.2 Tax Definition

Taxes are a source of state revenue that must be paid by the public which is regulated by law as a legal basis (Habib, 2022). Taxes have a clear legal basis in the form of laws that regulate the tax obligations of citizens. The main purpose of tax collection is to improve the welfare of society so that the government can create conditions that support the welfare of society as a whole.

2.3 Taxpayer Compliance

Taxpayer compliance is the attitude and actions taken by individuals or entities in carrying out tax obligations in accordance with applicable regulations. According to Agun et al. (2022), tax compliance can be defined as a situation where taxpayers fulfill all tax

obligations and exercise their rights. Compliance is measured not only based on the amount of tax paid, but also on the extent to which taxpayers comply with the provisions of tax legislation (Husaini et al., 2024). According to Wicaksari & Wulandari (2021), tax compliance can be seen from several aspects, such as taxpayer awareness in registering themselves, compliance in submitting tax returns correctly, compliance in calculating and paying taxes owed correctly, and compliance in paying arrears. Compliance with taxation not only contributes to state revenue, but also reflects social responsibility and active participation in economic development.

2.4 Digital Tax System

A digital tax system is a system that uses information and communication technology to manage taxation processes such as reporting, payment, and tax monitoring. According to Vientiany et al. (2024), online tax services can provide many benefits, both for taxpayers and DGT. E-filing is one of the electronic systems used by the Directorate General of Taxes (DGT) of the Ministry of Finance of the Republic of Indonesia for tax reporting (Amin et al., 2024). This system can increase efficiency and transparency in tax administration.

2.5 Digital Literacy

Digital literacy is an important ability to obtain, understand, and utilize information that comes from various digital sources (Naufal, 2021). Digital literacy is a key skill to adapt to a world that is increasingly filled with digital technology and information. According to Naufal (2021), he existence of digital literacy skills allows people to access, sort, select, and understand a variety of information that can be used to improve the quality of life.

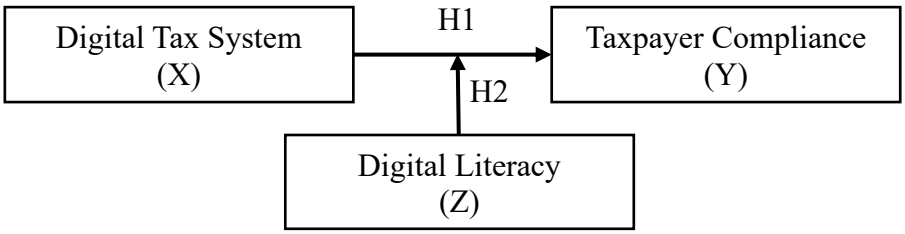
2.6 The Relationship Between the Implementation of the Digital Tax System and Taxpayer Compliance

The digital tax system makes the tax administration process more efficient and transparent. Taxpayers can access information related to tax obligations more easily through an online platform. This system also has a real-time transaction monitoring feature, which allows tax authorities to more quickly detect any non-compliance. According to Rachmawati et al. (2022), the application of the e-filing system can affect taxpayer compliance. When a digital tax system is implemented, taxpayers can easily access the taxation process and can increase the convenience of reporting, so as to increase the level of taxpayer compliance. From this explanation, the hypothesis formulated is H1 = The digital tax system affects taxpayer compliance.

2.7 The Relationship Between Digital Literacy Moderating the Effect of Digital Tax System Implementation on Taxpayer Compliance

Digital literacy has an important role in the implementation of the digital tax system. When a digital tax system is implemented, taxpayers who have good high digital literacy tend to be better able to use existing technology. According to Widjiadha & Damayanti (2024), digital literacy can strengthen the effect of implementing a digital tax system on taxpayer compliance. When taxpayers have an understanding of digital literacy, taxpayers can more easily access information, perform their tax obligations online, and can use the platform provided by the tax authority. Good digital literacy can make taxpayers better prepared to understand and use the digital tax system, thereby increasing taxpayer compliance. From this explanation, the hypothesis formulated is H2 = Digital literacy moderates the effect of the digital tax system on taxpayer compliance.

2.8 Kerangka Konseptual



3. Research Methodology

3.1 Type, Location and Time of Research

This research uses a quantitative approach method with the type of research used is a causal relationship or cause-and-effect relationship. This research was conducted at the Office of Taxation Services, Counseling and Consultation (Kp2Kp) Bumiayu Jl. Yos Sudarso No. 8, Pangembon, Brebes, Kec. Brebes, Kab, Brebes, Central Java 52212. This research was conducted from November 2024 to January 2025.

3.2 Population and Sample

The population in this study were individual taxpayers registered at the Tegal Primary Tax Service Office (KPP Pratama Tegal) in the Brebes Regency area, with a population of 408,563 based on data recorded at KPP Pratama Tegal as of December 17, 2024. The sample is a part that reflects the number and characteristics of a population (Sugiyono, 2022). The method used for sampling in this study is the Simple Random Sampling method. To determine the sample, this study used the Slovin formula, namely:

$$n = \frac{N}{1 + N\,(e)^2}$$

Description:
n : Number of samples required
N : Total population
e : Minimum sample error rate of 10%
Then the number of samples in this study are:

$$n = \frac{408.563}{1 + 408.563\,(0{,}1)^2}$$

$$n = 99{,}97$$

Based on the calculations carried out, the number of samples required for this study was 99.97, which was rounded up to 100 samples.

3.3 Variable Definitions and Operations

1. Taxpayer Compliance (Y)

   Taxpayer compliance is an action taken by an individual or entity to fulfill tax obligations in accordance with applicable regulations. Tax compliance can be measured through various aspects such as tax registration, reporting, calculation, and payment. This compliance not only contributes to state revenue but also reflects social responsibility and active participation in economic development.
2. Digital Tax System (X)

   The digital tax system is an electronic system provided by the Directorate General of Taxes (DGT) to facilitate interaction between the DGT and taxpayers. This system uses information and communication technology to manage taxation processes such as tax reporting, payment, and monitoring.

3. Digital Literacy (Z)

   Digital literacy is the ability to acquire, understand and utilize information from a variety of digital sources. Digital literacy is not just about skills in using devices and the internet, but also the important ability to analyze and use information wisely. Good digital skills enable people to access and select information that helps to improve quality of life.

3.4 Data Collection Sources and Methods

This research uses primary data as the data source. In this study, data was collected using a survey method that was randomly distributed to respondents. There are five points in the choice of scale, namely: Strongly Agree (5 Points), Agree (4 Points), Neutral (3 Points), Disagree (2 Points), and Strongly Disagree (1 Point).

3.5 Data Analysis Method

This study uses Moderated Regression Analysis (MRA) as the main analysis method. Moderated regression analysis is a regression analysis method that takes into account moderating variables in developing a model of the relationship between variables. According to Ghozali (2021), moderating variables are independent variables that can strengthen or weaken the relationship between the independent variable and the dependent variable. The following is the moderation regression analysis equation:

$$Y = \alpha + \beta 1X + \beta 2Z + \beta 3(X * Z) + \varepsilon$$

Keterangan:

Y : Taxpayer compliance (Dependent Variable)
α : Constant
β1-β3 : Regression coefficient
X : Digital tax system (Independent Variable)
Z : Digital Literacy (Moderating Variable)
ε : Error

4. Results and Discussion

This research was conducted on individual taxpayers registered at KPP Pratama Tegal in the Brebes Regency area with a total of 408,563 taxpayers. To determine the sample in this study using the Slovin formula with a final result of 100 samples. This research was processed using SPSS version 27.

4.1 Descriptive Statistical Analysis

Table 1. Descriptive Statistics

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Digital Tax System	100	1	5	4.14	.602
Digital Literacy	100	2	5	4.28	.386
Taxpayer Compliance	100	2	5	4.38	.515
Valid N (listwise)	100				

Source: Primary data processed by SPSS version 27, 2025

Based on the table above, it is known that in the Digital Tax System (X) variable, the lowest value is 1, while the highest value reaches 5. The average value for this variable is 4.14 with a standard deviation of 0.602. The Digital Literacy variable (Z) shows the lowest value of

2 and the highest value of 5, with an average value of 4.28 and a standard deviation of 0.386. Meanwhile, the Taxpayer Compliance variable also has the lowest value of 2 and the highest value of 5, with an average value of 4.38 and a standard deviation of 0.515. It can be seen that the average value for the three variables is quite high, namely the Digital Tax System variable of 4.14, the Digital Literacy variable of 4.28, and the Taxpayer Compliance variable of 4.38. This shows that respondents tend to agree or have a positive view of the three variables measured.

4.2 Instrument Test

1. Validity Test

   Based on the results of the validity test, it can be concluded that all statement items on the digital tax system variable, digital literacy and taxpayer compliance each have a value of r count> r table, namely 0.195, so that all statement items from each variable are said to be valid.

2. Reliability Test

Table 2. Reliability Test

Variable	Cronbach's Alpha	Description
Digital Tax System	0,885	Reliabel
Digital Literacy	0,755	Reliabel
Taxpayer Compliance	0,887	Reliabel

Source: Primary data processed by SPSS version 27, 2025

Based on the reliability test results in the table above, it explains that the Cronbach's Alpha value on the Digital Tax System (X) variable is 0.885 which means that the data is reliable because the Cronbach's Alpha value is> 0.7. Then the Digital Literacy variable (Z) is 0.755 which means that the data is reliable because the Cronbach's Alpha value is> 0.7. Finally, the Taxpayer Compliance (Y) variable is 0.887 which means that the data is reliable because the Cronbach's Alpha value is> 0.7.

4.3 Normality Test

To test normality in this study using the Kolmogorov Smirnov test.

Table 3. Normality Test

One-Sample Kolmogorov-Smirnov Test			
			Unstandardized Residual
N			100
Normal Parameters[a.b]	Mean		,0000000
	Std. Deviation		2,41341781
Most Extreme Differences	Absolute		,072
	Positive		,068
	Negative		-,072
Test Statistic			,072
Asymp. Sig. (2-tailed)[c]			,200[d]
Monte Carlo Sig. 92-tailed)[e]	Sig		,227
	99% Confidence Interval	Lower Bound	,216
		Upper Bound	,238

Source: Primary data processed by SPSS version 27, 2025

Based on the results in the table above, this study obtained an Asymp. Sig. (2-tailed) value is greater than the significant level of 0.05, which is 0.200. This shows that the normality assumption is met and the data used in this study are normally distributed.

4.4 Classical Assumption Test

1. Multicollinearity Test

The multicollinearity test aims to test whether there is a correlation between the independent variables in the regression model.

Table 4. Multicollinearity Test

Coefficients[a]								
Model		Unstandardized Coefficients		Standardized Coefficient	t	Sig.	Collinearity Statistic	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	12,945	2,778		4,660	,000		
	Digital Tax System	,458	,065	,624	7,007	,000	,793	1,262
	Digital Literacy	,002	,143	,002	,017	0,17	,793	1,262

Source: Primary data processed by SPSS version 27, 2025

Based on the table above, each variable has a Tolerance value greater than 0.10 and the VIF value on each variable is less than 10, which means there is no multicollinearity.

2. Heteroscedasticity Test

The heteroscedasticity test aims to test the regression model whether there is an inequality of variance from the residuals in one observation to another.

Table 5. Heteroscedasticity Test

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	5,336	1,441		3,703	,000
	Digital Tax System	-,010	,034	-,032	-,289	,774
	Digital Literacy	-,141	,074	-,212	-1,905	,060
a. Dependent Variable: Abs RES						

Source: Primary data processed by SPSS version 27, 2025

From the results of the table above, it can be seen that the Sig. value of the Digital Tax System variable is 0.774 and Digital Literacy is 0.060. So it can be concluded that there is no heteroscedasticity in the regression model.

4.5 Moderated Regression Analysis

Table 6. Moderated Regression Analysis

Coefficients[a]					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		

1	(Constant)	-30,586	20,716		-1,476	,143
	Sistem Pajak Digital	1,872	,670	2,551	2.793	,006
	Digital Literacy	2,065	,983	1,289	2.101	,038
	Digital Tax System * Digital Literacy	-,067	,031	-2,767	-2,120	0,037
a. Dependent Variable: Taxpayer Compliance						

Source: Primary data processed by SPSS version 27, 2025

$$KWP = -30,586 + 1,872SPD + 2,065LD – 0,067SPD*LD + \varepsilon$$

From the moderation regression analysis equation above, it can be explained as follows:

1. The coefficient value of the Digital Tax System variable regression model is 1.872 so it can be concluded that if the Digital Tax System increases by 1%, then taxpayer compliance also increases by 187.2%.
2. The coefficient value of the interaction regression model between the Digital Literacy variable and the Digital Tax System is -0.067 so it can be concluded that if the interaction between Digital Literacy and the Digital Tax System increases by 1%, then Taxpayer Compliance decreases by 6.7%.

4.6 Uji Hipotesis

1. Test Coefficient of Determination (R2)

Table 7. Determination Coefficient Test

Model Summary[b]				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,646[a]	,418	,399	2,395

Source: Primary data processed by SPSS version 27, 2025

It can be seen from the Model Summary test results in the table above, the Adjusted R Square value is 0.399 = 39.9%. So it can be concluded that the independent variables, namely the Digital Tax System and Digital Literacy, in explaining the dependent variable, namely Taxpayer Compliance in this model, are only 39.9%. Meanwhile, 60.1% is explained by other independent variables not discussed in this study.

2. T-test (partial)

Table 8. Test t (Partial)

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	-30,586	20,716		-1,476	,143
	Digital Tax System	1,872	,670	2,551	2.793	,006
	Digital Literacy	2,065	,983	1,289	2.101	,038
	Digital Tax System * Digital Literacy	-,067	,031	-2,767	-2,120	0,037
a. Dependent Variable: Taxpayer Compliance						

Source: Primary data processed by SPSS version 27, 2025

Based on the data in the table above, it can be concluded that:

1. It is known that the Digital Tax System has a significant value of 0.006 less than 0.05, so H1 is accepted.
2. It is known that the interaction of Digital Literacy with the Digital Tax System has a significant value of 0.037 less than 0.05, then H2 is accepted.

4.7 Discussion

1. The Effect of the Digital Tax System on Taxpayer Compliance

The first hypothesis (H1) states that the Digital Tax System has an effect on Taxpayer Compliance is accepted. This finding is in line with research conducted by Rachmawati et al. (2022), Habib (2022), Hama (2023), Widjiadha & Damayanti (2024), and Agusetiawati et al. (2024) which underline that the digital tax system has a positive effect on taxpayer compliance. This shows that the existence of a digital tax system can make it easier for taxpayers to access tax services, so the better the implementation of the digital tax system, the higher the taxpayer compliance in carrying out their obligations. Based on the demographics of the respondents, the majority of respondents who use the digital tax system are female, aged between 20-40 years, have a Bachelor's degree, and work as self-employed or in other flexible job categories. These factors indicate that these groups are more adaptable to technology and can take advantage of the conveniences offered by the digital tax system, which in turn helps increase taxpayer compliance in fulfilling tax obligations. This finding is in accordance with the Technology Acceptance Model (TAM) theory which states that perceived usefulness and ease of use can influence a person's decision to adopt technology. The theoretical implications of this research are useful for scientific development and further researchers to enrich the literature on technology acceptance in the context of taxation. Practically, this research is useful for the government to design better policies in implementing a more effective digital tax system and for taxpayers to improve compliance through a system that is easier to access and use. So that the implementation of an effective and efficient digital tax system can create a more transparent and accountable environment in tax management and simplify the taxation process for taxpayers.

2. The Interaction Effect of Digital Literacy with the Digital Tax System on Taxpayer Compliance

The second hypothesis (H2) states that Digital Literacy moderates the effect of the Digital Tax System on taxpayer compliance is accepted, but has a weakening impact. This finding is in line with research conducted by Widjiadha & Damayanti (2024), which reveals that digital literacy can moderate the relationship between the use of digital tax systems and taxpayer compliance, but in this study it has a weakening impact. This shows that although high digital literacy should help taxpayers in utilizing the digital tax system, other factors can weaken its influence on taxpayer compliance. Based on the demographics of respondents, although the majority of respondents have higher education and good digital literacy, most of the taxpayers work in the self-employed sector or jobs with irregular income which is often below the Non-Taxable Income (PTKP) limit. This causes taxpayers to feel that they do not need to report taxes. While the 20-40 age group is more adaptive to technology, lack of understanding of tax obligations and low income remain key barriers to improving taxpayer compliance, although the use of digital tax systems can help. Based on the Technology Acceptance Model (TAM) theory, which states that perceived usefulness and ease of use can influence a person's decision to adopt technology. Digital literacy can affect the ease of use of the digital tax system, but if taxpayers feel that the system is not useful, especially because income is below the PTKP limit, taxpayers tend to be non-compliant even though the system is easy to use. The factors of low income and irregular employment weaken the effect of digital literacy on tax compliance. The theoretical implications of this research for scientific development and further researchers contribute to the development of TAM theory in the context of taxation. Practically, this research is useful for the government to conduct training and provide an easily accessible

platform, while for taxpayers, increasing digital literacy will increase the ease and convenience of fulfilling tax obligations.

5. Conclusions and Suggestions

5.1 Conclusion

Based on the results of the tests carried out, it can be concluded that the application of the digital tax system can have a positive influence on the compliance of individual taxpayers registered at KPP Pratama Tegal in the Brebes Regency area. Digital literacy moderates, but has a weakening effect on the application of the digital tax system on the compliance of individual taxpayers registered at KPP Pratama Tegal in the Brebes Regency area.

5.2 Limitations

Based on the results of research and discussion in this study there are still limitations, namely:

1. The population in this study only includes individual taxpayers registered at KPP Pratama Tegal in the Brebes Regency area.
2. The independent variable used in this study is limited to one variable, namely the digital tax system.

5.2 Suggestion

Based on the findings and discussion, there are still limitations, so there are suggestions given as follows:

1. For future researchers, it is hoped that it will not only focus on individual taxpayers, but also involve corporate taxpayers, so that the results can provide a more comprehensive picture more broadly.
2. Future researchers can add other independent variables, such as tax socialization and tax literacy to expand research and gain deeper insight.

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INFLUENCE OF KNOWLEDGE, EASE AND RISK ON INTEREST IN INVESTING IN THE SYARIAH CAPITAL MARKET (Case Study of UNISMA Faculty of Economics and Business Students in 2021-2023)

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Abstract

This study aims to analyse the effect of knowledge, convenience and risk on student interest in investing in the Islamic capital market. The subjects of this research are students of the Faculty of Economics and Business, Islamic University of Malang, class of 2021-2023. The method used is a quantitative method with a correlational approach. The sampling technique used purposive sampling with a total of 95 respondents. Data collection was carried out through a questionnaire that had been tested for validity and reliability. Data analysis using multiple linear regression tests with the help of SPSS software. The results showed that knowledge does not have a positive effect on student interest in investing in the Islamic capital market. In contrast, convenience and risk have a positive and significant effect on students' interest in investing in the Islamic capital market. This finding confirms that although knowledge is an important aspect, well-managed convenience and risk factors have a more dominant role in encouraging student interest.

Keywords: Knowledge, Convenience, Risk, Investment Interest, Islamic Capital Market.

1. Introduction

In Islamic teachings, investment is a form of muamalah that is highly recommended. By investing, the assets owned can be utilised productively and provide benefits to others. To realise this recommendation, facilities that support investment activities are needed. One form of investment that can be done is by investing in the Islamic capital market (Hasibuan, 2019).

The Islamic Capital Market is a muamalah economic activity that involves trading securities that are in accordance with Islamic investment principles, such as stocks, bonds, and Islamic mutual funds. The existence of the Islamic capital market aims to fulfil the needs of Muslims in Indonesia who want to invest in capital market products that are in line with sharia principles. Sharia principles in capital market investment are applied so that investors can transact in compliance with Islamic values.

Sharia principles in investment refer to rules derived from Islamic law, which emphasises the value of divinity, justice, equality, and honesty in transactions. In addition, this principle also prioritises business ethics, the spirit of togetherness, and brotherhood in economic activities, as well as (Kharisma et al., 2023). In the Qur'an, Allah SWT expressly prohibits hoarding wealth without good use, as stated in (QS. Al-Hasyr verse 18):

يَٰٓأَيُّهَا ٱلَّذِينَ ءَامَنُوا۟ ٱتَّقُوا۟ ٱللَّهَ وَلْتَنظُرْ نَفْسٌ مَّا قَدَّمَتْ لِغَدٍ ۖ وَٱتَّقُوا۟
ٱللَّهَ ۚ إِنَّ ٱللَّهَ خَبِيرٌۢ بِمَا تَعْمَلُونَ ﴿١٨﴾

Meaning: "O you who believe, fear Allah and let everyone consider what he has done for tomorrow (hereafter) and fear Allah. Verily, Allah knows best what you do."

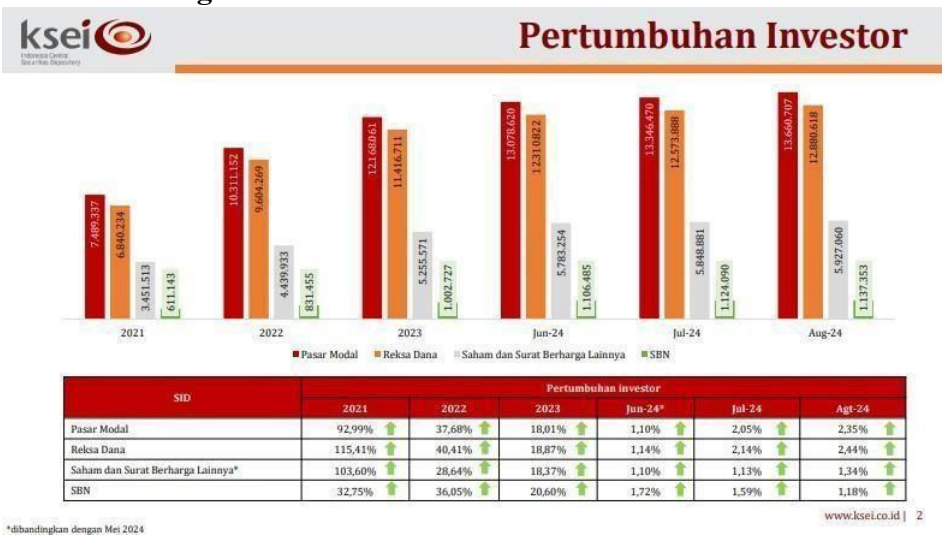
The above verse implies that humans are always prepared for everything that might happen in the future. In terms of the economy, Prophet Yusuf a.s set an example by preparing

sufficient food reserves to face the famine season. Thanks to careful planning, the reserves were able to meet the needs of the Egyptian people for seven years.

The capital market is one of the important pillars in today's world economy. Many industries and companies use capital market institutions as a medium to absorb investment and a medium to strengthen their financial position. In Indonesia, the development of the Islamic Capital Market began in 1997 with the launch of Islamic mutual funds by PT Danareksa Invesment Management on 3 July 1997. Then, on 3 July 2000. The Indonesia Stock Exchange in collaboration with PT Danareksa Investment Management launched the Jakarta Islamic Index which aims to assist investors in investing according to sharia principles (Ojk.go.id, 2020).

The difference between the conventional Islamic capital market comes from the company that will be invested, in the Islamic capital market is not contrary to sharia principles. According to William Strauss and Neil Howe, Generation Z is a group of teenagers born between 1996 and 2010. They are also known as the IGeneration or internet generation. They are similar to generation Y, but they cannot do many things at once with technology. The Islamic capital market has experienced an increase in the number of investors over the past four years from 2020 to January 2024 according to KSEI data (Ksei.co.id, n.d.).

Figure 1. 1 Investor Growth Chart 2020-2024



SID	Pertumbuhan investor					
	2021	2022	2023	Jun-24*	Jul-24	Agt-24
Pasar Modal	92,99%	37,68%	18,01%	1,10%	2,05%	2,35%
Reksa Dana	115,41%	40,41%	18,87%	1,14%	2,14%	2,44%
Saham dan Surat Berharga Lainnya*	103,60%	28,64%	18,37%	1,10%	1,13%	1,34%
SBN	32,75%	36,05%	20,60%	1,72%	1,59%	1,18%

*dibandingkan dengan Mei 2024

www.ksei.co.id | 2

Source:https://www.ksei.co.id/files/Statistik_Publik_Januari_2024_v3.pdf

Based on investor demographic data, the growth in the number of investors is currently dominated by Millennial investors under the age of 30 which reached 55.07% in August 2024 then followed by the number of investors aged 31-40 years which reached 24.27% then followed by the number of investors aged 41-60 years which reached 11.96% then followed by the number of investors aged 51-60 years with 5.72% and finally the age group above 60 years reached 2.98% of investors. The demographic data is the total number of investors registered at KSEI (Ksei.co.id, n.d.).

In fact, the Islamic financial system has provided a place for the public to invest in Islamic investments that can be profitable. The guarantor refers to the Financial Services Authority Law, which includes:

POJK Nomor 15/POJK.04/2015	Sharia principles in the capital market
POJK Nomor 16/POJK.04/2015	Sharia experts
POJK Nomor 17/POJK.04/2015	Issuance and requirements of sharia securities in the form of shares by sharia issuers

POJK Nomor 18/POJK.04/2015	or sharia public companies
POJK Nomor 19/POJK.04/20150	Issuance and requirements of sukuk
POJK Nomor 20/POJK.04/2015	Issuance and requirements of sharia mutual funds

Table 1.2 of Financial Services Authority Regulations

In addition, it is supported by DSN-MUI regulation Number 20/DSN- MUI/IV/2021 concerning investment implementation guidelines for Islamic mutual funds, which is also enhanced by Bapepam-LK regulations Number IX/A/13 concerning the issuance of Islamic securities and II.K.I concerning criteria and issuance of Islamic securities lists (Ojk.go.id, 2016).

The Indonesia Stock Exchange introduced the 'Yuk Nabung Saham' programme with the aim of changing the mindset of the public, from initially only saving in banks to realising that saving can also be done through the Islamic capital market. The concept of saving stocks is similar to saving at a bank, where the initial investment capital for students to open a Customer Fund Account is now more affordable, which is IDR 100,000 (Idxchannel.com, 2019). In investing, one of the obstacles that is often faced, especially for students, is the perception that investment requires a large initial capital. In fact, the lower the capital required, the higher a person's interest in investing.

The Indonesia Stock Exchange also organises education and socialisation programmes on investing in the capital market, especially for university students. In addition, the IDX held a campaign called 'Yuk Nabung Saham.'. During this programme, students are given special attention. Capital market education from the IDX, because students are assets in the future that will fill the financial industry in the capital market. In order to support the socialisation programme of sharia or sharia-based public businesses by launching investment galleries in several universities, the IDX hopes to attract new issuers and investors to the capital market through the issuance of POJK regulation Number 18/POJK.04/2015, sharia mutual funds, sharia asset-building securities and education. With the IDX investment gallery, which is a collaboration between the IDX, universities and securities companies, it is hoped that it will not only introduce the capital market from a practical and theoretical point of view (Idxchannel.com, 2018). One of the main objectives of the Indonesia Stock Exchange is to attract young investors by establishing Investment Galleries in each University. This cooperation with the University of Islam Malang aims to make students of the University of Islam Malang more interested in investing in the Islamic capital market.

Universitas Islam Malang is one of the private institutions that has an investment gallery (stock exchange corner). This investment gallery was opened through the cooperation of the Faculty of Economics and Business, Islamic University of Malang with the Indonesia Stock Exchange and PT Indo Premier Online Trading (IPOT). Dean of the Faculty of Economics and Business, Islamic University of Malang, Mrs Nur Diana SE, MSi, in the inauguration of the investment gallery (2/3/2016), hopes that the IDX investment gallery can encourage students of the Faculty of Economics and Business to develop their talents by utilising the investment gallery as a learning centre Until now, the Investment Gallery of Islamic University of Malang is the best and second most active investment gallery (Jatimtimes.com, 2016).

Students of the Faculty of Economics and Business, Islamic University of Malang have great potential to become investors. They get courses on investment management, portfolios and capital markets. In addition, the existence of investment galleries around campus is a good suggestion to deepen their understanding of investing in Islamic capital markets. In addition to academic support, PT Indo Premier Online Trading (IPOT), is also always open in providing more in-depth information about investing in the Islamic capital market. This is believed to increase students' interest in starting to invest. The Indonesia Stock Exchange Investment

Gallery at FEB UNISMA continues to grow from year to year. Based on the official website of FEB UNISMA (14/08/2020), the investment gallery has won the following awards

Students of the Faculty of Economics and Business, Islamic University of Malang also receive education about investing in the capital market. Guidance on investment is very important for students so that they can understand the concept of investment early on, so as not to be consumptive and start planning for financial stability in the future. This investment education is provided through courses that focus on the Islamic capital market. Thus, students not only understand the theory, but can also apply it in investment practices in the Islamic capital market. This course covers various aspects of investment, ranging from the level of profit, types of investment, benefits and ease of investment, to the risks that must be taken into account. In addition, the campus also provides supporting facilities, such as an investment gallery, which serves as a direct learning tool for students who want to enter the world of investment in the capital market. The campus also regularly holds motivational seminars to increase students' enthusiasm for investing and provide a deeper understanding of investment in the Islamic capital market.

Knowledge of the ease of investment in the Islamic capital market has a perception that is supported by several factors, namely easy to understand, easy to use, no effort is needed and doing it easily (Hikmah & Rustam, 2020). In investing, apart from the convenience and benefits that can be obtained, investors must also understand that the risks that may occur and always follow the investment benefits, because investment risk is directly proportional to the benefits obtained. Because the level of risk associated with investment is positively correlated with the level of profit earned by investors. Conversely, the level of risk that investors will face is negatively correlated with the level of profit they can get (Yunia et al., 2021).

To generate this interest, students must know what the Islamic capital market is. In addition, as students we must also know the benefits and risks of an investment. By investing and knowing the capital market, we can learn various knowledge, such as reading financial statements, how to analyse a company that has good prospects. In addition, we can get (capital gain) or profit from the difference between the selling price and the purchase price and can also get dividends. In addition, investment can not only be done by people who have jobs or have sufficient assets, students also have the opportunity to get to know the world of investment and invest in the Islamic capital market. It is hoped that they will also be interested in getting to know the capital market. Because as students, they also have a role in building the country's economy (Latifah, 2019).

This study found that the knowledge variable does not have a significant influence on student investment interest in the Islamic capital market. Students of the Faculty of Economics and Business, Islamic University of Malang consider that knowledge does not play an important role in encouraging investment interest, they are more dominant on the ease and risk of investment. This result is different from research conducted by (Latifah, 2019), which found that knowledge has a positive influence on student interest in investing. This difference can be caused by several factors such as different respondent characteristics, varying levels of financial literacy or the analytical methods used.

In a study (Diansyah & Hidayati, 2023) entitled 'The Effect of Financial Literacy, Motivation, Perception of Ease, Investment Risk on Interest in Investing in the Islamic Capital Market (Case Study of Islamic Financial Management Study Program Students in East Java)' the results showed that the convenience variable had a significant effect on interest in investing in the Islamic capital market. This is because the easier an investment system or service is to use, the more likely individuals are interested in investing. Conversely, other research conducted by (Masrina, 2020) shows that convenience does not always affect investment decisions, due to other factors such as financial literacy and investment experience. So, it can

be seen that the difference in the results of the above research requires an empirical review of the effect of convenience on investment interest in the Islamic capital market in this study.

In research (Yunia et al., 2021) entitled 'Motivation, Knowledge, Investment Risk Preferences and Investment Interest in the Islamic Capital Market in FEB IAIN Pekalongan Students' the results showed that the risk variable has an understanding of risk tends to be more interested in investing in the Islamic capital market. However, in contrast to research (Hikmah & Rustam, 2020), which states that risk has a negative impact on investment interest, because the higher the risk a person feels, the less likely they are to invest. Therefore, given the differences in the above research, this study aims to re-examine the relationship between risk and investment interest, in order to gain a clearer understanding of the role of risk in investment decisions in the Islamic capital market.

By considering the background of the problem above, this research is used to determine how much influence knowledge, convenience and assessed risk have on students' decisions to invest in the Islamic capital market. Based on the explanation above, the authors are interested in conducting further research on "The Effect of Knowledge, Ease and Risk on Interest in Investing in the Islamic Capital Market (Case Study of Students of the Faculty of Economics and Business, Islamic University of Malang 2021-2023)."

1.1 Problem Formulation

Based on the above context, the problems in this study are formulated as follows:

1. How does knowledge, convenience and risk affect the interest in investing in Islamic capital markets?
2. How does knowledge affect interest in investing in Islamic capital markets?
3. How does convenience affect interest in investing in the Islamic capital market?
4. How does risk affect the interest in investing in the Islamic capital market?

1.2 Research Objectives

1. To find out how knowledge, convenience and risk affect the desire to invest in the Islamic capital market.
2. To find out how investment knowledge affects the desire to invest in the Islamic capital market.
3. To find out how the ease of investment has an impact on the desire to invest in the Islamic capital market.
4. To find out how risk knowledge impacts the desire to invest in the Islamic capital market.

2. Theoretical Basis and Hypothesis Development

2.1 Theory of Planned Behavior (TPB)

Theory of Planned Behavior, as stated by Ajzen (2011: 131), is intended to predict and explain human behaviour in a particular setting. This idea tries to predict and The Theory of Reasoned Action, which claims that attitudes and subjective norms predict behavioural interest, is the foundation for the Theory of Planned Behavior, which explains human behaviour.

2.2 Technology Acceptance Model (TAM)

When using an information system, users consider several factors, such as the benefits and usability of the system. The Technology Acceptance Model (TAM) is a framework used to analyse how users adopt and utilise technology. This theory was first introduced by Davis M. (1986: 10) and then developed by researchers such as Adam et al. (1992:227), Szajna (1994:91), Igbaria et al. (1995:369), Venkatesh & Morris (2000:186), and Venkatesh & Davis (2000:186). The main purpose of TAM is to explain the factors that influence technology adoption and

analyse user behaviour regarding information technology. The model provides insight into how users accept technology based on two main factors: perceived usefulness (the extent to which a person believes the technology will improve performance) and perceived ease of use (the extent to which a person finds the technology easy to use) (Davis, 1989:10).

2.3 Islamic Capital Market Investment

Investment is the result of an individual's assessment of how well investing in the capital market can help them achieve their financial goals. The stronger a person's knowledge, ease of access, and understanding of risk, the more likely they are to develop a strong interest in investing. In short, investment interest is influenced by internal factors such as knowledge, accessibility, and risk perception, as well as external factors such as global economic events and market fluctuations (Abdullah, 2023).

2.4 Knowledge

Investment knowledge is an understanding of various aspects of investment, including the basics of valuation, risk levels, and potential returns (Latifah, 2019). Adequate knowledge of the capital market is very important in making investment decisions. Investors who have in-depth knowledge of investment instruction, market analysis, and potential risks and returns can have a competitive advantage and make more informed decisions.

2.5 Ease

According to Davis et al. (1989), ease of use is the extent to which a person believes that information technology is easy and does not require much effort. This means that a person feels that the technology used is uncomplicated and free from obstacles.

2.6 Risk

The definition of investment risk is a condition of uncertainty that can lead to losses or a negative impact on a decision or activity. Risk can come from various sources such as fluctuations in stock prices, changes in economic conditions, or unexpected events. In investment, risk always involves trading between risk and return. The perception of risk can vary between investors with some having a high risk tolerance and ready to take big risks, while others are more conservative (Abdullah, 2023).

2.7 Conceptual Framework

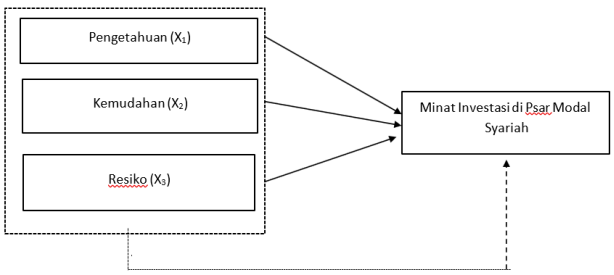


Figure 1 Conceptual Framework

H1: There is an influence of knowledge, convenience and investment risk on investment interest in the Islamic capital market of FEB UNISMA students class 2021-2023.

H2: There is an influence of knowledge on student interest in investing in the Islamic capital market of FEB UNISMA students class of 2021-2023.

H3: There is an influence of convenience on student interest in investing in the Islamic capital market of FEB UNISMA students class of 2021-2023.

H4: There is an influence of risk on student interest in investing in the Islamic capital market of FEB UNISMA students class of 2021-2023.

3. Methodology

3.1 Population and Sample

The population of this study were students of the Faculty of Economics and Business, UNISMA, batch 2021-2023 with a total of 150 respondents. Determination of the research sample was calculated using the Slovin formula which resulted in 95 respondents. The sampling technique used is purposive sampling with several predetermined criteria, namely:

a. Active students of the Faculty of Economics and Business, Islamic University of Malang, class of 2021-2023.
b. Students of the Faculty of Economics and Business, Islamic University of Malang who are currently studying or taking Islamic capital market courses.
c. Students of the Faculty of Economics and Business, Islamic University of Malang who have attended investment training or Islamic capital market investment seminars.

3.2 Data Source

The data source in this study is the type of primary data distributed directly to students of the Faculty of Economics and Business, UNISMA directly through questionnaires.

3.3 Data Collection Methods

This research uses data collection methods through questionnaires. Researchers used a Likert measurement scale with 5 levels of respondents' answers aimed at understanding the influence of knowledge, convenience and risk of Islamic capital market investment.

4. Results and Discussion

4.1 Validity Test

Table 1.1 Validity Test

Variabel	Item	r hitung	r tabel	Keterangan
Pengetahuan	$X1._1$	0,716	0,202	VALID
	$X1._2$	0,709	0,202	VALID
	$X1._3$	0,730	0,202	VALID
	$X1._4$	0,795	0,202	VALID
	$X1._5$	0,726	0,202	VALID
Kemudahan	$X2._1$	0,866	0,202	VALID
	$X2._2$	0,826	0,202	VALID
	$X2._3$	0,802	0,202	VALID
Risiko	$X3._1$	0,836	0,202	VALID
	$X3._2$	0,783	0,202	VALID

	$X3_{.3}$	0,842	0,202	VALID
Minat	Y_1	0,758	0,202	VALID
	Y_2	0,813	0,202	VALID
	Y_3	0,879	0,202	VALID
	Y_4	0,887	0,202	VALID

Source of primary data processed by SPPS 2025

The results of data processing and validity testing of the four variables show r count> r table. Therefore, it can be concluded that each statement is valid.

4.2 Reliability Test

Table 1.2 Reliability Test

No	Variabel	Cronbach's Alpha	Keterangan
1	Pengetahuan (X1)	0,787	Reliabel
2	Kemudahan (X2)	0,776	Reliabel
3	Resiko (X3)	0,757	Reliabel
4	Minat (Y)	0,856	Reliabel

Primary data sources processed by SPPS 2025

The results of the reliability test in this study resulted in a Cronbach Alpha value of each variable> 0.60. So that one variable used is declared reliable.

4.3 Normality Test

Table 1.3 Normality Test

One-Sample Kolmogorov-Smirnov Test			
			Standardized Residual
N			95
Normal Parametersa,b	Mean		.0000000
	Std. Deviation		.98391316
Most Extreme Differences	Absolute		.068
	Positive		.061
	Negative		-.068
Test Statistic			.068
Asymp. Sig. (2-tailed)c			.200d
Monte Carlo Sig. (2-tailed)e	Sig.		.325
	99% Confidence Interval	Lower Bound	.313
		Upper Bound	.337

Source of processed primary data spps 2025

In the table above, the normality test uses Kolmogorov -Smirnov which shows a significance value> 0.05. Based on the results of the normality test above, a significance value of 0.200 is obtained which exceeds 0.05. Therefore, it can be concluded that the data in this study are normally distributed.

4.4 Classical Assumption Test

4.4.1 Multicollinearity Test

Table 1.4 Multicollinearity Test

Variabel	Tolerance	VIF	Keterangan
Pengetahuan (X1)	0,845	1.171	bebas multikolinearitas.
Kemudahan (X2)	0,889	1.124	bebas multikolinearitas.
Resiko (X3)	0,936	1.069	bebas multikolinearitas.

Based on Table 1.4, it can be seen that the X1 tolerance value, namely Investment Knowledge, is 0.854 and VIF 1.171, then the X2 tolerance value, namely the Ease of Investment, is 0.889 and VIF 1.124, then the X3 tolerance value, namely risk, is 0.936 and VIF 1.069. The results in the multicollinearity test show tolerance results of more than 0.1 and VIF of the three variables are less than 10. So it can be said that there is no multicollinearity problem or free of multicollinearity.

4.4.2 Heteroscedasticity Test

Table 1.5 Heteroscedasticity Test

Variabel	T	Sig.	Keterangan
Pengetahuan (X1)	0,322	0.748	Bebas heteroskedastisitas
Kemudahan (X2)	1.107	0,271	Bebas heteroskedastisitas
Resiko (X3)	-0.142	0.888	Bebas heteroskedastisitas

Based on table 1.5 above, it can be seen that the significance of the investment knowledge variable is 0.748, the ease of investment is 0.271, and the investment risk is 0.888 has a significance value of more than 0.05. So it can be concluded that there is no heteroscedasticity in the regression model.

4.4.3 Multiple Linear Analysis

Table 1.6 Multiple Linear Analysis Test Results

Coefficientsa						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.079	2.119		.981	.329
	Pengetahuan	.080	.080	.090	.996	.322
	Kemudahan	.695	.119	.507	5.824	<,001
	Resiko	.294	.127	.202	2.318	.023
a Dependent Variable: Minat						

Source of processed primary data spps 2025

Based on the results of multiple linear regression, this study shows that the constant value (a) is 2,079, which indicates the influence of the variable influence of knowledge (X1), convenience (X2), risk (X3). Each variable has a regression coefficient value of 0.080 for knowledge, 0.695 for convenience, 0.294 for risk, which indicates the level of contribution of each variable to the research model.

4.4.4 F test

Table 1.7 F Test (Simultaneous Test)

ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	197.437	3	65.812	18.066	<,001[b]
	Residual	331.510	91	3.643		
	Total	528.947	94			
a Dependent Variable: Minat						
b Predictors: (Constant), Resiko, Kemudahan, Pengetahuan						

Source of processed primary data spps 2025

Based on the table above, the simultaneous results (F test) show that the Fcount value of 18,066> compared to the Ftable of 2,073, and the significance value of 0.001 is smaller than 0.005. Thus, the variables of knowledge, convenience and risk together have an effect on student investment interest.

4.4.5 Coefficient of Determination Analysis Test

Table 1.8 Test Analysis of the Coefficient of Determination

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.611a	.373	.353	1.909
a Predictors: (Constant), Resiko, Kemudahan, Pengetahuan				

Source of processed primary data SPPS 2025

The results of the table above show that the Adjusted R Square value is 0.353 or 35.3%. The coefficient of determination shows that the variables of Knowledge (X1), Ease (X2), and Risk (X3) are able to explain the investment interest variable (Y) by 35.3% while the remaining 64.7% is explained by other variables.

4.4.6 t test

Table 1.8 t test (Partial Test)

Coefficientsa						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.079	2.119		.981	.329
	Pengetahuan	.080	.080	.090	.996	.322
	Kemudahan	.695	.119	.507	5.824	<,001
	Resiko	.294	.127	.202	2.318	.023
a Dependent Variable: Minat						

Source of primary data processed by SPPS 2025

Based on the results obtained, each variable, namely knowledge (X1), convenience (X2) and risk (X3), is proven to have an individual influence on investment interest (Y).

4.5 Discussion Implications

4.5.1 The Influence of Knowledge on Interest in Investing in the Sharia Capital Market among

Students of the Faculty of Economics and Business UNISMA

This study examines the effect of knowledge on student investment interest in the Islamic capital market. The t-test results show that knowledge has no significant effect on investment interest, with a significance value of 0.332> 0.05. External factors such as the lack of understanding of investment and the rise of fraudulent investments make students hesitate to invest. This finding contradicts the research of Siti Latifah (2019) which states that knowledge has a positive effect on investment interest. Therefore, increasing investment literacy is needed to build student confidence in investing in the Islamic capital market.

4.5.2 The Effect of Ease on Interest in Investing in the Islamic Capital Market on Students of the Faculty of Economics and Business UNISMA

The t test results show that the ease of investment has a significant effect on investment interest in the Islamic capital market, the higher the student's interest in investing. This finding is in line with Viki Rahmat's research (2023) and supports the Theory of Planned Behaviour (TPB) which states that the ease of using technology increases a person's interest in investing.

4.5.3 The Effect of Risk on Interest in Investing in the Islamic Capital Market Among Students of the Faculty of Economics and Business UNISMA

This study found that risk has a significant effect on student interest in investing in the Islamic capital market with a significance value of 0.023 less than 0.05. The main influencing factor is the belief in transparent and careful sharia principles, as well as the availability of clear information for novice investors. These results are in line with research by Putri Sheilla (2020), which shows that risk preferences fulfil student investment interest.

5. Conclusions

Based on the results of the data analysis, this research resulted in the following main conclusions:

1. Knowledge, convenience and risk together affect the interest in investing in Islamic capital markets.
2. Knowledge has no effect on students' interest in investing in the Islamic capital market.
3. Ease affects student interest in investing in the Islamic capital market.
4. Risk affects student interest in investing in the Islamic capital market.

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THE EFFECT OF ENVIRONMENTAL, SOCIAL, AND GOVERNANCE (ESG) ON FIRM VALUE IN GREEN AND NON-GREEN INDUSTRY COMPANIES

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Abstract

This study analyzes the effect of ESG Disclosure on firm value and compares its impact between companies which are related and not related to the green industry. This study uses secondary data from annual reports of companies listed in the IDXINDUST Index for the 2021–2023 period. The analysis method applied is multiple linear regression using software IBM SPSS Statistics 27. The results show that ESG Disclosure significantly affects firm value, with a more dominant impact on companies related to the green industry. Environmental disclosure has a significant positive effect on green industry companies, while in non-green industry companies, it has a significant negative effect. However, social and governance variables do not significantly influence firm value in either green or non-green industry companies. These findings indicate that transparency and compliance with environmental practices enhance investor confidence in green industry companies, whereas in non-green industries, ESG compliance costs may be perceived as a financial burden that reduces firm value. The implications of this study provide insights for companies to improve ESG transparency and for investors to consider sustainability factors in investment decision-making.

Keywords: Environmental, Social, Governance, Firm Value

1. Introduction

Industries in Indonesia contribute significantly to the economy, but they also have a substantial environmental impact, such as air, water, and soil pollution caused by industrial waste and carbon emissions (Kaplale et al., 2023). In 2021, Indonesia generated 60 million tons of hazardous and toxic waste (B3 waste), with the manufacturing sector as the main contributor. In addition, Indonesia's carbon emissions reached 620 $MtCO_2$, accounting for 1.72% of total global emissions, making Indonesia one of the largest emitters in the world. (Global Carbon Atlas, 2024). This situation necessitates the implementation of green industry to balance economic growth with environmental sustainability.

The implementation of green industry can improve a company's competitiveness through resource efficiency and reduced environmental impact. By adopting green industry practices, companies can play an active role in reducing negative impacts on the environment and improving the quality of life of the community. (Hutahuruk et al., 2023).

The concept of Environmental, Social, and Governance (ESG) has become an important instrument in assessing a company's sustainability performance, which affects firm value and investor trust. ESG plays a crucial role in evaluating a company’s contribution to sustainability, where environmental disclosure reflects transparency in managing ecological impacts, the social aspect indicates responsibility toward stakeholders, and the governance aspect reflects the implementation of Good Corporate Governance (GCG) principles. Companies with a high level of ESG disclosure tend to have higher firm value, as reflected by Tobin’s Q, which serves as a market-based indicator of company valuation (Sugiarto et al., 2023).

Therefore, it is important to explore how ESG disclosure affects firm value in the industrial sector, which significantly contributes to the economy but also faces considerable environmental risks. This study aims to analyze the effect of ESG disclosure on the firm value of companies listed in the IDXINDUST Index for the 2021–2023 period. Furthermore, due to the limited number of studies comparing the impact of ESG disclosure across companies, this research also compares the differences in ESG's influence between companies related to the green industry and those that are not. This comparison seeks to provide deeper insights into the effectiveness of ESG disclosure in enhancing firm value, particularly among companies included in the IDXINDUST Index.

2. Literature Review

2.1 Stakeholder Theory

According to Freeman, R. E. (1984), stakeholder theory states that an organization must consider the interests of all parties connected to or affected by its business activities, such as employees, customers, suppliers, communities, and the environment. Stakeholder theory emphasizes that firm value has a significant influence on sustaining relationships with investors. The higher the firm value, the greater the investor interest in participating in the company. Thus, the primary objective of stakeholder theory is to assist company management in managing relationships with stakeholders to support long-term sustainability and growth (Dhani & Utama, 2017). In this study, stakeholder theory is used to analyze how the implementation of ESG influences firm value through the interaction and relationship with various stakeholders.

2.2 Legitimacy Theory

Legitimacy theory is used to explain how companies develop frameworks for disclosing social and environmental responsibility in order to maintain harmonious relationships with society and the environment. According to this theory, companies hold a social contract to operate based on prevailing values of fairness and accepted norms (Badjuri et al., 2021). The legitimacy theory is highly relevant and necessary for this study, as ESG disclosure serves as a mechanism for companies to strengthen their legitimacy in the eyes of stakeholders. In the context of firm value, ESG disclosure reflects the company's efforts to meet social expectations, enhance transparency, and demonstrate a commitment to sustainability. This is important because legitimacy gained through ESG disclosure can contribute to an improved corporate reputation, which ultimately has a positive impact on market perception and firm value.

2.3 Signalling Theory

Signaling theory refers to the information provided by a company to investors regarding the projected future development of the firm (Agus & Sutanto, 2024). The signal in this context is the information communicated by the company to external parties such as investors. Therefore, the signals conveyed must possess sufficient informational value to influence external perceptions of the company (Mirfaqoh et al., 2023). In the context of this study, ESG disclosure functions as a positive signal that reflects the company's commitment to sustainable social, environmental, and governance practices. This can enhance investor and stakeholder confidence in the company's long-term performance. Such positive signals also encourage investors to evaluate the company more favorably, increase investment interest, and ultimately contribute to higher stock prices and improved firm value.

2.4 Firm Value

Firm value is generally reflected in the company's stock price in the market, which is determined by market mechanisms through the interaction of supply and demand from market participants. Firm value represents the market's assessment of the company and can be enhanced through strong performance. Positive performance attracts investor interest, triggers favorable responses, and increases investment, ultimately leading to a rise in firm value (Twincond, 2023). To measure the firm value variable, this study uses Tobin's Q, calculated using the following formula:

$$TOBIN'S\ Q\ = \frac{Market\ Value\ of\ Equity + total\ liabilities}{Total\ Assets}$$

2.5 ESG Disclosure

Environmental, Social, and Governance (ESG) refers to a series of activities that encompass environmental and social responsibility, as well as the application of ethical principles in business operations under effective oversight (Kim & Li, 2021). The ESG aspect is a critical element that must be fulfilled to support economic, social, and environmental performance in achieving business sustainability goals (Shakil, 2021). ESG encompasses various components that influence long-term sustainability and corporate social responsibility. The following is an explanation of each ESG component:

2.5.1 Environmental

The environmental component of ESG reflects how business activities affect ecosystems and natural resources. Through sustainable strategies, companies not only seek to reduce their ecological impact but also contribute to the preservation of biodiversity and valuable natural resources (Putra & Asfiah, 2024). To determine the value of environmental disclosure, the following formula is used:

$$\text{ENV} = \frac{\Sigma\ item\ ENV}{total\ ENV}$$

2.5.2 Social

The social component of ESG focuses on a company's interaction with employees, communities, and society at large. By fostering strong social relationships, companies can build closer and more positive connections with stakeholders (Putra & Asfiah, 2024). To determine the value of social disclosure, the following formula is used:

$$\text{SOC} = \frac{\Sigma\ item\ SOC}{total\ SOC}$$

2.5.3 Governance

The governance aspect of ESG refers to the mechanisms of corporate management, regulation, and oversight. Good governance serves as a fundamental pillar for achieving long-term corporate success. Through transparent, ethical, and efficient governance practices, companies can ensure regulatory compliance, operational optimization, and the creation of added value for all stakeholders. (Putra & Asfiah, 2024). To determine the value of governance disclosure, the following formula Is used:

$$\text{GOV} = \frac{\Sigma\ item\ GOV}{total\ GOV}$$

2.6 Conceptual Framework

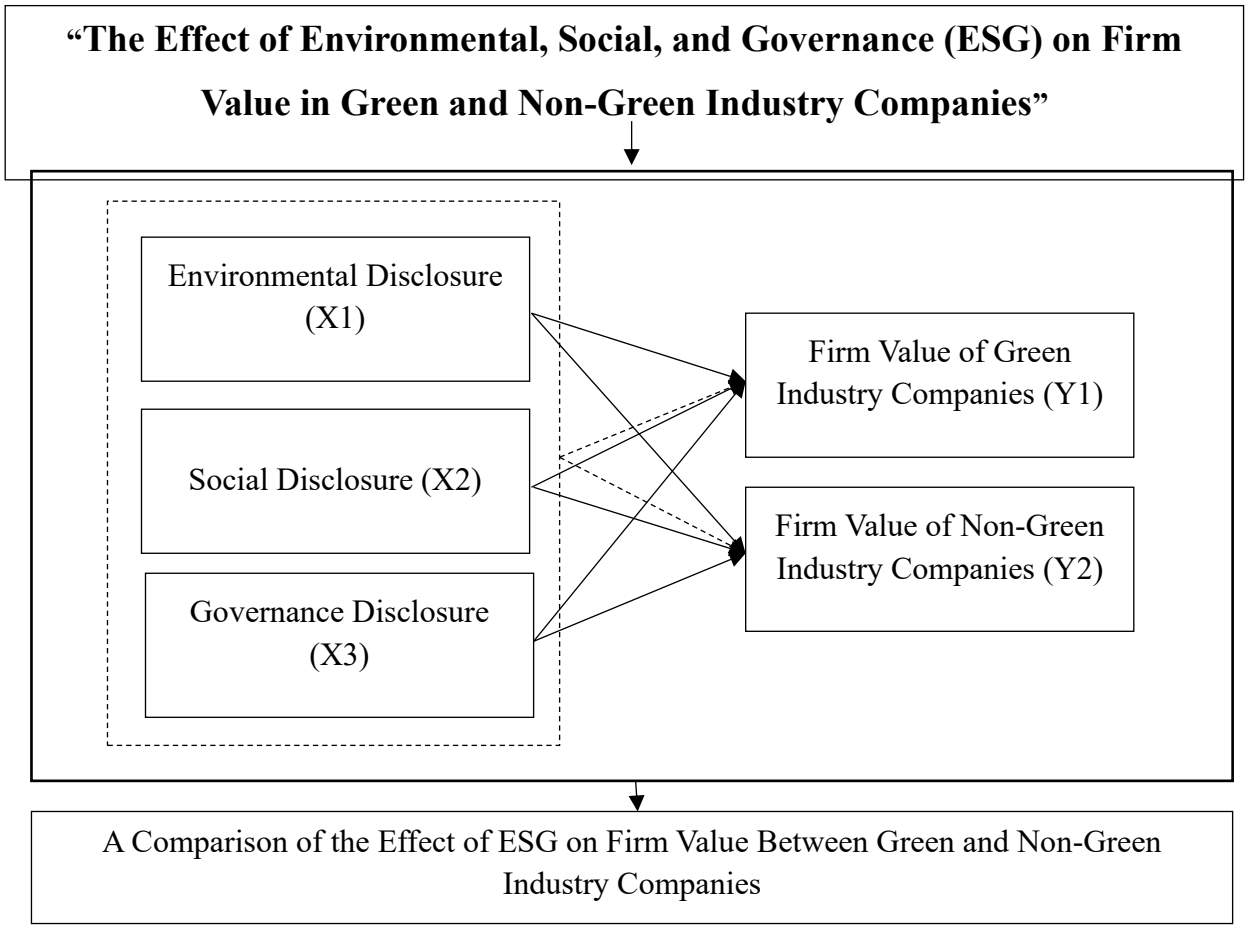

Figure 1. **Conceptual Framework**

Based on the conceptual framework above, the following hypotheses are proposed:

H1: Environmental, Social, and Governance (ESG) disclosure simultaneously has a significant effect on the firm value of companies related to the green industry.

H1a: Environmental disclosure has a significant effect on the firm value of companies related to the green industry.

H1b: Social disclosure has a significant effect on the firm value of companies related to the green industry.

H1c: Governance disclosure has a significant effect on the firm value of companies related to the green industry.

H2: Environmental, Social, and Governance (ESG) disclosure simultaneously has a significant effect on the firm value of companies not related to the green industry.

H2a: Environmental disclosure has a significant effect on the firm value of companies not related to the green industry.

H2b: Social disclosure has a significant effect on the firm value of companies not related to the green industry.

H2c: Governance disclosure has a significant effect on the firm value of companies not related to the green industry.

H3: The "Environmental" component of ESG disclosure has a more dominant effect on firm value in companies related to the green industry compared to those not related to the green industry.

H4: There is a difference in the effect of Environmental, Social, and Governance (ESG) disclosure on firm value between companies related to the green industry and those not related to it.

3. Research Methodology

3.1 Type of Research and Data Sources

This study employs a quantitative research design with a correlational and comparative approach. The objective is to examine the relationship between ESG disclosure and firm value, as well as to compare firm value between companies related to and not related to the green industry. This research utilizes secondary data obtained from financial reports, annual reports, and sustainability reports of companies listed on the Indonesia Stock Exchange (IDX) under the IDXINDUST Index during the 2021–2023 period. The 2021–2023 period was selected because the IDXINDUST Index was first launched in 2021, and data related to the companies in this index have only been available since then.

3.2 Population and Sample

The population of this study consists of all industrial sector companies listed in the IDXINDUST Index on the IDX during the 2021–2023 period. These companies were selected due to their relevance to the research topic, namely ESG disclosure and its relationship to firm value. The sample was determined using purposive sampling with specific criteria, resulting in 57 data points from 19 green industry-related companies and 42 data points from 14 non-green industry-related companies.

3.3 Data Analysis Method

In this study, multiple linear regression analysis is used to examine the effect of Environmental, Social, and Governance (ESG) disclosure on firm value. Meanwhile, to test the difference in the effect of ESG disclosure on firm value between companies related to and not related to the green industry, an independent sample t-test (difference test) is employed. The following is the multiple linear regression equation used in this research:

$$\text{Tobinsq1} = \alpha_1 + \beta_1 Env1 + \beta_2 Soc1 + \beta_3 \text{Gov1} + \beta_4 Size1 + \beta_5 ROA1 + \in_1$$

$$\text{Tobinsq2} = \alpha_2 + \beta_6 Env2 + \beta_7 Soc2 + \beta_8 \text{Gov2} + \beta_9 SIZE2 + \beta_{10}\ \text{ROA2} + \in_2$$

Explanation:

Tobinsq1	= Firm value of companies related to the green industry
Tobinsq2	= Firm value of companies not related to the green industry
Env1, Env2	= Environmental Disclosure
Soc1, Soc2	= Social Disclosure
Gov1, Gov2	= Governance Disclosure
SIZE1, SIZE2	= Firm Size
ROA1, ROA2	= Profitability
α_1, α_2	= Constant
$\beta_1 - \beta_{10}$	= Regression coefficients
$\in_1, \in_2$	= Error term

4. Research Results and Discussion

4.1 Descriptive Statistical Analysis

Table 1. Descriptive Statistical Analysis of Companies Related to the Green Industry

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
ENV1	57	,094	,742	,28086	,172389
SOC1	57	,056	,833	,26067	,194987
GOV1	57	,045	1,000	,32593	,360634
TOBINSQ1	57	,356	4,098	1,12735	,758358
SIZE1	57	26,609	33,731	28,74653	1,757471
ROA1	57	-,073	,364	,05577	,078551
Valid N (listwise)	57				

Source: Output of IBM SPSS Statistics 27, (2025)

Table 2. Descriptive Statistical Analysis of Companies not Related to the Green Industry

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
ENV2	42	,031	,375	,19131	,107437
SOC2	42	,100	,611	,23348	,096661
GOV2	42	,045	1,000	,20448	,200932
TOBINSQ2	42	,473	2,878	1,29690	,628831
SIZE2	42	24,678	31,885	27,81757	1,637002
ROA2	42	-,241	,125	,00157	,078110
Valid N (listwise)	42				

Source: Output of IBM SPSS Statistics 27, (2025)

Based on the descriptive analysis results, firm value (Tobin's Q) for green companies has an average of 1.127 with a standard deviation of 0.758, while non-green companies have an average of 1.297 with a standard deviation of 0.629, indicating that green companies tend to have higher market valuation. ESG disclosure shows that green companies have higher average scores than non-green companies across all aspects (environmental, social, and governance), with the environmental aspect showing the greatest variation. In terms of firm size (SIZE), green companies have a larger average size (28.75) compared to non-green companies (27.82), while profitability (ROA) is also higher in green companies (0.056) than in non-green companies (0.00157).

Overall, these results indicate that green companies exhibit better ESG disclosure, larger firm size, and higher profitability compared to non-green companies.

4.2 Normality Test Results

a. Normality Test Results for Companies Related to the Green Industry

Table 3. Results of the Normality Test

One-Sample Kolmogorov-Smirnov Test

	Unstandardized Residual
N	57

Normal Parameters[a,b]	Mean		,0000000
	Std. Deviation		,37053453
Most Extreme Differences	Absolute		,082
	Positive		,082
	Negative		-,074
Test Statistic			,082
Asymp. Sig. (2-tailed)[c]			,200[d]
Monte Carlo Sig. (2-tailed)[e]	Sig.		,433
	99% Confidence Interval	Lower Bound	,421
		Upper Bound	,446

Source: Output of IBM SPSS Statistics 27, (2025)

The test results in Table 3 show that the Asymp. Sig. (2-tailed) value is 0.200, which is greater than 0.05. Therefore, it can be concluded that the residuals are normally distributed.

b. Normality Test Resulrs for Companies Related to the Green Industry

Table 4. Results of the Normality Test

One-Sample Kolmogorov-Smirnov Test

			Unstandardized Residual
N			42
Normal Parameters[a,b]	Mean		,0000000
	Std. Deviation		,51532489
Most Extreme Differences	Absolute		,071
	Positive		,071
	Negative		-,057
Test Statistic			,071
Asymp. Sig. (2-tailed)[c]			,200[d]
Monte Carlo Sig. (2-tailed)[e]	Sig.		,857
	99% Confidence Interval	Lower Bound	,848
		Upper Bound	,866

Source: Output of IBM SPSS Statistics 27, (2025)

Based on the results of the normality test conducted using the One-Sample Kolmogorov-Smirnov method, the Asymp. Sig. (2-tailed) value obtained is 0.200, which exceeds the alpha level of 0.05. Therefore, it can be concluded that the data for companies not related to the green industry are normally distributed.

4.3 Classical Assumption Test Results

a. Multicollinearity Test

The basis for decision-making in the multicollinearity test is based on the tolerance and VIF values. Multicollinearity is considered not to occur if the tolerance value is ≥ 0.10 and the VIF value is ≤ 10. The following are the multicollinearity test results for companies related to and not related to the green industry

Tabel 5. Multicollinearity Test Results for Companies Related to the Green Industry

Variable	Tolerance	VIF	Explanation
ENV1	0,305	3,272	No multicollinearity is detected
SOC1	0,269	3,714	No multicollinearity is detected
GOV1	0,434	2,304	No multicollinearity is detected

SIZE1	0,625	1,599	No multicollinearity is detected
ROA1	0,892	1,121	No multicollinearity is detected

Source: Output of IBM SPSS Statistics 27, (2025)

Tabel 6. Multicollinearity Test Results for Companies not related to the Green Industry

Variable	Tolerance	VIF	Explanation
ENV2	0,797	1,255	No multicollinearity is detected
SOC2	0,449	2,228	No multicollinearity is detected
GOV2	0,661	1,513	No multicollinearity is detected
SIZE2	0,678	1,475	No multicollinearity is detected
ROA2	0,858	1,166	No multicollinearity is detected

Source: Output of IBM SPSS Statistics 27, (2025)

b. Heteroscedasticity Test

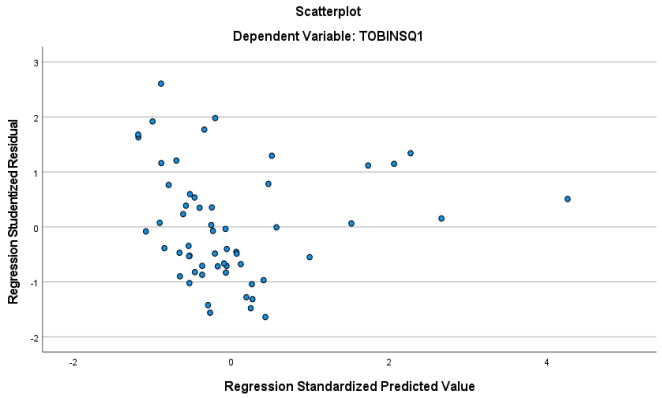

Figure 2. Heteroscedasticity Test Results for Companies Related to the Green Industry

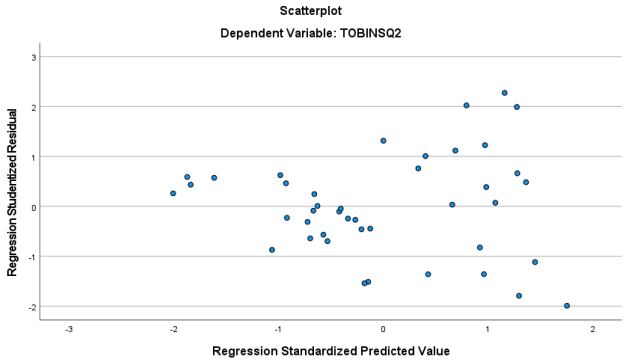

Figure 3. Heteroscedasticity Test Results for Companies not Related to the Green Industry

Based on the figure above, the heteroscedasticity test was conducted using a scatterplot. In Figures 2 and 3, the residual points are randomly scattered, indicating the likelihood of no significant heteroscedasticity.

c. Autocorrelation Test

Table 7. Autocorrelation Test Results for Companies Related to the Green Industry

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,869[a]	,755	,731	,393648	1,436

a. Predictors: (Constant), ROA1, GOV1, SIZE1, ENV1, SOC1

b. Dependent Variable: TOBINSQ1

Source: Output of IBM SPSS Statistics 27, (2025)

Table 8. Autocorrelation Test Results for Companies Not Related to the Green Industry

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,573[a]	,328	,235	,549948	,911

a. Predictors: (Constant), ROA2, GOV2, ENV2, SIZE2, SOC2
b. Dependent Variable: TOBINSQ2

Source: Output of IBM SPSS Statistics 27, (2025)

To detect the absence of negative or positive autocorrelation, the Durbin-Watson (DW) value should ideally fall between -2 and +2 (Nasution et al., 2024). Based on the results, the DW value is 1.436 for companies related to the green industry and 0.911 for companies not related to the green industry. Therefore, it can be concluded that the regression models are free from autocorrelation.

4.4 Multiple Linear Regression Analysis

a Results of Multiple Linear Regression Analysis for Companies Related to the Green Industry

b Table 9. Results of Multiple Linear Regression Analysis

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	4,578	1,026		4,464	,000
	ENV1	1,163	,552	,264	2,108	,040
	SOC1	,189	,520	,049	,363	,718
	GOV1	-,372	,221	-,177	-1,679	,099
	SIZE1	-,146	,038	-,338	-3,852	,000
	ROA1	8,715	,709	,903	12,292	,000

a. Dependent Variable: TOBINSQ1

Source: Output of IBM SPSS Statistics 27, (2025)

Based on Table 9, the multiple linear regression equation for companies related to the green industry is as follows:

$$\text{Tobinsq1} = 4{,}578 + 1{,}163\, ENV1_{(Sig:0{,}040)} + 0{,}189\, SOC1_{(Sig:0{,}718)} - 0{,}372\, GOV1_{(Sig:0{,}099)} - 0{,}146\, SIZE1_{(Sig:<0{,}001)} + 8{,}715\, ROA1_{(Sig:<0{,}001)} + \in_1$$

b. Results of Multiple Linear Regression Analysis for Companies not Related to the Green Industry

Table 10. Results of Multiple Linear Regression Analysis

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	4,967	1,686		2,946	,006
	ENV2	-3,121	,896	-,533	-3,485	,001
	SOC2	,193	1,326	,030	,145	,885
	GOV2	,345	,526	,110	,656	,516
	SIZE2	-,115	,064	-,299	-1,800	,080
	ROA2	1,265	1,187	,157	1,065	,294

a. Dependent Variable: TOBINSQ2

Source: Output of IBM SPSS Statistics 27, (2025)

Based on Table 10, the multiple linear regression equation for companies not related to the green industry is as follows:

$$\text{Tobinsq2} = 4{,}967 - 3{,}121\, ENV2_{(Sig:0{,}001)} + 0{,}193\, SOC2_{(Sig:0{,}885)} + 0{,}345\, GOV2_{(Sig:0{,}516)} - 0{,}115\, SIZE2_{(Sig:0{,}080)} + 1{,}265\, ROA2_{(Sig:0{,}294)} + \in_2$$

4.5 Hypothesis Testing Results

a. F-Test

Hypothesis testing is conducted based on the significance value. If the significance value (Sig.) is ≤ 0.05, then H_0 is rejected, indicating that the independent variables simultaneously have a significant effect on the dependent variable. Conversely, if the significance value (Sig.) is > 0.05, then H_0 is accepted, indicating that there is no significant simultaneous effect.

Table 11. F-Test Results for Companies Related to the Green Industry

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	24,303	5	4,861	31,367	,000[b]
	Residual	7,903	51	,155		
	Total	32,206	56			

a. Dependent Variable: TOBINSQ1

b. Predictors: (Constant), ROA1, GOV1, SIZE1, ENV1, SOC1

Source: Output of IBM SPSS Statistics 27, (2025)

Table 12. F-Test Results for Companies not Related to the Green Industry

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5,325	5	1,065	3,521	,011[b]
	Residual	10,888	36	,302		
	Total	16,213	41			

a. Dependent Variable: TOBINSQ2

b. Predictors: (Constant), ROA2, GOV2, ENV2, SIZE2, SOC2

Source: Output of IBM SPSS Statistics 27, (2025)

Table 11 shows that the regression model is significant in explaining firm value (TOBINSQ1) for companies related to the green industry ($F = 31.367$; $p < 0.001$), indicating that the variables ENV1, SOC1, GOV1, SIZE1, and ROA1 simultaneously have a significant effect. Therefore, H1 is accepted. Meanwhile, Table 12 shows that the regression model for non-green companies is also significant ($F = 3.521$; $p = 0.011$), thus H2 is accepted, although with a lower predictive strength.

b. Coefficient of Determination (R^2)

Table 13. Coefficient of Determination (R^2) Results for Companies Related to the Green Industry

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,869[a]	,755	,731	,393648

a. Predictors: (Constant), ROA1, GOV1, SIZE1, ENV1, SOC1
b. Dependent Variable: TOBINSQ1

Source: Output of IBM SPSS Statistics 27, (2025)

Source: Output of IBM SPSS Statistics 27, (2025)

Table 14. Coefficient of Determination (R^2) Results for Companies not Related to the Green Industry

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,573[a]	,328	,235	,549948

a. Predictors: (Constant), ROA2, GOV2, ENV2, SIZE2, SOC2
b. Dependent Variable: TOBINSQ2

Source: Output of IBM SPSS Statistics 27, (2025)

Source: Output of IBM SPSS Statistics 27, (2025)

Table 13 shows that ESG variables can explain 75.5% of the variation in firm value for companies related to the green industry (R Square = 0.755), while the remaining 24.5% is influenced by other factors. Table 14 indicates that, for non-green companies, ESG variables explain only 32.8% of the variation in firm value (R Square = 0.328), with the remaining 67.2% influenced by other factors outside the research model.

c. t-Test

Table 15. t-Test Results for Companies Related to the Green Industry

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	4,578	1,026		4,464	,000
	ENV1	1,163	,552	,264	2,108	,040
	SOC1	,189	,520	,049	,363	,718
	GOV1	-,372	,221	-,177	-1,679	,099
	SIZE1	-,146	,038	-,338	-3,852	,000
	ROA1	8,715	,709	,903	12,292	,000

a. Dependent Variable: TOBINSQ1

Source: Output of IBM SPSS Statistics 27, (2025)

The partial test results for companies not related to the green industry indicate the influence of Environmental, Social, Governance, Size, and Profitability variables on firm value as follows:

1. Environmental disclosure has a significant positive effect on firm value (t-test = 2.108; sig = 0.040), thus H1a is accepted, indicating that environmental transparency increases investor trust and enhances firm value. This finding supports Legitimacy Theory and Stakeholder Theory, where green-oriented companies actively engaged in environmental practices are more attractive to investors. In line with Legitimacy

Theory, one way for companies to gain legitimacy is by disclosing their social performance in sustainability reports as evidence of corporate social responsibility (Mudzakir & Pangestuti, 2023).

2. Social and Governance disclosures do not have a significant effect (sig > 0.05), therefore H1b and H1c are rejected, indicating that social and governance factors are not yet major concerns for investors in green-related industries. Their focus remains on profitability and environmental compliance, with profitability (ROA) and environmental disclosure showing significant positive effects.
3. Firm size (Size) has a significant negative effect (t-test = -3.852; sig < 0.001), suggesting that the larger the company, the more complex its management becomes, potentially reducing operational efficiency. Profitability (ROA) has a significant positive effect (t-test = 12.292; sig < 0.001), indicating that high earnings remain a key factor considered by investors.

Table 16. t-Test Results for Companies not Related to the Green Industry

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	4,967	1,686		2,946	,006
	ENV2	-3,121	,896	-,533	-3,485	,001
	SOC2	,193	1,326	,030	,145	,885
	GOV2	,345	,526	,110	,656	,516
	SIZE2	-,115	,064	-,299	-1,800	,080
	ROA2	1,265	1,187	,157	1,065	,294

a. Dependent Variable: TOBINSQ2

Source: Output of IBM SPSS Statistics 27, (2025)

The partial test results for companies not related to the green industry reveal the influence of Environmental, Social, Governance, Size, and Profitability variables on firm value as follows:

1. Environmental disclosure has a significant negative effect (t-test = -3.485; sig = 0.001), thus H2a is accepted. Environmental disclosure has a significantly negative impact on non-green companies because it is perceived as an additional cost burden without clear financial benefits. This is consistent with Signaling Theory, where investors interpret such disclosure as a reduction in profitability.
2. Social and Governance disclosures do not have a significant effect (sig > 0.05), therefore H2b and H2c are rejected, indicating that employee welfare and corporate governance are not the main considerations in investment decisions.
3. Firm size and profitability also do not show significant effects (sig > 0.05), suggesting that in non-green sectors, investors may consider other factors not included in this study.

The results of the partial tests for both groups of companies indicate that Environmental disclosure significantly affects firm value in both green and non-green companies, but in opposite directions. In green industry-related companies, the effect is significantly positive, while in non-green companies, the effect is significantly negative. This confirms that the Environmental component has a more dominant influence on firm value in green companies compared to non-green companies, thus supporting Hypothesis H3.

4.6 Independent Sample T-Test Results

Table 17. Results of Independent Sample T-Test

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Environmental Dosclosure	Equal variances assumed	3,871	,052	2,967	97	,004	,089550	,030187	,029638	,149463
	Equal variances not assumed			3,174	94,670	,002	,089550	,028217	,033530	,145570
Social Disclosure	Equal variances assumed	11,382	,001	,831	97	,408	,027190	,032726	-,037762	,092143
	Equal variances not assumed			,912	86,449	,364	,027190	,029824	-,032093	,086474
Governance Disclosure	Equal variances assumed	19,556	,000	1,967	97	,052	,121454	,061731	-,001065	,243972
	Equal variances not assumed			2,133	91,052	,036	,121454	,056947	,008336	,234571

Source: Output of IBM SPSS Statistics 27, (2025)

The independent t-test results show significant differences in Environmental and Governance disclosures between companies related and not related to the green industry, with green companies exhibiting higher average disclosure levels.

1. Environmental Disclosure: A significant difference is observed (Sig. 0.004 < 0.05), with green industry-related companies showing higher levels of environmental disclosure.
2. Social Disclosure: No significant difference is found (Sig. 0.364 > 0.05), indicating that social disclosure is relatively similar between the two groups.
3. Governance Disclosure: A significant difference is observed (Sig. 0.036 < 0.05), with green companies demonstrating a higher level of governance disclosure.

These findings support Hypothesis H4, as green industry-related companies tend to be more transparent in disclosing environmental and governance information compared to companies not related to the green industry.

5. Conclusion and Suggestions

5.1 Conclusion

1. Environmental disclosure has a significant positive effect on firm value in companies related to the green industry, while the social and governance aspects have no significant effect.
2. In companies not related to the green industry, environmental disclosure has a significant negative effect on firm value, whereas the social and governance aspects do not show significant effects.
3. The influence of the environmental aspect is more dominant on firm value in companies related to the green industry compared to those not related.
4. The results of the Independent Sample T-Test show significant differences in environmental and governance disclosures between companies related and not related to the green industry, while the social aspect shows no significant difference and is relatively similar between the two groups.

5.2 Limitations

1. This study only covers companies listed in the IDXINDUST index over a three-year period (2021–2023).

2. It only considers three independent variables (Environmental, Social, and Governance), excluding other potential factors that may influence firm value.
3. The measurement of control variables (Size and ROA) has limitations in fully representing company scale and profitability.

5.3 Suggestions

1. Future research may expand the scope to other sectors listed on the IDX and extend the observation period to capture long-term trends.
2. Additional variables related to ESG and firm value, such as Green Innovation, Eco-Efficiency, Environmental Management Accounting, and Good Corporate Governance, can be included to enhance model accuracy.
3. Employing more comprehensive measures of firm size (e.g., market capitalization) and adding other control variables such as ROE or NPM may improve the relevance and robustness of the research findings.

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THE EFFECT OF FINANCIAL TECHNOLOGY, DIGITALIZATION OF TAX SERVICES, DIGITAL-BASED TAX LITERACY ON TAXPAYER COMPLIANCE IN MALANG CITY

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Abstract

Indication this study focused on at the level of awareness and compliance of the Indonesian people with taxes still tends to be low. The purpose of this study is to determine the effect of Financial Technology, digitization of Tax Services, digital-based tax literacy on tax compliance. Research location in Malang City. The time used was December 2024 to February 2025. The number of samples was 90 respondents. the data was analyzed with SPSS 27. The results of this study indicate that the use of financial technolohy has no effect on taxpayer compliance, while the digitization of tax services and digial-based tax literacy has an effect on taxpayer compliance. Future researchers are advised to expand the research area outside Malang City, it is hoped that it will increase corporate taxpayer research respondents. and further researchers can add other variables.

Keywords: Tax compliance, Financial technology, digitalization of tax services, digital-based tax literacy

1. Introduction

According to Law No. 7 of 2021 concerning Harmonization of Tax Regulations, taxes are compelling with no direct reward for state purposes. This definition shows tax as an instrument of state revenue collection to fund development programs and public services. In this context, taxes are one of the main sources of state revenue needed to support the state budget.

The Directorate General of Taxes (DGT), source of the 2023 State Budget, reported that taxes are the source of state revenue in the period 2021 to 2024. This is evidenced by the very significant proportion of tax revenue, reaching 73.9% of total state revenue in 2021. The proportion of tax revenue continues to increase until it reaches 83.2% in 2023. The consistent increase in tax revenue every year indicates that taxes have become the mainstay for the state in financing the State Budget.

Tax revenue has also shown a significant upward trend since 2021 after experiencing a decline in 2020 due to the COVID-19 pandemic. Tax realization in 2021 reached IDR1,278.63 trillion with an annual growth of 19.3%, followed by an increase in 2022 of IDR1,716.77 trillion with a growth of 34.3%. In 2023, tax revenue increased again to IDR1,869.23 trillion or 102.8% of the target, with annual growth of 8.9%. This data shows the success of the government's strategy in improving taxpayer compliance.

Many factors affect taxpayer compliance, one of which is financial technology. tax is one of the largest state revenues, so it should emphasize the utilization of fintech where taxpayer actors increase their understanding of certain features or services from fintech such as financial management so that state revenues can be increased as a result of increasing taxpayer tax compliance. Apart from financial technology, Digitalization of Tax Services is also a factor that can affect taxpayer compliance. Digitalization of tax services can reduce administrative barriers and increase transparency, so that taxpayers are more motivated to fulfill their obligations on time. Therefore, increasing the digitalization of tax services will make taxpayer compliance increase.

The next factor is digital-based tax literacy can also affect taxpayer compliance. a more effective way of delivering digital-based tax information can increase public understanding. Digital-based tax literacy helps taxpayers operate online tax applications or platforms, thereby reducing technical barriers that can lead to non-compliance.

There have been many previous studies on taxpayer compliance. This research expands the understanding of the determinants of tax compliance by integrating the three main variables of financial technology, digitalization of tax services, and digital-based tax literacy in one model, in contrast to previous studies that tend to focus only on one or two independent variables. The focus on the local context of Malang City provides a unique and specific perspective, adding geographical and social dimensions that have not been studied much before. The emphasis on digitalization reflects recent developments in technology and government services, making it relevant to Davis' (1986) adoption theory, the Technology Acceptance Model or TAM, which explains how factors such as perceived ease of use and perceived usefulness influence the acceptance and use of new technologies.

2. Literature Review

2.1 Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM) is a theoretical framework developed by Davis in 1989 to understand and predict user acceptance of technology. TAM emphasizes two main variables, namely Perceived Usefulness and Perceived Ease of Use, which have a significant effect on users' behavioral intentions to use technology.

2.2 Tax Compliance

Tax compliance, according to Nurmantu (2005: 148-149), is defined as the ability of taxpayers to comply with tax provisions and exercise taxation rights. Ristanti et al., (2022) added that taxpayer compliance includes awareness and actions of taxpayers in fulfilling tax obligations, including registration, reporting, and payment of taxes in accordance with applicable regulations. Indicators of compliance in registering themselves as taxpayers, compliance in submitting tax returns on time, and calculation of tax payments owed, and settlement of tax arrears.

2.3 Financial Technology

According to Nuria Soviatun, (2024) financial Technology (Fintech) includes improving and simplifying financial services, including personal and business financial management. Fintech creates new products, services and business models that can increase efficiency, security and accessibility in financial transactions. This certainly helps in financial management so that it can increase tax compliance. Financial technology indicators include the level of utilization of financial technology, the level of understanding of financial technology, managing finances with financial technology, the level of ease of use and barriers to the use of financial technology (Hakim, 2022).

2.4 Digital-based Tax Literacy

According to Andinata (2015) the ability of a taxpayer to know tax regulations both about the tax rates they will pay, and the benefits of taxes that will be useful for their lives. Indicators of digital-based tax literacy include Knowing tax subjects and tax objects, Tax rates, Knowledge of financial concepts, Ability to compile and file tax reports, Ability regarding financial budgeting) and the concept of saving (saving, insurance, and investment).

Conceptual Framework

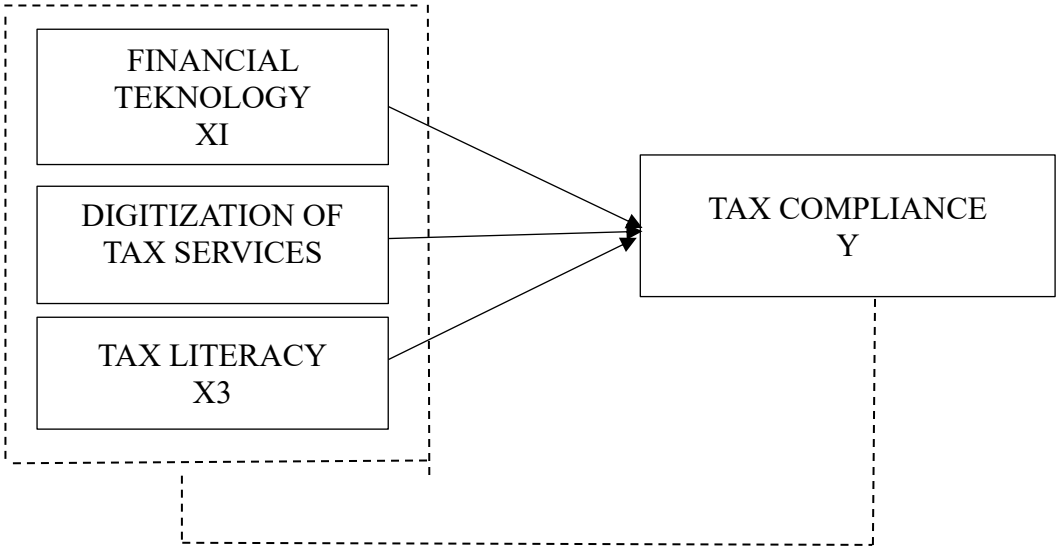

Figure 2.1 Conceptual Framework

Research Hypotheses

1. H1: Financial Technology (Fintech) has a positive and significant effect on taxpayer compliance in Malang City.
2. H2: Digitalization of tax services has a positive and significant effect on taxpayer compliance in Malang City.
3. H3: Digital-based tax literacy has a positive and significant effect on taxpayer compliance in Malang City.
4. H4: Financial Technology (Fintech), digitalization of tax services, and digital-based tax literacy simultaneously have a positive and significant effect on taxpayer compliance in Malang City.

3. Methodology

This research is included in quantitative research In this quantitative research uses the method of translating data into numerical form to conduct analysis. This research uses a causal method that aims to explain the cause-and-effect relationship between the variables studied which aims to test the hypothesis that has been formulated. This research was conducted in the districts of Kedungkandang, Klojen, Sukun, Blimbing, Lowokwaru, Malang City. The time used was December 2024 to February 2025.

The population in this study were individual taxpayers in Malang City. The research sample was obtained from the calculation of the slovin formula with a total of 90 respondents. The research sample was obtained from the calculation The sampling method used in this study is purposive sampling method, explained by Sugiyono (2018: 133) that Purposive Sampling is a sampling technique with certain considerations. The sample criteria selected in this study are as follows: 1) Formal workers (civil servants and private sector) in the Malang City area who have NPWP. 2) Domiciled in Malang City, 3) Age, 4) Total PTKP (non-taxable income), and 5) Length of status as a taxpayer calculation of the slovin formula with a total of 90 respondents. The research sample was obtained from the calculation The sampling method used in this study is purposive sampling method, explained by Sugiyono (2018: 133) that Purposive Sampling is a sampling technique with certain considerations. The sample criteria selected in this study are as follows: 1) Formal workers (civil servants and private sector) in the Malang City area who

have NPWP. 2) Domiciled in Malang City, 3) Age, 4) Total PTKP (non-taxable income), and 5) Length of status as a taxpayer

The data source in this study is using primary data with data collection methods using a questionnaire. This research analysis was carried out with several stages, namely instrument test, normality test, classical assumption test, multiple linear regression, moderated regression analysis, and hypothesis testing.

4. Research Results and Discussion

4.1 Research Results

Characteristics of Respondents

Description of Research Variables

In this study, there are four variables analyzed: Financial technology, Digitalization of Tax Services, Digital-based Tax Literacy, and Tax Compliance. The analysis results show that:

Financial Technology: the average answer for the Financial Technology variable is 4.14, indicating that respondents generally agree with the statements contained in this variable. The item with the highest average is "I feel information about FinTech is easy to access as well as understand." with an average of 4.41.

Digitalization of Tax Services: the average answer for the Tax Service Digitalization variable is 3.80, indicating that respondents are capable of using digital reporting. The item with the highest average is "Digitalization of taxation is easy to understand and learn" with an average of 3.87.

Digital-based Tax Literacy: the average answer for the Digital-based Tax Literacy variable is 3.80, indicating that respondents are literate in digital-based literacy so that it has a good impact on reporting. The item with the highest average is "I can submit my tax return online" with an average of 3.84.

Tax Compliance: the average answer for the Tax Compliance variable is 4.08, indicating that respondents can carry out tax compliance well. The item with the highest average is "I always submit my tax return on time" with an average of 4.60.

4.2 Analysis Results and Discussion

4.2.1 Descriptive Statistical Analysis

Descriptive statistical analysis shows an overview of the characteristics of the variables studied, namely Financial technology (X1), Digitalization of Tax Services (X2), and Digital-based Tax Literacy (X3).

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
X1	90	2.67	5.00	3.8723	0.43214
X2	90	2.86	5.00	3.9746	0.44254
X3	90	3.00	5.00	3.9976	0.38476
Y	90	3.00	5.00	4.0161	0.45034
Valid N (listwise)	90				

Source: Data Processed, 2025

Based on the descriptive statistical test table, it can be concluded

1. Financial technology variable obtained a minimum of 16, a maximum value of 30. The average value is 23.23 with a standard deviation of 2.592.

2. The Tax Service Digitalization variable obtained a minimum of 20, a maximum value of 35, an average value of 27.82 with a standard deviation of 3,092.

3. The digital-based tax literacy variable obtained a minimum of 24, a maximum value of 40. The average value is 31.97 with a standard deviation of 3,077.

4. The Tax Compliance variable obtained a minimum of 24, a maximum value of 40, an average value of 32.11 with a standard deviation of 3,602.

4.2.2 Validity and Reliability Test

Validity and reliability testing are crucial stages in this research to ensure that the data collection instruments are reliable and actually measure the intended variables. Validity relates to the extent to which a measuring instrument is able to represent the concept to be measured, while reliability refers to the level of consistency of the results produced by the measuring instrument.

Variabel	Item	r Hitung	r Tabel	Description
Financial Tecnology (X1)	X1.1	0.657	0.207	Valid
	X1.2	0.772	0.207	Valid
	X1.3	0.653	0.207	Valid
	X1.4	0.73	0.207	Valid
	X1.5	0.665	0.207	Valid
	X1.6	0.396	0.207	Valid
Digitalization of Tax Services(X2)	X2.1	0.656	0.207	Valid
	X2.2	0.794	0.207	Valid
	X2.3	0.708	0.207	Valid
	X2.4	0.784	0.207	Valid
	X2.5	0.739	0.207	Valid
	X2.6	0.681	0.207	Valid
	X2.7	0.753	0.207	Valid
Digital-based Tax Literacy(X3)	X3.1	0.672	0.207	Valid
	X3.2	0.706	0.207	Valid
	X3.3	0.636	0.207	Valid
	X3.4	0.494	0.207	Valid
	X3.5	0.765	0.207	Valid
	X3.6	0.771	0.207	Valid
	X3.7	0.764	0.207	Valid
	X3.8	0.741	0.207	Valid
Tax Compliance (Y)	Y1.1	0.292	0.207	Valid
	Y1..2	0.685	0.207	Valid
	Y1.3	0.689	0.207	Valid

	Y1.4	0.799	0.207	Valid
	Y1.5	0.807	0.207	Valid
	Y1.6	0.757	0.207	Valid
	Y1.7	0.747	0.207	Valid
	Y1.8	0.759	0.207	Valid

All items in the variables studied have a value of r count higher than r table, so it can be concluded that all items are valid. In addition, the Cronbach's Alpha value that exceeds 0.6 for each variable indicates that the measurement instruments in this study have a good level of internal consistency.

No.	**Variabel**	**Koefisien Reliabilitas**	**Keterangan**
1	*Financial Tecnology (X1)*	0.705	Reliabel
2	Digitalization of Tax Services(X2)	0.852	Reliabel
3	Digital-based Tax Literacy(X3)	0.832	Reliabel
4	Tax Compliance (Y)	0.844	Reliabel

The reliability test results indicate that all variables have a good level of internal consistency. Financial Technology (X1) obtained a Cronbach's Alpha value of 0.705, indicating excellent reliability. Digitalization of Tax Services (X2) also has good reliability with a value of 0.852. Digital-based Tax Literacy (X3) obtained a value of 0.832, which reflects good consistency. Meanwhile, Tax Compliance (Y) has a value of 0.844, which also shows a good level of reliability. Overall, all variables have Cronbach's Alpha values above 0.6, indicating that the measurement instruments in this study are reliable and suitable for further analysis. This high reliability plays an important role in ensuring the accuracy and reliability of the data collected, thus increasing the overall validity of the study.

4.2.3 Normality Test

The normality test in this study aims to determine whether the data used is normally distributed. If the test results show that the residual data is normally distributed, then the regression model used fulfills the normality assumption and can be used for further analysis.

Parameter	**Nilai**
Asymp. Sig. (2-tailed)	.200[d]

The results of the normality test, it is known that the p-value of 0.200> 0.05 indicates that the data is normally distributed. This is a strong foundation for the statistical analysis that will be carried out next.

4.2.4 Classical Assumption Tes

The Classical Assumption Test is carried out in regression analysis to ensure that the regression model used meets the basic assumptions and produces valid estimates. In this study, the classical assumption tests carried out include: Multicollinearity Test aims to determine

whether there is a strong relationship between independent variables and Heteroscedasticity Test To test whether there is an inequality of residual variances.

Table 6 Multicollinearity Test

Variabel	Tolerance	VIF	Keterangan
X1	0.833	1.201	non multikolinearitas
X2	0.589	1.698	non multikolinearitas
X3	0.590	1.695	non multikolinearitas

Table 7 Heteroscedasticity Test

Variabel	Sig.	Keterangan
Financial Tecnology (X1)	0.989	non heteroskedastisitas
Digitalisasi Layanan Pajak (X2)	0.802	non heteroskedastisitas
Literasi Pajak Berbasis Digital (X3)	0.523	non heteroskedastisitas

The multicollinearity test results indicate that there is no multicollinearity problem, indicated by tolerance and VIF values that are within appropriate limits. In addition, the heteroscedasticity test indicates that the regression model does not experience significant heteroscedasticity problems.

4.2.5 Multiple Linear Regression Analysis
Table 8 Multiple Linear Regression Analysis

Coefficientsa								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	6.214	3.597		1.728	0.088		
	X1	0.140	0.127	0.101	1.105	0.272	0.833	1.201
	X2	0.416	0.126	0.357	3.299	0.001	0.589	1.698
	X3	0.347	0.127	0.296	2.736	0.008	0.590	1.695
a. Dependent Variable: Y								

Based on table 4.20 above, the regression equation can be written as follows:

$$Y = 6.214 + 0.140X_{1(sig.0.272)} + 0.416X_{2(sig.0.001)} + 0.347X_{3(sig.0.008)} + e$$

The variable Financial Tecnology (X1), Digitalization of Tax Services (X2), Digital-based Tax Literacy (X3) has a positive value.

5. Conclusion, Limitations and Suggestions

5.1 Conclusion

In the study analyzing the effect of financial technology, digitization of tax services and digital-based tax literacy on tax compliance in Malang city taxpayers, it can be concluded (A) Financial Technology is not significant to tax compliance, advances in financial technology have not directly increased tax compliance. (B) Digitalization of tax services has a positive and significant effect. Users have various benefits in terms of access, reporting to administrative barriers. (C) Digital-based tax literacy has a positive and significant effect. Good understanding can increase high compliance. (D) Simultaneously, these three variables have a positive and significant effect on tax compliance. The combination of Financial technology, Digitalization of tax services, digital-based tax literacy contributes positively to increasing tax compliance.

5.2 Limitations

In this study, there are data limitations, namely on individual taxpayers in Malang City, there are only 90 respondents in this study, Respondents in this study only used individual taxpayers and the research focus was only three variables so that the findings show that there are still more factors that influence tax compliance.

5.3 Suggestions

Further researchers are advised to expand the research area outside Malang City, it is hoped that it will increase research respondents because in this study only uses individual taxpayer compliance so that further researchers can add corporate taxpayer compliance respondents. and further researchers can add other variables.

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THE EFFECT OF *GOOD CORPORATE GOVERNANCE* AND PROFITABILITY ON PROFIT MANAGEMENT (CASE STUDY ON PHARMACEUTICAL SECTOR COMPANIES LISTED ON THE IDX FOR THE PERIOD 2019 - 2023)

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Abstract

This study aims to analyze the effect of Good Corporate Governance (GCG) and profitability on earnings management in pharmaceutical companies listed on the Indonesia Stock Exchange (IDX) during the period 2019–2023. GCG is measured by institutional ownership, profitability by Return on Assets (ROA), and earnings management by the distribution of earnings changes (ΔE). This study uses a quantitative approach with descriptive and verification methods. The sample was selected by purposive sampling from four companies: KLBF, KAEF, MERK, and PEHA. Data analysis was carried out using multiple linear regression, correlation, coefficient of determination, and t-test and F-test with the help of SPSS version 27. The results of the study indicate that both partially and simultaneously, GCG and profitability do not have a significant effect on earnings management. This is likely due to the company's focus on long-term investment and the impact of the COVID-19 pandemic on the effectiveness of GCG implementation. In addition, profitability does not directly reflect earnings management practices. This finding suggests that other factors may play a more dominant role in influencing earnings management practices. Further research is suggested to extend the observation period, increase the sample size, and include additional variables such as leverage and intellectual capital to obtain more comprehensive results .

Keywords: Good Corporate Governance, Profitability, Earnings Management, Indonesia Stock Exchange and Pharmaceutical Sector.

1. Introduction

The pharmaceutical industry in Indonesia plays a vital role in supporting public health needs, especially during and after the COVID-19 pandemic. The sector has seen significant growth, with the Ministry of Industry reporting an annual market value increase of 2.5% in Q1 2024, largely driven by domestic pharmaceutical companies that control more than 80% of the market share. However, this growth also brings challenges in maintaining financial stability, transparency, and reputation amidst increasing competition.

As healthcare providers, pharmaceutical companies are expected to not only demonstrate strong operational performance but also ensure the reliability of their financial statements. Financial statements serve as a key indicator for investors and stakeholders. However, the pressure to meet market expectations and maintain profits often leads to earnings management practices, where managers may manipulate accruals or real activities to present profitable financial results. While such actions may follow accounting standards, they risk distorting the quality of financial information and reducing investor confidence.

To overcome this, the implementation of Good Corporate Governance (GCG) becomes important. GCG mechanisms such as independent boards, audit committees, and internal controls can limit earnings manipulation and increase the credibility of financial reporting. In

addition, profitability is a potential driver of earnings management. Companies with high profits may seek to maintain a stable image, while companies with low profits may be pressured to manipulate reports to appear more profitable.

Given the unique characteristics of the pharmaceutical sector such as high R&D costs, strict regulation, and public scrutiny, these companies are highly susceptible to earnings management practices. Previous studies have mostly focused on the banking or general manufacturing sectors. Thus, this study focuses on pharmaceutical companies listed on the Indonesia Stock Exchange (IDX) during 2019 - 2023, with the aim of analyzing the effect of GCG and profitability on earnings management.

This research is also relevant for regulators such as OJK and BEI, which support efforts to improve corporate governance and financial reporting standards in public companies. Through this research, it is expected to provide academic and practical contributions by providing insights for companies, investors, and regulators in maintaining the integrity of financial reports and corporate sustainability in sector pharmacy .

Table 1 Good Corporate Governance Data, Profitability , and Practices Earnings Management in Pharmaceutical Sector Companies Listed on the Indonesia Stock Exchange (IDX), 2019–2023

NO	CODE	COMPANY NAME	YEAR	KI	Net profit	ΔE
1	KLBF	PT. Kalbe Farma Tbk .	2019	57%	24.26%	0.57
			2020	57%	30.99%	3.68
			2021	58%	27.07%	5.69
			2022	58%	24.43%	3.14
			2023	58%	12.52%	-8.87
2	KAEF	PT .	2019	95%	12.41%	-0.36
			2020	95%	12.59%	0.00
			2021	95%	12.66%	0.39
			2022	95%	10.27%	-0.31
			2023	94%	0.09%	-2.81
3	BRAND	PT. Merck Indonesia Tbk .	2019	87%	0.11%	-0.02
			2020	87%	1.68%	0.00
			2021	87%	-0.64%	40.81
			2022	87%	-10.36%	32.79
			2023	87%	8.68%	-0.97
4	PEHA	PT. Phapros Tbk .	2019	6%	7.73%	-0.01
			2020	6%	12.83%	-0.02
			2021	6%	17.33%	-0.04
			2022	6%	18.61%	0.01
			2023	6%	4.88%	-0.02

This study uses earnings management indications as dependent variables measured through changes in earnings (ΔE). The identification method follows Nurani & Dillak (2019) who compare the coefficients of variation of earnings and sales (CVΔI and CVΔS). If CVΔI < CVΔS, the company is categorized as performing income smoothing.

Data from four pharmaceutical companies during 2019–2023 show fluctuating profit distribution, indicating potential earnings management practices. This is important, given that the pharmaceutical sector faces tight regulation, high costs, and public expectations for accountability.

In this context, the implementation of Good Corporate Governance (GCG) and profitability play a key role in maintaining the integrity of financial reporting and building investor and public trust.

This finding is in line with research conducted by (Braindies & Fuad, 2019) and (Sarra, 2020) which states that Good Corporate Governance and Profitability do not have a positive effect on Earnings Management. On the other hand, research conducted by (Sholikah et al., 2024) and (Fitriyah, 2021) shows a significant effect. In other studies conducted by (Tamara et al., 2022) and (Paramitha & Idayati, 2020) showed a significant effect. Likewise with independence, the results of the study still show differences.

2. Literature Revies

2.1 Agency Theory

Agency theory (Jensen & Meckling, 2014) explains the relationship between principals (owners/shareholders) and agents (managers) where the principal delegates tasks to the agent to manage the company. The principal's main goal is to maximize the value of the company, but conflicts of interest often occur because agents have personal interests. This causes agency problems such as conflicts and costs that are detrimental to the principal.

2.2 Financial statements

Financial statements are important documents prepared by companies to provide a comprehensive picture of the financial condition, performance, and changes in financial position in a period. According to (Thian, 2022a) , this report is useful for economic decision makers, especially if the information can be used to predict the future. PSAK No. 1 (2018) emphasizes that financial statements include balance sheets, income statements, cash flows, and other notes and explanations. (Kasmir, 2019) refers to financial statements as a picture of the company's financial condition in a certain period.

In general, financial reports function as a communication tool between companies and stakeholders, as well as being a reflection of business activities that can be analyzed to assess performance and plan future strategies.

2.3 Management Accounting

Management accounting is an accounting system that presents financial information for internal parties of the company, such as financial, production, and marketing managers (Suharlina., Fajariani, 2023) . According to the Institute of Management Accountants (IMA), management accounting is an ongoing process to add value through planning, measuring, and managing financial and non-financial information to support the achievement of strategic and operational goals.

Experts such as Hlmim & Supomo and Mulyadi emphasize that management accounting aims to present financial information as a basis for decision making by management. Meanwhile, Charles T. Horngren highlights the role of management accounting in identifying, analyzing, and communicating information to help executives achieve organizational goals.

Thus, management accounting becomes an important tool in supporting the planning process, cost control, performance evaluation, and effective and efficient decision making in an

organization.

2.4 Profit Management

Earnings management is the action of managers to influence information in financial reports, either by increasing or decreasing profits, for personal or corporate interests. Agency theory explains that this practice arises due to differences in goals between managers and owners. Watts and Zimmerman (1986) through Positive Accounting Theory formulated three main hypotheses that explain the motivation for earnings management:

- Bonus Plan Hypothesis: Managers will increase profits to earn larger bonuses.
- Debt Covenant Hypothesis: Managers increase profits so that the firm does not violate debt covenants.
- Political Cost Hypothesis: Profits are lowered to avoid political burdens such as taxes and government regulations .

The profit distribution approach formula according to Philips et al. (2003) in (Aditama Ferry, 2019) is:

$$\Delta \mathbf{E} = \frac{\boldsymbol{Eit - Eit - 1}}{\boldsymbol{MVEit - 1}}$$

Information :

ΔE = Change in profit
Eit = Profit of company i in year t
Eit-1 = Profit of company i in year t-1.
MVEit-1 = Market Value of Equity of Company I at year t-1

2.5 Good Corporate Governance

GCG is a mechanism supervision and control in the company For minimize conflict between principal and agent . In theory agency , GCG functions as monitoring tools that can reduce cost agency and inhibit behavior opportunistic managers. GCG elements such as commissioners independent , audit committee , ownership institutional , and ownership managerial viewed capable limit room managers' movements in manipulating financial reports.

The formula for Good Corporate Governance (GCG) according to Suriyani et al. 2015 in (Elindika, 2019) that is:

$INST = \frac{Jumlah\ saham\ yang\ dimiliki\ institusional}{Jumlah\ saham\ beredar}\ x\ 100$
$MAN = \frac{Jumlah\ saham\ yang\ dimiliki\ manajer}{Jumlah\ saham\ beredar}\ x\ 100$
KA = Number of audit committee members in the company
DK = Number of members of the board of commissioners in the company

Information :

INST = Ownership Institutional
MAN = Ownership Managerial

KA = Audit Committee
DK = Board of commissioners

2.6 Profitability

Profitability , which is usually measured using Return on Assets (ROA), reflects manager efficiency in managing asset company . In theory agency , high profitability can create pressure For maintain profits consistently , so managers tend to carry out profit management to make it look capable maintain performance . (Thian, 2022b)

According to Abd'rachim (2021, p. 17), ROA can be calculated using the formula:

$$ROA = \frac{Laba\ Bersih\ Setelah\ Pajak\ (EAT)}{Total\ Aktiva}\ x\ 100$$

3. Research Method

This research was conducted at Pharmaceutical Companies listed on the Indonesia Stock Exchange. (BEI) For That 2019-2023 period. This research is A quantitative Study with Secondary data were obtained from www.idx.co.id and company websites. Sampling using purposive sampling method with a sample size of 8 companies during the 5-year observation period. That data analysis used in the This Study used English: IBM SPSS 27 For window statistics software, with the classical assumption tests used, namely the normality test, multicollinearity test, heteroscedasticity test and autocorrelation test, then multiple linear regression, correlation coefficient, determination coefficient and finally hypothesis testing, namely partial test (t test) and simultaneous test (f test).

4. Results and Discussion

Normality Test

The normality test is carried out to determine and test whether the residual values are distributed. usually or No use That Kolmogorov-Smirnov statistics test with decision making if the significance value has a value above 0.05 then the data stated has been normally distributed and vice versa. The results of the normality test are as follows:

Table 2 Results from Kolmogorov owned by Smrinov Normality Test Before Outlier

One-Sample Kolmogorov-Smirnov Test		
		Unstandardized Residual
N		15
Normal Parameters[a,b]	Mean	.0000000
	Std. Deviation	3.44628843
Most Extreme Differences	Absolute	.125
	Positive	.125
	Negative	-.113
Test Statistic		.125
Asymp. Sig. (2-tailed)[c]		.200[d]
a. Test distribution is Normal.		
b. Calculated from data.		
c. Lilliefors Significance Correction.		

Source : Data process the results use SPSS

Based on table 2 above, it shows the results of the Kolmogorov-Smirnov test as seen from the Asymp.Sig (2-tailed) results in a value of 000. This number is smaller than A = 0.05, Which method That That remainder data is No usually distributed. So, he is needed to correct or handle

data by eliminating extreme data (outliers).

Table 3 Results from Kolmogorov owned by Smrinov Normality Test After Outlier

One-Sample Kolmogorov-Smirnov Test		
		Unstandardized Residual
N		15
Normal Parameters[a,b]	Mean	.0000000
	Std. Deviation	3.44628843
Most Extreme Differences	Absolute	.125
	Positive	.125
	Negative	-.113
Test Statistic		.125
Asymp. Sig. (2-tailed)[c]		.200[d]
a. Test distribution is Normal.		
b. Calculated from data.		
c. Lilliefors Significance Correction.		

Source : Data process the results use SPSS

Based on on table 3 .7 on, he show That That Kolmogorov-Smirnov test results seen from Asymp. Sig. (2-tailed) has a value of 200 or the value is greater than α = 0.05. so that the residual data in this study is normally distributed.

Multicollinearity Test

The next classical assumption test is the multicollinearity test. This test aims to test whether the regression model finds a correlation between independent variables. A Good regression model is A regression model in the Which there is There is no correlation between independent variables. To find out whether or not there is multicollinearity in regression model, he Can become Finished by evaluate That amount from English: VIF (Difference Inflation Factor) and tolerance value. If the tolerance value > 0.10 or VIF value < 10 then there is no multicollinearity and if the tolerance value < 0.10 or VIF value > 10 then there is multicollinearity. regression model. The results of the multicollinearity test in this study are as follows:

Table 4 Multicollinearity Test Results

Coefficients[a]			
Model		Collinearity Statistics	
		Tolerance	VIF
1	KI	.960	1.042
	ROA	.960	1.042
a. Dependent Variable: ΔE			

Source : Data processing results use SPSS

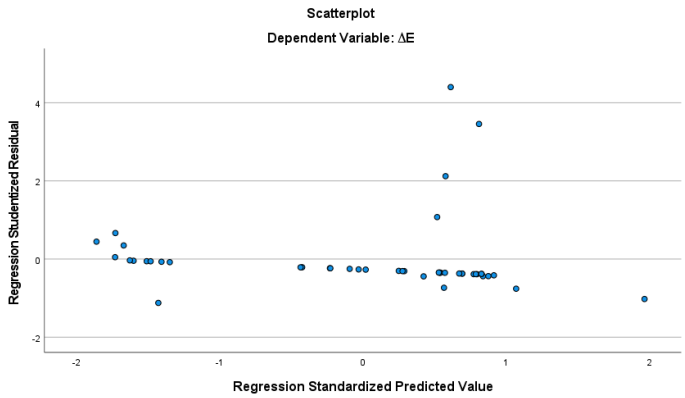
Based on table 4 above, it is known that the tolerance value at variable Ownership Institutional (KI) or GCG and Return on Assets (ROA) or Profitability is 0.9 60 . Then the results of the Tolerance value show > 0.1. In addition, the Variance Inflation Factor (VIF) value on the Ownership variable Institutional (KI) or GCG and Return on Assets (ROA) or Profitability of 1.0 42 . So the whole thing he show VIF < 10 of every from This variable. Can concluded that Ownership Institutional (KI) or GCG and Return on Assets (ROA) or Profitability in this study there is no multicollinearity.

Heteroscedasticity Test

The third classical assumption test is the heteroscedasticity test. The heteroscedasticity test is an explanatory variable in the regression equation that has a non-constant error variance and causes the estimator to be inefficient. In this test, it can be observed by looking at the results of the scatterlot test if the points on the scatterlot graph are spread above and below the number 0, then this indicates that there is no heteroscedasticity. The following are the results of the heteroscedasticity test using IBM SPSS 27 which can be seen as follows:

Figure 1

Heteroscedasticity Test Results



Source : Data process the results use SPSS

Automatic correlation Test

Autocorrelation test is the final step testing that is carried out with the aim of to test the nuisance error in period t with the nuisance error in period t-1 which arises due to consecutive observations to determine whether or not there is autocorrelation which is carried out using the Durbin-Watson test (WD-test) using IBM SPSS 27 software.

Table 5 Autocorrelation Test Results

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.144[a]	.021	-.026	8.7115698	1.527

a. Predictors: (Constant), ROA, KI

b. Dependent Variable: ΔE

Source : Data processing results use SPSS

Based on the results of the autocorrelation test in table 4.9 above, show mark Durbin-Watson as big as 1,527 . Mark This is then compared with the DU and 4-DU values. Based on table Durbin-Watson, mark DU For k= 2 (number of variables) independent) And n= 45 (amount data) is 1 , 61 48 and the 4-DU value is 2.473 . Then the Durbin-Watson value is obtained which is explained as follows:

= DW < DU < 4-DU

= 1.527 < 1.6148 < (4 – 1.527)

= 1,527 < 1,6148 < 2,473

The above calculation concludes that this study can reject (H0) which states that there is no positive and negative autocorrelation between all independent variables, so there are no symptoms of autocorrelation.

Many Linear Regression Analysis

This study uses multiple linear regression tests which aim to test the independent variables, namely carbon emission disclosure, green innovation, and intellectual capital against That depends variable, that is firm mark. That data processing used to analyze This use IBM SPSS 27 software, the following are the results of the processed data:

Table 6 Many Linear Regression Test Results

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-3.589	7.831		-.458	.649
	KI	7.654	9.713	.123	.788	.435
	ROA	-2.510	7.233	-.054	-.347	.730

a. Dependent Variable: ΔE

Source : Data processing results use SPSS

Based on on table 6 on, he Can become conclude That That Lots linear regression equality in the This research is as follows:

Y = -3,589 + 7,654X1 – 2,510X2

1. That constant mark from -3,589 Which show That mark from Ownership Institutional or GCG (X1), and Return on Assets or Profitability (X2) is 0, then the Distribution value Change in Profit or Earnings Management (Y) is -3.589 .

2. That regression coefficient mark from Ownership Institutional or GCG (X1) is 7,645 Which show That Ownership Variable Institutional or GCG (X1) has a positive influence on Distribution Change in Profit or Profit Management (Y). If Ownership Institutional (X1) increases by 1%, this will be followed by an increase in Distribution Change in Profit (Y) is 7.645 .

3. The regression coefficient value of Return on Assets or Profitability (X2) is -2.510 , which

shows that Return on Assets (X2) has a fairly large influence on the dependent variable, namely -2.510 . (X2) variable own A positive influence on Firm Mark (Y). If Return on Assets (X2) increases by 1%, which will be followed by an increase in Company Value (Y) of -1.602.

Correlation Coefficient Analysis

Correlation analysis is used to determine how close the relationship is between two independent variables. is together (simultaneously) And One depends variable. That correlation number range from - 1 to 1. That closer to That number 1 year That higher That connection between That independent variable together and the dependent variable. Positive and negative values indicate the direction of the relationship, if the value is positive then the relationship is unidirectional and vice versa if the value is negative then the relationship is not unidirectional. The following are the results of the correlation test as follows:

Table 7 Results from Correlation Coefficient Analysis Test

Correlations

		KI	ROA	ΔE
KI	Pearson Correlation	1	-.201	.134
	Sig. (2-tailed)		.186	.381
	N	45	45	45
ROA	Pearson Correlation	-.201	1	-.079
	Sig. (2-tailed)	.186		.607
	N	45	45	45
ΔE	Pearson Correlation	.134	-.079	1
	Sig. (2-tailed)	.381	.607	
	N	45	45	45

Source : Data processing results use SPSS

Based on the results of the interpretation of the partial correlation test in table 4.13 above, it is known that the relationship between the variables can be seen that the level of relationship between GCG and profit management is very low in that direction positive , It means if mark GCG go on so will followed with decreasing earnings management . Furthermore, the level of relationship between the Profitability variables t on earnings management is very low with a negative direction, meaning if the profitability value go on then it will be followed by a decrease in earnings management.

Determination Coefficient Analysis

The determination coefficient test is used to assess the extent to which the independent variable influences the dependent variable as a whole, the measurement refers to the Adjusted R Square value. results from Lots linear regression analysis. That follow is That results from That The coefficient of determination test can be seen in the following table:

Table 8 Results from Determination Coefficient Analysis Test

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.544[a]	.021	-.026	8.7115698

a. Predictors: (Constant), ROA, KI

Source : Data processing results use SPSS

Kd = R ^{2} X 100%

= (0, 544) ^{2} X 100%
= 29.5%

Based on the results of the determination coefficient analysis in the table 8 in on, known mark coefficient determination by 29.5 %. Mark This show that *Good Corporate Governance* (GCG), and Profitability can explain about profit management amounting to 29.5 %. While the remaining 70.5 % is explained by the variables others that were not examined in this study.

Draw a conclusion

Drawing conclusions Drawing conclusions is done to find out whether the proposed hypothesis is accepted or not, by conducting hypothesis testing, namely partial tests (t-tests) and simultaneous tests (f-tests).

Part Test (t-test)

Part test or T test is has brought go out to draw conclusion about whether That submitted Hypothesis is accepted or rejected. The t-test describes the extent to which the influence of each independent variable can explain the dependent variable. The t-test is done by comparing Tcount with Ttable. H0 is rejected and Ha is accepted if Tcount > Ttable or - Tcount < Ttable and the significance level < 0.05, this means that H0 is rejected and Ha is accepted. show That That independent variable own A part And important influence on That depends variables. On the other hand, If Ha is rejected And H0 If Count < Table or - Count > - Table And A important level>0.05, this show that That partial independent variable does not affect the dependent variable. The following are the results of the partial test (t-test) as follows:

Table 9 Part Test Results (T- Test)

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-3.589	7.831		-.458	.649
	KI	7.654	9.713	.123	.788	.435
	ROA	-2.510	7.233	-.054	-.347	.730

a. Dependent Variable: ΔE

Source : Data processing results use SPSS

Based on table 9 above , it is known that that mark t count more small from t table namely - 0.458 < 2.018 and the significance value is greater than 0.05, namely 0.435 > 0.05. It can be concluded that partially the GCG variable does not have a significant effect on earnings management on sector pharmacy Which listed on the Indonesia Stock Exchange (IDX) for the period 2019–2023. And the value t count more small from t table that is 0.788 < 2.018 and the significance value is greater than 0.05, namely 0.730 > 0.05. It can be concluded that partially the *intellectual capital variable* does not have a significant effect on profit management sector pharmacy listed on the Indonesia Stock Exchange (IDX) for the period 2019–2023.

Simultaneously Test (F- Test)

That Statistics Test F is has brought go out to find go out whether independent variable together can influence That depends variable. That decision make is That If That meaning mark < 0.05 And That If the value of fCalculate > FTable, then it can be stated that H0 is rejected and Ha is accepted. The following are the results of the F test.

Table 10 Simultan Test Results (F- Test)

ANOVA[a]

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	67.301	2	33.651	.443	.645[b]
Residual	3187.441	42	75.891		
Total	3254.742	44			

a. Dependent Variable: ΔE

b. Predictors: (Constant), ROA, KI

Source : Data processing results use SPSS

Based on table 4.16 above, it is known that the significance value of the model simultaneous regression smaller than 0.05 , namely 0.645 > 0.05. In addition, the calculated F value is greater than the F table which is 0.443 < 3.22 So it can be concluded that simultaneously the GCG and Profitability variables does not have a significant effect on earnings management on sector pharmacy Which registered in Exchange Effect Indonesia (BEI) period 2019–2023.

That Influence from Good Corporate Governance on Partial Earnings Management

Testing data show the result is that *Good Corporate Governance (GCG)* does not has a significant influence on earnings management, this is indicated by the GCG variable which has a significance value greater than 0.05, namely 0.435 > 0.05 and the calculated t value is smaller than the t table which is 0.458 < 2.018 , so that H a1 rejected and H 01 accepted, which means that GCG does not have a significant effect on earnings management.

That Influence from Profitability in Partial Earnings Management

Data testing shows that *profitability* does not have a significant effect on earnings management, this is indicated by *Return on Assets.* (ROA) which has a significance value greater than 0.05, namely 0.730 > 0.05 and a calculated t value that is smaller than the t table which is 0.788 < 2.018 so that H a 1 rejected and H 0 1 accepted which means profitability does not have a significant positive effect on earnings management.

That Influence from Good Corporate Governance and Profitability in Simultaneous Earnings Management

Data testing shows that Good Corporate Governance (GCG) and Profitability simultaneously do not have a significant effect on Earnings Management. This is indicated by the significance value Which more small from 0.05 that is as big as 0.645 > 0.05 and mark F count Which more big from F table that is of 0.443 < 3.22, so it can be concluded that H a2 rejected and H 02 accepted, which means that Corporate Governance (GCG) and Profitability do not have a significant influence to Earnings Management on sector pharmaceuticals listed on the IDX for the 2019–2023 period.

4. Conclusion and Suggestions

Conclusion

Based on the results of data analysis through hypothesis testing that has been carried out by researchers entitled That Influence from Carbon Emission Disclosure, Green Innovation, And Intellectual Active capital Firm Mark in the Energy Company Registered on That Indonesia Share Exchange (BEI) For That Period 2019-2023, it can be concluded that this research is as follows:

4. Carbon Emission Disclosure part own A important positive influence on Firm Mark.
5. Green Innovation part own A important negative influence on Company Mark.

Intellectual Capital part own NO influence And is No important to That Company Mark .

Suggestion

This research is expected to provide an overview of the influence of Good Corporate Governance and Profitability. on Profit Management in Pharmaceutical Companies Listed on the Indonesia Stock Exchange for the 2019-2023 Period . Based on several research limitations, the researcher intends to provide suggestions for further researchers, that is as as follows: a). It is expected to increase the observation period of the research, expand the population and sample, and add other factors or variables that can affect earnings management. b). It is expected to use moderating variables in order to analyze the factors that affect the independent variables on the dependent variables. c). It is expected to add variables that can strengthen the influence of the independent variables on the dependent variables. d). It is expected to expand the sectors studied so that the range of information produced is greater. e). It is expected to help companies in making decisions related to Earnings Management and companies should pay attention to the level of Profit Management by managing and utilizing funding from debt or loans properly in order to increase profits for the company .

Thank-you note

This research would not have happened without the support of my parents and my own hard work. I would like to thank my parents and my self, for being able to fight hard so far and continue to try until finally being able to complete this research

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THE INFLUENCE OF *ENVIRONMENTAL SOCIAL GOVERNANCE* AND *ECO-EFFICIENCY* ON FIRM VALUE MEDIATED BY FINANCIAL PERFORMANCE IN MINING SECTOR COMPANIES LISTED ON THE INDONESIA STOCK EXCHANGE FOR THE PERIOD 2019-2023

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Abstract

The mining sector remains a favorite among investors because it contributes significantly to the economy. However, mining activities are a major contributor to carbon emissions and deforestation in Indonesia, requiring companies to implement sustainable business practices through ESG and improved environmental efficiency. This study aimed to determine the effect of environmental social governance and eco-efficiency on firm value with financial performance as a mediating variable. The research method used is a quantitative method descriptive causality approach. The population consists of 71 mining companies listed on the Indonesia Stock Exchange. The sampling technique using purposive sampling resulted in 11 companies—statistical analysis using the panel data regression method and the sobel test. The results showed that: 1) ESG and Eco-efficiency have a positive effect on ROA; 2) ESG has a negative effect on firm value; 3) Eco-efficiency has no effect on firm value; 4) ROA has a positive effect on firm value; 5) Financial performance is not able to mediate the effect of ESG on firm value; 6) Financial performance can mediate the effect of Eco-efficiency on firm value; and 7) ESG, Eco-efficiency, and financial performance simultaneously affect firm value.

Keywords: *Environmental, Social, Governance (ESG); Eco-efficiency; ROA; Firm Value*

1. Introduction

The ESG concept is an assessment standard based on three main criteria: environmental, social, and governance. Research by Rahelliamelinda & Handoko (2024), Adhi & Cahyonowati (2023), Mudzakir et al. (2023), and Mauliddin & Subardjo (2022) shows that the application of ESG as a form of environmental responsibility for environmental damage problems can increase the trust and good image of the company in front of investors and stakeholders, so that it becomes a positive signal for investors to buy company shares and increase company value. Contrary to research by Xaviera & Rahman (2023), Romli & Abdurohim (2024), and Prayogo et al. (2023), the application of ESG has not become a significant factor in investment decisions because the practice is considered only a formality and requires a significant cost, which will reduce the dividends received by investors.

Eco-efficiency focuses on resource efficiency and environmental impact to increase the added value of products. Research by Anjarsari et al. (2023), Dewi & Rahmianingsih (2020), Kurnianta & Dianawati (2020), and Rais et al. (2020) shows that the application of *eco-efficiency* makes business activities effective because it can save costs and reduce waste and

pollution, thus becoming a competitive advantage and a positive signal for investors. After all, the company has the potential to achieve high profitability and provide a good image in the eyes of the public and investors. In contrast to the research results of Kurniasari & Cahyono (2025) and Yuliandhari et al. (2023), the application of *eco-efficiency* to reduce environmental impacts is still not the primary focus of investors when investing. Because many investors do not know in detail the application of environmental performance and the effect of financial benefits if they support the application of *eco-efficiency*, investment decisions are still based on how much profit investors will receive.

Financial performance is a significant factor for investors and shows the company's ability to generate profits from utilizing its assets. Investors still tend to see financial performance as the main factor in investment decisions because if the company's financial performance is increasing, it will impact the distribution of larger dividends. Research from Putra & Budastra (2023) and Sumarno et al. (2023) shows that implementing ESG is a wise step for companies in running a sustainable business as a form of responsibility to society, the social environment, and the government. Exemplary ESG implementation will help improve profitability, corporate image, and investor confidence. Thus, investors will consider ESG an indicator of investment decision-making and encourage stock purchases to increase company value. However, implementing ESG is costly and will pressure the company's finances if not managed properly. Based on research by Ajizah (2025) and Utami & Falah (2023), ESG implementation requires a long time and significant costs, so in the short term, it will affect the company's profitability. In addition, the frequent misalignment between ESG disclosure and real action will reduce investor confidence in the company. Financial performance can also be an indication of the success or failure of the implementation of *eco-efficiency*. According to research by Rais et al. (2020) and Savitri & Abdullah (2023), environmental and economic efficiency will reduce production costs and compliance costs to increase company profitability. This increase in profitability is a good signal for investors that by implementing *eco-efficiency*, the company's operating costs do not swell and will not reduce the profits distributed to investors, so that investors respond by buying company shares, which impacts increasing company value.

Based on the description above, the authors are interested in examining the effect of *environmental, social, governance,* and *eco-efficiency* on firm value mediated by financial performance in mining sector companies listed on the IDX for the 2019-2023 period.

2. Literature Review

2.1 Signaling Theory

Signaling Theory reveals an imbalance of information between two parties. According to this theory, there are three main elements in *signaling theory*: the signal giver, the signal itself, and the signal receiver. The information conveyed is an important element that investors need to describe the company's past, present, and future conditions (Kurnianta & Dianawati, 2020; Panggau & Septiani, 2017; Spence, 1973).

2.2 Stakeholder Theory

Based on the *Stakeholder theory*, company management needs to formulate and implement strategic steps to understand the needs and concerns of all stakeholders. This theory focuses on expanding the responsibility of companies that not only maximize profits for shareholders but must also meet the needs of other stakeholders (Freeman & McVea, 2006; Hariyanto & Ghozali, 2024).

ESG disclosure is a form of corporate transparency to stakeholders and supports business sustainability. Good ESG practices, such as resource efficiency, waste management, and transparent governance, can reduce operational costs and increase profitability, particularly *return on* assets (ROA). A high ROA reflects a company's effectiveness in managing assets into profit. A high ESG score also improves the company's reputation and attracts investors and business partners, facilitating access to funding. Previous research shows that ESG has a positive impact on profitability, supporting the theory that attention to stakeholder interests strengthens corporate profitability (Azkiya et al., 2024; Brigham & Houston, 2019; Masditok et al., 2024; Nisa et al., 2023; Putra & Budastra, 2023).
H_1: ESG has a positive effect on ROA

The application of *eco-efficiency* emphasizes environmental responsibility and economic efficiency by minimizing the negative impact of production while maintaining product value. This concept encourages companies to increase productivity while reducing operational costs through environmentally friendly practices. Reduced environmental impacts contribute to cost efficiency and increased profits (Atiningsih & Setiyono, 2023; Lorenza & Sudrajat, 2024; WBCSD, 2006). Research conducted by Daud et al (2023), Meutia et al (2019), and Rais et al. (2020) shows that *eco-efficiency* has a positive effect on ROA, because good environmental practices can increase company profitability.
H_2: *Eco-efficiency* has a positive effect on ROA

ESG is a sustainable business practice that includes environmental, social, and governance aspects, and serves as a means of corporate transparency to stakeholders and consideration for investors. Based on *stakeholder theory*, the implementation of ESG reflects the company's responsibility to stakeholders and supports sustainable relationships (Romli & Abdurohim, 2024). Firm value reflects investors' perception of the company's performance and is closely related to the stock price. An increase in ESG score will improve the company's image, increase share demand, and drive up the company's value. Previous research conducted by Mudzakir et al. (2023), Pramisti & Istiqomah (2024), and Rahelliamelinda & Handoko (2024) shows that ESG has a positive effect on firm value.
H_3: ESG has a positive effect on firm value

Eco-efficiency is a concept that combines economic and environmental efficiency to increase productivity while reducing costs and environmental impacts. This strategy strengthens the company's competitiveness through production efficiency, waste reduction, and using environmentally friendly resources. Based on *stakeholder theory*, environmental responsibility will build stakeholder trust, which impacts increasing company value. Previous research conducted by Anjarsari et al. (2023), Dewi & Rahmianingsih (2020), Kurnianta & Dianawati

(2020), and Savitri & Abdullah (2023) shows that *eco-efficiency* has a positive effect on firm value.
H_4: *Eco-efficiency* has a positive effect on firm value

Return on assets (ROA) reflects the effectiveness of the company in managing assets to generate profits. A high ROA indicates good managerial performance, improves the company's reputation, and impacts increasing stock demand and company value. ROA is an important signal for investors in assessing company efficiency, and research shows that ROA has a positive effect on firm value (Kumala & Priantilianingtiasari, 2024; Pramisti & Istiqomah, 2024; Putra & Budastra, 2023; Rais et al., 2020; Setiawati et al., 2023; Udjaili et al., 2021).
H_5: ROA has a positive effect on firm value

Companies implementing ESG practices have good growth prospects because they are committed to sustainability and social, environmental, and governance responsibilities. ESG implementation contributes to the company's financial efficiency by reducing production costs and increasing profitability. Based on *signaling theory* and *stakeholder theory*, good ESG disclosure provides positive signals to stakeholders, increases *return on* assets, and strengthens the company's image and reputation. An increase in ROA drives up the demand for shares and their selling price, increasing the company's value. In addition, high profitability allows companies to fund ESG activities more easily. Previous research conducted by Putra & Budastra (2023) and Sumarno et al. (2023) shows that ROA can mediate the influence of ESG on firm value.
H_6: ROA can mediate ESG on firm value.

Eco-efficiency encourages companies to produce high-value products by minimizing environmental impacts, resource use, and operational costs. This practice strengthens production efficiency, provides positive signals to the public, and improves stakeholders' perception of the company. A good reputation makes the company more attractive to investors, increasing demand and share prices, and impacting company value. Research conducted by Rais et al. (2020) and Savitri & Abdullah (2023) shows that *return on assets* (ROA) can mediate the effect of *eco-efficiency* on firm value, because environmental efficiency contributes to increasing profitability, so that it can attract investment and maintain its long-term value.
H_7: ROA can mediate *Eco-efficiency* on firm value.

Based on the literature review above, the paradigm of this study is as follows.

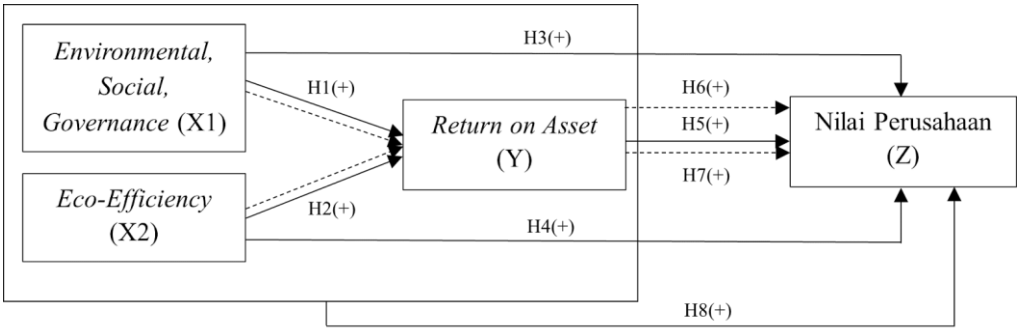

Figure 1. Research Model

3. Research Methodology

This study uses a quantitative method with a descriptive causality approach. The population of this study was all companies included in the mining sector and listed on the IDX during the 2019-2023 period, a total of 71 companies. The sampling technique for this study was *purposive sampling,* and a sample of 11 companies was selected. The data analysis technique uses the panel data regression method and the sobel test. This study uses E-views 10 software to perform statistical analysis. The statistical model equation is as follows:

$$Z = \alpha + \beta_{(1)}\, X_{(1)} + \beta_{(2)}\, X_{(2)} + e$$

$$Y = \alpha + \beta_{(1)}\, X_{(1)} + \beta_{(2)}\, X_{(2)} + \beta_3 Z + e$$

The operationalization of variables is as follows:

Table 1. Variable Operationalization

Variable	Measurement Method	Scale
Environmental, Social, and Governance (ESG) (X1)	ESG=Nilai Pengungkapan ESG Total Pengungkapan Maksimal	Ratio
Eco-efficiency (X2)	The criteria for dummy variables are as follows: • Value 1 = the company has an ISO 14001 certificate • Value 0 = the company does not have an ISO 14001 certificate	Nominal
Company Value (Y)	Tobin's Q= Total Market Value+Hutang Total Aktiva	Ratio
Financial Performance (ROA) (Z)	ROA=Laba BersihTotal Aktivax100%	Ratio

Source: Several Sources

4. Research Results

4.1 Classical Assumption Test

Table 2. Classical Assumption Test Results

Classical Assumption Test	Method	Criteria	P Value	Conclusion
		Model 1		
Normality Test	*Jarque-Bera*	> 0,05	0,2197	Normal Distribution
Multicollinearity Test	VIF	< 10	• ESG: 6,9879 • ECO: 8,4252	No Multicollinearity
Heteroscedasticity Test	*Glejser* Test	> 0,05	- ESG: 0,0817 - ECO: 0,4714	No Heteroscedasticity

Autocorrelation Test	*Durbin Watson*	-2>DW<+2	1,0263	No Autocorrelation
Model 2				
Normality Test	*Jarque-Bera*	> 0,05	0,1737	Normal Distribution
Multicollinearity Test	VIF	< 10	• ESG: 2,1655 • ECO: 4,4121 • ROA: 2,0150	No Multicollinearity Occurs
Heteroscedasticity Test	*Glejser* Test	> 0,05	- ESG: 0,0518 - ECO: 0,4756 - ROA : 0,9011	No Heteroscedasticity
Autocorrelation Test	*Durbin Watson*	-2>DW <+2	1,7445	No Autocorrelation

Source: Data processing results with Eviews 10, 2025

Based on Table 3, the regression model has passed the classical assumption test.

4.2 Panel Data Regression

Table 3. Regression Model Selection

	Model 1 ***P-value***	**Model 2** ***P-value***
Chow Test Results	0,0000	0,0000
Hausman Test Results	0,3479	0,7912
Lagrange Multiplier Test Results	0,0002	0,0000

Source: Data processing results with Eviews 10, 2025

The Chow Test *p-value* of equations 1 and 2 is smaller than 0.05, so the model chosen is the *fixed effect model* (FEM). Followed by the Hausman Test, the *p-value* of models 1 and 2 is greater than 0.05, so the model chosen is the *random effect model* (REM). Followed by the LM Test, the *p-value* of models 1 and 2 is less than 0.05. Therefore, the model chosen is the *random effect model* (REM).

Table 4. Panel Data Regression Results Model 1 and 2

Dependent variable: Z_ROA					
Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**	**Conclusion**
C	-5.313931	0.782092	-6.794513	0	
ESG	1.576834	0.759254	2.07682	0.0436	Accepted
ECO	1.400548	0.641928	2.181785	0.0344	Accepted
Dependent variable: Y_TOBIN'S Q					
Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**	**Conclusion**
C	0.323992	0.285185	1.136076	0.2621	
ESG	-0.386109	0.1607	-2.402675	0.0206	Accepted

ECO	0.365396	0.215701	1.693994	0.0973	Rejected
ROA	0.067249	0.032449	2.072445	0.0441	Accepted
F test				**0,0108**	
Adj R^2				**0,1691**	

Source: Data processing results with Eviews 10, 2025

Based on the results of the panel data regression analysis above, the regression equation models one and two are as follows:

$$Z = -5.3140 + 1.5768X1 + 1.4005X2$$
$$Y = 0.3240 - 0.3861X1 + 0.3654X2 + 0.0672Z$$

4.3 T test

1. The ESG regression coefficient value of 1.5768, *probability* 0.0436, is smaller than 0.05, meaning that ESG affects ROA in a positive relationship direction.
2. The ECO regression coefficient value of 1.4005, *probability* 0.0344, is smaller than 0.05, meaning that ECO affects ROA with a positive relationship direction.
3. The ESG regression coefficient value is -0.3861, and the *probability of* X1 on Y is 0.0206, which is smaller than 0.05, meaning that ESG affects the company's value in the direction of a negative relationship.
4. The ECO regression coefficient value of 0.3654, the *probability* X2 to Y of 0.0973 is greater than 0.05, meaning that ECO has no effect on firm value with a positive direction of relationship.
5. The ROA regression coefficient value is 0.0672, and the *probability of* Z against Y is 0.0441, which is smaller than 0.05. This means that ROA has an effect on firm value with a positive relationship direction.

4.4 F test

The *probability* value of the F test is 0.0108< 0.05, then H0 is rejected, meaning that the ESG, ECO, and ROA variables jointly affect firm value.

4.5 Coefficient of Determination

The *Adjusted R-Square* value is 0.1691. This value indicates that the ESG, ECO, and ROA variables can explain 16.91% of the variation in endogenous variables.

4.6 Sobel Test

Table 5. Sobel Test Results

Variable	T-count	T-table	Decision
X1_ESG	1,467	2,007	Does not mediate
X2_ECO	2,072	2,007	Mediate

Source: Data processing results with Eviews 10, 2025

Based on the table above, the t-table value is 2.007. The t-count result of the ESG variable is obtained at 1.467 < 2.007, so *return on assets* cannot mediate the effect of ESG on firm value. While the t-count result of the ECO variable is obtained at 2.072 > 2.007, meaning that *return on assets* can mediate the effect of ECO on firm value.

5. Discussion

5.1 Effect of Environmental Social Governance on Return on Assets

The test results show that ESG has a positive effect on ROA. These results indicate that sustainable business practices with attention to environmental, social, and governance issues directly contribute to increasing company profitability. In line with signal theory, an increase in the average ESG performance of mining sector companies is a positive signal to investors that the company is concerned with non-financial aspects by continuing to increase revenue and profit without neglecting its responsibility to the broader community. In addition, ESG is a means of communication between companies and stakeholders (Putra & Budastra, 2023; Pramisti & Istiqomah, 2024). The results of this study are in line with research conducted by Pramisti & Istiqomah (2024), Putra & Budastra (2023), and Aydogmus et al. (2022), which shows that commitment to sustainability can encourage more optimal profitability.

5.2 Effect of Eco-efficiency on Return on Assets

The test results show that *eco-efficiency* has a positive effect on ROA. This result aligns with stakeholder theory that, in its strategic plan, the company must understand its responsibilities and create value for stakeholders. Reducing negative environmental impacts due to production activities will reduce production costs and compliance costs, so that it does not significantly affect the company's profitability and can maximize its profits for the welfare of investors and stakeholders (Daud et al., 2023; Meutia et al., 2019). The results of this study are in line with research conducted by Daud et al. (2023), Meutia et al. (2019), Rais et al. (2020), and Savitri & Abdullah (2023)

5.3 The Effect of Environmental Social Governance on Company Value

The test results show that ESG has a negative effect on firm value. According to Prabawati & Rahmawati (2022), the application of ESG in developing countries has not been fully implemented, considering that its application is expensive and not profitable, so in the short term, it will reduce the company's operating costs. In addition, ESG activities have likely not been communicated to stakeholders, so they do not consider ESG activities to be a positive signal that will encourage the purchase of company shares. The lack of investors who buy shares will cause the stock price to fall and decrease the company's value. Prayogo et al. (2023) and Finrely (2024) also revealed the same results, stating that ESG shows significant results but has a negative relationship direction, so that ESG implementation will affect the decline in firm value.

5.4 The Effect of Eco-efficiency on Firm Value

The test results show that *eco-efficiency* does not affect firm value. Although the ISO 14001 certificate indicates the implementation of an environmental management system according to international standards, research shows that *eco-efficiency* has not had a direct impact on increasing the market value of the company, so it is not in line with the initial hypothesis (Yuliandhari et al., 2023). Investors consider financial factors rather than environmental aspects when making investment decisions (Kurniasari & Cahyono, 2025). In addition, the

wider community has not understood the benefits of implementing *eco-efficiency, so it has not impacted* the company's reputation to increase its market value. This is in line with research conducted by Apriandi & Lastanti (2023), Damas et al. (2021), Kurniasari & Cahyono (2025), and Yuliandhari et al. (2023), which states that *eco-efficiency* has no direct effect on firm value.

5.5 Effect of Return on assets on Firm value

The test results show that ROA has a positive effect on firm value. ROA is an indicator that measures the company's ability to generate profits from its total assets (Kumala & Priantilianingtiasari, 2024). If the company achieves a high level of profit and healthy financial prospects, it will provide benefits through dividends or an increase in share prices (Badollah, 2024; Rais et al., 2020) This is in line with research conducted by Badollah (2024), Kumala & Priantilianingtiasari (2024), Rais et al. (2020), and Savitri & Abdullah (2023) that good financial performance characterized by a high level of profitability affects the increase in firm value.

5.6 The effect of Environmental Social Governance on Firm Value mediated by Return on Assets

Based on the sobel test results, ROA cannot mediate the effect of ESG on firm value. This result illustrates that ESG cannot affect firm value despite increased *return on assets*. The increase in corporate profits is thought to be reallocated to invest in ESG activities, which in its implementation often requires high costs, so that corporate profits have no impact on shareholders (Ajizah, 2025). In other words, the amount of retained earnings allocated for ESG investment is greater than the earnings distributed to shareholders, so that investors catch the signal and there is a decrease in stock purchases, not an increase in company value. Therefore, in line with research conducted by Ajizah (2025) and Utami & Falah (2023), it shows that financial performance reflected by *return on assets* cannot mediate the influence of ESG on firm value.

5.7 The effect of Eco-efficiency on Firm Value mediated by Return on Assets

Based on the sobel test results, ROA can mediate the effect of *eco-efficiency* on firm value. These results illustrate that *eco-efficiency* will affect firm value by improving the company's financial performance, as reflected in the *return on assets.* Implementing *eco-efficiency* is a company strategy to optimize the welfare of shareholders and stakeholders. Positive responses from investors, the environment, and society to companies with good reputations and healthy financial conditions can strengthen the company's position (Savitri & Abdullah, 2023; Rais et al., 2020). Applying *eco-efficiency* can reduce production and compliance costs, which affects the increase in profitability and attracts investors to buy company shares because it provides optimal benefits in the form of dividends. Thus, the more investors buy the company's shares, the more the company's reputation and market value will increase. These results are reinforced by the results of research conducted by Rais et al. (2020) and Savitri & Abdullah (2023) that *eco-efficiency* cannot affect firm value directly, but requires an intervention variable, namely, financial performance, to be able to increase firm value.

5.8 The Effect of ESG, Eco-efficiency, and Return on Assets Simultaneously on Firm Value

Based on the F test, ESG, *eco-efficiency*, and *return on assets* simultaneously affect firm value. The *adjusted R-square* value is 16.91%, indicating that the company value can be explained by ESG, *eco-efficiency, and return on assets* by 16.91%. The remaining 83.09% is explained by other variables not examined.

6. Conclusion

Environmental, Social, and Governance (ESG) and Eco-efficiency positively affect financial performance as proxied by Return on Assets. ESG has a negative effect on company value. Eco-efficiency does not affect company value. Return on assets (ROA) has a positive effect on company value. ROA is unable to mediate the effect of ESG on company value. However, ROA can mediate the effect of eco-efficiency on company value. Simultaneously, ESG, eco-efficiency, and ROA significantly affect company value, with an effect size of 16.91%.Based on the discussion above, this study still has limitations in the sample size that cannot describe the overall condition of the mining sector, so that further research is expected to expand the sample coverage or replace it with other industrial sectors in order to find out the condition of the research results more accurately and thoroughly.

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THE EFFECT OF AUDITOR COMPETENCE AND INDEPENDENCE ON AUDIT QUALITY: THE MODERATING ROLE OF AUDIT FEES (A CASE STUDY OF PUBLIC ACCOUNTING FIRMS IN BANDUNG)

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Abstract

The purpose of this study is to evaluate various aspects of audit quality in Indonesia, with a particular emphasis on auditor competence, independence, and audit costs at public accounting firms in Bandung.A quantitative approach is applied using descriptive, associative, and causal methods. To collect data, auditors from 17 randomly selected public accounting firms were used as respondents in a closed-ended questionnaire based on a Likert scale. The data were analyzed using SEM-PLS techniques together with the SmartPLS 4 tool. The results of the analysis showed that auditor competence and independence greatly influence audit quality. Conversely, audit fees do not significantly affect audit quality, but they weaken the relationship between competence and audit quality. Meanwhile, audit fees do not moderate the relationship between independence and audit quality.These findings highlight the crucial role of auditor competence and objectivity in maintaining high audit quality, in line with Attribution Theory. Practically, companies should invest in improving auditor skills, ensure auditor independence, and establish audit fees that are fair and proportional. Future studies are encouraged to adopt a mixed-method approach.
Keywords: Audit Quality, Competence, Independence, Audit Fee and Public Accounting Firm.

1. Introduction

Indonesia faces pressing challenges in audit quality deterioration, highlighted by recurrent breaches involving accounting firms and professionals. For instance, the Financial Services Authority (OJK) penalized Anderson Public Accounting Firm and its auditor, Anderson Supari, in early 2024 for non-compliance with Article 21 of POJK No. 9/2023 on audit quality control. A similar case occurred at PT Wanaartha Life, where data manipulation amounting to IDR 12.1 trillion was discovered. Auditor Nunu Nurdiyaman and KAP KNMT received severe sanctions for violating POJK No. 13 of 2017, and auditor Jenly Hendrawan was deemed unqualified under OJK regulations.

The audit of PT Garuda Indonesia's financial statements conducted by KAP Tanubrata Sutanto Fahmi Bambang & Partners experienced a similar case. The investigation revealed that the auditors made mistakes by recognizing revenue prematurely, violating SA 315, SA 500, and SA 560. As a result, the KAP's practice license was revoked by the Ministry of Finance in 2019.Several factors contribute to the declining audit quality, including insufficient auditor competence and independence, as well as inappropriate audit fees. Fees that are too low can reduce the quality of the audit, while excessively high fees may compromise auditor independence (Indahsari et al., 2023).

Auditors with adequate competence and independence are capable of performing audits professionally and producing reliable reports (Maulana, 2020). However, in reality, there are still auditors who fail to detect errors or fraud in financial statements.

Table 1. Sanctioned Public Accounting Firms

No.	Public Accounting Firm	Sanction	Source
1.	Andersen Subri & Partners Public Accounting Firm	Sanctioned by OJK for non-compliance with regulations and lack of quality control in audits. Firm was suspended and prohibited from offering audit services during the sanction period	*OJK Jatuhkan Sanksi ke KAP Andersen Subri, Larang Audit Laporan Keuangan* www.cnbcindonesia.com
2.	Kosasih, Nurdiyaman, Mulyadi Tjahjo & Partners (KNMT)	Sanctioned for audit violations related to WAL's financial reports (2014–2019), failing to disclose high-risk insurance products. Violated POJK No. 13/2017.	*OJK Jatuhkan Sanksi ke KAP KNMT Gara-gara Laporan Keuangan WAL 2014-2019* www.cnbcindonesia.com
3.	Tanubrata, Sutanto, Fahmi, Bambang & Partners is part of the BDO International network, reflecting its connection to a global auditing standard.	Sanctioned for recognizing unearned revenue in Garuda's audit. Violated SA 315, 500, and 560. Received a one-year suspension from both MoF and OJK.	*Pelanggaran SA 315-560: KAP Tanubrata Sutanto Dibekukan Setahun Akibat Pendapatan Fiktif* www.cnbcindonesia.com
4.	Satrio, Bing, Eny & Partners	Sanctioned for issuing WTP opinion on misleading financial statements of PT SNP. Registration revoked; firm was banned from taking new clients.	*OJK Cabut Izin KAP Satrio Bing Eny Kasus Laporan Keuangan PT SNP* www.cnbcindonesia.com

Source: www.cnbcindonesia.com 2024

The table of sanctions imposed on Public Accounting Firms reveals that professional standard violations remain widespread. These include inaccurate revenue recognition, misleading audit opinions, and non-compliance with standards such as SA 315, SA 500, and SA 560. This indicates poor audit quality, mainly due to the auditors' lack of competence and independence.(Mahendra & Soedibyo, 2023).

The PPPK inspection results from the third quarter of 2022 showed that 61% of the 926 findings were violations of professional standards, most commonly found in SA 500, SA 315, and SA 530. Despite the increasing number of public accountants, most are over 50 years old, and serious violations continued to rise in 2023—one of which is linked to low audit fees.

These findings align with the research by (Septiana & Jaeni, 2021) and (Noormansyah, 2024), which shows that audit quality is improved by competence. Conversely, the research by (Lele Biri, 2019) and (Hasan Farid,2023.) shows no significant impact. Similarly, regarding independence, research results still show differences.

2. Literature Review

2.1 AttributionTheory

In 1958, Fritz Heider developed attribution theory, explaining that people interpret the reasons behind their own and others' actions by considering two main categories: internal (personal traits) and external (environmental influences) factors. Internal factors include an individual's personal characteristics such as ability, effort, personality, and motivation. External factors, on the other hand, relate to situations or conditions outside the individual, such as social pressure, rules, or the environment (Weiner et al., 2015,Utama & Rohman, 2023).

In the auditing context, attribution theory explains the way auditors link their judgments and behaviors to both internal and external elements. Factors like professional competence and independence significantly influence the decisions auditors make during an engagement. Auditors with strong competencies possess the technical abilities needed for precise evaluations, while those who uphold independence are more likely to remain objective and resist external pressures that could undermine the reliability of audit outcomes. (Murdiansyah et al., 2021).

However, attribution theory also recognizes that external factors such as audit fees can influence auditor behavior. Audit fees serve as a situational factor that can change the way auditors act. For example, if audit fees are low, auditors may feel that they are not adequately rewarded and may be less committed to performing the audit to its full potential. This shows how audit fees can reduce auditors' motivation even though they have good competence and independence (Murdiansyah et al., 2021).

Attribution theory helps explain how auditors seek causation from the events they observe during an audit. Auditors tend to try to understand what factors led to a particular outcome or decision, either from within themselves (competence and independence) or from external conditions (such as management pressure or audit fees). This explains how auditors evaluate their audit results based on an assessment of the causes they deem relevant - whether it is due to personal ability (competence) or external pressures they face (Weiner et al., 2015).

Auditors' interpretation of why events occur during an audit process (such as mistakes made or problems successfully identified) is fundamentally shaped by whether they assign responsibility to personal capabilities or outside influences. When examining audit deficiencies, professionals might attribute these either to their own skill gaps and knowledge limitations (internal attribution) or to organizational constraints and client pressures that compromise their impartiality (external attribution). These causal judgments subsequently influence both how auditors rationalize their findings and what corrective measures they implement in subsequent engagements (Weiner et al., 2015).

Attribution theory provides an important framework in explaining how auditors respond to various factors that influence their decisions and behavior in the audit process. By separating internal (competence and independence) and external (audit fees and environmental pressures) factors, the theory helps to understand why auditors act in certain ways. Auditors attribute their audit results to internal factors such as their ability and integrity, or to external factors that influence their behavior, such as audit fees (Utama & Rohman, 2023; Weiner et al., 2015).

Attribution theory has been extensively applied in auditing research to understand how auditors form judgments, evaluate performance, and make decisions. The theory focuses on the cognitive processes underlying auditors' assessments and behavioral responses, with particular emphasis on how intrinsic factors predominantly influence their professional capabilities (Ali Zaputra & Marlina, 2022)

3. Methodology

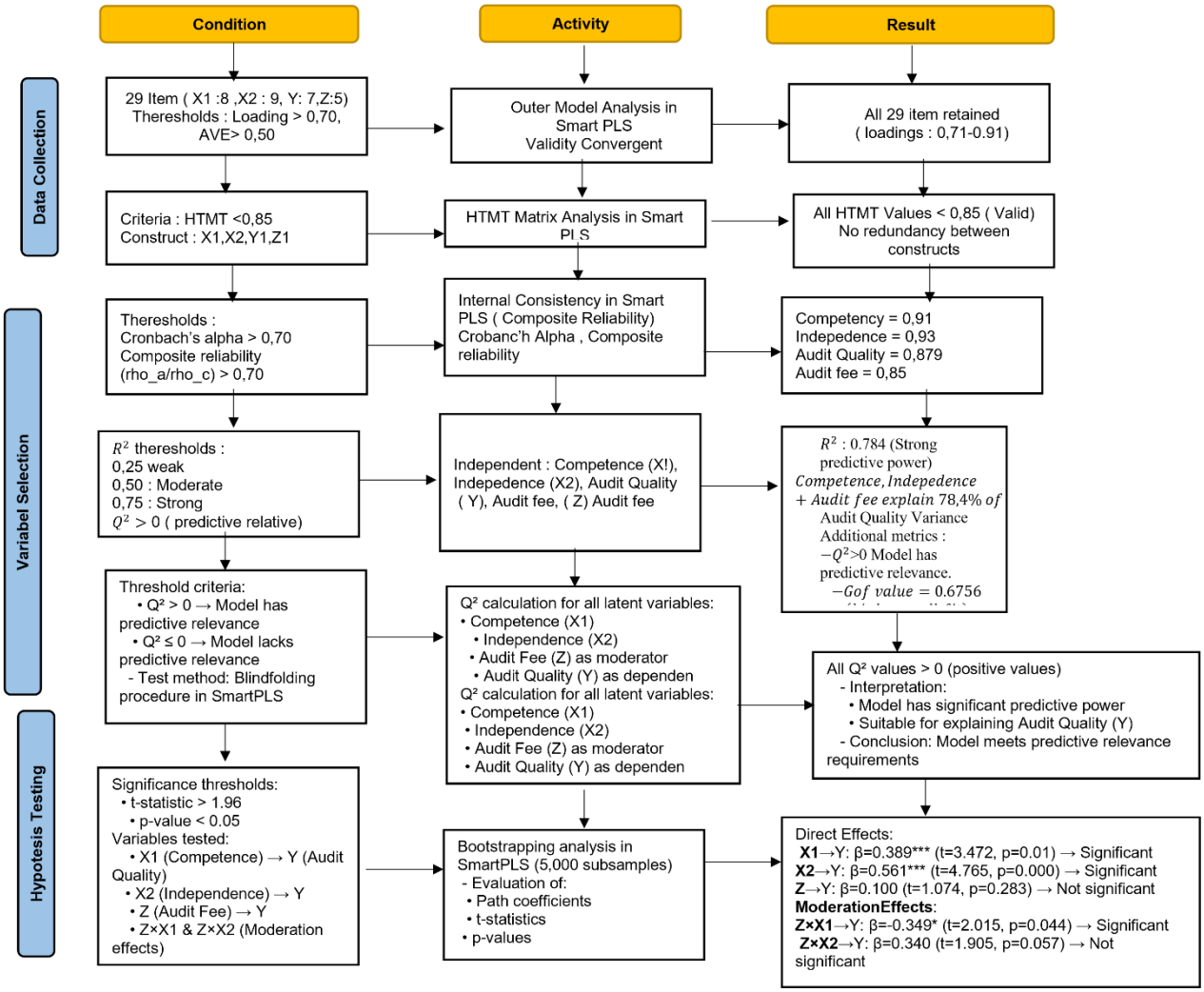
This study is a quantitative research that applies a descriptive and associative approach to evaluate how auditor competence and independence affect audit quality, where audit costs serve as a moderating variable. The main data source was obtained through the distribution of questionnaires directly to research respondents.

This study involved all 35 public accounting firms registered with IAPI Bandung. The sample was selected using simple random sampling, which means that everyone in the population had an equal chance of being selected. For this study, Google Forms and physical questionnaires were used to collect data.

The instrument used in this study is a Likert scale questionnaire, which measures the respondents perceptions of the research variables. The instrument is tested for validity (convergent and discriminant validity) and reliability (Cronbach's Alpha and Composite Reliability) to ensure data quality.

Inferential statistical analysis (SEM) was used to analyze the data, and SmartPLS 4 software was used to perform the analysis (Ghozali, 2024). Figure 1 shows the procedure used to process and analyze the data.

Figure 1.Diagram Condition-Activity-Result Methodology



Source: Processed (2025)

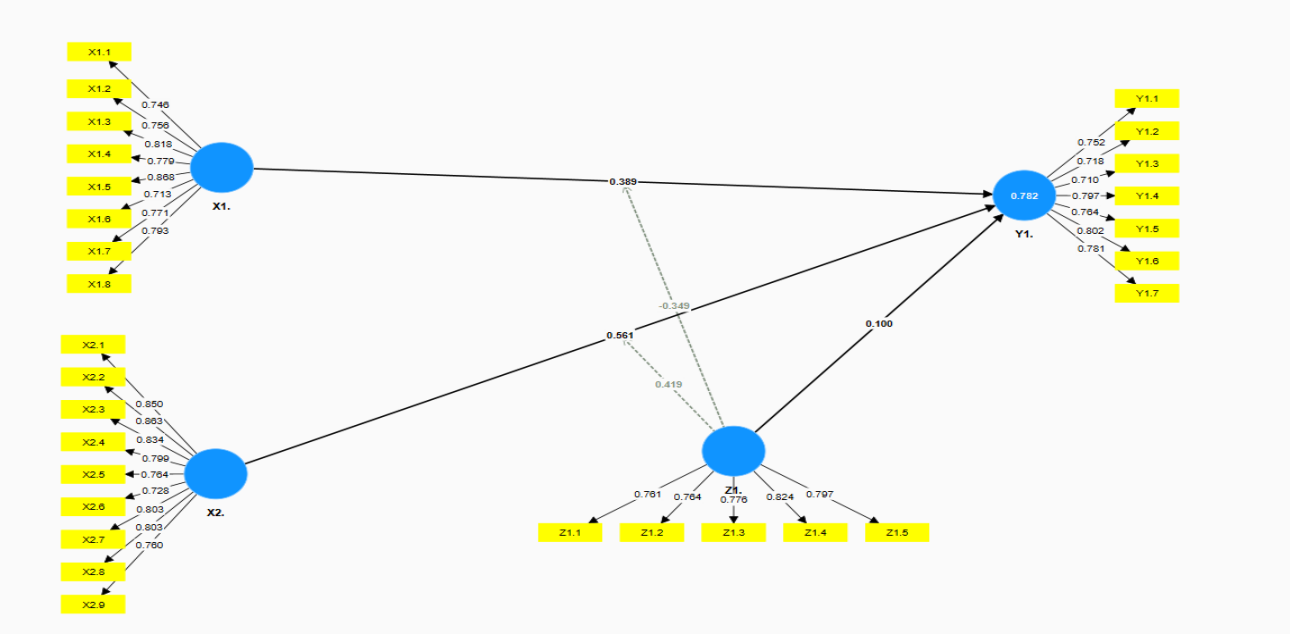
4. Result and Discussion

Validity Test Results

4.1 Convergent Validity Test Results

Convergent validity testing was conducted to measure the consistency of indicators with the constructed construct. Indicators were considered valid if they showed an outer loading value >0.70, although in scale development research, a minimum limit of 0.50 was still tolerable(Ghozali, 2024).

Figure 2. PLS Algorithm Final Evaluation Result



Source: SmartPLS 4 Output, processed (2025)

Discriminant Validity Test Results

Discriminant validity was assessed using the HTMT (Heterotrait-Monotrait Ratio) criterion, which is among the most recommended and up-to-date methods in PLS-SEM.

- HTMT value < 0.85 (or < 0.90 in some literature) → Discriminant validity is satisfied; constructs are empirically distinct.
- HTMT value ≥ 0.85 (or ≥ 0.90) → Discriminant validity is not satisfied; constructs may not be truly different.

Figure 3. Discriminant Validity Test Results

Discriminant validity - Heterotrait-monotrait ratio (HTMT) - Matrix

	X1.	X2.	Y1.	Z1.	Z1. x X2.	Z1. x X1.
X1.						
X2.	0.573					
Y1.	0.806	0.796				
Z1.	0.386	0.346	0.431			
Z1. x X2.	0.052	0.190	0.099	0.165		
Z1. x X1.	0.078	0.066	0.097	0.244	0.733	

Source: SmartPLS 4 Output, 2024

Based on Figure 2, all HTMT values are below 0.85, which means all constructsCompetence, Independence, Audit Quality, and Audit Fee—are empirically distinct. This indicates the model is valid in terms of construct separations.

4.2 Reliability Test (Cronbach's Alpha)

Internal consistency of constructs was measured through reliability testing using Cronbach's Alpha and Composite Reliability. According to (Ghozali, 2024), a construct is considered reliable when it meets the following conditions:

- Cronbach's Alpha > 0.70
- Composite Reliability > 0.70

Table 6. Reliability Test Results

Variable	Cronbach's Alpha	rho_A	Composite Reliability
Competence	0.91	0.917	**0.926**
Independence	0.93	0.933	**0.942**
Audit Quality	0.879	0.882	**0.906**
Audit Fee	0.85	0.861	**0.892**

Source: Processed SmartPLS 5 Output, 2025

From the table above, all variables have high reliability, with values > 0.85. This indicates the instruments used are internally consistent and reliable.

4.3 Structural Model Test (Inner Model)

The structural model test evaluates the causal relationship between latent variables using the following criteria:

- R-Square (R^2)
- Q-Square (Q^2)
- Goodness of Fit (GoF)

4.4 R-Square Test Result

Table 7. R-Square Test Result

Variabel	R-square
Kualitas Audit (Y)	0.784

Source: SmartPLS 4 Output, 2025

The R-Square value = 0.784, which means that 78.4% of the variance in Audit Quality can be explained by the independent variables Competence, Independence, and the moderating variable Audit Fee.

4.5 Q-Square Test Result

Table 8. Q-Square Test Result

Construct cross-validated redundancy - Total			
	SSO	SSE	Q^2 (=1-SSE/SSO)
X1.	488.000	455.285	0.067
X2.	549.000	517.671	0.057
Y1.	427.000	250.818	0.413
Z1.	305.000	305.000	0.000

Source: Processed SmartPLS 5 Output, 2025

This model is considered to have good predictive ability, as seen from all latent variable Q^2 values greater than 0.
This means the constructs used are relevant in explaining the variation in the dependent variable (Audit Quality).

4.6 Goodness of Fit (GoF) Test Result

GoF is used to assess the overall model fit and its capability to explain empirical data (Ghozali, 2015).
The value is calculated using the formula:

GoF=Average AVE×R2GoF

GoF=Average AVE×R2

- AVE Values:
  - Competence = 0.612
  - Independence = 0.642
  - Audit Quality = 0.580
  - Audit Fee = 0.622
  - Moderation (Z*X1) = 1
  - Moderation (Z*X2) = 1
- R^2 = 0.784
- Average AVE = (0.612 + 0.642 + 0.580 + 0.622 + 1 + 1) / 6 = 0.7427
- Gof = $\sqrt{Com\ x\ R^2}$

- $= \sqrt{\frac{0{,}612 + 0{,}642 + 0.58 + 0.622 + 1 + 1}{6}}$ x 0.78

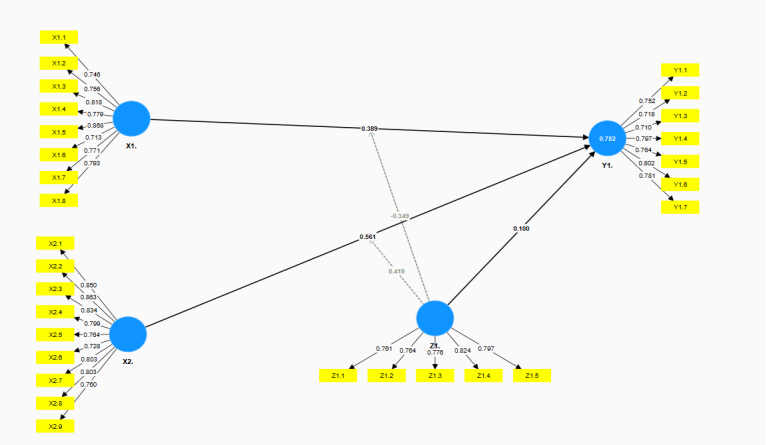
  = 0,6756

Interpretation: GoF = 0.6756 → indicates high overall model fit (above 0.36 threshold).

4.7 Hypothesis Testing Results

This study used the bootstrapping method in SmartPLS to evaluate the influence between constructs. This was done by looking at the coefficient of determination and t-statistic values; the hypothesis was accepted if the p-value was less than 0.05. The SmartPLS bootstrapping results are shown in the following figure.

Figure 4. Bootstrapping Test Results



Source: SmartPLS Output 4, 2025

P-values and T-statistics are used in the bootstrapping process with path coefficient output to determine whether independent variables significantly influence dependent variables or whether moderator variables strengthen or weaken the relationship between the two. The bootstrapping results with T-statistics and P-values are shown in the following table.

Table 9. Path Coefficient Test Results

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
X1. -> Y1.	0.389	0.396	0.112	3.472	0.001
X2. -> Y1.	0.561	0.54	0.118	4.765	0
Z1. -> Y1.	0.1	0.121	0.094	1.074	0.283

Source: SmartPLS Output 4, 2025

Based on Table 9 , the results of hypothesis testing on the direct influence using bootstrapping can be explained as follows:

1.The analysis results show that the Competence variable (X1) has a positive effect on Audit Quality (Y) with a path coefficient of 0.389. The T-statistic value of 3.472 (>1.96) and significance of 0.01 (<0.05) confirm a statistically significant effect.

2.The research findings reveal that Independence (X2) has a strong positive influence on Audit Quality (Y) with a coefficient of 0.561. This is supported by a T-statistic value of 4.765 (>1.96) and a significance level of 0.000 (<0.05), indicating a highly significant relationship.

3.For the Audit Cost (Z) variable, although it shows a positive path coefficient of 0.100 on Audit Quality (Y), the T-statistic value of 1.074 (<1.96) and significance level of 0.283 (>0.05) indicate that the influence is not statistically significant.

4.8 Moderation Test Results

Table 10. Moderation Path Coefficient Test Results

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
Z1. x X2. -> Y1.	0.419	0.34	0.22	1.905	0.057
Z1. x X1. -> Y1.	-0.349	-0.277	0.173	2.015	0.044

Source: SmartPLS Output 4, 2025

1.The results of the moderation analysis revealed that Audit Costs (Z) significantly moderated the effect of Competence (X1) on Audit Quality (Y), with an interaction coefficient of -0.349 (T=2.015 > 1.96; p=0.044 < 0.05). These findings indicate that Audit Costs play a significant moderating role in this relationship.

2.In contrast to the previous finding, the moderating effect of Audit Costs (Z) on the relationship between Independence (X2) and Audit Quality (Y) is not statistically significant, although it shows a positive coefficient of 0.340 (T=1.905 < 1.96; p=0.057 > 0.05). Thus, Audit Costs were not found to moderate the relationship between Independence and Audit Quality.

4.9 Disscusion

Competence as a Determinant of Audit Quality

Statistical analysis proves a significant positive influence between auditor competence and audit quality. The T-statistic value exceeds the threshold of 1.96, and the P-value is below 0.05, indicating that the hypothesis is accepted. This finding not only supports the proposed hypothesis but also confirms the theoretical proposition that an increase in auditor competence is directly proportional to an increase in audit quality through three main mechanisms: risk identification ability, proper execution of audit procedures, and reliability of audit results.

Independence as a Determinant of Audit Quality

The analysis indicates that auditor independence has a significant positive effect on audit quality. The statistical test results show that independence meets the requirements for hypothesis acceptance. This suggests that independent auditors are more likely to maintain objectivity, perform their duties fairly, and produce accurate audit reports. Independence is essential to ensure that auditors are not influenced by external parties during the audit process.

Audit Fee Impact on the Quality of Audit Services

Statistical analysis revealed no significant effect of audit fees on audit quality.The T-statistic value is below 1.96 and the P-value is greater than 0.05, meaning the hypothesis is rejected. This finding rejects the initial hypothesis and implies that non-monetary variables such as professional integrity and compliance with auditing standards may play a greater role in ensuring audit quality than the amount of audit fees.

The Moderating Role of Audit Fees Between Auditor Competence and Audit Quality

The moderation analysis indicates that audit fees (Z) significantly moderate the relationship between auditor competence (X1) and audit quality (Y), with an interaction coefficient of -0.349. This is evidenced by a T-statistic of 2.015 (exceeding the 1.96 threshold) and P-value of 0.044 (below α=0.05), statistically confirming the moderating effect. These findings demonstrate that audit fees serve as a significant moderator variable influencing the competence-audit quality association.

The Moderating Role of Audit Fees Between Independence and Audit Quality

The moderation test results indicate that audit fees (Z) do not significantly moderate the relationship between auditor independence (X2) and audit quality (Y). This is evidenced by a non-significant moderation coefficient of 0.34 (T-Statistic = 1.905 < 1.96; P-Value = 0.057 > 0.05). Therefore, it can be concluded that audit fees do not play a relevant moderating role in the independence-audit quality relationship, neither strengthening nor weakening its effect.

5. Conclussion

Using a case study at a public accounting firm in Bandung, this study aims to examine the relationship between competence and independence on audit quality, with audit costs as a moderating variable. The respondents consisted of 61, junior auditors, senior auditors, supervisors, managers, and partners. The data were analyzed using SmartPLS 4. The hypothesis testing results led to the following conclusions:

1. Auditor competence markedly influences audit quality, as heightened expertise correlates with superior outcomes. This underscores the pivotal role of technical proficiency and experiential knowledge in ensuring audit reliability.
2. Effect of Independence on Audit Quality
   The analysis confirms that auditor independence significantly affects audit quality. Professionals who maintain independence demonstrate superior capability in conducting objective and unbiased assessments, thereby positively enhancing audit outcomes.

3. Non-Significance of Audit Fees
   The study reveals no significant impact of audit fees on audit quality. This implies that financial compensation levels do not determine audit quality, as auditors consistently apply professional standards and ethical principles unaffected by monetary factors.
4. Moderating Role of Audit Fees
   Audit fees serve as a statistically significant moderator in the competence-audit quality relationship. The analysis demonstrates that fee structures can amplify or attenuate the effect of auditor competence on audit quality, with the moderating effect being statistically significant in this study context.
5. Audit fee does not moderate the effect of independence on audit quality.
   The audit fee received does not influence the relationship between independence and audit quality. Independence remains an internal factor that consistently contributes to audit outcomes regardless of fee levels.

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THE INFLUENCE OF *FLASH SALES* AND FEAR OF MISSING OUT ON IMPULSIVE BUYING BEHAVIOR OF LAZADA USERS (A STUDY ON GENERATION Z IN BOGOR CITY)

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Abstract

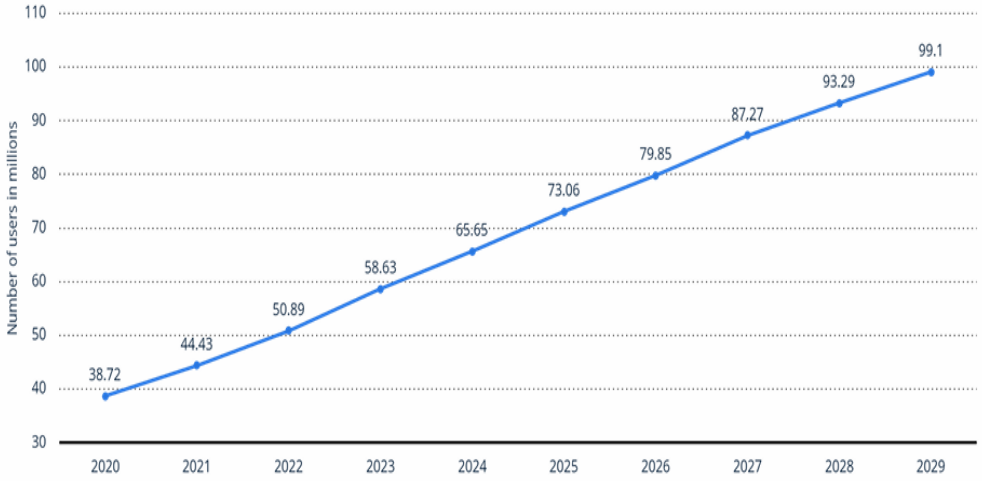
This research aims to analyze the influence of flash sales and fear of missing out on impulsive buying behavior among Lazada application users within Generation Z in Bogor City. This is a quantitative study. Data collection was conducted through a questionnaire using a Likert scale of 1-4, with a sample of 100 respondents from Generation Z who use the Lazada application in Bogor City. The data were analyzed using Structural Equation Modeling-Partial Least Squares (SEM-PLS) with the assistance of SmartPLS 4.0 software. The results show that flash sales have a positive and significant effect on impulsive buying behavior, with a T-statistic value of 2.896, while fear of missing out has a stronger and significant effect, with a T-statistic value of 9.444. These findings indicate that promotional factors and emotional factors significantly drive impulsive purchases among Generation Z Lazada user.

Keywords: Flash Sale, Fear of Missing Out, Impulsive Buying, Lazada

1. Introduction

Technological developments have affected many aspects of life, including in the world of business and marketing. Digitalization has driven significant growth in internet users, which then opens up new opportunities in buying and selling activities through social media and online shopping applications (*apps shop*). This has led to the formation of an online shopping trend that is now increasingly popular, especially in Indonesia.

Figure 1: Number of E-commerce users in Indonesia for the period 2020-2029



Source: Trade, 2024

Based on data from the (Ministry of Trade, 2024), the number of *e-commerce* users in Indonesia has continued to increase since 2020. In 2024, there were 65,65 million users and is expected

to reach 99,1 million users in 2029. This growth shows that *e-commerce* has great potential to influence consumer behavior, especially generation Z who are very familiar with the digital world.

Based on data from (Datanesia 2022) , presents data related to the statistics of the 10 regions with the highest e-commerce transaction growth in Indonesia. The city of Bogor has the highest e-commerce growth, reaching 113,5%. This indicates that Bogor City experienced a significant increase in online buying and selling activities during that period. However, the percentage of transactions conducted online relative to the total population was only 21,1%, the lowest among the nine other cities. Bekasi City and Depok City ranked second and third, with growth rates of 103,2% and 82,7%, respectively. Other major cities followed, including Central Jakarta, East Jakarta, and Yogyakarta, which ranked at the bottom with a growth rate of 16,3%.

Figure 2: E-commerce with the most visitors in Indonesia throughout 2023

Source: Databoks, 2024

Based on data from (Databoks 2024) on Figure 2, it can be seen that Lazada has not been able to achieve the highest number of visits. During January-December 2023, the Lazada e-commerce site cumulatively achieved around 762,4 million visits, which is significantly lower than Shopee, which achieved around 2,3 billion visits, and Tokopedia, which achieved around 1,2 billion visits. Meanwhile, Blibli's website recorded 337,4 million visits, and Bukalapak's website recorded 168,2 million visits. Lazada's performance still lags behind competitors such as Shopee and Tokopedia. In fact, the number of visits to Lazada's website has decreased by 46,72% (*year-to-date*).

One of the strategies used by *e-commerce* to attract consumers is flash sales. According to (Darwipat et al., 2020), a flash sale is a promotional technique that offers lower prices for a limited time, creating a sense of urgency and increasing traffic and purchases. Data from (Goodstats.id, 2023) states that 64% of respondents claimed to like flash sale promotions, making it one of the favorite types of promotions for consumers. It is known that flash sales held by Lazada are more frequent, namely as many as 4x every day, but still unable to attract consumer interest to be able to increase visits to this Lazada *e-commerce* application.

Table 1: Table Pre Survey on Generation Z in Bogor City Regarding Flash sale

Question	Answer		Total Sample
	Yes	No	
I feel that the discounts offered during	20	10	30

Lazada flash sales are very attractive and make me want to buy products	(66,7%)	(33,3)	
The amount of discount on products during Lazada's flash sales is enough to make me buy products that I don't really need	16 (53,3%)	14 (46,7%)	30
I feel that the duration of the flash sale that is currently taking place is long enough for me to decide to buy products at Lazada.	20 (66,7%)	10 (33,3)	30

Source: Primary Data, 2024

The results of a pre-survey conducted on 30 Generation Z respondents in Bogor City showed that 66,7% of respondents felt that the discounts offered during the Lazada flash sale were very attractive and encouraged them to buy products, while 53,3% of respondents stated that the size of the discount was enough to influence their decision to buy products that were not really needed. In addition, 66,7% of respondents also claimed that the duration of the *flash sale* was long enough to make a product purchase decision at Lazada.

In flash sales conducted by Lazada, generally every 4 hours and only 1 minute for big sale products, during harbonas for products that are very much in demand or are often contested and the prices offered are very cheap such as, Rp. 1, Rp. 99, Rp.100,000 for electronic goods and gadgets worth tens of millions. On the other hand, the fear of missing out (FoMO) phenomenon is also an important factor in online shopping behavior. Based on data from (Blibli, 2023), the level of FoMOs increases to 80% when promos are accompanied by " today for only" information, (Wisernotify, 2024) reported that 69% of consumers experienced FoMO and contributed to a 60% increase in sales.

Table 2: Table Pre Survey on Generation Z in Bogor City Regarding Fear of misisng out

Question	Answer		Total Sample
	Yes	NO	
I feel afraid of missing out on the great deals that Lazada offers if I don't buy the items I want right away.	22 (73,3%)	8 (26,7)	30
I worry if I miss the opportunity to get a gift or purchase bonus that Lazada offers.	19 (63,3%)	11 (36,7%)	30
I feel anxious if I don't keep up with the latest product trends offered by Lazada.	23 (76,7%)	7 (23,3)	30

Source: Primary Data, 2024

A pre-survey conducted to 30 generation Z respondents in Bogor City showed that 73,3% were afraid of missing out on great deals, 76,7% were anxious about not keeping up with the latest trends, and 66,7% admitted to often buying products without planning. This shows that FoMO has a real influence on impulsive buying behavior. The pre-survey results show that the *Fear of missing out* in generation Z tends to be high and this *Fear of missing out* phenomenon is even more pronounced in generation Z, who grew up in the digital age with unlimited access to social media and can be an opportunity to increase traffic and encourage impulse purchases on *E-commerce*. This is in line with the results of research conducted by (Putri *et al*. 2024) namely, there is a significant influence between the *Fear of missing out* variable on impulse buying behavior. The high development of *e-commerce* users makes it easier for users to obtain information and conduct electronic transactions. This ultimately triggers a consumer behavior

called *impulsive buying* (Widodo, 2024). According to (Tarigan *et al*., 2020) *impulsive* buying is consumer purchasing behavior that spontaneously buys a product without planning and has no prior purchase intention.

Table 3: Table Pre Survey on Generation Z in Bogor City Regarding impulsive buying

Question	Answer		Total Sample
	Yes	No	
I often buy products without prior planning.	20 (66,7%)	10 (33,3)	30
I find it difficult to refrain from buying a product that I want, even if I don't need it.	17 (56,7%)	13 (43,3%)	30
I tend to buy products without thinking about the consequences.	19 (63,3%)	11 (36,7%)	30

Source: Primary Data, 2024

Based on table 3, the majority of respondents (66,7%) admitted that they often buy products without prior planning, (56,7%) find it difficult to refrain from buying a product they want, even though they don't need it and (63,3%) respondents tend to buy products without thinking about the consequences. This shows that although on average 62,2% of respondents tend to impulsive buying. This percentage can be increased and is an opportunity for Lazada to encourage impulsive purchases which can be supported by factors such as promotions and emotions.

2. Literature review and hypotheses development

2.1 Flash Sale

A flash sale is a promotion that gives consumers the opportunity to purchase goods at a lower cost compared to the regular price, within a specified period of time. Usually, the duration of the flash sale is short, and the start time is publicized in advance to a wide audience (Rahmawati, 2022). According to (Ariska et al., 2022) flash Sale is a promotion that gives consumers a tendency to think, to decide on offers that they feel will not happen the next time. the indicators of flash sales in this study include:

1. Promotion time
2. Flash sale attractiveness
3. Discount

2.2 Fear OF Missing Out

According to (Imaddudin, 2020), fear of missing out is a type of anxiety commonly felt by generation Z, fear of missing out is a person's condition of fear of being said not to be updated, not slang, and fear of missing out on current trends. According to (Elviana *et al*., 2024) fear of missing out is a consumer attitude that often occurs in the field of psychology, but this fear of missing out can also occur in the field of marketing, because in marketing it is no stranger to promotional factors so that someone who has this fear of missing out trait has a fear of missing a moment such as discounts given by sellers. The indicators of FoMO in this study include:

1. Fear
2. Worry

3. Missed Experience.

2.3 Impulsive Buying

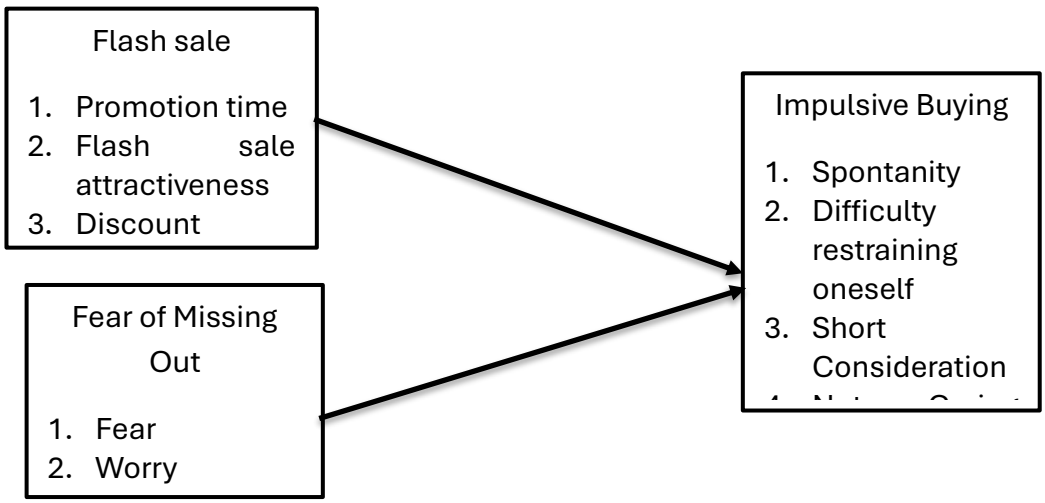
According to (Tarigan *et al*., 2020) impulsive buying is the purchasing behavior of consumers in shopping spontaneously without planning because of the emergence of interest in the product beforehand, the act of buying by consumers where there was no plan to buy before. According to (Ariska et al., 2022), Impulsive buying is the tendency of a consumer to make purchases automatically, without considering needs or prices quickly. The indicator of impulsive buying in this study include:

1. Spontanity
2. Difficulty restraining oneself
3. Short Consideration
4. Not Caring about the Consequences.

2.4 Research Constelation

Promotional strategies such as flash sales are marketing methods by providing large discounts in a very limited time. According to (Syauqi *et al*., 2022) this strategy is designed to create a sense of urgency and attract consumers' attention to make purchases immediately, even without prior planning. Time pressure and exclusivity of offers encourage consumers to make decisions quickly. Previous research results by (Darwipat et al., 2020) and (Setiawati, 2022)show that flash sales have a significant influence on impulsive buying behavior. Fear of missing out (FoMO) is a psychological condition characterized by anxiety, worry, or fear of missing an experience or opportunity. According to (Imaddudin, 2020), FoMO is a type of anxiety that is common in generation Z, who tend not to want to miss trends or be considered out of date. FoMO encourages consumers to make impulse purchases to fulfill social and emotional needs. Research by (Irza, 2024) and (Maula, 2024) shows that FoMO has a positive and significant effect on impulsive buying behavior. Based on the framework above, the researcher can make a research constellation as follows:

Figure 3: Thinking Framework



Source: Primary Data, 2024

2.5 Hypotheses development

A hypothesis is an assumption that needs to be verified, which may be true or false, by seeking

answers through research. Based on this explanation, the hypothesis in this research is:

H1 : Flash sales are thought to have an effect on impulsive buying behavior Lazada users

H2 : Fear of missing out is thought to have an effect on impulsive buying behavior Lazada users

3. Research Methods

This research uses a type of quantitative research with an associative approach. The object of research consists of two independent variables, namely flash sale and fear of missing out, and one dependent variable, namely impulsive buying. The unit of analysis is an individual, who is active or has made purchases through the Lazada application. The research location is focused on Bogor City with the distribution of questionnaires conducted online using Google Form. The type of data used in this research is quantified qualitative data. Data sources consist of primary and secondary data. The sampling method in this study was NonProbability sampling with a sample size of 100 respondents, using purposive sampling technique.

4. Results and discussion

4.1 Validity test

This validity test can be done by looking at the correlation between the score of each item in the questionnaire and the total score to be measured, namely using the Correlation Coefficient. If the Correlation Coefficient value is> 0.361 (R Table) then the question is said to be valid and if the Correlation Coefficient value is below 0.361 then the question is said to be invalid. The results of the data validity test can be seen in the following tables 4:

Table 4. Validity Test Result

No	Item	R-table	R-count	Criteria
1	XI.1	0,361	0,812	Valid
2	X1.2	0,361	0,675	Valid
3	X1.3	0,361	0,850	Valid
4	X1.4	0,361	0,699	Valid
5	X1.5	0,361	0,885	Valid
6	X1.6	0,361	0,662	Valid
7	X1.7	0,361	0,775	Valid
8	X1.8	0,361	0,855	Valid
9	X1.9	0,361	0,771	Valid
10	X2.1	0,361	0,782	Valid
11	X2.2	0,361	0,850	Valid
12	X2.3	0,361	0,838	Valid
13	X2.4	0,361	0,895	Valid

No	Item	R-table	R-count	Criteria
14	X2.5	0,361	0,846	Valid
15	X2.6	0,361	0,849	Valid
16	X3.1	0,361	0,778	Valid
17	X3.2	0,361	0,777	Valid
18	X3.3	0,361	0,743	Valid
19	X3.4	0,361	0,777	Valid
20	X3.5	0,361	0,839	Valid
21	X3.6	0,361	0,795	Valid
22	X3.7	0,361	0,861	Valid
23	X3.8	0,361	0,851	Valid
24	X3.9	0,361	0,796	Valid

Source: Primary Data, 2025

Based on Table 4, it can be seen that all instruments or items of questions from each variable are valid because the calculated r value is greater than the table r value. Based on Table 4.1, it is known that the instrument with the highest validity value is X2.4 with a calculated r value of 0.895, while X1.6 has the lowest validity value with a calculated r value of 0.662 and all instruments or question items from each variable are valid because the calculated r value is greater than the r table value.

4.2 Reliability test

This reliability test uses the SPSS program with the Cronbach Alpha (α) statistical test. A construct or variable is said to be reliable if it provides a Cronbach Alpha (α) value> 0.70. The results of the reliability test of each and all variables in the research instrument are in tables 5.

Table 5. Reliability Test Result

No.	Variabel	Cronbach's Alpha	Description
1	Flash sale	0,913	Reliabel
2	Fear Of Missing Out	0,918	Reliabel
3	Impulsive Buying	0,929	Reliabel

Source: Primary Data, 2025

Based on the reliability test results in Table 5, the Cronbach's alpha value for each variable has results greater than 0.70. These results can lead to the conclusion that all research instruments are declared reliable.

4.3 Structural Equation Modeling-Partial Least Square (outer Model)

4.3.1 Convergent Validity

Convergent validity, evaluation is obtained through the loading factor and average variance extracted (AVE) obtained through SmartPLS. The loading factor value is expected to reach more than 0,7.

Table 6: Loading Factor Results

Variabele	Item	Loading Factor	Description
Flash sale	X1.1	0,837	Valid
	X1.2	0,790	Valid
	X1.3	0,859	Valid
	X1.4	0,869	Valid
	X1.5	0,800	Valid
	X1.6	0,794	Valid
	X1.7	0,826	Valid
	X1.8	0,797	Valid
	X1.9	0,846	Valid
Fear of missing out	X2.1	0,827	Valid
	X2.2	0,859	Valid
	X2.3	0,811	Valid
	X2.4	0,775	Valid
	X2.5	0,706	Valid
	X2.6	0,759	Valid
Impulsive buying	Y.1	0,741	Valid
	Y.2	0,823	Valid
	Y.3	0,809	Valid
	Y.4	0,787	Valid
	Y.5	0,863	Valid
	Y.6	0,765	Valid
	Y.7	0,807	Valid
	Y.8	0,803	Valid
	Y.9	0,733	Valid

Source: Primary Data, 2025

From the results of data processing with SmartPLS shown in the table above, variable indicators that have a loading factor value greater than 0,70 and meet convergent validity. The next stage evaluates AVE which has an AVE value requirement> 0,5.

Table 7: Results of AVE Value

Variabele	*Average Variance Extracted* (AVE)
Flash sale	0,680

Fear Of Missing Out	0,626
Impulsive Buying	0,629

Source: Primary Data, 2025

Based on the display of table 10 output above, it shows that all constructs or latent variables, namely flash sales, fear of missing out and impulsive buying, have met the convergent validity test, namely the AVE value of more than 0,5.

4.3.2 Discriminant validity,

Discriminant Validity is done by looking at the cross loading value of construct measurements. The cross loading value shows the magnitude of the correlation between each construct with its indicators and indicators from other block constructs. the cross loading results can be shown in the following table.

Table 8: Cross LoadingtResults

Indicator Item Code	***Flash sale***	***Fear of missing out***	***Impulsive buying***
X1.1	0,837	0,531	0,519
X1.2	0,790	0,397	0,358
X1.3	0,859	0,453	0,426
X1.4	0,869	0,482	0,453
X1.5	0,800	0,386	0,403
X1.6	0,794	0,491	0,574
X1.7	0,826	0,493	0,482
X1.8	0,797	0,517	0,484
X1.9	0,846	0,452	0,409
X2.1	0,445	0,827	0,669
X2.2	0,422	0,859	0,629
X2.3	0,382	0,811	0,554
X2.4	0,540	0,775	0,587
X2.5	0,389	0,706	0,559
X2.6	0,550	0,759	0,536
Y.1	0,493	0,601	0,741
Y.2	0,384	0,619	0,823
Y.3	0,573	0,611	0,809
Y.4	0,541	0,680	0,787
Y.5	0,422	0,647	0,863
Y.6	0,418	0,473	0,765
Y.7	0,448	0,663	0,807
Y.8	0,391	0,501	0,803
Y.9	0,289	0,467	0,733

Source: Primary Data, 2025

Based on table 8 above, it can be concluded that each indicator item in the variable shows a difference with indicators in other variables, which is indicated by a loading value that is higher than other constructs.

4.3.3 Composite Reliability

The construct is declared reliable if the composite reliability and Cronbarch's alpha have a value> 0,7, then the construct is declared reliable.

Table 9: Composite Reliability Value

	Cronbach's Alpha	***Composite Reliability***
***Flash sale* (X1)**	0,941	0,950
***Fear Of Missing Out* (X2)**	0,879	0,909
***Impulsive Buying* (Y)**	0,926	0,938

Source: Primary Data, 2025

Based on the table above, the majority of constructs show the composite reliability value and Cronbarch's alpha have shown complementary results. It can be seen in the table above that each variable has a composite reliability value and Cronbarch's alpha, which is> 0,7

4.4 Structural Equation Modeling-Partial Least Square (Inner Model)

4.4.1 R-Square

Table 10: R-Square Value

R-Square Value	**Description**	**Variabele *R-Square* Value** ***Impulsive Buying***
0,25	Weak	
0,50	**Medium**	**0,587**
0,75	Strong	

Source: Primary Data, 2025

Based on table 10, the R-Square value shows that the flash sale and fear of missing out variables can explain the construction of Impulsive Buying by 58,7% and the remaining 41,3% is explained by other variables not included in the variables in this study.

4.4.2 Path Coefficient

Table 11: Path coefficient value

Endogenous Variable	***Impulsive Buying***	**Relationship**
Flash sale	0,202	Positif
Fear Of Missing Out	0,633	Positif

Source: Primary Data, 2025

Based on Table 11 above, it can be explained that the flash sale variable (X1) has a coefficient

value of 0,202, this value indicates a positive relationship to the impulsive buying variable (Y). Meanwhile, the fear of missing out (X2) variable has a coefficient value of 0,633, this value indicates a positive relationship to impulsive buying behavior (Y). Based on the path coefficient table, FoMO (coefficient 0,633) has a stronger influence than flash fale (coefficient 0,202), indicating that the fear of missing out plays a greater role in driving consumers' impulsive purchasing behavior.

4.4.3 F-Square

Table 12: F-Square value

Kriteria nilai *F-Square*	**Keterangan**	**Nilai *F-Square* Variabel *Flash Sale***	**Nilai *F-Square* Variabel *Fear of Missing Out***
0,02	**Kecil**	**0,066**	
0,15	Sedang		
0,35	**Besar**		**0,652**

Source: Primary Data, 2025

Based on Table 12 above, it is known that the results of the F-Square analysis show that the Flash sale variable has a small effect on Impulsive Buying (F^2 = 0,066), while the fear of missing out (FoMO) variable has a large effect (F^2 = 0,652). This indicates that FoMO makes a much more significant contribution in explaining consumer impulsive buying behavior than the flash sale variable

4.4.4 Predictive Relevance (Q-Square)

Table 13: Predictive Relevance (Q-Square)Value

Nilai *Q-Square*	**Keterangan**	**Nilai *Q-Square* Variabel *Impulsive Buying***
0,02 to < 0,15	Weak	
0,15 to < 0,35	Medium	
> 0,35	**Large**	**0,556**

Source: Primary Data, 2025

Based on Table 13, it can be seen that the Q-square value on the dependent variable or Impulsive buying variable is 0,556 and is classified as large, the Q-Square value of 0,556 indicates that the model has a large predictive power on the Impulsive Buying variable. This means that the model in this study has good predictive quality and is able to explain the dependent variable strongly.

4.4.5 Hypothesis Test (Bootstraping)

Table 14:. Bootstrapping Value

Influence	***Original sampel***	***t-statistic***	**P-value**	**Effect of**
Flash sale on *impulsive buying*	0,202	2,896	0,004	Signifikan

Fear of missing out on *impulsive buying*	0,633	9,444	0,000	Signifikan

Source: Primary Data, 2025

Based on the results of the bootstrapping test using a two-tailed test in Table 14 above shows the significant influence of both variables in this reaserch on impulsive buying. Thus, it is known that flash sales have a positive influence on impulsive buying of 0,202 with a t-statistic value of 2,896 and a p-value of 0,004, indicating a significant influence. Additionally, fear of missing out also has a stronger effect of 0,633 with a t-statistic value of 9,444 and a p-value of 0,000, indicating a highly significant effect on impulsive buying.
The results of this bootstrapping test show that flash sales and fear of missing out (FoMO) have a positive and significant effect on impulsive buying, with a p-value below 0,05, but FoMO has a stronger influence than flash sales in encouraging impulsive buying behavior.

4.4.6 Model Fit

The NFI value which is getting closer to 1 indicates that the model used has a higher level of fit. The NFI value of 0,774 indicates that the model has a good level of fit of 77,4%. In addition, the SRMR value of 0,078 is below the threshold limit of 0,1 which indicates that the overall fit model is good and feasible to use.

Table 15: Model Fit Value

	Estimated model
SRMR	0,078
d_ULS	1,818
d_G	0,904
Chi-square	454,641
NFI	**0,774**

Source: Primary Data, 2025

4.5 Hypothesis Test Result

The significance value of the relationship between constructs, the t-statistic value, and the p-value determine whether a hypothesis can be accepted or not. The output path coefficients are used to test the hypotheses of this study and have been discussed in previous hypothesis tests using the bootstrapping method. In the bootstrapping method used in this study, the hypothesis is accepted if the significance value of the t-statistic is greater than 1,99 (t-table) and/or the p-value is less than 0,05, then H1 and H2 are accepted. Conversely, if these conditions are not met, H0 is accepted, and H1 and H2 are rejected. Based on the results of the data analysis conducted previously, the respective t-statistic values, p-values, and F-calculations for flash sales and fear of missing out on impulsive buying can be seen in Table 4.16 below

Table 16: Hypothesis Test Results

Hypothesis	**Analysis**	**Decision**

There is a positive and significant effect of Flash sale variables on impulsive buying behavior.	The results of the bootsraping test on the flash sale variable on impulsive buying with a value of 0.202 and has been significant because it has a t-statistic value above 1,99, which is 2,896.	Accepted
There is a positive and significant effect of the Fear of misisng out variable on impulsive buying behavior.	The results of the bootsraping test on the Fear of misisng out variable on impulsive buying with a value of 0,633 and has been significant because it has a t-statistic value above 1,99, which is 9.444.	Accepted

Source: Primary Data, 2025

Based on table 15 above, it shows that the t-statistic value for flash sale is 2,896 and fear of missing out is 9,444, both of which exceed the t table value of 1,99. Therefore, both hypotheses (H1 and H2) are acceptable.

4.6 Discussion and Interpretation of Results

4.6.1 The effect of Flash sale on Impulsive buying

Based on the results of the descriptive analysis that has been carried out previously, it is known that the results of descriptive analysis show that flash sales are a factor that is considered good and approved by respondents in increasing impulsive buying behavior. The path coefficient results also show that flash sales have a coefficient value of 0,202, which indicates a positive relationship to impulsive buying. In addition, the bootstrapping results show that flash sales have a significant effect on Impulsive buying. This can be seen based on the t-statistic value which exceeds the significance limit, namely (2,866> 1,96) and the P-value which is smaller than the specified significance level (0,004 < 0,05). This means that the greater the encouragement of generation Z consumers to make purchases during flash sales, the stronger the influence in encouraging their impulse buying behavior on the Lazada application. The results of this study indicate conformity with the findings in previous studies conducted by (Rahmawati, 2023) and (Setiawati, 2022) show that flash sales have a positive and significant effect on impulsive buying.

4.6.2 The effect of Fear of missing out on Impulsive buying

Based on the results of the descriptive analysis that has been done previously, it is known that the results of descriptive analysis show that the Fear of missing out variable is a factor that is considered good and approved by respondents in increasing impulsive buying behavior. The path coefficient results also show that Fear of missing out has a coefficient value of 0,633, which indicates a positive relationship to Impulsive buying. In addition, the bootstrapping results show that Fear of missing out has a significant influence on Impulsive buying. This can be seen based on the t-statistic value which exceeds the significance limit, namely (9,444> 1,96) and the P-value which is smaller than the specified significant level (0,000 < 0,05). This means that the greater the encouragement of generation Z consumers to make purchases when they feel fear of missing out or FoMO alone, the stronger the influence in encouraging their impulsive buying behavior on the Lazada application. The results of this study show conformity with the findings in previous studies conducted by (Irza, 2024) and (Maula, 2024) found that the fear of missing out variable has a positive and significant effect on Implusive buying

5. Conclusion

1. The results of the analysis show that flash sales have a positive and significant effect on impulsive buying in generation Z consumers, with a coefficient value of 0,202. The more often consumers shop during flash sales to get discounts, the greater their tendency to make impulsive purchases. This is supported by the bootstrapping results which show a t-statistic value of 2,866 (>1,96) and a P-value of 0,004 (<0,05), which confirms that flash sales significantly drive the impulsive behavior of generation Z consumers on the Lazada application.
2. Fear of missing out (FoMO) has a greater positive and significant influence on impulsive buying in generation Z consumers, with a coefficient value of 0,633. The stronger the fear of missing out on trends or offers, the greater their tendency to make impulsive purchases. Bootstrapping results support this with a t-statistic value of 9,444 (>1,96) and a P-value of 0,000 (<0,05), indicating that FoMO significantly drives generation Z's impulsive behavior on the Lazada app

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THE EVOLUTION OF EQUALITY IN THE WORKPLACE: A SYSTEMATIC ANALYSIS OF FACTORS AFFECTING FAIR AND INCLUSIVE EMPLOYMENT OPPORTUNITIES

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Abstract

This Systematic Literature Review (SLR) research aims to explore the factors that affect fair and inclusive employment opportunities through a comprehensive analysis of scientific literature for the 2019-2024 period. The research method uses the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) protocol with systematic searches on various reputable academic databases. Selection criteria include peer-reviewed publications in English, focusing on the context of work equity, with a time span of 2019-2024. Qualitative meta-synthesis analysis identifies five fundamental dimensions: regulation, organizational strategy, interactional approach, digital technology intervention, and human resource development. The findings reveal that work equality is a complex ecosystem that requires a multidimensional approach, where diversity is seen as an organizational strategic asset. The research produces practical recommendations for creating an inclusive work environment, which includes the development of progressive policies, responsive training programs, the adoption of digital technologies, and an accommodating management model to differences. The main contribution of the research is a comprehensive mapping of the factors that affect fair employment opportunities and their implications for organizational transformation

Keywords: *Equality In The Workplace, Organizational Inclusion, Diversity of the Workforce*

1. Introduction

The dynamics of the contemporary work environment are undergoing a fundamental transformation in the context of equality and inclusion, reflecting a significant social and organizational paradigm shift.(Farhani, 2024). Equality in the workplace is no longer just a normative concept, but has become a strategic imperative that determines the sustainability and competitiveness of organizations in the global era.(Anik Iftitah et al., 2023). The complexity of the equality challenge requires a comprehensive approach that goes beyond demographic representation, to systemic implementation that encourages full and meaningful participation across the entire spectrum of the workforce.

The historical context shows that discrimination and inequality in employment opportunities have been persistent issues that undermine human resource potential and hinder organizational innovation. Although progress has been made, structural inequalities still color the employment landscape, especially for traditionally marginalized groups, such as women, people with disabilities, and ethnic minorities.(Efendi, 2018). This phenomenon is not only detrimental to the individuals concerned, but also has a negative impact on the productivity and creativity of the work ecosystem as a whole. Recent research indicates that equality is not just an ethical challenge, but a fundamental prerequisite for organizational sustainability. Empirical studies show a positive correlation between comprehensive inclusion practices and increased organizational performance, innovation, and job satisfaction.(Tuasikal & Safitri, 2024). This underlines the importance of a holistic approach that takes into account the multidimensionality of factors influencing equal employment opportunities.

The complexity of equality issues requires in-depth systematic analysis to identify effective intervention mechanisms.(Fitriani & Sokhivah, 2024). The Systematic Literature Review (SLR) approach is a highly relevant methodological instrument in dismantling the knowledge structure, identifying research gaps, and mapping the conceptual evolution trajectory of equality in the workplace. By conducting a critical synthesis of various academic contributions, this study aims to explore and analyze the fundamental factors that influence the creation of an inclusive work ecosystem. The main focus of this study is to explore the complex dimensions of equal employment opportunities, taking into account the interactional aspects including gender, ethnicity, disability, sexual orientation, and socio-economic background. Through a systematic approach, this study aims to produce a comprehensive map that not only diagnoses challenges but also offers a practical framework for sustainable organizational transformation.

The academic and practical significance of this research lies in its ability to bridge the gap between theory and practice, and provide an empirical basis for policy makers and human resource practitioners. By synergizing multidisciplinary perspectives, this research is expected to provide substantive contributions in redefining the paradigm of equality in the workplace.

2. Literature review

Equality and inclusion in the workplace have become critical areas of focus in human resource management (HRM) due to globalization, demographic shifts, and increasing recognition of their impact on organizational success. Equality ensures that all employees have fair access to opportunities, resources, and treatment, regardless of gender, race, age, disability, sexual orientation, or other characteristics. Inclusion, however, goes beyond mere representation by fostering a work environment where diverse individuals feel valued, respected, and integrated into decision-making processes (Shore et al., 2011). Workplace equality is rooted in principles of fairness and justice. According to Armstrong (2020), equality in HRM involves ensuring that policies, practices, and organizational culture do not discriminate against any group. Key theories include: Social Identity Theory (Tajfel & Turner, 1979). This theory explains how individuals categorize themselves and others into social groups, leading to in-group favoritism and out-group discrimination. In workplaces, this can manifest as biases in hiring, promotions, and team dynamics. Equity Theory (Adams, 1963): Employees assess fairness by comparing their inputs (effort, skills) to outcomes (salary, recognition). Perceived inequities can lead to disengagement, turnover, and conflict. Institutional Theory (DiMaggio & Powell, 1983): Organizations adopt equality policies not just for efficiency but also to gain legitimacy in the eyes of stakeholders.

Inclusion is an active process that ensures diverse employees feel a sense of belonging and empowerment. Roberson (2006) defines inclusion as the degree to which employees feel their contributions are valued and they have access to opportunities. The Deloitte Inclusion Model (Bourke & Dillon, 2018) identifies three key dimensions: belonging, uniqueness and psychological safety. Belonging relate to employees feel accepted as part of the organization. Uniqueness relate to individual differences are respected rather than suppressed. Psychological Safety relate to employees feel safe to express ideas without fear of retaliation.

3. Methodology

This study uses a systematic literature review method. The Systematic Literature Review (SLR) methodology was chosen as a comprehensive research framework to systematically and in-depth explore the evolution of equality in the workplace. This methodological approach allows for a critical and comprehensive synthesis of relevant scientific publications, with the aim of identifying, evaluating, and integrating research

findings related to factors that influence fair and inclusive employment opportunities. The Systematic Literature Review process will be carried out through structured and rigorous methodological stages, referring to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) protocol.

The literature search strategy will be conducted systematically using various reputable academic databases, including but not limited to Web of Science, Scopus, EBSCO, ProQuest, and Google Scholar. A combination of complex keywords will be used to extract relevant literature, including terms such as "workplace equality", "organizational inclusion", "fair employment opportunities", "diversity management", and "intersectional workplace dynamics". The inclusion and exclusion criteria of the literature will be strictly determined to ensure the quality and relevance of the sources used. The inclusion criteria include: (1) peer-reviewed journal publications, (2) English-language articles, (3) publications between 2019-2024, (4) focus on the context of equality in the workplace, and (5) comprehensive empirical or conceptual research methodology. Meanwhile, the exclusion criteria include: (1) duplicate articles, (2) non-academic publications, (3) articles outside the specified time frame, and (4) publications with low methodological quality.

The literature selection process will be conducted through three main stages: (1) initial screening based on title and abstract, (2) full-text review to assess comprehensive relevance, and (3) in-depth analysis of articles that pass the previous stage. Each article will be assessed using a systematically developed critical appraisal instrument, considering methodological aspects, validity of findings, and significance of scientific contribution. Data analysis will use a qualitative meta-synthesis approach, which allows for narrative integration of research findings across studies. This method allows for the identification of patterns, themes, and conceptual constructs that emerge from the literature analyzed. The coding process will be conducted independently by two researchers to minimize bias and increase the validity of the findings.

The analytical framework will focus on several key dimensions: (1) organizational structural factors, (2) socio-cultural dynamics, (3) policy and regulatory frameworks, (4) human resource management practices, and (5) interactional perspectives on equal employment opportunities. Each dimension will be analyzed in depth to explore the complexity and interconnections of factors that influence inclusion in the workplace. The validity and reliability of the research will be ensured through several mechanisms. First, the research protocol will be documented transparently, allowing for reproducibility. Second, the selection and analysis process will involve consensus among researchers. Third, cross-checking of various sources will be carried out to ensure the credibility of the findings. An ethical approach is a fundamental consideration in the methodology of this research. The entire process will pay attention to academic integrity, avoid plagiarism, and comprehensively document each stage of the research. Transparency and methodological accuracy are the main principles in the construction of responsible scientific knowledge.

4. Results and discussions

The findings of the systematic literature review research reveal the complexity of the dynamics of equality in the workplace that requires a multidimensional and comprehensive approach. An in-depth analysis of ten recent studies identified a number of fundamental factors that significantly influence the creation of an inclusive and equitable work ecosystem. The Policy and Regulation dimension plays a crucial role in promoting equal employment opportunities. The study (Blanck, 2022) specifically highlights the transformative role of the Americans with Disabilities Act (ADA) in minimizing discrimination. The research findings indicate that a comprehensive regulatory framework serves not merely as a legal instrument,

but as a fundamental mechanism for dismantling structural barriers that have historically hindered the participation of marginalized groups in the employment ecosystem.

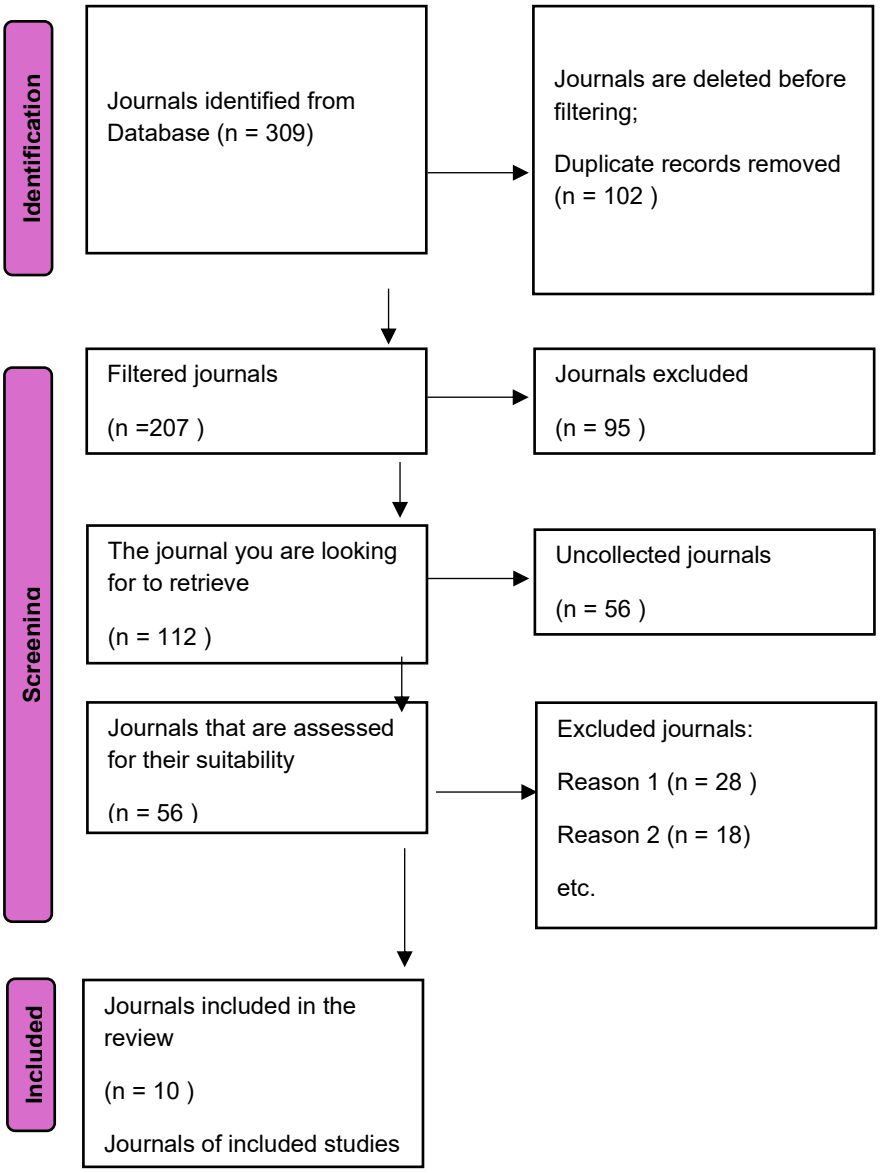

Figure 01.*Prisma Flowchart*

The interactional perspective is a central theme that emerges from various literature.(Ryan et al., 2020)insightfully explores the complexity of barriers to equality, identifying that discrimination is multidimensional and affects a range of social groups, including LGBTQ+ communities, pregnant women and people with disabilities. The findings highlight that a single approach cannot accommodate the complex diversity of contemporary employment contexts. Sectoral contexts also make a significant contribution to understanding equality dynamics.(Ni Luasa et al., 2023)in its comprehensive study on the healthcare sector revealed that equality and inclusion practices are positively correlated with increased creativity,

productivity, staff retention, and workforce integration. This shows that equality is not just an ethical imperative, but a substantive organizational strategy for creating a sustainable work environment.

Innovative approaches to promoting inclusion are an interesting finding from the literature.(Corvino et al., 2023)explores the potential of sport as an instrument of social development, offering an alternative perspective in promoting inclusive employment opportunities. The study underlines the importance of creative interventions that go beyond conventional frameworks in creating a diversity-responsive work ecosystem. The organizational development aspect receives special attention in the literature.(Aaby et al., 2020)introduced the innovative Organizational Health Literacy Responsiveness (Org-HLR) framework, identifying 62 improvement ideas and 11 action plan items to enhance organizational responsiveness. These findings affirm that equity transformation requires a systemic approach integrated into organizational architecture.

Digital technologies emerge as a significant factor in driving work inclusion. Study(Wang et al., 2024)reveals how digital inclusive finance can increase non-farm employment opportunities in rural areas, particularly through mechanisms that reduce financing constraints and improve risk appetite. This indicates the transformative role of technology in dismantling structural barriers. Demographic diversity is identified as an important predictor of organizational performance.(Turi et al., 2022)through comprehensive quantitative analysis proves the significant impact of diversity in age, beliefs, and leadership skills on organizational performance. These findings confirm that equality is not just a moral consideration, but a fundamental competitive strategy.

The literature also highlights the importance of specific intervention strategies. Studies(Tomczak et al., 2021)developed an inclusive communication model for individuals on the autism spectrum, demonstrating that targeted interventions can effectively support workforce inclusion with special needs.(Silvaggi et al., 2020) (Silvaggi et al., 2019), contributed by developing a toolbox and training tools to support the inclusion of workers with chronic conditions. The conclusions of this systematic analysis confirm that equality in the workplace is a complex phenomenon that requires a holistic, interactional and sustainable approach. Factors that influence equal employment opportunities include progressive regulatory frameworks, innovative organisational strategies, technology-based interventions, human resource capacity development and a commitment to celebrating diversity

A. Summary Results of Key Findings

Table 1. Synthesis Table

No	Author & Year	Title	Method	Findings	Relevance to Research
1	(Blanck, 2022)	Disability-inclusive employment, `survivorship, and the Americans with Disabilities Act	Analytical and comparative studies of law.	The ADA promotes the elimination of discrimination against people with disabilities in the workplace. COVID-19 has heightened the need for	Highlighting the importance of inclusive policies to minimize discrimination in the workplace, relevant in supporting equal

				inclusive policies for cancer survivors and people with disabilities.	employment opportunities.
2	(Ni Luasa et al., 2023)	Workplace equality and inclusion practices in the healthcare sector	Systematic review using the PICO framework to identify peer-reviewed literature on equity in the health sector.	Equity and inclusion practices in the healthcare sector enhance creativity, productivity, staff retention and workforce integration.	Provides a systematic approach to assessing and promoting employment equality, relevant to research on inclusion in the workplace.
3	(Ryan et al., 2020)	Understanding Barriers to Workplace Equality: A Focus on the Target's Perspective	Editorial and literature review.	Barriers to equality in the workplace include both direct and indirect discrimination, affecting a range of social groups such as LGBTQ+, pregnant women and people with disabilities.	Highlighting relevant barriers to achieving an equal workplace, supporting the research objective of identifying factors influencing employment equality.
4	(Corvino et al., 2023)	Sport as a tool for social inclusion, employment, and improved health	Literature review related to sport initiatives for social inclusion.	Sport can be used for social development purposes such as social inclusion, health and employment opportunities.	Offering insights into alternative approaches such as sport in driving inclusive workplace equality.
5	(Aaby et al., 2020)	Fit for Diversity: A Staff-Driven Organizational Development Process	Case study using the Organizational Health Literacy Responsiveness (Org-HLR) framework.	The Org-HLR process identified 62 improvement ideas, resulting in 11 items in an action plan to improve the	Relevant in understanding how to create organizational strategies for responsiveness and inclusion in the workplace.

				organization's health literacy responsiveness.	
6	(Silvaggi et al., 2020)	Employment and chronic diseases: Suggested actions for the implementation of inclusive policies	Development of tools for companies and training of managers to manage workers with chronic conditions.	The Toolbox helps promote employment access for workers with chronic conditions through training for managers and company regulation.	It is useful to understand inclusive policy steps to address workers with special needs.
7	(Silvaggi et al., 2019)	Chronic diseases & employment: An overview of existing training tools for employers	Review of training tools for managers and HR staff regarding workers with chronic conditions.	There are two main types of training tools: those developed by social organizations and large multinational companies. These trainings help the inclusion of workers with chronic conditions.	It is relevant to highlight the importance of training as a factor in increasing inclusivity in the workplace.
8	(Tomczak et al., 2021)	Inclusive communication model for individuals with autism spectrum disorders	Qualitative study based on in-depth interviews with 21 experts.	An inclusive communication model designed to improve the employment cycle of individuals with ASD, including modifications to the job interview process and training of neurotypical colleagues.	Providing specific strategies to improve communication in the workplace is essential for the inclusion of workers with special needs such as ASD.
9	(Wang et al., 2024)	Digital inclusive finance and	Quantitative study using family survey	Digital inclusive finance increases non-farm	Offers insights into the role of technology in

		non-agricultural employment	data and digital financial inclusion index from China.	employment in rural areas by improving risk appetite and reducing financing constraints.	supporting employment equality, relevant to digital-based inclusion studies.
10	(Turi et al., 2022)	Diversity impact on organizational performance	Quantitative study using SPSS and SMART-PLS3 to analyze the impact of diversity on organizational performance.	Age diversity, diversity beliefs, and leadership skills have a significant impact on organizational performance.	Provides insight into the positive impact of diversity on organizational performance, relevant to research on the benefits of equality and inclusion.

5. Conclusion

The Systematic Literature Review (SLR) on the evolution of equality in the workplace yields comprehensive findings that underscore the complexity of the transformation of the contemporary employment ecosystem. The study reveals that equality is not merely a normative concept, but rather a fundamental prerequisite for organizational sustainability and competitiveness in the global era. The systematic review identifies five key dimensions that influence fair and inclusive employment opportunities: (1) progressive regulatory frameworks, (2) innovative organizational strategies, (3) interactional approaches, (4) digital technology-based interventions, and (5) commitment to human resource development. Each dimension has a unique contribution in dismantling the structural barriers that have historically hindered the participation of marginalized groups. The theoretical implications of this study lie in the assertion that equality is a complex ecosystem that requires a multidimensional approach. Diversity is no longer seen as a challenge, but rather a strategic asset that can drive innovation, creativity, and organizational performance. The practical recommendations produced include: (1) developing an inclusive policy framework, (2) implementing diversity-responsive training programs, (3) adopting digital technologies that support inclusion, (4) creating accommodating communication mechanisms, and (5) developing a management model that celebrates differences.

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THE EFFECTIVENESS OF STOCK SPLITS IN INVESTOR SIGNALING: AN EVENT STUDY ANALYSIS BEFORE AND DURING COVID-19

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Abstract

This study aims to examine the differences in trading volume, firm value, bid-ask spread and abnormal return before and after a stock split. This research is a comparative study with an event study using 10 days before and after the stock split. The data used is secondary data with the data collection technique used is documentation. The population of this study is 30 companies that carry out stock splits in 2018-2021. Through purposive sampling used as a sample selection technique, there were 8 samples used in the study. The data analysis tool used in this study is SPSS 26. The results of this study indicate that there are significant differences in trading volume, firm value, and abnormal returns before and after a stock split, while there is no significant difference in the bid-ask spread before and after stock splits. Additional tests also provide empirical findings that none of the four variables tested experienced significant differences before and during Covid-19. Investors need to be more sensitive in reading the signals given by the company, especially through stock split activities. Signals from stock splits can be used by investors to see prospects for stock trading volume, company value and abnormal returns in the future.

Keywords: *abnormal return, event study, firm value, stock split*

1. Introduction

On March 2, 2020, the Indonesian government officially announced the first confirmed COVID-19 case in the country (Arnani, 2022). According to Kusuma (2020), Finance Minister Sri Mulyani Indrawati stated that Indonesia's economic growth experienced a significant decline, contracting to -0.4% by the end of 2020. The impact of the COVID-19 pandemic proved highly significant for Indonesia's economy, as evidenced by the substantial economic growth deceleration (Murdhaningsih et al., 2022). Fernando (2021) noted that since 2020, several companies achieved successful outcomes from their stock split decisions, including PT Bank Central Asia Tbk (BBCA) and PT MNC Studio International Tbk (MISN), while PT Elang Mahkota Teknologi Tbk (EMTK) and PT Unilever Indonesia Tbk (UNVR) experienced share price declines following their stock split implementations. This economic challenge was previously documented by Nasution et al. (2020), who reported that the COVID-19 pandemic significantly impacted Indonesia's economy. Within this context, stock splits were employed as a strategic mechanism by various companies to communicate their financial information to stakeholders.

Stock splits conducted by corporations can significantly influence share prices (Wahyudi & Putra, 2020). The stock split mechanism represents a corporate strategy to divide outstanding shares without actual buy-sell transactions, primarily aimed at attracting investors (Afriyenti & Kurniawan, 2019). Stock splits enable investors to purchase shares at relatively lower prices, which is expected to enhance share liquidity and increase trading volume (Lestari & Sudaryono, 2008). Based on these observations, stock splits constitute share divisions that

affect only the market price without altering the proportional ownership of existing investors. Currently, stock split events represent an intriguing phenomenon for academic investigation, particularly within the field of economics. Stock splits are also referred to as "stock cosmetics," signifying corporate actions designed to enhance share attractiveness without substantively improving investor wealth (Muharam & Sakti, 2008). This phenomenon can be examined from both theoretical and practical perspectives: theoretically, stock splits increase the number of outstanding shares without enhancing investor welfare, while practically, stock splits can trigger market reactions (Janiantari & Badera, 2014). This study is also grounded in signaling theory, which serves to communicate signals to investors and explains that companies conduct stock splits to restore optimal and more affordable share prices.

Stock demand and purchasing activity occasionally decline due to excessively high share prices, necessitating stock splits to reduce share prices and enhance market accessibility (Putra & Suaryana, 2019). While corporations generally view rising stock prices as beneficial, excessive price appreciation can adversely affect trading volume and investor participation (Handayani & Yasa, 2017). Situmorang & Mahfud (2016) identify two primary motivations for implementing stock splits: signaling positive future prospects to the market and directing share prices to an optimal trading range that facilitates broader market participation. According to Wareza (2021), PT Bank Central Asia Tbk (BBCA) executed a stock split at a 1:5 ratio. The company's decision to implement this stock split was attributed to robust capital market development and increasing retail investor interest in equity investments.

Financial information represents a critical factor required by investors as a decision-making tool for determining whether to hold, purchase, or sell securities (Muharam & Sakti, 2008). Such information serves as the foundation for investment decision-making and uncertainty reduction to achieve desired investment objectives (Lestari & Sudaryono, 2008). Munthe (2016) elucidates that investor perceptions regarding the fairness of stock prices can determine supply-demand equilibrium. Consequently, excessively high stock prices diminish investor interest in purchasing securities, necessitating price stability within reasonable and optimal ranges. To assess market efficiency, publicly available information is essential for examining market reactions to specific events through what is termed event study methodology (Hartono, 2014:585). According to Nadig (2015), event studies constitute empirical analyses designed to evaluate the impact of specific events on stock returns. The event study examined in this research focuses on stock split announcements. The primary function of event study methodology is to assess the informational content of stock split announcements (Wahyudi & Putra, 2020). Several factors may be influenced by stock split events, including trading volume, firm value, bid-ask spreads, and abnormal returns, which can be theoretically explained through signaling theory.

This study extends the research conducted by Anwar & Asandimitra (2018) by incorporating firm value as an additional independent variable. The study also examines the COVID-19 pandemic that began in 2020 to analyze market reactions to this unprecedented event. Consequently, this research includes supplementary analysis to investigate corporate responses to stock splits both before and during the COVID-19 pandemic. Four factors are identified as being influenced following stock split events: trading volume (Afriyenti & Kurniawan, 2019; Ambarwati, 2008), firm value (Sriyono & Alam, 2021; Widiastuti & Usmara, 2005), bid-ask spread (Afriyenti & Kurniawan, 2019; Janiantari & Badera, 2014), and abnormal return (Munthe, 2016; Puspita & Yuliari, 2019). This study utilizes data from companies that conducted stock splits between 2018 and 2021 and are listed on the Indonesia Stock Exchange (IDX).

Based on the conducted research, this study provides empirical evidence and contributes to the literature on stock splits. This study employs an event study methodology to better capture the effects of corporate actions, specifically stock splits. Following statistical testing, the results indicate that three out of four variables examined demonstrate statistically significant differences. Trading volume, firm value, and abnormal returns exhibit significant differences, while no significant difference is observed for the bid-ask spread variable. Regarding the additional analysis conducted on companies that implemented stock splits before and during the COVID-19 pandemic, no significant differences were found across the four tested variables, suggesting that COVID-19 did not differentially impact companies undertaking stock splits. This research also provides insights for investors, indicating that stock splits serve as corporate signals regarding future company prospects. Investors can interpret these signals through observable changes in trading volume, firm value, and abnormal returns following stock split announcements.

2. Literature review

2.1 Signalling theory

Signaling theory describes the dynamics that occur when two parties have access to different information, typically involving a sender who provides signals or information and a receiver who must interpret these signals (Connelly et al., 2011). When announced information carries positive value during the observation period, the market responds by sending positive or negative signals depending on whether investors receive favorable or unfavorable information (Afriyenti & Kurniawan, 2019). Signaling theory plays a crucial role in stock split announcements by providing information to prospective investors about the company's future prospects. Wahyudi & Putra (2020) explain that information asymmetry enables stakeholders to assess corporate prospects, allowing managers to send positive signals to investors, thereby generating favorable responses to stock split announcements. When communicating potential high returns to investors, companies can enhance their attractiveness for investment decisions (Putra & Suaryana, 2019). Consequently, stock split announcements serve as indicators that the company's financial condition remains sound (Febrianti, 2018).

2.2 Trading volume activity before and after stock split

Stock trading volume represents one of the key parameters indicating increased stock trading activity in the exchange (Indrayani et al., 2020). Changes in trading volume are measured using trading volume activity (Munthe, 2016). Khajar (2016) explains that there is a specific ratio used to measure trading volume, namely trading volume activity, which represents the ratio of traded shares to outstanding shares. The magnitude of stock split effects on stock trading volume is reflected in the volume of shares traded (Copeland, 1988). Stock splits result in increased trading volume due to lower offered share prices, thereby enhancing investor interest and trading volume (Indrayani et al., 2020). Research conducted by Indrayani et al. (2020) on 30 manufacturing companies listed on the Indonesia Stock Exchange from 2014-2016 demonstrates significant differences in stock trading volume before and after stock splits.

H1: There is a significant difference in trading volume before and after stock splits.

2.3 Firm value before and after stock split

Firm value serves as a financial performance indicator for publicly listed companies (Putra & Lestari, 2016). Generally, publicly listed companies maximize their firm value through strategic policies known as corporate actions (Maulana & Yuliana, 2022), such as stock splits.

Widiastuti & Usmara (2005) explain that higher stock prices correspond to higher firm value, while conversely, declining stock prices may indicate poor corporate performance. The study by Sriyono & Alam (2021) provides empirical evidence demonstrating significant differences in firm value before and after stock split events. Signaling theory plays a crucial role in providing investors with essential information regarding firm value assessment. Based on this premise, signaling theory can be concluded to serve as a measurement tool for investors in determining their desired investment choices. High firm value can generate positive impacts for investors by providing additional benefits in the form of capital gains from their shareholdings (Putra & Lestari, 2016).
H2: There are significant differences in firm value before and after stock split.

2.4 Bid-ask spread before and after stock split

The bid-ask spread represents the difference between the bid price and the ask price, reflecting the bargaining power of a stock (Afriyenti & Kurniawan, 2019). Higher trading activity or trading volume of a stock leads to lower ownership costs, which subsequently results in a smaller bid-ask spread (Ambarwati, 2008). According to Anwar & Asandimitra (2018), the bid-ask spread can be utilized to observe market reactions to specific events. Signaling theory explains that companies conducting stock splits signal healthy financial conditions (Fahmi, 2012). This indicates that there should be differences in bid-ask spreads before and after stock split announcements as a form of market reaction. Research findings by Pujiharjanto (2001) and Rusliati & Farida (2010) successfully identified significant differences in bid-ask spreads between the periods before and after stock split announcements.
H3: There is a significant difference in bid-ask spreads before and after stock splits.

2.5 Abnormal return before and after stock split

A stock split is a corporate action undertaken by companies with the objective of restoring share price liquidity and signaling positive information to investors (Anwar & Asandimitra, 2018). Abnormal return represents the difference between actual returns and expected returns (Doryab & Salehi, 2018; Zakiyah & Nurweni, 2020). Generally, abnormal returns yield positive values when actual returns exceed expected returns, but generate negative values when the rate of return falls below expectations (Yustisia, 2018). In the context of stock split events, positive abnormal returns can provide above-normal gains to investors, while negative abnormal returns indicate below-normal returns (Munthe, 2016). Positive abnormal returns following stock split announcements may attract investors to securities with greater certainty and transparency (Mardiyaningsih & Andhitiyara, 2020). Puspita & Yuliari (2019) explain that abnormal returns are frequently employed as the focal point for examining price reactions and market efficiency. The presence of differential abnormal returns before and after stock split announcements can serve as an indicator of positive signalling effects, as supported by empirical research (Ahn et al., 2005).
H4: There is a significant difference in abnormal returns before and after stock split.

3. Methodology

This study employs a comparative research design, which involves comparing the presence of one or more variables across two or more different samples (Sugiyono, 2021:36). The research provides a descriptive analysis of stock split events. To analyze these events, this study utilizes an event study methodology to measure capital market reactions to the publication of information required by investors, employing a specific time period to determine the research window. This study uses a 20-day event window, comprising 10 days before and 10 days after the stock split announcement. The research focuses on companies listed on the Indonesia Stock Exchange (IDX) during the period 2018-2021. The population consists of 30

companies that conducted stock splits during this period without engaging in other corporate actions. The research objects are publicly traded companies listed on the Jakarta Composite Index (JCI) of the Indonesia Stock Exchange (IDX) that executed stock split corporate actions between 2018-2021. During the 2018-2021 period, 30 companies listed on the JCI conducted stock split corporate actions. Table 1 presents a summary of the variables examined in this study.

Table 1
Operational Variable Definition

Variable	Concept	Measurement	Scale
Trading Volume Activity	Stock trading volume represents the ratio of the number of shares traded to the total number of shares outstanding during a relevant time period (Husnan, 2005).	$\text{TVA} = \frac{\text{Number of shares of company i traded in period t}}{\text{Number of shares of i outstanding at time t}}$ (Khajar, 2016).	Ratio
Firm Value	Firm value is defined as the total market value including debt divided by total assets (Putra & Lestari, 2016).	$Q = \frac{MVS + D}{TA}$ (Suranta & Merdistusi, 2004)	Ratio
Bid-Ask Spread	The difference between the bid price and the ask price is known as the bid-ask spread (Afriyenti & Kurniawan, 2019).	$\text{Spread}_{i,t} = \frac{\text{Ask}_{i,t} - \text{Bid}_{i,t}}{(\text{Ask}_{i,t} + \text{Bid}_{i,t})/2}$ (Anwar & Asandimitra, 2018)	Ratio
Abnormal Return	Abnormal return refers to the dependent variable calculated by subtracting the expected return from the actual return (Doryab & Salehi, 2018).	$\text{IHSG}_t = \frac{\text{Market Value}}{\text{Par Value}} \text{x } 100$ (Hartono, 2014:125)	Ratio

Source: Data Processed

The data analysis procedure in this study comprised descriptive statistical analysis, normality testing, paired t-test, Wilcoxon signed-rank test, and supplemental analysis, following the methodological guidelines established by Sugiyono (2021) and Ghozali (2021). This study employed the Kolmogorov-Smirnov normality test and paired-sample t-test.. Anwar & Asandimitra (2018) demonstrated that data normality can be detected using SPSS 26 through the Kolmogorov-Smirnov test. Since the t-test requires normally distributed data, non-parametric statistical estimation equivalent to the paired-sample t-test, specifically the Wilcoxon signed-rank test, was implemented when normality assumptions were violated (Zakiyah & Nurweni, 2020). The Mann-Whitney U test was selected as the analytical tool for supplemental analysis to examine and provide comparative information between pre- and post-COVID-19 periods. This supplemental analysis was conducted following the completion of

descriptive statistical analysis, normality testing, paired t-test, and Wilcoxon signed-rank test. The purpose of this additional analysis was to determine whether significant differences existed in the conditions of companies conducting stock splits before and during the COVID-19 pandemic.

4. Results and discussions

Table 2
Descriptive Statistical Test Results

Variable	Min	Max	Mean	Std. Deviation
Trading Volume Activity	13,691.00	1,246,035,397.00	22,924,133.6813	106,846,519.56887
Firm Value	39,139,101.00	972,862,000,000,000,000.00	61,294,778,211,014,300.0000	193,677,687,811,817,000.00
Bid-Ask Spread	-104,562,738.00	-7.00	-15,057,767.0875	16,191,486.02347
Abnormal Return	-241,649,293.00	316,392,132.00	-368969.3017	57,386,611.65361

Source: Data Processed SPSS 26

Referring to Table 4.2, the mean values for each variable tested are as follows:

1. The mean trading volume is 22,924,133.68 with a standard deviation of 106,846,519.57.
2. The mean firm value is 61,294,778,211,014,300.00 with a standard deviation of 193,677,687,811,817,000.00.
3. The bid-ask spread exhibits a mean value of -15,057,767.09 with a standard deviation of 16,191,486.02.
4. Abnormal return demonstrates a mean value of -368,969.30 with a standard deviation of 57,386,611.65.

Each tested variable exhibits a mean value lower than its corresponding standard deviation, indicating relatively high data variability and dispersion within the dataset.

Normality Test Results

Parametric Skewness and Kurtosis tests, along with the one-sample Kolmogorov-Smirnov test, were employed to assess data normality. Data are considered normally distributed when Skewness and Kurtosis values fall within the range of -2 to +2, while for the one-sample Kolmogorov-Smirnov test, normality is indicated when the significance value exceeds 0.05. The normality tests utilized are presented as follows:

Table 3
Skewness and Kurtosis Normality Test Results

Variable	N	Skewness Value	Kurtosis Value
Trading Volume Activity	160	52,083.33	290,561.68
Firm Value	160	18,072.92	28,199.48
Bid-Ask Spread	160	-13,885.42	23,359.58
Abnormal Return	160	3.95	27,879.27

Source: Data Processed SPSS 26

Table 4
Kolmogorov-Smirnov Normality Test Results

Variable	N	Asymp. Sig. (2-tailed)	Keterangan
Trading Volume Activity "Before"	80	0,000	Not Normal
Trading Volume Activity "After"	80	0,000	Not Normal
Firm Value "Before"	80	0,000	Not Normal
Firm Value "After"	80	0,000	Not Normal
Bid-Ask Spread "Before"	80	0,000	Not Normal
Bid-Ask Spread "After"	80	0,000	Not Normal
Abnormal Return "Before"	80	0,000	Not Normal
Abnormal Return "After"	80	0,000	Not Normal

Source: Data Processed SPSS 26

Based on Table 3 and Table 4, the normality test results indicate that all variables are not normally distributed, as demonstrated by the Skewness and Kurtosis and Kolmogorov-Smirnov test results. All four variables, both before and after the stock split, exhibit values that do not meet the significance level requirements following these tests. Therefore, this study requires a non-parametric test using the Wilcoxon Signed Rank Test due to the non-normal distribution of the data.

Hypothesis Test Results

Table 5
Wilcoxon Signed Rank Test Results

Variable	N	Asymp. Sig. (2-tailed)	Description
Trading Volume Activity	80	0.000	Accepted
Firm Value	80	0.000	Accepted
Bid-Ask Spread	80	0.108	Rejected
Abnormal Return	80	0.027	Accepted

Source: Data Processed SPSS 26

The results of hypothesis testing in this study are as follows:

1. Trading volume activity demonstrated statistical significance ($p < 0.001$), providing support for H1.
2. Firm value demonstrated statistical significance ($p < 0.001$), providing support for H2.
3. Bid-ask spread was not statistically significant ($p = 0.108$), failing to support H3.
4. Abnormal return demonstrated statistical significance ($p = 0.027$), providing support for H4.

Supplemental Analysis

Table 6
Supplemental Analysis Test Results

Variable	Asymp. Sig. (2-tailed)	Conclusion
Trading Volume Activity	0.055	There is No Significant Difference
Firm Value	0.683	There is No Significant Difference
Bid-Ask Spread	0.789	There is No Significant Difference
Abnormal Return	0.825	There is No Significant Difference

Source: Data Processed SPSS 26

Table 6 presents the comparative analysis of stock split effects between the pre-COVID-19 and COVID-19 periods, revealing the following findings:

1. Trading volume demonstrates a significance level of 0.055, which exceeds 0.05, indicating no statistically significant difference.
2. Firm value exhibits a significance level of 0.683, which is greater than 0.05, leading to the conclusion that no significant difference exists.
3. Bid-ask spread shows a significance level of $0.789 > 0.05$, indicating that no significant difference is present.
4. Abnormal return displays a significance level of $0.825 > 0.05$, thus it can be concluded that no significant difference exists.

Discussion

Trading Volume Activity on Stock Split

The hypothesis testing results for trading volume (H1) indicate that the hypothesis is accepted. These findings are consistent with studies conducted by Indrayani et al. (2020), Khajar (2016), and Mardiyaningsih & Andhitiyara (2020), which demonstrated significant differences in trading volume before and after stock splits. However, these results contradict the findings of Azhar et al. (2013), Satria & Adnan (2018), and Zakiyah & Nurweni (2020), who reported no significant differences in trading volume before and after stock splits. The results suggest that significant differences exist in trading volume before and after stock split announcements, although this study cannot definitively conclude whether companies experience an increase or decrease in trading volume.

These findings indicate that investors continue to receive signals when stock splits occur. This study supports signalling theory, whereby companies can provide signals about future prospects, enabling investors to make more informed investment decisions. Investors obtain additional information that is not available in companies' financial statements. Therefore, it can be concluded that the first hypothesis, which states that investors react when companies announce stock splits, is supported by signalling theory as an information source.

Firm Value on Stock Split

The second hypothesis states that firm value exhibits significant differences before and after stock split implementation. Statistical testing results provide evidence of significant differences, thereby supporting the acceptance of the second hypothesis. For investors, these significant differences serve as valuable signals for decision-making processes, enabling them to recognize the distinct performance patterns before and after stock splits. These findings also support signalling theory, demonstrating that stock splits contain informational content that can be utilized to observe immediate market reactions.

The results of this study are consistent with research conducted by Sriyono & Alam (2021) and Khajar (2016), which documented significant differences before and after stock split execution. However, these findings contradict the research by Mardiyaningsih & Andhitiyara (2020), who found no significant differences before and after stock split implementation. Based on the obtained results, it can be concluded that firm value increases when investor interest in stock prices also rises. The more actively the market reacts to stocks, the greater the enhancement in firm value.

Bid-Ask Spread on Stock Split

Statistical testing of the bid-ask spread variable indicates that the third hypothesis is rejected. This result is supported by the absence of significant differences before and after the stock split implementation. Moreover, information serves as a benchmark for companies to attract investors through signalling mechanisms. These findings suggest that stock split information is insufficient to influence the magnitude of stock offerings. This phenomenon can be attributed to asymmetric information distribution, resulting in investors' inability to receive signals effectively.

The analysis demonstrates that the results show no significant differences before and after stock split execution. These findings are inconsistent with studies conducted by Febrianti (2018), Janiantari & Badera (2014), and Zakiyah & Nurweni (2020), which documented significant differences before and after stock split implementation. Based on the empirical results, it can be concluded that the level of stock purchasing and selling activities can be assessed through bid-ask spread analysis; therefore, adequate information disclosure is essential to enable investors to make more informed investment decisions.

Abnormal Return on Stock Split

The hypothesis testing results for the abnormal return variable demonstrate a statistically significant difference between the pre- and post-stock split periods. These findings indicate that the fourth hypothesis is accepted. The results are consistent with previous studies by Zakiyah & Nurweni (2020) and Ahn et al. (2005), which similarly found significant differences in abnormal returns before and after stock split announcements. However, these findings contradict the results reported by Mardiyaningsih & Andhitiyara (2020) and Satria & Adnan (2018), who found no significant differences in the pre- and post-stock split periods.

These findings support signalling theory, which posits that stock splits serve as corporate actions that signal management's expectations regarding future prospects. This theory suggests that stock splits function as a mechanism to restore share prices to more accessible trading ranges for investors. Within this theoretical framework, abnormal returns serve as a focal point for examining market reactions and efficiency. In relation to signalling, the information asymmetry between management and external stakeholders enables companies to convey positive signals about future expectations. The results demonstrate that abnormal returns generate positive values when actual returns exceed market expectations, and negative values when returns fall short of expectations.

5. Conclusion

This study aims to examine and provide empirical evidence regarding whether significant differences exist before and after stock split announcements. Four variables were tested for differences pre- and post-stock split: trading volume, firm value, bid-ask spread, and abnormal returns. Based on the statistical testing results, it can be concluded that trading volume, firm value, and abnormal returns demonstrate statistically significant differences before and after stock splits. However, bid-ask spread shows no significant difference before and after stock splits. Additional testing results indicate no significant differences among the four variables tested. These findings suggest that the majority of samples examined before and during COVID-19 exhibit no significant differences. Therefore, it can be concluded that COVID-19 did not substantially influence the differential effects of stock splits on firms.

This research provides valuable insights for companies and investors in equity investment decisions. For companies, stock splits may serve as a viable alternative when firms perform well but share prices become excessively high; however, this signaling mechanism appears ineffective during periods of market stagnation. The research findings can also serve as considerations for investors in making equity investment decisions. Stock splits undertaken by companies and the accompanying signals can serve as benchmarks for investment decision-making. Through stock splits supported by signaling theory, investors can formulate future expectations, particularly regarding firm prospects and anticipated abnormal returns.

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THE INFLUENCE OF LOCUS OF CONTROL, RISK TAKING PROPENSITY, NEED OF ACHIEVEMENT, PERSONALITY, ENTREPRENEURIAL EDUCATION, AND SOCIAL SUPPORT ON ENTREPRENEURIAL DECISIONS IN THE RETAIL SECTOR

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Abstract

This study aimed to analyze the influence of locus of control, risk-taking propensity, need for achievement, personality, entrepreneurial education, and social support on the decision to engage in entrepreneurship in the retail sector in Indonesia. The respondents in this study consisted of individuals who decided to pursue entrepreneurship in the retail industry, totaling 459 respondents. The research method employed was quantitative, and the sampling technique used was random sampling. The software utilized for analysis was SPSS 22 with logistic regression analysis.The results of this study indicate that, partially, locus of control, need for achievement, personality, and social support had positive and significant influence, while risk-taking propensity and entrepreneurial education had negative and significant influence. Simultaneously, locus of control, risk-taking propensity, need for achievement, personality, entrepreneurial education, and social support collectively influence the decision to engage in entrepreneurship. Based on the coefficient of determination test, the independent variables consisting of locus of control, risk-taking propensity, need for achievement, personality, entrepreneurial education, and social support accounted for 62.7% of the variation in the dependent variable (the decision to engage in entrepreneurship), while the remaining 37.3% was influenced by other variables outside this study.

Keywords: entrepreneurial education, entrepreneurial decision, locus of control, need of achievement, personality, risk taking propensity, social support

1. Introduction

The Indonesian government is actively promoting entrepreneurship to stimulate economic growth. However, the entrepreneurial activity rate remains low at 3.47%, below the target of 3.95% (Limanseto, 2022). Compared to neighboring countries like Malaysia (4.74%) and Singapore (8.76%), Indonesia lags behind in entrepreneurial capacity (Adhi, 2024). According to the Global Entrepreneurship Index (GEI), Indonesia ranks 5th among 11 Southeast Asian countries with a score of 25 (Azkiya, 2023).

In addition to low entrepreneurship rates, Indonesia faces a significant unemployment issue. As of August 2023, the unemployment rate stood at 5.32%, affecting 7.89 million people (BPS, 2023). Entrepreneurship is seen as a solution to both economic growth and unemployment Ahmed et al. (2021), particularly through the development of Micro, Small, and Medium Enterprises (MSMEs) and the retail sector, which is accessible and labor-intensive (Heriawan 2018; Zulfiyandi et al., 2023).

Retail absorbs 26.1 million workers, second only to agriculture (38.7 million), and has shown growth in the Real Sales Index (IPR), indicating increased consumer purchasing power (Adi, 2023). Successful entrepreneurship requires traits such as resilience, creativity, and risk-taking (Alifah et al., 2019). Internal factors like locus of control positively influence

entrepreneurial intentions Ekawarna et al. (2020), although some studies find no significant effect (Othman, 2023).

Risk-taking propensity is crucial for entrepreneurial decision-making Shukla & Kumar (2024), though its influence is debated (Luc et al., 2021). The need for achievement drives individuals to overcome challenges and pursue goals (Susanto, 2018; Dzmonda 2020; Fatika et al., 2022). Personality traits also significantly affect entrepreneurial intentions (Ahmed et al., 2021; Bazkiaei et al., 2020; Ratnamiasih, 2016).

External factors such as entrepreneurial education and social support play a role. While some studies show a positive impact (Yung, 2022; Yesmin et al., 2024; Huang et al., 2024), others report no significant effect (Nabi et al., 2017). Importantly, entrepreneurial intention must translate into actual decisions and actions (Neneh & Dzomonda, 2024). This study differs from previous research by focusing on entrepreneurial decision-making rather than intention, using retail entrepreneurs as the sample. It aims to address inconsistencies in prior findings and expand the understanding of influencing variables.

2. Literature Review And Hypothesis Development

This study is grounded in Ajzen's Theory of Planned Behavior (TPB), which explains entrepreneurial decisions through three key components: attitudes (behavioral beliefs), subjective norms (normative beliefs), and perceived behavioral control (control beliefs). These elements are reflected in both internal and external factors that shape an individual's intention to pursue entrepreneurship. Internal factors include locus of control—belief in one's ability to influence outcomes (Rahmawati et al., 2023; Caliendo et al., 2024), risk-taking propensity—confidence in facing uncertainty (Ndofirepi, 2020; Shahzad et al., 2021), need for achievement—a drive to overcome challenges (Ekawarna et al. (2020); Kerr et al., 2017), and personality traits such as extraversion, conscientiousness, and openness, which support innovation and leadership (Tewel et al., 2017; Baumert et al., 2017).

External factors also play a crucial role. Entrepreneurial education provides structured learning that fosters skills, confidence, and a business mindset (Virk & Gambhir, 2024; Rakicevic et al., 2022). Social support, including emotional and practical assistance from family and peers, enhances self-esteem and reduces psychological barriers to entrepreneurship (Uchino et al., 2016; Acoba, 2024). Together, these internal and external influences align with TPB's framework, offering a comprehensive understanding of entrepreneurial intention and behavior.

Previous studies (Sze et al. 2021; Ekawarna et al. 2020; Tentama & Abdussalam, 2020; Agyemang et al. 2022); Asante & Affum-Osei, 2019; Rayawan, 2017) consistently demonstrate that individuals with a strong internal locus of control are more likely to engage in entrepreneurial activities. Such individuals are typically more motivated, proactive, and resilient, which enhances their likelihood of entrepreneurial success.

H1: The locus of control has a positive effect on entrepreneurial decisions.

Research by Antoncic et al. (2018), Setiawan et al. (2023), Ilevbare et al. (2022), and Zhuang & Sun (2024) confirms that individuals with a high propensity for risk-taking are more inclined to pursue entrepreneurship. This trait not only fosters entrepreneurial intention but also readiness to face business challenges.

H2: Risk taking propensity has a positive effect on entrepreneurial decisions.

Studies by Akhtar et al. (2020), Untu & Widjaja (2019), Shahzad et al. (2021), Saif & Ghania (2020), and Zahroh et al. (2023), reveal that a high need for achievement significantly influences entrepreneurial intention and behavior. Individuals with this trait are driven to overcome challenges and achieve business success.

H3: Need of achievement has a positive effect on entrepreneurial decisions.

Empirical evidence from Haider & Shah (2022), Mathushan (2023), Bazkiaei et al. (2020), Juhari et al. (2023), and Kathayat et al. (2023) indicates that personality traits significantly affect entrepreneurial intention and sustainability. Traits such as extraversion, conscientiousness, and openness are particularly influential.

H4: Personality has a positive effect on entrepreneurial decisions.

Findings from ArdaBily & Rizky (2024), Pebriyanti & Rizky (2024), Khoirunisa & Rizky (2025), Serefina & Kurjono (2021), and Sari et al. (2021) suggest that entrepreneurial education positively shapes entrepreneurial mindset, motivation, and readiness to start a business.

H5: Entrepreneurial education has a positive effect on entrepreneurial decisions.

Research by Yesmin et al. (2024), Shehryar & Ahsen (2022), Khusna & Ulya (2024), and Cai et al. (2021) shows that social support—particularly from family and peers—enhances entrepreneurial intention and behavior by boosting confidence and emotional well-being.

H6: Social support has a positive effect on entrepreneurial decisions.

Studies by Agustina & Fauzia (2021), Ratnamiasih et al. (2024), Annisa et al. (2023) Annisa (2022), and Shaddiq (2023) support the hypothesis that locus of control, risk taking propensity, need for achievement, personality, entrepreneurial education, and social support collectively influence entrepreneurial decision-making. These factors form a comprehensive foundation for entrepreneurial readiness and success.

H7: Independent variables have a positive effect on entrepreneurial decisions.

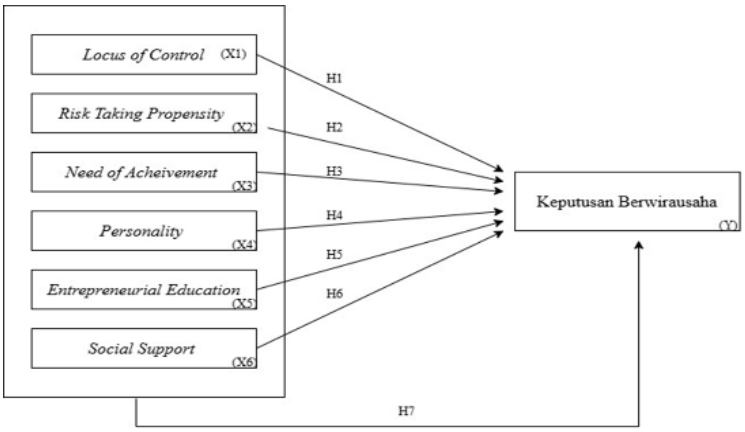

Image 1 Framework

2. Methodology

This quantitative study explores how psychological and contextual factors influence entrepreneurial decision-making in Indonesia's retail sector. With a population of approximately 3.98 million retail outlets, a sample of 400 respondents was determined using Slovin's formula at a 5% margin of error. The research focuses on one dependent variable—entrepreneurial decision—and six independent variables: locus of control, risk-taking propensity, need for achievement, personality, entrepreneurial education, and social support. Each variable is measured using validated indicators, such as control perceptions, risk tolerance, motivational drive, personality traits, educational background, and perceived support.

Data were collected via online questionnaires using Likert and Guttman scales, ensuring clarity and suitability for large-scale surveys. Secondary data were sourced from credible publications. Analysis was conducted using SPSS version 22, including descriptive statistics, validity and reliability testing (Cronbach's alpha > 0.70), and logistic regression. The regression model assessed the probability of entrepreneurial decisions based on the independent variables, with model fit evaluated using Hosmer-Lemeshow's test, Nagelkerke

R^2, and prediction accuracy. Hypothesis testing employed the Wald and Omnibus tests to determine individual and collective variable effects. This approach provides empirical insights into the factors shaping entrepreneurial behavior in Indonesia's retail landscape. The regression model in this study is as follows:

$$\text{Ln}\frac{p}{1-p} = \beta 0 + \beta 1X1 + \beta 2X2 + \beta 3X3 + \beta 4X4 + \beta 4X4 + \beta 5X5 + \beta 6X6$$

Information:
β0= Constant
β1= Koefisien regresi locus of control
β2= Koefisien regresi risk taking propensity
β3= Koefisien regresi need of achievement
β4= Koefisien regresi personality
β5= Koefisien regresi entrepreneurial education
β6= Social support regression coefficient

3. Results and discussion

3.1.Descriptive Statistics

This research utilizes primary data obtained through the distribution of questionnaires to individuals engaged in the retail business sector. A total of 459 respondents participated in the study. The descriptive analysis in Table 1 reveals that the majority of respondents were female, accounting for 241 individuals or 52.5% of the sample. In terms of educational background, the most common level was senior high school or its equivalent, reported by 216 respondents or 47.1%. The highest concentration of respondents by provincial domicile was found in East Java, comprising 187 individuals or 40.7%. Regarding business tenure, the most prevalent duration was between five and less than ten years, represented by 174 respondents or 37.9%. Lastly, the most frequently reported monthly revenue category was below IDR 50,000,000, with 179 respondents or 39.0%.

Table 1 Statistics Descriptive

No	Respond	Characteristics	Total	Percentage
1	**Gender**	Man	218	47,5
		Woman	241	52,5
2	**Highest level of education**	Elementary Equivalent	5	1,1
		Junior High School Equivalent	11	2,4
		High School Equivalent	216	47,1
		Diploma	56	12,2
		Bachelor	142	30,9
		Magister	23	5,0
3	**Provincial Domicile**	Aceh	1	,2
		Bali	4	,9
		Banten	25	5,4
		Bengkulu	2	,4
		Yogyakarta	51	11,1
		Jakarta	36	7,8
		Gorontalo	1	,2
		Jambi	3	,7
		Jawa Barat	52	11,3

No	Respond	Characteristics	Total	Percentage
		Jawa Tengah	65	14,2
		Jawa Timur	187	40,7
		Kalimantan Barat	2	,4
		Kalimantan Tengah	1	,2
		Kalimantan Timur	1	,2
		Lampung	10	2,2
		Nusa Tenggara Barat	1	,2
		Papua Barat Daya	1	,2
		Riau	2	,4
		Sulawesi Barat	1	,2
		Sulawesi Selatan	2	,4
		Sulawesi Tengah	2	,4
		Sulawesi Utara	1	,2
		Sumatra Barat	2	,4
		South Sumatra Selatan	3	,7
		Sumatra Utara	3	,7
4	**Duration of Business Operation**	Less than 5 Years	156	34,0
		5 Years - Less than 10 Years	174	37,9
		10 Years - Less than 15 Years	105	22,9
		15 Years - More than 15 Years	24	5,2
5	**Monthly Revenue Income / Month**	Less than 50,000,000	179	39,0
		50,000,000 - Less than 100,000,000	143	31,2
		100,000,000 - Less than 250,000,000	90	19,6
		250,000,000 - Less than 500,000,000	32	7,0
		500,000,000 - More than 500,000,000	15	3,3

3.2.Logistic Regression

4.2.1 Overal Model Fit

The decrease in the -2LogL value between model iterations indicates improved model fit. As more independent variables are added, the model better explains the data, enhancing its predictive accuracy. This improvement is shown in Table 2, confirming the effectiveness of including additional variables.

Table 2 Overal Model Fit

Iteration	-2 Log Likehood	Coefficients
		Constant
Step 0	187,754	1,869
Step 1	53,818	-11,611

4.2.2 Goodness of Fit Test.

The Hosmer and Lemeshow test, shown in Table 3, confirmed the regression model's validity, as the significance value exceeded 0.05. This indicates no meaningful difference between the model and observed data, affirming its suitability for predicting entrepreneurial decisions..

Table 3 Hosmer and Lemeshow Test

Hosmer and Lemeshow Test			
Step	Chi-square	df	Itself.
1	,388	8	1,000

4.2.3 Nagelkerke R Square

The coefficient of determination was assessed using the Nagelkerke R Square value, which indicates the extent to which the independent variables explain the variation in the dependent variable. The analysis in Table 4 revealed that the independent variables accounted for 62.7% of the variance in the dependent variable, while the remaining 37.3% is attributed to other factors not included in the model.

Table 4 Model Summary

Model Summary			
Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	53,818a	,157	,627

4.2.4 Prediction Accuracy

The predictive accuracy test was conducted to evaluate the effectiveness of the regression model in forecasting entrepreneurial decisions. The classification table indicates that the model incorrectly predicted 15 cases, with 8 actual responses classified as "no," resulting in a prediction accuracy of 53.3% for that category. Conversely, the model predicted "yes" for 444 cases, closely aligning with the actual count of 441, yielding a prediction accuracy of 99.3%. Overall, the model achieved a total classification accuracy of 97.8%, demonstrating a high level of reliability in predicting entrepreneurial decision outcomes.

Table 5 Classification Table

Classification Table[a]					
Observed			Predicted		
			Results		Percentage Correct
			0 No	1 Ya	
Step 1	Results	0 No	8	7	53,3
		1 Ya	3	441	99,3
	Overall Percentage				97,8

4.3 Hypothesis Testing

4.3.1 Partial Test (Wald Test)

The partial test assessed the individual impact of each independent variable on entrepreneurial decision-making. All variables showed significance levels below 0.05, confirming their statistical relevance. Locus of control, need for achievement, personality, and social support had positive effects, while risk-taking propensity and entrepreneurial education had negative effects. Thus, hypotheses H1, H3, H5, and H6 are accepted, while H2 and H4 are rejected.

Table 6 Wald Test

Variables in the Equation									
		B	S.E.	Forest	df	Itself.	Exp(B)	95% C.I.for EXP(B)	
								Lower	Upper
	TotalLOC	,376	,152	6,143	1	,013	1,456	1,082	1,960

Variables in the Equation									
Step 1a	TotalRTP	-,382	,144	7,054	1	,008	,682	,514	,905
	TotalNOA	,336	,125	7,261	1	,007	1,399	1,096	1,787
	TotalPerson	,179	,075	5,766	1	,016	1,196	1,033	1,384
	TotalEE	-,541	,166	10,645	1	,001	,582	,421	,806
	TotalSS	,206	,062	10,911	1	,001	1,229	1,088	1,389
	Constant	-11,611	2,959	15,398	1	,000	,000		

4.3.2 Simultaneous Test (Omnibus Test)

The test aimed to assess whether all independent variables collectively influence entrepreneurial decision-making. Using a significance threshold of 0.05, the analysis produced a value of 0.000, confirming a statistically significant simultaneous effect of the independent variables on the decision-making process.

Table 7 Omnibus Test Result

Omnibus Tests of Model Coefficients				
		Chi-square	df	Itself.
Step 1	Step	78,316	6	,000
	Block	78,316	6	,000
	Model	78,316	6	,000

4.4 Discussion

The variable locus of control was found to have a positive and significant influence on entrepreneurial decision-making, supporting hypothesis H1. This finding aligns with prior studies by Ekawarna et al. (2020), Tentama & Abdussalam (2020), Agyemang et al., 2022), Sze et al. (2021, Asante & Affum (2019, and Rayawan (2017), which consistently demonstrate that individuals with a strong internal locus of control are more committed, opportunity-aware, and resilient in business contexts. Thus, locus of control serves as a critical internal factor driving entrepreneurial success in the retail industry.

The variable risk taking propensity was found to have a negative and significant influence on entrepreneurial decision-making, leading to the rejection of hypothesis H2. This finding is consistent with prior studies by Luc et al. (2021), Patricia & Saputra (2022), and Adhimursandi (2016), which suggest that entrepreneurial interest is more strongly driven by confidence and social values than risk tolerance. In the retail sector, high-risk factors—such as intense competition, pricing errors, inventory issues, theft, and market volatility—may discourage individuals with high risk-taking tendencies from pursuing entrepreneurship (Sunreni, 2020).

The variable need for achievement demonstrated a positive and significant influence on entrepreneurial decision-making, supporting hypothesis H3. This finding aligns with studies by Akhtar et al. (2020), Untu & Widjaja (2019), Shahzad et al. (2021), Saif & Ghania (2020), and Zahroh et al. (2023), which consistently show that individuals with a strong drive for achievement are more motivated, confident, and inclined to pursue entrepreneurship. In the retail sector, this internal motivation fosters goal-setting, risk-taking, and a belief that entrepreneurship is a viable path to personal success and fulfillment.

The variable personality was found to have a positive and significant effect on entrepreneurial decision-making, supporting hypothesis H4. This result is consistent with findings from Haider & Shah (2022), Juhari et al. (2023), Mathushan (2023), Bazkiaei et al. (2020), and Kathayat et al. (2023), which highlight that traits such as openness, responsibility, and confidence foster entrepreneurial motivation and success. Strong personality traits enhance

discipline, resilience, and strategic thinking, making individuals more likely to pursue and succeed in entrepreneurship, particularly within the retail sector.

The variable entrepreneurial education was found to have a negative and significant effect on entrepreneurial decision-making, leading to the rejection of hypothesis H5. This finding is consistent with studies by Nabi et al. (2017), Ziemianski & Golik (2020), and Yanti (2019), which suggest that overly theoretical curricula and a lack of exposure to real-world business challenges—such as financial risk and stress—can diminish entrepreneurial interest. In the retail sector, such educational shortcomings may discourage individuals from pursuing entrepreneurship due to inadequate preparation for the realities of business ownership.

The variable social support was found to have a positive and significant effect on entrepreneurial decision-making, supporting hypothesis H6. This finding is consistent with studies by Yesmin et al. (2024), Shehryar & Ahsen (2022), and Cai et al. (2021), which emphasize that a supportive environment enhances entrepreneurial intentions and behavior. Social support plays a crucial role in boosting confidence and motivation, thereby encouraging individuals to pursue entrepreneurship. In the retail sector, such support strengthens one's readiness to start a business by fostering emotional resilience and reinforcing belief in one's entrepreneurial potential.

H7, which posits that locus of control, risk taking propensity, need for achievement, personality, entrepreneurial education, and social support simultaneously influence entrepreneurial decision-making, is supported. This finding aligns with studies by Agustina & Fauzia (2021), Ratnamiasih (2016), and Annisa et al. (2023), which emphasize the complementary roles of psychological traits, education, and social environment in shaping entrepreneurial motivation and readiness. The integration of these factors forms a cohesive system that enhances confidence, adaptability, and practical competence, ultimately encouraging individuals to pursue entrepreneurship in the retail sector.

5. Conclusion

This study concludes that locus of control, need for achievement, personality, and social support positively and significantly influence entrepreneurial decisions in the retail sector, while risk taking propensity and entrepreneurial education have a negative impact. All six variables also show a simultaneous effect. However, limitations include reliance on online questionnaires, geographic concentration of respondents in East Java, and the exclusion of other potential influencing factors. Managerially, the findings suggest the need for more practical entrepreneurship education, risk diversification strategies, and stronger social support systems to enhance entrepreneurial readiness and success.

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THE INFLUENCE OF DIGITAL PROMOTION, HEDONIC SHOPPING MOTIVATION, AND SHOPPING LIFESTYLE ON IMPULSE BUYING AMONG MARKETPLACE USERS (A STUDY OF GENERATION Z IN DEPOK CITY)

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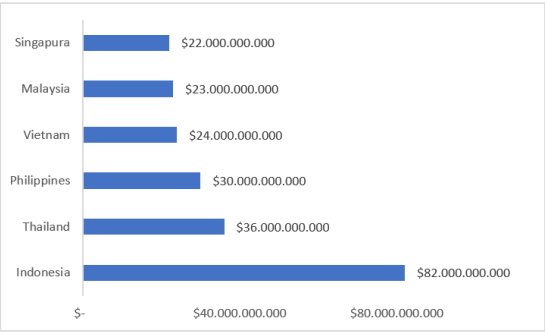
Abstract

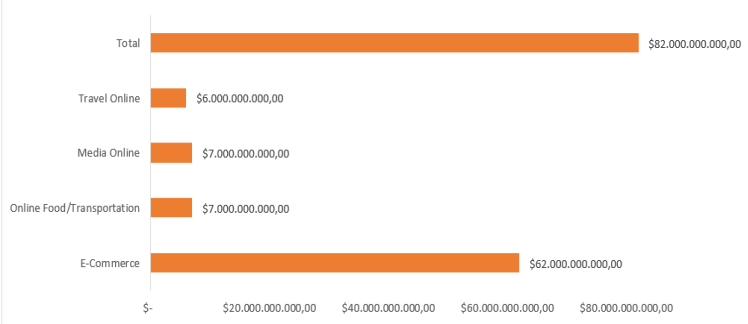
The advancement of digital technology has changed people's consumption patterns, especially with the presence of marketplace platforms that offer easy access to shopping anytime and anywhere. This phenomenon has also driven changes in consumer behavior, including an increased tendency to make impulsive purchases, especially among Generation Z, who are familiar with technology. This study aims to analyze how the influence of Digital Promotion, Hedonic Shopping Motivation, and Shopping Lifestyle on Impulse buying behavior among Marketplace users among Generation Z in Depok City. This study uses a quantitative approach with an associative method. The sample in this study was selected through a purposive sampling technique, with a total of 100 respondents from Generation Z who use marketplaces in Depok City, which was determined based on the Lemeshow formula. Data were analyzed using descriptive analysis, SEM-PLS method, and hypothesis testing with the help of SmartPLS software version 4.0. The results of the study indicate that digital promotion has a negative and insignificant effect on impulse buying behavior. While hedonic shopping motivation has a positive and significant effect on impulse buying behavior, and shopping lifestyle has a positive and significant effect on impulse buying behavior.

Keywords: Digital Promotion, Hedonic Shopping Motivation, Shopping Lifestyle, Impulse Buying

1. Introduction

Figure 1. Gross Transaction Value of the Digital Economy in Southeast Asia and Indonesia in 2023





The development of digital technology has brought about fundamental changes in consumer behavior, particularly in the context of shopping activities. The rapid growth of information and communication technology enables people to conduct online transactions more quickly, practically, and flexibly (Hasibuan et al., 2023). This transformation is reflected in the increasing use of e-commerce platforms or marketplaces in Indonesia, which have become the main channel for meeting the consumption needs of urban communities. The gross transaction value of Indonesia's digital economy Gross Merchandise Value (GMV) in 2023 reached USD 82 billion, making it the highest in Southeast Asia (Amali et al., 2025) .The e-commerce sector contributed 75.6% of the GMV or around USD 62 billion. The most commonly used e -e-commerce platforms are Shopee (56.04 percent), Lazada (32.72 percent), Tokopedia (12.80 percent), and TikTok (8.29 percent) (Amali et al., 2025) .

Figure 2. Percentage of E-commerce Users by Age in Indonesia in 2023

E-commerce Users by Age	
Age	**Percentage (%)**
18-24	45,6
25-30	25
31-35	14,4
36-40	8,3
41-45	5,6
46-50	1,1

Generation Z, consisting of individuals aged 18 to 28, plays a crucial role in this dynamic. According to Sleekflow (2023), 70.6% of e-commerce users in Indonesia come from this age group (Andini, 2023). Generation Z is known for its digital- native characteristics are highly connected to the virtual world and exhibit a rapid response to visual, interactive, and emotional digital campaigns. This has led to the emergence of the impulse buying phenomenon. Impulsive buying or buying behavior characterized by unplanned and emotional purchases. According to Gupta & Nair, (2021), impulse buying is triggered by a sudden, difficult-to-control urge and often occurs in the context of an attractive promotion, a big discount, or a pleasant shopping atmosphere. Many factors influence impulse buying. Buying in the context of online shopping. First, digital promotion which encompasses various internet-based marketing strategies such as flash sales, exclusive discounts, free shipping, app notifications, and the use of influencers (Gupta & Nair, 2021). Second, hedonic shopping Motivation, namely shopping motivation based on the desire to obtain pleasure, entertainment, and emotional experiences during the shopping process (Romadhoni, 2024). Third, shopping lifestyle, namely a means for consumers to express their feelings, perceptions, and views towards a brand through shopping activities (Giveline et al., 2024). Populix's (2023) findings support this phenomenon. The main reasons Indonesians make impulsive purchases are self-satisfaction (39%), the lure of discounts from sellers (35%),

and platform promotions (34%). Furthermore, Goodstats (2023) data states that 73.5% of consumers choose marketplaces because of time flexibility, 65.6% because of attractive promotions, and 60.2% because of the ease of comparing prices.

A pre-survey conducted by researchers on 30 Generation Z individuals in Depok City showed that 83.3% of respondents agreed that digital promotions influenced their impulse buying decisions, 81.6% were driven to shop for personal enjoyment, and 79.2% considered online shopping to be part of their daily lifestyle. In fact, 76.7% admitted to frequently purchasing products spontaneously without planning (Primary Data, 2024). Depok City was chosen as the research location because it is one of the cities with the highest e-commerce transaction rates in Indonesia. Based on Datanesia (2022), approximately 659,958 of Depok City's 2.4 million residents are active as sellers and buyers via the internet, making it a city with a high concentration of digital economic activity (Irawanto et al., 2022) .

Based on the description above, it is important to conduct further research on how digital promotions, hedonic shopping motivation, and shopping lifestyle influence impulse buying among marketplace users, particularly among Generation Z in Depok City.

2. Literature review and hypotheses development

2.1 Consumer Behavior

According to Yudha and Prasetyo (2023), consumer behavior is one of the fields in knowledge marketing that studies how individuals spend money to get goods or services. Meanwhile according to Putri Nugraha et al. (2021), describes behavior consumer as action both by individuals and group in buy and use product or services, which involve the process of taking decision For fulfil need or desire According to Andrian et al. (2022), consumer behavior includes mental and physical activities carried out by consumers, both end consumers and business actors, in terms of obtaining, using, and discontinuing the use of certain goods, services, ideas, or experiences.

2.2 Digital Promotion

According to Habibullah (2023), digital promotion is a promotional activity carried out through digital means with the aim of introducing products to consumers and shaping their preferences. The main goal is to increase company revenue through digital advertising media. Fadillah et al. (2020) state that digital promotion is included in digital marketing strategies that rely on online platforms to convey product information to consumers, with the hope of creating engagement both directly and indirectly. Meanwhile, according to Uday Kiran and Arumugam (2021), digital promotion is the result of a continuous advertising and marketing process, which aims to attract new customers, maintain the loyalty of existing customers, and increase sales through the efficient use of digital technology.

2.3. Hedonic Shopping Motivation

According to Romadhoni (2024), hedonic shopping motivation is the drive within consumers to shop to obtain pleasure and psychological sensations, not solely because of rational needs, this behavior is closely related to the search for pleasure when shopping. According to Tumewu et al., (2024), Hedonic Shopping Motivation is a form of encouragement to enjoy entertainment, emotional satisfaction, or pleasant experiences during the shopping process, which is generally not based on functional considerations. According to Utami (2017), hedonic shopping motivation is the drive for consumer

behavior to shop, both consciously and unconsciously, which is generally influenced by subjective views or emotional factors with the aim of obtaining pleasure.

2.4. Shopping Lifestyle

According to Andrian et al. (2022), a shopping lifestyle is a way of life where a person expresses themselves through shopping behavior patterns that distinguish them from others. According to Giveline et al. (2024), a shopping lifestyle is a means for consumers to express their feelings, perceptions, and views about a brand through shopping activities. This lifestyle sometimes encourages excessive consumer behavior, especially due to various attractive offers from retail businesses. According to Zayusman and Septrizola (2019), a shopping lifestyle reflects a person's pattern of time and money usage. When someone has sufficient time and funds, the tendency to shop increases. This reflects how an individual lives their life, including how they view their surroundings.

2.5. Impulse buying

According to Giveline et al. (2024), impulse buying is the behavior of purchasing goods suddenly without prior planning or careful consideration, usually triggered by emotional impulses. This action arises from a strong urge to immediately own a product, without considering the potential negative consequences. It usually provides instant gratification, but is often accompanied by feelings of doubt or regret afterward due to not considering the risks of the purchase. According to Azmi (2023), impulse buying is when someone buys something without thinking it through. Consumers who act in this way tend not to consider the consequences of their actions.

2.6. Marketplace

According to Kusumaningsih et al. (2021), a marketplace is a platform that acts as an intermediary between sellers and buyers in conducting online product transactions. This online market also offers various facilities, including payment methods, estimated delivery times, product selection by category, and other features. Meanwhile, according to Apriadi and Saputra (2017), a marketplace is a web-based platform that functions as an online medium for business activities and transactions between sellers and buyers. Buyers can search for as many suppliers as possible according to their desired criteria, thus obtaining prices that are in line with market conditions.

2.7. Hypothesis development

H1: There is an influence of digital promotion on impulse buying behavior among Generation Z marketplace users in Depok City.
H2: There is an influence of hedonic shopping motivation on impulse buying behavior among Generation Z marketplace users in Depok City.
H3: There is an influence of shopping lifestyle on impulse buying behavior among Generation Z marketplace users in Depok City.

3. Research methods

3.1 Types and Approaches Study

This research is quantitative, using a descriptive and causal approach. This approach was used to examine and analyze the relationship and influence between digital promotion, hedonic shopping motivation, and shopping lifestyle variables on impulse buying. The

study employed a survey method using a questionnaire distributed online.

3.2 Population and Samples

The population in this study is Generation Z (aged 18–28 years) in Depok City who actively use marketplace platforms. The sampling technique used non-probability sampling with a purposive sampling method, with the following criteria: (1) domiciled in Depok City, (2) included in Generation Z, and (3) have made shopping transactions on the marketplace at least 2–3 times a month. The number of samples determined was 100 respondents, referring to the Lameshow formula (1990), with a confidence coefficient of 95% and a sampling error of 10%.

3.3 Data collection technique

Data were collected through an online questionnaire distributed using the Google Forms platform. The questionnaire was structured as closed-ended statements measured using a Likert scale, which serves to gauge individual or group attitudes, opinions, and perceptions toward social phenomena (Sugiyono, 2013). The instrument was developed based on indicators for each variable that had been validated in previous research.

3.4 Operationalization of Variables

This research involves four main variables:

- Digital Promotion (X1): attractive promotional schemes, informative promotions, useful promotions, and the appeal of influencer marketing (Gupta & Nair, 2021).
- Hedonic Shopping Motivation (X2): Adventure Shopping, Value Shopping, Idea Shopping, Social Shopping, and Relaxation Shopping (Ozen & Engizek, 2014).
- Shopping Lifestyle (X3): Measured through indicator Activities, Interests, and Opinions (Sumarwan, 2017).
- Impulse Buying (Y): Measured through indicator Purchase Spontaneous Purchase Done In a way Rush, Purchase Influenced by Emotions, Purchases Done Without Thinking about Consequences (Wahyuni & Setyawati, 2020).

3.5. Data Analysis Techniques

Data analysis uses the Structural Equation Modeling-Partial Least Square (SEM-PLS) method with the help of the device software SmartPLS version 3.3. Analysis includes :

- Evaluation: Validity Test convergent (loading factor value > 0.7), validity test discriminant (AVE value > 0.5), and reliability test (Cronbach's Alpha and Composite Reliability values > 0.7).
- Evaluation: includes the R-square (R^2) test for known influence variables independent of variables dependent, F-squared test (f^2) for see strength effect, and the Q-square (Q^2) test for predictive relevance.
- Hypothesis Testing: conducted through analysis of t-statistic and p-value using bootstrapping techniques. The hypothesis is said to be significant if the p-value < 0.05 and the t-statistic > 1.96.

4. Results and discussion

4.1 Characteristics of Respondents

This study involved 100 respondents, consumers residing in Depok City and those with experience shopping through marketplace apps. Questionnaires were distributed from February 2025 to March 2025.

a. Gender

Table 1. Respondent Characteristics Based on Gender

No.	Category	Number of Respondents	Percentage (%)
1.	Man	39	39%
2.	Woman	61	61%
Amount		100	100%

Based on Table 1, data obtained from 100 respondents shows that 61 (61%) were female, while 39 (39%) were male. This indicates that the majority of respondents in this study were female.

b. Age

Table 2. Respondents' Age

No	Category	Number of Respondents	Percentage (%)
1.	18-20 years old	12	12%
2.	21-23 years old	38	38%
3.	24-26 years old	25	25%
4.	27-28 years old	25	25%
Amount		100	100%

Based on Table 2, the data obtained from 100 respondents shows that there are 12 respondents aged 18-20 years, with a percentage of 12%. Meanwhile, there are 38 respondents aged 21-23 years with a percentage of 38%. Followed by the 24-26 age group consisting of 25 respondents with a percentage of 25%. Meanwhile, there are 25 respondents aged 27-28 years with a percentage of 25%. From these data, it can be concluded that the majority of respondents are in the 21-23 age range with the highest percentage, namely 38%.

4.2 SEM-PLS Analysis Results

4.2.1. Outer Model Evaluation Analysis

4.2.1.1 . Validity Convergent and Discriminant Validity

Table 5. Outer Loading Factor and Cross Value Loading

Code	*Digital Promotion* (X1)	*Hedonic shopping motivation* (X2)	*Shopping lifestyle* (X3)	*Impulse buying* (Y)	Information
DP1.1	**0.736**	0.497	0.409	0.429	Valid
DP1.2	**0.697**	0.482	0.303	0.298	Valid
DP2.1	**0.729**	0.400	0.431	0.351	Valid
DP2.2	**0.763**	0.493	0.461	0.494	Valid
DP3.1	**0.723**	0.446	0.443	0.399	Valid
DP3.2	**0.703**	0.547	0.359	0.366	Valid
DP4.1	**0.687**	0.445	0.453	0.316	Valid

DP4.2	**0.712**	0.576	0.421	0.379	Valid
HS1.1	0.472	**0.755**	0.505	0.447	Valid
HS1.2	0.402	**0.701**	0.336	0.327	Valid
HS2.1	0.499	**0.719**	0.401	0.459	Valid
HS2.2	0.512	**0.713**	0.423	0.482	Valid
HS3.1	0.525	**0.718**	0.489	0.504	Valid
HS3.2	0.411	**0.724**	0.375	0.383	Valid
HS4.1	0.598	**0.738**	0.452	0.458	Valid
HS4.2	0.479	**0.729**	0.465	0.461	Valid
HS5.1	0.469	**0.748**	0.534	0.661	Valid
HS5.2	0.454	**0.747**	0.485	0.656	Valid
SL1.1	0.353	0.450	**0.695**	0.548	Valid
SL1.2	0.341	0.428	**0.750**	0.641	Valid
SL2.1	0.444	0.577	**0.752**	0.560	Valid
SL2.2	0.433	0.446	**0.657**	0.515	Valid
SL3.1	0.512	0.393	**0.723**	0.477	Valid
SL3.2	0.415	0.375	**0.722**	0.473	Valid
IB1.1	0.449	0.679	0.598	**0.792**	Valid
IB1.2	0.397	0.503	0.582	**0.731**	Valid
IB2.1	0.401	0.475	0.669	**0.738**	Valid
IB2.2	0.509	0.518	0.592	**0.790**	Valid
IB3.1	0.384	0.390	0.554	**0.717**	Valid
IB3.2	0.394	0.432	0.546	**0.732**	Valid
IB4.1	0.416	0.568	0.507	**0.782**	Valid
IB4.2	0.258	0.548	0.468	**0.727**	Valid

Table 6. *Average Value Variance Extracted*

Variables	**Average Variance Extracted (AVE)**
Digital Promotion	0.517
Hedonic shopping motivation	0.532
Shopping lifestyle	0.514
Impulse buying	0.565

Based on the test results, all loading values The factor values were recorded at more than 0.7, and the AVE value exceeded 0.5. Thus, the indicators used in this study have met the convergent validity criteria and can be considered valid, and it can be identified that each indicator is able to reflect its original latent construct more strongly than other

constructs, as indicated by the cross-correlation value. The highest loading on the construct.

4.2.1.2. Construction Reliability

a. Cronbach's alpha

Table 7. Cronbach's Alpha

Variables	Cronbach's Alpha	Information
Digital Promotion	0.867	Reliable
Hedonic shopping motivation	0.903	Reliable
Shopping lifestyle	0.811	Reliable
Impulse buying	0.890	Reliable

Based on table 7, all variables in this study have Cronbach's α values. Alpha > 0.7, so it can be concluded that the instrument used has met the reliability criteria.

b. Composite Reliability

Table 8. Composite Reliability

Variables	Composite Reliability	Information
Digital Promotion	0.895	Reliable
Hedonic shopping motivation	0.919	Reliable
Shopping lifestyle	0.864	Reliable
Impulse buying	0.912	Reliable

Based on table 8, all variables in this study, namely Digital Promotion, hedonic shopping motivation, shopping lifestyle, and impulse buying, show the composite value reliability which is greater than 0.7. Thus, all variables can be said to have met the reliability criteria.

4.2.2. Structural Model Evaluation Analysis (Inner Model)

4.2.2.1. R-Square (R^2)

Table 9. R-Square Value

Endogenous Variables	R-Square	Prediction Model
Impulse buying	0.648	Strong

In Table 9 above, it can be seen that the R- Square value Impulse latent variable buying is 0.648. This shows that all exogenous latent variable constructs are simultaneously able to explain the variance of the endogenous latent variable Impulse buying of 64.8%, while the remaining 35.2% is explained by other variables not included in this research model. Based on the calculation results, the R-Square value is included in the strong category, so it can be concluded that the prediction model has a good ability to explain the influence of exogenous variables on endogenous variables.

4.2.2.2. Path Coefficient

Table 10. Path Values coefficient

Variables	*Impulse Buying*	Connection

Digital Promotion (X1)	-0.018	Negative
Hedonic shopping motivation (X2)	0.368	Positive
Shopping lifestyle (X3)	0.535	Positive

Based on Table 10, it can be explained that the Digital Promotion variable (X1) has a coefficient value of -0.018, which indicates a negative relationship with the Impulse variable. buying (Y). This shows that the higher the intensity of digital promotions carried out, the lower the tendency of consumers to make impulsive purchases. Meanwhile, the Hedonic variable shopping motivation (X2) has a coefficient value of 0.368, which indicates a positive relationship with Impulse buying (Y). This means that the higher the consumer's motivation to shop for pleasure or emotional satisfaction, the greater their tendency to make impulsive purchases. Furthermore, the Shopping lifestyle variable (X3) shows a coefficient value of 0.535, which is the highest value among the three independent variables. This value indicates a strong positive relationship with Impulse buying (Y). Thus, a high shopping lifestyle significantly drives impulsive buying behavior.

4.2.2.3. F-square

Table 11. F-square value

	f- square	**Information**
Digital Promotion → Impulse buying	0,000	Small Effect
Hedonic shopping motivation → Impulse buying	0.178	Moderate Effect
Shopping lifestyle → Impulse buying	0.463	Big Effect

Based on Table 11, it can be seen that the Digital Promotion variable falls into the category of small effects. Next, Hedonic shopping motivation has an f-square value which is classified as a moderate effect, and Shopping lifestyle shows the f-square value which falls into the category of major effects.

4.2.2.4. Predictive relevance (Q-square)

Table 12. Predictive Values Relevance

Dependent Variable	**Q^2 predict**	**Information**
Impulse buying	0.608	Good

Based on Table 12, it can be seen that the Q- square value on the dependent variable is 0.608. This indicates that this study has good observation quality, because the Q- square value which is greater than 0 (0.608 > 0).

4.2.2.5. Bootstrapping

Table 13. Bootstrapping Values

Influence	**t- statistic**	**P- value**	**Influence**
Digital Promotion (X1) → Impulse buying (Y)	0.208	0.418	Not Significant
Hedonic shopping motivation (X2) → Impulse buying (Y)	3,895	0,000	Significant
Shopping lifestyle (X3) → Impulse buying (Y)	4,939	0,000	Significant

Referring to the results of the statistical analysis, which includes the t-statistic and p-

value, the level of significance of the influence of each independent variable on the dependent variable can be interpreted. The results of this analysis are presented as follows:

1) Digital Promotion does not have a significant effect on impulse buying. This can be seen based on the t- statistic value, which does not exceed the significance threshold (0.208 < 1.96), and P- value, which is greater than the specified level of significance (0.418 > 0.05).
2) Hedonic shopping motivation has a significant influence on impulse buying. This can be seen based on the t-statistic value, which exceeds the significance threshold (3.895 > 1.96), and the P- value, which is smaller than the specified significance level (0.000 < 0.05).
3) Shopping lifestyle has a significant influence on impulse buying. This can be seen based on the t- statistic value, which exceeds the significance threshold (4.939 > 1.96) and P- value, which is smaller than the specified significance level (0.000 < 0.05).

4.2.2.6. Fit Model

Table 14. Model fit values

	Saturated Model	**Estimated Model**
SRMR	0.081	0.081
d_ULS	3,472	3,472
d_G	1,507	1,507
Chi-square	715,401	715,401
NFI	**0.656**	**0.656**

An NFI value that approaches 1 indicates a higher level of fit for the model. In this study, the resulting NFI value was 0.656, indicating a 65.6% fit for the model.

4.3. Hypothesis Results

Table 15. Hypothesis Test Results

No	**Hypothesis**	**Analysis**	**Decision**
1.	There is a negative and insignificant influence between Digital Promotion on Impulse Buying.	The results of the path coefficient analysis on Digital Promotion own a negative relationship with Impulse buying with a value of -0.018, and the t-statistic value is below 1.96, namely 0.208, indicating no significant relationship.	Rejected
2.	There is a positive influence and significant relationship between Hedonic shopping motivation and Impulse buying.	The results of the path coefficient analysis on Hedonic shopping motivation have a positive connection against Impulse buying with a mark of 0.368 and is significant because the own mark t-statistic >1.96 which is 3,895.	Accepted

3.	There is influence positive and significant influence between Shopping lifestyle towards Impulse buying.	Results of path coefficient analysis on Shopping lifestyle own positive relationship with impulse buying value 0.535, and is significant because its own mark t-statistic >1.96, namely 4,939.	Accepted

The value of each aspect refers to the consistency of the direction of the relationship between the variables Digital Promotion, Hedonic shopping motivation, and Shopping lifestyle with Impulse buying. When the path coefficient and t-statistic values show a significant positive relationship, it can be concluded that the variable has a real influence on impulse buying behavior. In the Digital Promotion variable, it shows a negative and insignificant relationship with impulse buying. Conversely, the Hedonic shopping motivation variable shows a positive and significant relationship with impulse buying. Similarly, the Shopping lifestyle variable has a positive and significant influence on impulse buying.

4.4. Discussion and Interpretation of Results

4.4.1. The Influence of Digital Promotion on Impulse Buying

The path coefficient results indicate a negative relationship between digital promotion and impulse buying, with a coefficient value of -0.018, thus statistically the relationship is negative. Furthermore, bootstrapping results indicate that digital promotion does not have a significant effect on impulse buying, as seen from the t-statistic value of 0.208, which is below the significance threshold of 1.96, and the P-value of 0.418, which exceeds the significance level of 0.05. This means that the higher the intensity of digital promotion carried out, it will not automatically have an effect on increasing impulse buying behavior among Generation Z in Depok City when shopping in the marketplace. The results of this study show differences from the findings of previous research conducted by Fadillah et al. (2020), where the differences could be caused by differences in location, methods, economic conditions, or characteristics of the samples used. Furthermore, research conducted by Sarhour (2025) states that Generation Z tends to be more rational, selective, and skeptical of digital promotions that are irrelevant to their needs or preferences.

4.4.2. The Influence of Digital Promotion on Impulse Buying

Based on the path coefficient results, it show that hedonic shopping motivation has a coefficient value of 0.368, which indicates a positive relationship with impulse buying. This means that the higher the motivation of Generation Z consumers to shop for pleasure or emotional satisfaction, the greater their tendency to make impulsive purchases. In addition, the bootstrapping results show that hedonic shopping motivation has a significant influence on impulse buying. This can be seen based on the t-statistic value that exceeds the significance threshold (3.895 > 1.96) and the P-value is smaller than the specified significance level (0.000 < 0.05). This means that the greater the hedonic shopping drive felt by Generation Z in Depok City when shopping in the Marketplace when shopping in the marketplace, the stronger its influence in driving their impulsive purchasing behavior in the marketplace. This shows that hedonic shopping motivation plays an important role in influencing impulse buying behavior among respondents, especially Generation Z in Depok City. The results of this analysis indicate consistency with the findings of previous studies conducted by Wahyuni (2020), which stated that hedonic shopping motivation has a positive and significant influence on impulsive buying.

4.4.3. The Influence of Shopping Lifestyle on Impulse Buying

Based on the path coefficient results show that shopping lifestyle shows a marked coefficient of 0.535, which is the highest among the third variables. This value indicates a strong positive relationship with impulse buying. Thus, a high shopping lifestyle significantly encourages impulsive buying behavior. In addition, the bootstrapping results show that shopping lifestyle has a significant influence on impulse buying. This can be seen based on the t-statistic value that exceeds the significance threshold (4.939 > 1.96) and the P-value is smaller than the specified significance level (0.000 < 0.05). This means that the higher the shopping lifestyle of Generation Z in Depok City in shopping in the marketplace, the more likely they are to make impulsive purchases in the marketplace. The results of this analysis indicate consistency with the findings of previous studies conducted by Wahyuni (2020), which stated that shopping lifestyle has a positive and significant influence on impulsive buying.

5. Conclusion

Based on results research and discussion that has been done, can concluded that digital promotion variables have an influence negative and no significant to impulse buying behavior among Generation Z marketplace users in Depok City, so that the more tall intensity digital promotions carried out No as well as immediately increase trend purchase impulsive among On the other hand, the hedonic shopping motivation variable shows influence positive and significant, which means that the more strong encouragement shopping of a nature emotional and enjoyable feelings felt by Generation Z, increasingly there is a big possibility they do purchase impulsive in the marketplace. In addition, shopping lifestyle variables also have an influence positive and significant influence, which indicates that the taller style of life shopping owned by Generation Z in Depok City, then the bigger trend they follow for making purchases in a spontaneous way. These findings indicate that internal factors such as hedonic motivation and lifestyle play a dominant role in driving impulse buying behavior, compared to the influence of external promotions offered by marketplace platforms.

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THE EFFECTIVENESS OF SOCIAL MEDIA ADVERTISING FOR FASHION PRODUCTS THIS IS APRIL

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Abstract

Advertising effectiveness is the degree of success an advertisement achieves in reaching its objectives. Advertising effectiveness indicates how effectively an advertisement can influence the feelings, actions, and thoughts of the audience, where consumers can remember the message conveyed by the advertisement as intended by the company, thereby increasing consumer interest in purchasing or even driving their purchasing interest. This study aims to analyze the level of difference in advertising effectiveness between Instagram and TikTok social media. The data analysis methods used in this study include validity and reliability tests processed using IBM SPSS Statistics 26, as well as the EPIC Model by calculating simple tabulation analysis, average scores, and EPIC Rate values. The results of the study show that all research instruments are valid and reliable. The analysis using the EPIC Model indicates that all instruments in this study fall within the effective scale range. With an EPIC Rate of 4.25 for Instagram and 4.03 for TikTok, this indicates that advertisements posted on Instagram are more effective than those on TikTok.

Keywords: Advertising Effectiveness, EPIC Model, Instagram, TikTok, Fashion

1. Introduction

The development of information and communication technology has brought significant changes to various aspects of life, including the business and marketing world. The internet is not only used as a means of information and communication but also as a marketplace for businesses. In the context of marketing, social media has become an indispensable promotional tool for businesses, especially in the highly dynamic and competitive fashion industry, which enables direct communication between businesses and consumers.

Social media is one of the most effective ways for businesses to promote their products through social internet marketing (Aryani & Murtiariyati, 2022). Consumers and producers can interact with each other even without face-to-face contact (Millatina et al., 2020). Advertisements on television, radio, and social media play an important role in shaping consumers' perceptions of products or services.

According to Latifa (2021), content in advertisements is information that can be accessed through products or electronic media. Content has the purpose of communicating a message to the audience. The highly competitive landscape of digital advertising is becoming increasingly competitive. To reach the right audience, the appropriate advertising platform is also necessary. In recent years, Instagram and TikTok have become major influences in the world of social media advertising. Since the pandemic in 2020, both platforms have garnered significant attention with their short video content.

Table 1. Comparison of Instagram and TikTok Content

Aspects	Instagram	TikTok
Content Format	Diverse: Posts, stories, reels	Short music-themed videos (15-60 seconds)
Audience	Diverse age range, from teenagers to adults	Primarily younger demographics (16-24 years old)
Use Cases	Visual storytelling, influencer culture	Trend setting, virality, and challenges.
Strengths	Visual appeal, established user base	Authenticity, viral potential
Engagement Patterns	Algorithm-based feed and explore page	The "For You Page" algorithm is driven by an algorithm
Advertising Opportunities	Instagram ads (feed, stories, explore)	TikTok ads (In-Feed, TopView, Challenges)
Cost Effectiveness	Various ad formats to suit your budget	Cost-effective advertising options
Influencer Marketing	Influencers have credibility and influence	Influencers play a crucial role
Brand Authenticity and Voice Emphasized	Through various content	Through creativity (content and entertainment)

Source: Secondary Data, Taggbox, 2025

This table compares Instagram and TikTok based on several key aspects. Instagram excels in diverse content formats, a broader audience, a focus on visual storytelling and influencer culture, and strong visual appeal. Meanwhile, TikTok stands out in short video formats, a younger audience, emphasis on trends and challenges, and high viral potential with the "For You" algorithm. Both platforms offer advertising and influencer marketing opportunities, but with different characteristics and effectiveness. Instagram emphasizes brand authenticity through diverse content, while TikTok focuses on creativity and entertainment.

The fashion industry has a great opportunity to leverage technology and innovation to create and enhance a more professional and satisfying shopping experience for consumers. The future of the fashion industry is increasingly bright, as it continues to evolve and adapt to changing trends and consumer needs. In line with the development of the digital era, the fashion industry faces new challenges, namely changes in consumer behavior toward online shopping and the influence of social media in shaping fashion trends. Competition among local women's fashion brands in Indonesia is also becoming increasingly intense and dynamic. Each brand strives to target specific segments with distinct designs ranging from minimalist, modern, feminine, casual, to edgy styles, while implementing appropriate marketing strategies. This creates healthy yet fierce competition, as each brand focuses on its unique strengths and advantages.

Table 2. Comparison of the Most Popular Local Clothing Brands on Social Media in 2024

No	Brand	Intagram	TikTok	Instagram Posting Frequency	TikTok Posting Frequency
1	Thenblank	834,000 followers	5,700 followers	2-3 times a week	Several times a week
2	This is April	832,000 Followers	364,700 Followers	Every day	Every day / 1-3 times a day
3	Cotton Ink	659,000 Followers	70,100 Followers	Every day	Every day / 1-3 times a day
4	Shop at Velvet	460,000 Followers	44,200 Followers	Several times a week	Several times a week
5	Callie Cotton	110,000 Followers	3,393 Followers	Several times a week	Less active
6	Kyrra	41,600 Followers	156 Followers	Several times a week	Less active
7	Gaudi	115,000 Followers	37,800 Followers	Several times a week	Every day

Source: Compiled by researchers, 2025

This table shows that Instagram is currently the platform with the largest audience reach for most of the brands we analyzed. When comparing follower counts, brands such as Thenblank, This is April, Cotton Ink, Shop at Velvet, Callie Cotton, Kyra, and Gaudi consistently have significantly more followers on Instagram than on TikTok. However, when looking at the posting frequency on Instagram and TikTok, This is April ranks second among local fashion brands in Indonesia, indicating that there is inefficiency in This is April's ad placements.

This is April is a local Indonesian fashion brand founded by Maria Anggraini in 2012. Maria Anggraini started this business with the hope of creating a high-quality fashion brand that would become a symbol of style, especially for women. This is April has successfully become one of the most popular local fashion brands in Indonesia. One of the brand's key strengths is its unique designs and inspiration for its collections. The This is April fashion brand continues to strive to create diverse products to empower women through fashion.

This study uses the EPIC Model developed by AC Nielsen to measure the effectiveness of advertisements on Instagram and TikTok for This is April fashion products. The results of this study can provide insights and recommendations for other local fashion industries, particularly for This is April in utilizing social media as a platform for promoting its products.

2. Literature review

3.3. Marketing and Advertising

According to Ariyanto (2023), marketing is a managerial process that results in individuals or groups obtaining what they need or desire by creating, offering, and exchanging products of value to others. Simply put, marketing encompasses all efforts made to attract consumer interest and encourage them to purchase the products or services being offered.

According to Indah & Maulida (2023), advertising is a product offered through messages to the general public via specific media. Advertising delivered through media aims to promote a product, service, or idea to the general public. Advertising is also one of the ways media markets and promotes products and services to potential consumers.

3.4. Social Media

According to Tanggang et al., (2024), social media is an online platform where users can easily participate, share, and create content, including blogs, social networks, wikis, forums, and virtual worlds. It serves as a hub for images, videos, text, and interactions between individuals or groups. One of the uses of social media by other users is as a marketing communication medium, such as advertising (Maysaroh et al., 2022). This form of communication can include two-way communication, sharing information, photos, videos, articles, and various other types of content. Meanwhile, according to Tanggang et al., (2024), social media is an online medium where users can easily participate, share, and create content including blogs, social networks, wikis, forums, and virtual worlds. This is a place for collections of images, videos, writings, and interactions between individuals or groups.

3.5. Instagram dan TikTok

According to Carpenter et al., (2020), Instagram is a social media platform for sharing photos and videos, where users access the service through an app or web interface with limited features and can edit content using various filters. This involves the ability to edit photos and videos before uploading them, with the editing process involving various filters that can alter the visual aspects of the content, including color, contrast, and other effects.

According to Batoebara et al. (2020), TikTok is an app created in China, specifically designed for videos, music, and photos. TikTok offers various visual effects, filters, transitions, and stickers that can be used to enhance or modify videos. TikTok often serves as a source for new trends, whether in music, dance, comedy, or other fields. Through videos, images, and music, this app facilitates the transmission of information and can stimulate those who view, imitate, or share it (Mulyani et al., 2022).

3.6. EPIC Model

The EPIC Model is a model used to measure the effectiveness of communication, particularly in the world of advertising and public relations. The EPIC Model provides an effective tool for assessing the success of promotions. Each dimension in the EPIC Model aligns with the objectives of promotion, with the four dimensions comprising empathy, persuasion, impact, and communication.

Empathy can be used to determine how effectively an advertisement can evoke feelings and identify the needs of the audience. In other words, empathy conveys valuable information, brand appeal, and engages the feelings and understanding of the audience.

Persuasion is the company's effort to encourage the target audience to change their behavior, beliefs, and attitudes. This can be used to determine how effective an advertisement is in persuading consumers to take action, such as understanding the product and purchasing it.

Impact in marketing can be used by businesses to understand how much of an impact advertisements have on consumer behavior. This can involve feedback from promotional activities on the understanding of the products or services produced.

Communication can convey information about brands and other activities so that they are remembered by the audience. Communication is used to determine how clear and easy to understand the message conveyed in advertisements is.

3. Methodology

The type of research used is descriptive exploratory research with a case study approach. This research was conducted to analyze and describe the phenomenon in depth, as well as to collect data that has been collected comprehensively.

10.10. Sampling Method

The population in this study consists of Instagram and TikTok followers of @thisisapril_ or the general public who follow Instagram and TikTok @thisisapril_. To determine the sample size for this study, the authors used the Slovin formula with a significance level of 10%. Using the Slovin formula, the sample size is calculated as follows:

Slovin Formula:

$$\text{Rumus Slovin: } n = \frac{N}{1+Ne^2}$$

Notes:

n: Sample Size

N: Population Size

e^2: Error Tolerance Limit

In this study, an error rate of 10% was used in accordance with existing research standards. The sample size in this study was 99.99, rounded to 100 followers on the Instagram social media account @thisisapril_ and 99.97, rounded to 100 followers on the TikTok social media account @thisisapril_.

10.11. *Data Collection Method*

Data collection methods are systematic and standardized procedures for obtaining the necessary data. To obtain the data and information required for this study, the researchers used primary and secondary data, namely:

1. Primary Data

   The primary data used in this study were obtained from the distribution of questionnaires used to measure advertisements on Instagram and TikTok social media for This is April fashion products. The questionnaire will be distributed to 100 followers on the Instagram social media account @thisisapril_ and 100 followers on the TikTok social media account @thisisapril_.

2. Secondary Data

   In this study, the secondary data used by the researcher was obtained through information collected from journals, books, articles, e-books, and documents relevant to the research theme.

10.12. Operational Variables

Table 3. Operational Variables

Variable	Indicator	Measurement	Scale
Advertising (Indah & Maulida, 2023)	*Emphaty*	1. Consumers feel interested when they see This Is April ads on Instagram and TikTok. 2. Consumers want to see This Is April ads on Instagram and TikTok repeatedly. 3. Consumers feel satisfied and happy when they see This Is April ads on Instagram and TikTok. 4. Consumers like This Is April ads on Instagram and TikTok	Ordinal
	Persuasion	1. Consumers feel inclined to purchase products after viewing advertisements on Instagram and TikTok for This Is April 2. Advertisements for This Is April effectively explain the products being promoted 3. Consumers feel confident about the advertised products after viewing advertisements for This Is April on Instagram and TikTok	Ordinal
	Impact	1. Advertising posts on Instagram and TikTok This Is April provide knowledge to consumers 2. Posts generated by Instagram and TikTok This Is April are different from others 3. Consumers are aware of the advantages of This Is April products	Ordinal
	Communication	1. Advertising posts on Instagram and TikTok by This Is April provide clear information to consumers 2. The messages in the posts displayed by This Is April on Instagram and TikTok are easy for consumers to understand 3. Consumers can remember the messages displayed on This Is April products	Ordinal

Source: Processed Data, 2024

4. Results and Discussion

The validity test was conducted to ensure that the research instrument accurately measured the statements being studied. In other words, a valid instrument produces information that is relevant to the actual situation.

Table 4. Results of the Validity Test of Advertising Effectiveness on Instagram Social Media for This is April

No	Variable	Statement	Calculated r		Table r	Description
			Instagram	TikTok		
1	*Emphaty*	E1	0.720	0.815	0.195	Valid
2		E2	0.721	0.784	0.195	Valid
3		E3	0.656	0.804	0.195	Valid
4		E4	0.650	0.834	0.195	Valid
1	*Persuasion*	P1	0.692	0.794	0.195	Valid
2		P2	0.779	0.865	0.195	Valid
3		P3	0.657	0.823	0.195	Valid
1	*Impact*	I1	0.607	0.823	0.195	Valid
2		I2	0.697	0.810	0.195	Valid
3		I3	0.710	0.809	0.195	Valid
1	*Communication*	C1	0.649	0.841	0.195	Valid
2		C2	0.730	0.783	0.195	Valid
3		C3	0.650	0.816	0.195	Valid

Source: Primary Data, 2025

Based on Table 4, it shows that all statement items in the dimensions of empathy, persuasion, impact, and communication used in this study regarding advertising posts on Instagram and TikTok This is April meet the validity criteria. Where the calculated r value for each statement is greater than the table r value. This shows that the research instrument (questionnaire) has been able to measure variables accurately and consistently.

Table 5. Results of the Reliability Test of the Effectiveness of Social Media Advertising This is April

Kuesioner Item	Kriteria Kesimpulan			Description
	Cronbach Alpha	r tabel	N of items	
EPIC	Instagram			
	0,904	0,904 > 0,60	13	Reliabel
	TikTok			
	0,985	0,985 > 0,60	13	Reliabel

Source: Primary Data, SPSS, 2025

Based on Table 5 above, the reliability test results for the effectiveness of advertisements on Instagram This is April social media show a Cronbach's Alpha value of 0.904, and on TikTok social media, a Cronbach's Alpha value of 0.958, which is considered reliable. Therefore, it can be seen that the instruments or questionnaires used to measure the effectiveness of advertisements on both social media platforms, Instagram and TikTok This is April, are reliable or valid.

4.1 Data analysis

The EPIC Model was used to assess the effectiveness of advertisements on Instagram and TikTok for This is April fashion products. The following are the results of data processing using the EPIC Model:

1. Empathy

Empathy in advertising is an affective response that comes from understanding the emotions of others. Does the audience like the advertisement and how does the advertisement depict the relationship between the advertisement and their personal lives? The following are the results of data processing using the EPIC Model on the empathy dimension:

Table 6. EPIC Model Score for the Empathy Dimension

No	STATEMENT	Score Value	
		Instagram	TikTok
1	This is April advertising posts are able to attract interest	4,51	4,07
2	This is April advertising posts are easy to view repeatedly	4,44	4,17
3	This is April advertising posts are able to influence mood	4,02	3,92
4	Liking This is April advertising posts	4,14	4,07
Total Average Score		**4,27**	**4,05**

Source: Processed Data, 2025

Based on Table 6, the statement that This is April advertisements can influence mood is the statement with the lowest score on both social media platforms, Instagram and TikTok, with scores of 4.02 on Instagram and 3.92 on TikTok. This indicates that the advertising posts uploaded by both social media accounts are not sufficient to influence consumer mood. This aligns with Akhirudin's (2022) research, which states that Inces Olshop advertising posts tend to be uploaded directly, causing consumers to be less interested in viewing Inces Olshop product advertising posts.

2. Persuasion

The persuasion dimension can inform what is conveyed by the ad, and by understanding the persuasion dimension of the uploaded ad, one can gain insight into how the audience takes action, such as purchasing the product and understanding it. The following are the results of data processing using the EPIC Model on the persuasion dimension:

Table 7. EPIC Model Score for the Persuasion Dimension

NO	STATEMENT	Score Value	
		Instagram	TikTok
1	This is April's advertising posts successfully attracted interest in purchasing its products.	4,47	4,11
2	This is April's advertising posts were able to provide clarity about the advertised products.	4,33	4,05
3	This is April's advertising posts successfully convinced people to purchase its products.	4,16	4,04
	Total Average Score	**4,32**	**4,06**

Source: Processed Data, 2025

Based on Table 7, the statement that This is April advertisements successfully convince consumers to purchase their products has the lowest score on Instagram and TikTok, with values of 4.16 on Instagram and 4.04 on TikTok. Consumers may not receive much information about the product, such as price, variants, availability, or how to purchase it. This is consistent with Akhirudin's (2022) research, which states that Inces Olshop posts tend to be less interesting, so consumers are less interested in the products offered.

3. Impact

The impact dimension focuses on how much the advertisement or message communicated in the advertisement is able to leave a deep impression and influence the audience's mind. Impact is evaluated to capture the audience's attention and engage in reciprocity to increase brand awareness. The following are the results of data processing using the EPIC Model on the impact dimension:

Table 8. EPIC Model Score for the Impact Dimension

NO	STATEMENT	Score Value	
		Instagram	TikTok
1	Instagram ads for This is April provide information about the product	4,26	3,99
2	Instagram ads for This is April have unique characteristics	4,20	4,03
3	Understanding the advantages of This is April products through Instagram ads for This is April	4,16	4,05
	Total Average Score	**4,20**	**4,02**

Source: Processed Data, 2025

Based on Table 8, the statement regarding awareness of the advantages of the This is April product through advertising posts has the lowest score on Instagram, at 4.16, while on TikTok, the statement regarding This is April advertisements being able to provide knowledge about the product has the lowest score, at 3.99. This indicates that consumers are not yet aware of the advantages and information about the product advertised through This is April's advertising posts. This is consistent with Akhirudin's (2022) research, which states that due to the infrequent promotions by Inces Olshop, consumers are less aware of the products and advantages of Inces Olshop.

4. Communication

The communication dimension focuses on how advertisements can convey messages clearly, easily understood, and relevantly. Advertisements that excel in this dimension show that messages are conveyed effectively, there are no barriers to understanding, and the audience receives information in the manner intended by marketers. The following are the results of data processing using the EPIC Model in the communication dimension:

Table 9. EPIC Model Score for the Communication Dimension

NO	STATEMENT	Score Value	
		Instagram	TikTok
1	This is April's advertising posts are able to provide clear information about its products	4,30	3,98
2	The message in This is April's advertising posts is easy to understand	4,21	4,04
3	Easily remember the message conveyed in This is April's advertising posts	4,19	4,00
	Total Average Score	**4,23**	**4,00**

Source: Processed Data, 2025

Based on Table 4.9, regarding the statement that it is easy to remember the message conveyed in the This is April advertising post has the lowest score on Instagram social media with a value of 4.19. In addition, on TikTok social media, the statement about advertising being able to provide clear information about its products is the statement that has the lowest score, which is 3.98. This allows the messages and information conveyed to be too vague and not

specific in giving messages on the advertised product. This is in line with Akhirudin's research (2022), which states that Inces Olshop posts tend not to explain the main message clearly and optimally so that consumers cannot find out the main message that Inces Olshop wants to convey.

The final step is to determine the average value of the EPIC Rate to measure overall advertising on social media on This is April fashion products. The following are the results of the EPIC Rate calculation:

Table 10. EPIC Rate

Instagram			
No	**EPIC Model Dimension**	**Score**	**Description**
1	*Emphaty*	4,27	Very Effective
2	*Persuasion*	4,32	Very Effective
3	*Impact*	4,20	Effective
4	*Communication*	4,23	Very Effective
Total EPIC Rate		**4,25**	**Very Effective**
TikTok			
No	**EPIC Model Dimension**	**Score**	**Description**
1	*Emphaty*	4.05	Effective
2	*Persuasion*	4,06	Effective
3	*Impact*	4,02	Effective
4	*Communication*	4,00	Effective
Total EPIC Rate		**4,03**	**Effective**

Source: Processed Data, 2025

Measurement of the effectiveness of advertising on Instagram social media shows that overall it is rated very effective with a total EPIC Rate value of 4.25 presented in table 4.20. In this case, the persuasion dimension is the highest dimension with a value of 4.32 and the impact dimension is the lowest dimension with a value of 4.20 on Instagram social media. This is in line with Akhirudin's research (2022), which shows the same results with the order of the persuasion dimension being the highest and the impact dimension being the lowest as the weakest dimension in advertising research at the Inces olshop.

In connection with that, measuring the effectiveness of advertising on TikTok social media shows that overall it is in the effective category with a total EPIC Rate value of 4.03 presented in table 4.20. In this case, the persuasion dimension is the most dominant dimension with the highest score of 4.06 and the communication dimension is the dimension with the lowest order, with a value of 4.00. This has alignment with Billah's research (2022), that the persuasion dimension is in the highest order and the communication dimension is in the lowest order in Ughgurl fashion store product research.

Thus, Instagram social media advertising is considered superior to TikTok social media advertising based on the strengths and weaknesses of each dimension measured. Although both are in the effective category, advertising on Instagram This is April social media indicates an overall content and engagement strategy that successfully attracts consumer attention and interest and encourages positive interactions. In this case, it has alignment with Imilda et al.'s research, (2024), which states that Instagram is superior in building emotional connections with consumers through visual appeal and influencer credibility. In contrast, TikTok is more

effective in attracting young consumers through more dynamic content and more spontaneous interactions, as well as an emphasis on limited-time promotions

5. Conclusion

Measurement of the effectiveness of advertising on social media on This is April fashion products shows the EPIC Rate of 4.25 on Instagram social media and 4.03 on TikTok social media, this shows that advertisements uploaded by This is April's Instagram social media account involving the dimensions of empathy, persuasion, impact, and communication are more effective than advertisements uploaded by TikTok social media accounts. Thus, This is April's Instagram ads are more successful in attracting audience attention, delivering the right and clear message, and encouraging consumers to take action.

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THE EFFECT OF PROFITABILITY, LEVERAGE, AND ASSET ACTIVITY PERFORMANCE ON PROFIT GROWTH OF SUBSECTOR COMPANIES PROCESSED FOODS PERIOD 2019-2023

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Abstract

This study aims to determine the effect of Profitability, Leverage and Asset Activity performance on processed foods subsector companies in 2019-2023. The type of research used in this research is verification research with an explanatory survey method that uses inferential statistical research techniques. The samples used in this study were 8 processed foods subsector companies in 2019-2023 with a sample withdrawal method using purposive sampling. The data analysis used is the classic assumption test, panel data regression analysis, t test and F test with e-views 12 software. The results of this study indicate that partially the Profitability variable proxied by Net Profit Margin and Leverage proxied by Debt to Equity Ratio has no effect on profit growth, while Asset Activity proxied by Total Asset Turnover affects profit growth. Simultaneously, the variables Net Profit Margin, Debt to Equity Ratio, Total Asset Turnover affect earnings growth. The panel data regression test results show an Adjusted R-Square value of 29.47%, which means that the contribution of the influence of the Net Profit Margin, Debt to Equity Ratio, and Total Asset Turnover variables on profit growth is 29.47%.

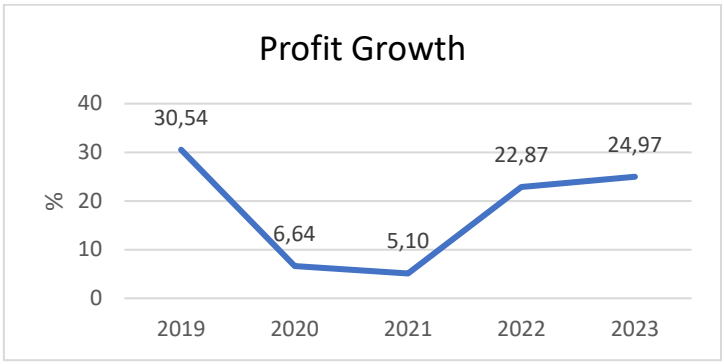
Keywords: Profitability, Leverage, Asset Activity Profit Growth

1. Introduction

In the current era of globalization in Indonesia, companies are growing more rapidly so that competition in the business world is increasingly competitive. Increasingly competitive conditions require companies to innovate and improve company performance well so that they can compete with other companies. The prospect of the processed industry in the country will still grow. The estimate, until the end of the year, the processed industry can still grow 5 percent, this type includes basic food needs. If it is implemented, Adhi, Chairman of the Indonesian Food and Beverage Manufacturers Association (Gapmmi), stated that the selling price of MBDK in the market and retail stores could increase by up to 30 percent. This is because the increase in excise duty costs cannot be covered by entrepreneurs, so it will be passed on to consumers. The world market for processed food and beverage products can reach 22 billion US dollars, while Indonesia's contribution to the world market is only 360 million US dollars or ranked 18th in the world (Kompas, 2024).

Profit growth describes the growth of the company's assets which will affect the company's profitability, and the percentage change in total assets is a very good indicator of company growth. Profit is the basis for measuring management's ability to run the company's assets to realize them effectively. Earnings growth can have an impact on the quality of a company's

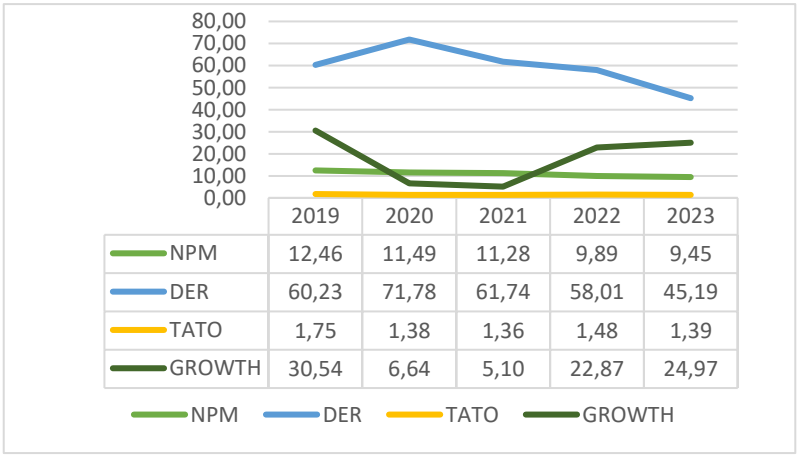
income, because if a company has the opportunity to grow in profit, the company's finances are likely to grow well (Riany, 2022).



Source: IDX data processed by the author, 2025

Image 1. Profit Growth Companies Processed Foods Period 2019-2023

Based on Image 1 the annual average of companies in the processed foods sector period 2019-2023 was the highest profit growth over the last 5 years with a value of 30.54%. In 2020, there was a decrease in profit to 6.64%, this could occur due to several factors during the pandem covid-19 period and an increase in production costs, namely an increase in food raw material prices, an increase in costs, and an increase in labor wages. This suppresses the profit margins of companies in the Processed Foods sector. In 2021 it decreased by 5.10%, and experienced a significant increase in 2022 of 22.87% and in 2023 profit growth rose again by 24.97%. The decline in profit growth in the Processed Foods sector occurred in 2020 with a fairly low decline, one of which was from PT Garudafood Putra Putri Jaya Tbk, this could occur due to rising costs in the domestic market and the impact of the co-19 pandemic. Profit in 2019 decreased 37.76% compared to the previous year, 2019. This was also due to net sales which fell 8.3% in 2020 (Aziz, 2021).



	2019	2020	2021	2022	2023
NPM	12,46	11,49	11,28	9,89	9,45
DER	60,23	71,78	61,74	58,01	45,19
TATO	1,75	1,38	1,36	1,48	1,39
GROWTH	30,54	6,64	5,10	22,87	24,97

Source: IDX data processed by the author, 2025

Image 2. Average Net Profit Margin, Debt to Equity Ratio, Total Asset Turnover, and Profit Growth of Processed Foods Subsector Companies Period 2019-2023

Based on Image 2, companies in the processed foods sector have an annual average NPM value in 2020 of 11.49% above the average NPM of 10.92% and profit growth of 6.64% below the average growth of 18.02%. This data shows that in 2020 NPM has increased but profit growth has decreased. This can occur due to operational factors such as increased production

costs including raw materials, labor, and overhead so that the level of sales decreases at the beginning of the pandemic. And in 2021 NPM experienced the same thing as in 2020 NPM increased and profits decreased below the average, this could occur due to the factor of shipping goods or spreading production because in 2021 the government appealed to the public to minimize outdoor activities. The existing data is not in line with the existing theory, namely that the higher the NPM ratio, the better the position of the company owner which has implications for increasing profits. This shows that high NPM contributes positively to profit growth. (Kasmir, 2018)

The average annual DER in 2019 has increased, namely 60.23% above the average DER value of 59.39% and profit has increased by 30.54% above the average growth value of 18.02%. The data shows an increase in DER value and an increase in profit. The data is not in line with the theory that an increasing DER value indicates poor company performance because a higher debt burden makes it difficult for the company to maintain profits and increase them. (Rahayuningsih, 2022).

The average annual TATO in 2023 was 1.39 below the average TATO of 1.47, this value is inversely proportional to the Growth which increased with a value of 24.97% above the average of 18.02%. This is not in line with the theory explained that if the TATO value decreases, profits decrease. The analysis results show a significance value which indicates that a decrease in TATO will affect the company's profit (Alvionita, 2021).

The phenomenon that occurred from 2019-2023 from the results of the ratio calculation that when NPM, DER, and TATO increased, growth was not always in line this could occur due to high sales volume with low margins, decreased debt but decreased profits, the Covid-19 pandemic which changed consumption patterns.

2. Literature Riview

Signaling theory is a theory that explains a management that wants to give instructions to outsiders. The information presented relates to business results, business prospects and the company's balance sheet. This activity is carried out by management because outsiders cannot see directly what is happening in the company due to information asymmetry (Sunardi, 2021).

Profit growth shows how much profit increases in the company, earnings growth is measured by the difference in total profit in the year to be studied with total profit in the previous year which is then divided by total profit in the previous year. Operationally, profit comes from income from sales that are realized with the costs that must be incurred to get income. Earnings growth is the addition and subtraction of current earnings compared to the previous year's earnings. Earnings growth can be used in projecting how future earnings growth will be, by several parties such as company management (Wijaya, 2023).

2.1. The Effect of Probability (NPM) on Profit Growth

Profitability ratio is a ratio that also provides a measure of the effectiveness of a company's management. Profitability can be measured by net profit margin which is a ratio that shows the ratio of net profit after tax to sales (Larasati, 2023).

H_1: Profitability (NPM) Affects Profit Growth in *Processed Foods* sub sector companies in 2019-2023

2.2 The Effect of Leverage (DER) on Profit Growth

A high Debt to Equity Ratio (DER) indicates that the company has a large proportion of debt in its capital structure. This means that the company is highly dependent on debt rather than equity (Sa'adah, 2022).

H_2: Leverage (DER) Affects Profit Growth in *Processed Foods* sub sector companies in 2019-2023

2.3 The Effect of Asset Activity (TATO) on Profit Growth

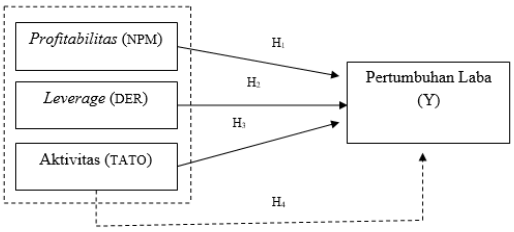
The higher the total asset turnover value, the greater the profit earned. The amount of profit earned is because the company can utilize its assets to support sales activities which will affect the company's revenue, thus causing profit growth to increase (Arfandi, 2021).

H_3: Asset Activity (TATO) Affects Profit Growth in *Processed Foods* sub-sector companies in 2019-2023

2.4 The Effect of Profitability (NPM), Leverage (DER), and Asset Activity (TATO) Simultaneous Effect on Profit Growth

The higher the net profit margin, it shows that the company can generate high profits at the sales level, the Debt to Equity Ratio decreases, the net profit generated will increase, the high Total Asset Turnover value shows the high turnover of assets in the company and can support profit growth (Kasmir, 2018).

H_4: Profitability (NPM), Leverage (DER), and Asset Activity (TATO) Simultaneously Affect Profit Growth in Processed Foods sub-sector companies in 2019-2023.



Based on the explanation above, the authors create a framework with three independent variables, namely profitability, leverage, asset activity from one dependent variable, namely earnings growth.

The Following is a picture of the research constellation:

Image 3 Research Constellation

3. Methodology

The type of research used is verification research with a quantitative approach and using explanatory survey research methods. Verification research which aims to test and prove the truth of existing theories. Research that explains the phenomena that occur in the form of relationships between variables. In this study, it explains the effect of financial performance variables on profit growth in processed foods sub-sector companies period 2019-2023. The unit of analysis in this study used is an organization which is a source of data generated from an

organization as a unit of analysis. In this case, the unit of analysis is the financial position report and comprehensive income statement of the processed foods sub-sector company.

This study determines the sample using purposive / judgment sampling method with the following criteria: (1) Processed foods sector companies listed and listed on the Indonesia Stock Exchange in 2018-2023; (2) Processed foods sub-sector companies that have complete financial data for the 2018-2023 period; (3) Processed foods sub-sector companies that generate positive profits during the 2018-2023 research period.

With the predetermined criteria, the sample used in this study is data on processed foods subsector companies. And the research sample consists of 8 companies that have met the predetermined criteria as follows:

1. PT Mayora Indah Tbk
2. PT Ultrajaya Milk Industri & Trading Company Tbk
3. PT Indofood Sukses Makmur Tbk
4. PT Wilmar Cahaya Indonesia Tbk
5. PT Garuda Food Putra Putri Jaya Tbk
6. PT Siantar Top Tbk
7. PT Sekar Bumi Tbk
8. PT Formosa Ingredient Factory Tbk

In this study, the independent variables used are profitability, leverage, and asset activity. While the dependent variable is profit growth (Growth). The operational variables in this study are summarized in the following table:

Table 1

Operationalization of Variables

Variables	Sub-Variables	Indicator	Scale
Profitability	*Net Profit Margin* (NPM)	Net Profit / Sales	Ratio
Leverage	*Debt To Equity Ratio* (DER)	Liabilities / Equity	Ratio
Asset Activity	*Total Assets Turnover* (TATO)	Sales / Asset	Ratio
Profit Growth	Profit Period t and Profit Previoous Period	Profit Perid t –Profit Period t-1 / Profit Period t-1	Ratio

4. Results and Discussions

4.1. Best regression selection results

Based on the results of the chow test, the Prob. Cross Section F value of 0.8751> 0.05, it can be concluded that the right model to use is the Common Effect Model compared to the Fixed Effect Model. And based on the results of the lagrange multiplier test, the value of 0.2136> 0.05, it can be concluded that the most appropriate model used in the study is the Common Effect Model.

4.2. Normality Test

The data normality test in this study is to identify whether or not there is a normality problem that can be seen from the Jarque-Bera probability whose results are greater than 0.05. The following are the results of the normality test processed using Eviews 12

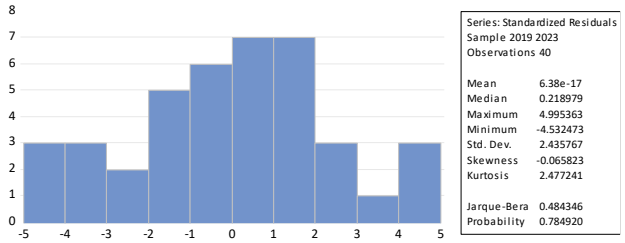


Image 4 Normality Test Results

Based on the results of the normality test, the Jarque-Bera probability value is 0.784920. these results show that the normality value is greater than 0.05 so it can be interpreted that the regression model is normally distributed.

4.3. Multicollinearity Test

To test for multicollinearity problems, it can be seen from the correlation matrix of the independent variables, if there is a coefficient of more than 0.8, it means that there is multicollinearity and otherwise.

Table 2. Multicolinearity Test Results

	NPM	DER	TATO
NPM	1.000000	0.162915	0.000302
DER	0.162915	1.000000	-0.137115
TATO	0.000302	-0.137115	1.000000

Source: Data processed by the author with Eviews 12, 2025

Based on the multicollinearity test results, the correlation coefficient value for Net Profit Margin (X1), Debt to Equity Ratio (X2), Total Asset Turnover (TATO) produces a value below 0.8 so that it can be interpreted that the data in this study does not occur multicollinearity.

4.4. Heteroscedasticity Test

In this study, the heteroscedasticity test used the Glejser Test. In this test it can be said that there is no heteroscedasticity problem if the significant value is > 0.05.

Tabel 3. Glejser Test Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.838647	0.399834	4.598521	0.0001
NPM	-0.220154	0.145033	-1.517962	0.1378
DER	0.420272	0.281137	1.494901	0.1437
TATO	0.013997	0.342809	0.040829	0.9677

Source: Data processed by the author with Eviews 12, 2025

Based on the results of the heteroscedasticity test, the probability value for the independent variable> 0.05, namely Net Profit Margin (X1) of 0.1378, Debt to Equity Ratio (X2) of 0.1437, Total Asset Turnover (X3) of 0.9677. From the results of this analysis it can be concluded that there is no heteroscedasticity problem in the regression model in this study.

4.5 Autocorrelation Test

In this study, the autocorrelation test used the Lagrange Multiplier Test (LM test). In this test if the value (Obs * R2)> 0.05, it means that there is no autocorrelation problem.

Tabel 4. Lagrange Multiplier Test Results

F-statistic	0.510014	Prob. F(2,34)	0.6050
Obs*R-squared	1.165079	Prob. Chi-Square(2)	0.5585

Source: Data processed by the author with Eviews 12, 2025

Based on the results of the lagrange multiplier test, the probability value (Obs * R2) is 0.5585> 0.05. So it can be concluded that there is no autocorrelation problem in the regression model in this study.

4.6 Panel Data Regression Test

Table 5. Regression Test Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.008934	0.165590	0.053953	0.9573
NPM	0.722410	0.463765	1.557707	0.1281
DER	-0.086157	0.152460	-0.565112	0.5755
TATO	0.190227	0.048709	3.905364	0.0004

Source: Data processed by the author with Eviews 12, 2025

In this study, the panel data regression model used is the Common Effect Model (CEM) with the following regression equation:

Growth = 0,008934 + 0,722410NPMit - 0,086157DERit + 0,190227TATOit + 0,165590

Based on the regression equation, it shows a constant value of 0.008, meaning that if Net Profit Margin, Debt to Equity Ratio, Total Asset Turnover is 0, then growth is positive at 0.008. The Net Profit Margin regression coefficient value is positive, namely 0.722410, meaning that every 1% increase in Net Profit Margin will increase growth by 0.722410 assuming other independent variables are constant. The *Debt to Equity Ratio* regression coefficient value is negative at -0.086157, meaning that every 1% decrease in Debt to Equity Ratio, growth will decrease by -0.086157 assuming other independent variables are constant. The Total Asset Turnover regression coefficient value is positive at 0.190227, meaning that every 1% increase in Total Asset Turnover, growth will increase by 0.190227 assuming other independent variables are constant. This finding illustrates how each variable contributes differently to changes in earnings growth.

Table 6. Cross-section Fixed Test Results

R-squared	0.348967	Mean dependent var	0.324500
Adjusted R-squared	0.294714	S.D. dependent var	0.395960
S.E. of regression	0.332532	Akaike info criterion	0.730480
Sum squared resid	3.980800	Schwarz criterion	0.899368
Log likelihood	-10.60961	Hannan-Quinn criter.	0.791545
F-statistic	6.432244	Durbin-Watson stat	2.472303
Prob(F-statistic)	0.001334		

Source: Data processed by the author with Eviews 12, 2025

Based on Table 6 of the panel data regression test results, the Adjusted R-Square value is 29.47%, which means that the contribution of the influence of the Net Profit Margin, Debt to Equity Ratio, and Total Asset Turnover variables on profit growth is 29.47%. Adjusted R-Square is used because the variables in this study are more than one variable.

4.7. Test t (Partial)

Referring back to Table 5, the results of the t (partial) test are as follows:

H_1: Net Profit Margin (NPM) Has no Effect on Profit Growth in Processed Foods sub-sector Companies Period 2019-2023.

The first hypothesis (H1) results of the NPM variable (X1) with a statistical t value = 1.5577, a positive regression coefficient value and a probability of 0.1281. The significance value of the t test is 0.1281> 0.05 with a count value of 1.5577 < t table 2.0280, meaning that Net Profit Margin (NPM) has no effect on profit growth in Processed Foods subsector companies in 2019-2023. So it can be concluded that H1 is rejected. This shows that the level of profitability has not been a factor influencing profit growth in Processed Foods subsector companies in 2019-2023.

H_2: Debt to Equity Ratio (DER) has No Effect on Profit Growth in Processed Foods sub-sector Companies Period 2019-2023.

The second hypothesis (H2), the results of the DER variable (X2) with a statistical t value = -0.5651, a negative regression coefficient value of -0.5755. The significance value of the t test is 0.5755> 0.05 with a count value of -0.5651 < t table 2.0280, meaning that the Debt to Equity Ratio (DER) has no effect on profit growth in the Processed Foods subsector company in 2019-2023. So it can be concluded that H2 is rejected. This shows that the company's funding structure through debt does not affect the profit growth of Processed Foods companies period 2019-2023.

H_3: Total Asset Turnover (TATO) Affects Profit Growth in Processed Foods sub-sector Companies Period 2019-2023.

The third hypothesis (H3), the results of the TATO variable (X3) with a statistical t value = 3.9053, the regression coefficient value is 0.0004. The significance value of the t test is 0.0004 <0.05 with a count value of 3.9053> t table 2.0280, meaning that Total Asset Turnover (TATO) has an effect on profit growth in the Processed Foods subsector company in 2019-2023. So it can be concluded that H_3 is accepted.

4.8 F Test (Simultaneous)

H_4: Net Profit Margin, Debt to Equity Ratio, and Total Asset Turnover affect profit growth in Processed Foods subsector Companies Period 2019-2023.

Referring back to Table 6, the results of the F test or simultaneous regression coefficient test show that the F-statistic is 6.432244 with a probability of 0.001334. The significant value of F is 0.0013 <0.05 with fcount 6.4322> ftabel 2.8662. This shows that net profit margin, debt to

equity ratio, and total asset turnover simultaneously affect profit growth in Processed Foods companies in 2019-2023. So it can be concluded that H4 is accepted.

4.9. Discussion

4.9.1 The Effect of Net Profit Margin (NPM) Performance on Profit Growth

Based on the partial research results, Net Profit Margin (NPM) has no effect on profit growth. This shows that even though the Processed Foods subsector company is able to generate high sales, this does not directly affect the company's profits because there is an increase in operating expenses. This is evidenced from the results of data collection that there are six companies out of eight companies that are research samples that are not in line with the increase or decrease in NPM on profit growth (growth). The results of hypothesis testing show that NPM has no effect on the profit growth of Processed Foods subsector companies or hypothesis 1 is rejected.

This can occur due to the characteristics of the industry with high competition, dependence on the stability of raw material prices, and changes in people's consumption patterns. In addition, there are expenses that have increased from the previous period to support the company's operations, which is one of the factors causing the increase and decrease between NPM and Growth when compared to the previous period and the company's average results.

According to Lev and Thiagarajan (2019) NPM as one of the profitability ratios does not always reflect the underlying profit. Companies with high NPM can have very different revenue and expense structures resulting in different profit growth patterns from the previous period.

The results of research by Ardian Wijaya, Anton Arisman (2023), Lailatus Sa'adah (2022), Liliana Rizkidayanti (2023) state that net profit margin partially has no effect on profit growth This can occur because the Net Profit Margin ratio fluctuates every year and production costs increase and competition is significant enough to suppress profits from sales. Dia Lailil Widad (2023) explains that NPM has no effect on profit growth due to fluctuating factors in the components of production and operational costs that are not proportional to the increase in product selling prices, as a result, even though the company managed to maintain or increase sales in one period, this condition is not sustainable in the next period.

4.9.2 The Effect of Debt to Equity Ratio (DER) Performance on Earnings Growth

Based on the research results partially Debt to Equity Ratio (DER) has no effect on profit growth. This shows that the higher and lower debt levels of a company have no direct effect on the profit growth of processed foods companies. The results of hypothesis testing show that DER has no effect on profit growth in Processed Foods subsector companies or hypothesis 3 is rejected.

Based on the analysis of the DER value, it shows that despite improvements in the capital structure of processed foods subsector companies, this is not directly positively correlated with profit growth. The use of debt to expand production capacity has the potential to increase revenue and profits if the debt is managed by risk management properly and efficiently, but the capital structure reflected in DER is not the main determinant of company profit growth. Therefore, companies need to focus more on other aspects that have a direct impact on company performance in increasing profit growth. DER only shows how much the company is financed by debt compared to equity, it does not show whether the funds are used productively. Therefore, the increase or decrease in DER does not reflect a significant change in profit growth.

Amyum et al (2021) that DER has a negative and insignificant effect on earnings growth, meaning that an increase or decrease in DER has no significant effect on earnings growth. And the results of Dia Lailil's research (2023) resulted in an analysis that the Debt to Equity Ratio has no effect on profit growth (growth) due to inefficient capital management. Yuslinda et al (2022) that partially Debt to Equity Ratio has no significant effect on profit growth in basic chemical sector manufacturing companies, profit growth is not only influenced by capital structure, but also external factors such as market conditions, consumer demand, and the company's business strategy.

4.9.3 The Effect of Total Asset Turnover (TATO) Performance on Profit Growth

Based on the research results partially Total Asset Turnover (TATO) has an effect on profit growth. This shows that the increase in TATO is in line with the increase in profit growth (growth). The results of this study are in accordance with hypothesis 3 which states that Total Asset Turnover has an effect on earnings growth. Then hypothesis 3 is accepted.

Total asset turnover is a ratio to measure the overall level of use of the company's assets in generating a certain sales volume. The higher this ratio, the more effective the management of assets owned by the company to generate sales and can increase profit growth. In this study, Total Asset Turnover affects profit growth in Processed Foods subsector companies, and identifies that this company is effective in managing asset turnover to generate sales and increase profit growth.

This is consistent with research conducted by Yuslinda et al (2022), that Total Asset Turnover (TATO) has a significant effect on profit growth in basic chemical sector manufacturing companies. This condition means that the company utilizes all its activities that affect production in making sales to achieve maximum profit. So that all assets have been managed by the company effectively, from this it proves that Total Asset Turnover has an effect on profit growth.

4.9.4 The Effect of Net Profit Margin (NPM) Performance, Debt to Equity Ratio (DER), Total Asset Turnover (TATO) on Earnings Growth

Based on the research results simultaneously Net Profit Margin, Debt to Equity Ratio, Total Asset Turnover have a significant effect on earnings growth. The results of this study are in accordance with hypothesis 4 which states that Net Profit Margin, Debt to Equity Ratio, and Total Asset Turnover have an effect on profit growth. This shows that the company's financial performance can affect profit growth in Processed Foods sub-sector companies. Then Hypothesis 4 is accepted.

The results of this study are in line with research conducted by Syahida et al (2021) which states that Net Profit Margin, Debt to Equity Ratio, Total Asset Turnover have a significant effect on profit growth. This shows that in the Processed Foods sub-sector companies the role of the Net Profit Margin, Debt to Equity Ratio, Total Asset Turnover ratios is very noteworthy because these ratios support profit growth

5. Conclution

Based on the results of research conducted on Processed Foods subsector companies in 2019-2023, it can be concluded that; (1) Profitability (NPM) has no effect and is not significant to profit growth in Processed Foods subsector companies in 2019-2023, this can occur because the characteristics of the industry owned with high competitive intensity and there are expenses that have increased to support the company's operations are one of the factors causing profits to decline from the previous period; (2) Leverage (DER) has no effect and is not significant to

profit growth in Processed Foods subsector companies in 2019-2023, capital structure such as DER is not a major factor in determining company profit growth; (3) Asset Activity (TATO) has a significant effect on profit growth in Processed Foods subsector companies in 2019-2023, Based on the results of this analysis which proves that the more efficient the company is in using its assets to generate sales, the more likely the company's profits will increase; (4) Simultaneously Profitability (NPM), Leverage (DER), Asset Activity (TATO) together affect profit growth in Processed Foods subsector companies in 2019-2023. This shows that the performance of operational efficiency as measured by NPM, capital structure as measured by DER, and asset activity using TATO affects the ability to increase profits in Processed Foods companies.

6. Advice

Based on the results of this study, profitability and leverage have no effect on the profit growth of Processed Foods subsector companies. Therefore, companies should focus on managing and saving production costs and operating costs to maintain profit growth. By analyzing and identifying what costs are incurred during the production process. Conduct analysis and control in each component of operational costs such as utility and distribution costs, and adjust the number and placement of employees based on the volume or level of production that is running according to production needs so that labor costs remain under control to maintain the company's profit growth. And companies need to manage debt wisely so as not to burden finances. The company is advised to focus more on optimizing the use of capital for activities that can have a direct impact on profit growth, namely external factors such as inflation which can reduce profitability, and control production costs effectively to support an increase in net profit. The company should prioritize the efficiency of working capital management which has a greater influence on profit growth than the long-term capital structure.

For Investors and Prospective Investors who will invest in Processed Foods subsector companies, it is necessary to pay attention to profitability and leverage ratios because based on the analysis there is a mismatch between Net Profit Margin and profit earned, and Debt to Equity Ratio which shows that on average the company generates high profits but high debt because it is also influenced by the expenses used in supporting the company's operations. Prospective investors must make the right choice through strong consideration to invest so as to avoid the risk of loss.

Future researchers should use different variables from this study such as ROA, ROE, DAR which will produce a more significant effect on earnings growth, and by using the latest research period with the last 3 years of the research year to see a more optimal level of fluctuation. Future researchers can also make comparisons between subsectors in the processed foods industry to identify whether the influence patterns found are universal or specific to certain subsectors.

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THE ROLE OF DIGITAL MARKETING SOCIAL MEDIA TIKTOK, INSTAGRAM, TWITTER ON PURCHASING DECISIONS ON GACOAN NOODLES

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Abstract

Social media has become an important channel for businesses in today's digital age to promote products and build relationships with consumers. TikTok, Instagram, and Twitter have the potential to increase brand awareness and engagement as they are very popular platforms among the younger generation. Studies have shown that engaging and interactive content on TikTok and Instagram is more effective in attracting user attention than other platforms such as Facebook. This study aims to analyze the influence of social media TikTok, Instagram, and Twitter on consumer purchasing decisions on Gacoan Noodle products. Social media has developed into an important tool in digital marketing, but its effectiveness in driving direct purchasing decisions remains unclear. The method used in this research is a quantitative approach with the Partial Least Square (PLS) model to measure the influence of each variable. The research sample was social media users who were exposed to Mie Gacoan content on the three platforms, and data was collected through an online questionnaire. Validity and reliability analysis showed that only Instagram, TikTok, and Twitter were valid with AVE values above 0.50, while the purchase decision variable did not meet this requirement. The results show that these three social media platforms do not have a significant influence on the purchase decision of Gacoan Noodles. TikTok has a coefficient of 0.236 with a p-value of 0.299, Instagram 0.166 with a p-value of 0.342, and Twitter 0.217 with a p-value of 0.361, all of which are higher than the significance threshold of 0.05. Thus, the three social media platforms were more instrumental in raising brand awareness than driving direct purchase decisions for this product.

Keywords: Social Media, TikTok, Instagram, Twitter, Purchase Decision, Gacoan Noodles

1. Introduction

In today's digital age, social media plays a significant role in everyday life, including in shaping consumer purchasing decisions. Along with the development of technology, social media platforms such as TikTok, Instagram, and Twitter have become key channels for many companies to introduce products and increase brand awareness. Social media offers various advantages in reaching a broader audience in an efficient, interactive and measurable way. However, the effectiveness of each platform in influencing consumer purchasing decisions may vary depending on the characteristics of the audience and the type of content offered.

TikTok, as one of the independent variables in this study, is characterized by highly dynamic and fast-paced content. TikTok is known as a platform that prioritizes short video-based content, with much content focused on entertainment and virality (Aryadi & Putri, 2022). The use of technology is expected to bring enormous benefits to an increasingly competitive business world, making social media one of the effective marketing strategies to influence consumer purchasing decisions (Risnawati & Chamidah, 2022). Based on the data listed in the file, the analysis results show that TikTok has a coefficient of 0.236 with a p-value of 0.299,

which indicates that its effect on purchasing decisions is not significant. This suggests that while TikTok may attract consumers' attention through viral content, the platform may not be strong enough to drive direct purchase decisions. TikTok may be more effective in raising brand awareness than driving purchases, as its consumers are more likely to seek entertainment rather than in-depth product information.

Instagram, as the second platform analyzed, has a broad user base and is a popular choice for many consumers to seek visual and lifestyle inspiration. Unlike TikTok, Instagram allows users to explore visual content that is more aesthetically pleasing and sometimes accompanied by more informative product descriptions (Fakhira et al., 2022). Nonetheless, the results show that Instagram has a coefficient of 0.166 with a p-value of 0.342, which indicates that its effect on purchasing decisions is also not significant. This data indicates that although Instagram is effective in building brand awareness through attractive visual displays, users may not be immediately compelled to make a purchase. Most Instagram users use the platform for inspiration or visual exploration rather than to make an immediate purchase (Fredik & Dewi, 2019). Features such as “Shop” and “Swipe Up” in Instagram Stories make it easier for users to access products. However, in reality, many consumers are more likely to save or like content as a reference rather than buy directly.

Twitter, as the third independent variable, is a more widely used platform for quick communication, news, and discussion. Twitter allows users to engage in more spontaneous and direct conversations compared to other platforms but has character limitations that often make it less suitable for detailed product promotion (Askaria, 2019) Based on the data in the study, Twitter has a coefficient of 0.217 and a p-value of 0.361, which indicates that its effect on purchasing decisions is also not significant. This is in line with the characteristics of Twitter as a platform that is more effective for strengthening brand relationships through direct interaction and quick responses than for triggering direct purchases (Oktaviani & Estaswara, 2022). Content on Twitter is often limited to brief and temporary information, so it is less able to have a strong enough impact to influence consumer purchasing decisions.

Research with the title “The Effect of Social Media on Purchasing Decisions Through Consumer Motivation on Fast Fashion Products” by Indriyani et al., (2023) shows that social media significantly influences consumer purchasing decisions. The purchasing decision indicator that has the highest average value is the willingness to sacrifice to get a product. If the influence of social media is more substantial, the purchasing decisions made by consumers to make purchases will also be stronger, resulting in actual purchases. Consumers use social media to find all information about the product to be purchased. This is evidenced by the indicator of using social media related to the ease of searching for information, which has the highest average value of 3.94. Previous research conducted by Megarezky et al., (2024) proved a similar thing, namely that 75% of the people of Mumbai, India, used social media to find information before deciding to buy products. Research by Putri Dewi et al., (2023) entitled “The Effect of Tiktok Content on Consumer Decisions in Buying Products at Tiktok Shop, Nusa Putra University” shows that the effect of TikTok content on purchasing decisions is only 24.8%; the remaining 75.2% is another factor that we do not know, so it is not because of the engaging Tiktok content that makes consumers consider deciding to buy products at TikTok shop but other influences, variables that allow buying and selling transactions to occur. Of course, this research is only limited in scope. The campus environment, namely at Nusa Putra University Sukabumi and our semple testing is limited to 30 respondents, namely students.

2. Literature review

2.1. Purchasing Decisions

Purchasing decisions are a series of processes that start with consumers recognizing their problems, seeking information about specific products or brands and evaluating these products or brands on how well each alternative can solve their problems, which then leads to a purchase decision. In research (Megarezky et al., 2024), it is concluded that social media strongly influences purchasing decisions. In addition, research by Mustapa et al., (2022.) concluded that consumer purchasing decisions increased due to social media. The amount of the influence coefficient is obtained at 34.9%, which means that when there is a one per cent increase in social media, it will increase purchasing decisions by 34.9%.

2.2. Tiktok

Tiktok is a social media network in the form of videos or what is also called content, which has a duration of 15-30 seconds. In a study by Putri Dewi et al., (2023), it was found that the creative content produced by TikTok users had a significant impact on consumer purchasing decisions. Although the influence of content on purchasing decisions only reaches 24.8%, this shows that entertainment elements and creativity in content can attract consumers' attention and encourage them to make purchases. Several key factors influence purchasing decisions through TikTok, including price, promotion, and ease of access to information. Product price is one of the primary considerations for consumers; where they tend to choose products with prices that fit their budget. In addition, promotional techniques such as discounts and free shipping offers have proven effective in attracting attention and driving purchasing decisions (Widya K. S , 2023).

2.3. Instagram

Instagram is an application for sharing photos and videos that allow users to take pictures and videos and share them with various social networking services, including themselves. Research by Gusria A & Busyra, (2023) says that Instagram social media has a positive and significant impact on purchasing decisions. Based on the results of data processing, it shows that Instagram social media has an effect of 48.1% on purchasing decisions in these research variables and the rest is influenced by other variables that are not tested as much as 51.9%. On the other hand, research by (Virginia, 2023) shows that the variables of Instagram social media promotion and product quality are proven to have a positive effect in influencing customer satisfaction.

2.4. Twitter

Consumer reviews on social media, such as Twitter, can significantly influence purchasing decisions. Research by Fatih Adiyatma et al., (n.d.) shows that information shared through this platform can be quickly spread and accessed by potential buyers. Twitter's influence on purchasing decisions is complex and involves a variety of variables, such as consumer reviews, social norms, communication between users, and parasocial emotions and interactions. Research shows that all of these factors contribute to how consumers make decisions in an e-commerce environment. Another study (Okt Oktaviani & Estaswara, (2022) said that the positive talk built on Twitter was able to increase users in Indonesia by 76.6%. Twitter can be a key driver in purchasing products online. Talk on Twitter, as many as 51% make users make purchases when there are reviews by other consumers. Meanwhile, 37.4% spend on products when they get many likes and positive comments.

3. Methodology

This research uses quantitative methods, with the type of data used in this research being primary data. Primary data is data that is obtained directly by providing primary data to data

collectors. In this study, primary data was obtained through answers to questionnaires distributed to people who met the criteria. A questionnaire or questionnaire is a tool used to collect data through a series of questions that have been designed with the aim of measuring research variables (Ardiansyah et al., 2022) The sample in this study was 100 respondents. The data collection technique used in this study was to use a questionnaire or questionnaire by distributing questionnaires to respondents and distributing questionnaire links that have been made using Google Forms.

4. Results and discussions

Outer Model Results
Validity Test Results

Table 1. Average Variance Extracted (AVE) Test Results

	Average Variance Extracted (AVE)
Instagram	0.674
Purchase Decision	0.397
Tiktok	0.616
Twitter	0.730

Based on the information displayed in Table 1, it can be concluded that the Average Variance Extracted (AVE) value for each variable shows different variations. The Instagram variable has an AVE value of 0.674, the Purchase Decision variable shows an AVE value of 0.397, the Tiktok variable records an AVE value of 0.616, and the Twitter variable has an AVE value of 0.730. Based on the construct validity criteria, which state that an AVE value greater than 0.50 indicates adequate validity, it can be said that the Instagram, Tiktok, and Twitter variables have an AVE value above this threshold, so they can be declared statistically valid. However, for the Purchase Decision variable, the AVE value obtained is 0.397, which is below the minimum limit value of 0.50. Therefore, the Purchase Decision variable is invalid based on this AVE criterion. This conclusion confirms that there are different levels of validity among the variables analyzed in this study.

Reliability Test Results

Table 2. Cronbach Alpha Test Results

	Cronbach's Alpha
Instagram	0.879
Purchase Decision	0.564
Tiktok	0.846
Twitter	0.907

Based on the information in Table 2, Cronbach's Alpha value shows the different levels of reliability among the variables analyzed. The Instagram variable has a Cronbach's Alpha value of 0.879, the Tiktok variable of 0.846, and the Twitter variable of 0.907, all of which are above the 0.70 threshold, so it can be concluded that these three variables have a high and consistent level of reliability in measuring the intended construct. In contrast, the Purchase Decision variable has a Cronbach's Alpha value of 0.564, which is below the 0.70 threshold, thus indicating that the variable has a low level of reliability and is less reliable in representing the measured construct. Thus, it can be concluded that the variables Instagram, Tiktok, and

Twitter meet the criteria for high reliability, while the Purchase Decision variable does not meet these criteria.

Inner Model Results
R Square Test Results

Table 3. R Square Test Results

	R Square	Adjusted R Square
Purchase Decision	0.314	0.293

Based on the data presented in Table 3, the R-Square value for the Purchase Decision variable of 0.314 indicates a relationship that is classified as moderate. This means that the independent variables in the model can explain 31.4% of the variation in the Purchase Decision variable. The remaining 68.6% is influenced by other factors outside the model not discussed in this study. In addition, the Adjusted R-Square value of 0.293 indicates that after considering the complexity of the model, about 29.3% of the variation in the Purchase Decision variable can still be explained by the variables included in the model. This shows that the variables in the model make a significant contribution, although other external variables still have a considerable influence.

Bootstrapping Test Results

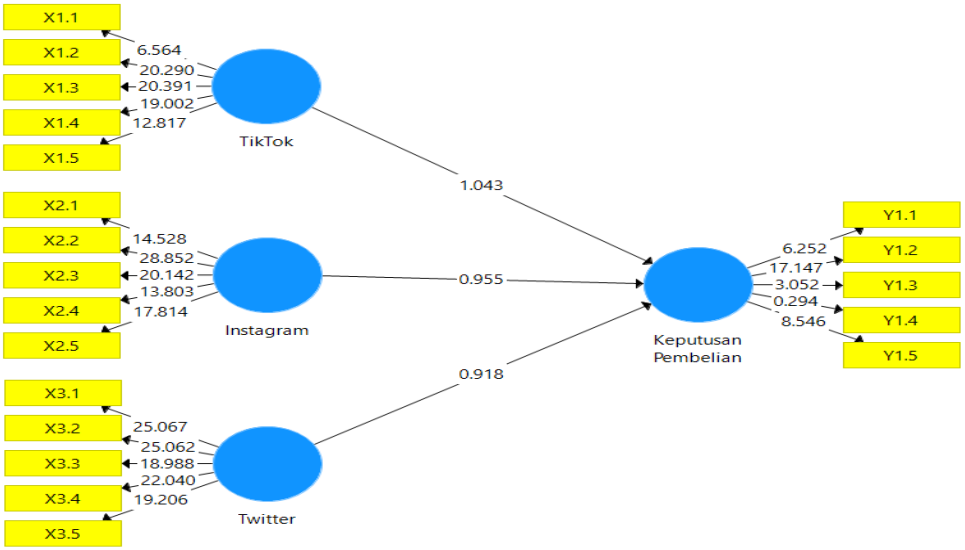

Figure 1. Bootstrapping Test Results

Figure 1 above shows the results of the hypothesis test conducted to analyze and identify the influence of the various constructs involved in this study. In this context, the variables tested are TikTok, Instagram, and Twitter, which act as independent variables. These three social media variables are considered to influence the dependent variable, namely Purchasing Decisions. In hypothesis testing, a variable is considered to significantly influence other

variables if the P-value obtained is smaller than 0.05 (5%). This means that the relationship between the independent and dependent variables can be considered accurate and not caused by mere coincidence. Conversely, the relationship is considered insignificant if the P-value is more significant than 0.05. This means that the independent variable does not have a strong enough influence on the dependent variable being measured. This process helps understand the extent of social media's influence on purchase decisions and provides insight into the importance of each platform in influencing consumer behavior.

Path Coefficient Test Results

Table 4. Path Coefficient Test Results

	Original Sample	Sample Mean	Standard Deviation	T Statistics	Purchase Decision
TT → KP	0.236	0.189	0.226	1.043	0.299
IG → KP	0.166	0.222	0.174	0.955	0.342
TW → KP	0.217	0.245	0.236	0.918	0.361

From Table 4 above, it can be concluded that:

The results obtained from the Path Coefficient Test show that using social media platforms has no significant effect on consumer purchasing decisions in this study. Based on the analysis, Instagram has a coefficient value of 0.166 with a p-value of 0.342. This p-value, which is greater than 0.05, indicates that the use of Instagram does not significantly influence purchasing decisions, so the relationship between the two can be considered non-existent or weak in the context of this study. TikTok also shows similar results, with a coefficient of 0.236 and a p-value of 0.299. These results indicate that TikTok, as one of the popular social media platforms, does not significantly influence purchase decisions. Therefore, its influence on purchase decisions cannot be considered significant. In addition, Twitter, which has a coefficient of 0.217 with a p-value of 0.361, also shows results that align with the other two social media platforms. A p-value greater than 0.05 corroborates the finding that Twitter usage does not significantly influence consumer purchasing decisions. Overall, the analysis results show that the three social media platforms-Instagram, TikTok, and Twitter- did not significantly contribute to increasing consumer purchase decisions in this study. The three platforms each showed insignificant coefficient values, indicating that marketing strategies that rely on social media, at least in the context of this study, may not have played a significant role in influencing purchase decisions. This suggests that other factors in this study may be more dominant in shaping consumer purchasing behavior.

Discussion

TikTok on the Purchase Decision of Gacoan Noodles

TikTok has a coefficient value of 0.236 with a p-value of 0.299, which means that its effect on the purchase decision of Gacoan Noodles is not significant. One of the underlying reasons for this ineffectiveness is the nature of TikTok's content, which focuses more on entertainment and virality than on in-depth information. TikTok users tend to consume content quickly and spend little time browsing or purchasing products directly. While TikTok has excellent potential to increase brand awareness through viral content, several underlying reasons explain why the platform has little impact on purchasing decisions. First, the main characteristics of TikTok is short video content that aims to entertain and provoke quick

reactions. However, according to research by the Journal of Interactive Marketing, this type of content often only generates temporary interest rather than an immediate purchase. Consumers who view videos on TikTok tend to seek entertainment or inspiration rather than detailed product information, so the effect is more impulsive and rarely leads to a planned purchase, especially for food products. Research by (Risnawati & Chamidah, 2022) states that the use of technology is expected to provide significant benefits for the increasingly competitive business world. One application is to make social media an effective marketing strategy to influence consumer purchasing decisions. In addition, TikTok's algorithm, which focuses on viral content, often displays videos that attract attention quickly but only facilitate deeper information or product reviews. As a result, although promotions on TikTok may attract users, they are likely to seek more information through other platforms before making a purchase decision. Research by (Aryadi & Putri, 2022) shows that TikTok is known as a platform that prioritizes short video-based content, with much of the content focusing on entertainment and virality alone.

Instagram on Purchasing Decisions of Gacoan Noodles

Instagram has a coefficient of 0.166 and a p-value of 0.342, which shows that its effect on purchasing decisions for Gacoan Noodles is also insignificant. One of the underlying reasons for this is that Instagram users tend to use it to seek visual or lifestyle inspiration rather than as a direct purchasing platform. Instagram, being visual-based, also did not show a significant influence on the purchase decision of Gacoan Noodles, and several reasons support this. Firstly, Harvard Business Review research shows that Instagram content is more effective for building brand awareness than driving direct purchases, especially in the food product category. Research (Fredik & Dewi, 2019) also says most Instagram users use the platform for inspiration or visual exploration, not to make direct purchases. Instagram attracts users through images and videos that emphasize aesthetic or lifestyle aspects, but these often only serve to showcase products in general rather than influence the final purchase decision. In addition, while features like “Shop” and “Swipe Up” on Instagram Stories allow users to access products, according to the Digital Marketing Institute, most Instagram users are in the “inspiration” or “research” stage when viewing food content. They tend not to buy products right away but simply save or like posts to look back on. This indicates that Instagram is more suitable as a brand image creation tool than as a direct promotional tool that influences purchasing decisions. Research by (Fakhira et al., 2022) also shows Instagram to be a popular choice for many consumers to seek visual and lifestyle inspiration. Unlike TikTok, Instagram allows users to explore visual content that is more aesthetically pleasing and sometimes accompanied by more informative product descriptions.

Twitter on Purchasing Decisions for Gacoan Noodles

Twitter has a coefficient of 0.217 and a p-value of 0.361, which indicates that its effect on purchasing decisions for Gacoan Noodles is also insignificant. This is in line with the characteristics of Twitter, which is more widely used as a platform for quick communication, news, or direct interaction than a means for direct sales promotion. One of the main reasons is the character of Twitter as a platform that is more often used for news, discussions, and quick updates. Research (Askaria, 2019) also said that Twitter is a more widely used platform for quick communication, news, and discussion. Twitter allows users to engage in more spontaneous and direct conversations than other platforms, but it has character limitations that often make it less suitable for detailed product promotion. Since content on Twitter is often limited by the number of characters, it is difficult for brands to convey detailed product information or arouse consumers' interest in buying immediately. While Twitter can increase brand engagement, its effects are more focused on long-term relationships and building loyalty

rather than driving immediate purchases. According to research by (Oktaviani & Estaswara, 2022) also said this is in line with Twitter's characteristics as a platform that is more effective for strengthening brand relationships through direct interaction and quick responses than for triggering direct purchases.

5. Conclusion

From the data above, the influence of social media such as TikTok, Instagram, and Twitter on Mie Gacoan's decision to buy something is not significant. TikTok has a coefficient of 0.236 and a p-value of 0.299, which indicates that entertainment and viral content are not deep enough to influence planned purchase decisions. Customers often consume the content quickly without seeking more information about the product. Instagram also has no significant influence, with a coefficient of 0.166 and a p-value of 0.342; the website focuses more on providing visual inspiration rather than promoting direct purchases. Despite its shopping features, users are usually still in the research stage and do not buy something after viewing the content. With a coefficient of 0.217 and a p-value of 0.361, Twitter emphasizes interaction and quick communication rather than direct sales promotion. Overall, although these three social media platforms can increase brand awareness and customer engagement with Gacoan Noodles, customers' buying decisions are not influenced by them. To convert conversion from interest to actual purchase, marketers should consider a more in-depth and informative marketing approach. Marketers should consider ways to provide more complete and relevant product information on each platform so that they can maximize the influence of social media on customer buying behaviour. The implications of this study are several important. From an academic perspective, the findings underscore the need for further research into the role of social media in purchasing decisions, particularly in the food sector. Future research could expand the scope by considering other factors such as product quality, consumer reviews, or comparisons with other social media platforms. In addition, this study contributes to the literature on the effectiveness of digital marketing strategies, which is relevant for academics in marketing and communication management. From a social perspective, the results show that social media content consumption patterns are heavily influenced by entertainment and aesthetic preferences rather than direct purchase goals. This reflects the changing behavior of consumers in the digital age, where quick and visual information often dominates but only sometimes deeply influences decision-making. This understanding can help companies and organizations to design more relevant and contextual content according to people's needs. For the public, this research highlights the importance of being a critical consumer in the digital age. While social media offers many opportunities to explore products, people must understand that wise purchasing decisions often require deeper information and more rational analysis. By doing so, consumers can avoid impulsive influences.

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THE INFLUENCE OF INFLUENCER MARKETING AND PRODUCT INNOVATION ON PURCHASING DECISIONS AT E-COMMERCE SHOPEE

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Abstract

This study aims to analyze the effect of influencer marketing and product innovation In the digital age, influencer marketing has become a significant factor influencing purchasing decisions on the Shopee e-commerce platform the effective marketing strategies for attracting consumer attention through the influence of individuals with a broad follower base. In addition, product innovation also plays a vital role in creating added value and differentiating products in a highly competitive market. This study employs a quantitative research methodology, utilizing data collected through questionnaires distributed to active Shopee users. The analysis of the data was performed using multiple linear regression techniques to measure the extent to which influencer marketing and product innovation influence consumer purchasing decisions. The results showed that influencer marketing significantly influences purchasing decisions through trust and content relevance. Product innovation is important in purchasing decisions because it increases consumer satisfaction and interest in the products offered. These findings provide practical implications for e-commerce businesses to maximize digital marketing strategies through collaboration with influencers and developing product innovations relevant to market needs. E-commerce serves as a moderating factor that enhances the connection between influencers and consumer purchasing decisions, while simultaneously diminishing the impact of product innovation on those same purchasing decisions.

Keyword: Influencer Marketing, Product Innovation, Purchase Decision, E-Commerce, Shopee

1. Introduction

The rapid development of e-commerce in Indonesia, especially the Shopee platform, has triggered various innovations in marketing strategies to attract consumers. One of the increasingly popular strategies is influencer marketing, which utilizes well-known figures on social media to promote products. According to research by (Jessica Novin Prananda Putri et al., 2023), influencer marketing can increase brand awareness and consumer trust, thus potentially driving purchasing decisions. In addition, research by (Nyoman Anjali Seruni et al., 2024). shows that recommendations from trusted influencers can strengthen consumer purchase intentions, especially among the younger generation who are active on digital platforms.

On the other hand, product innovation also plays an important role in attracting consumers' attention and maintaining their loyalty. Research by (Aldira Layza Madina, 2024) (Aldira Layza Madina, 2024) revealed that products that are constantly updated with new features are able to increase competitiveness in a competitive market3. This innovation includes not only the physical aspects of the product but also digital features such as applications and customer service. This is in line with the findings by (Firdaus et al., 2021) (Firdaus et al., 2021), which show that innovations in e-commerce services, such as the development of interactive features and more flexible payment methods, can improve the consumer shopping experience and drive

purchasing decisions. Thus, this study aims to analyze the effect of influencer marketing and product innovation on consumer purchasing decisions at Shopee. The results of this study can provide deeper insight into the factors that influence shopping behaviour on the e-commerce platform. As stated by Subianto & Basuki, (2024), understanding the influence of these two factors is very important to formulate effective marketing strategies in facing competition in the e-commerce industry.

The rapid development of e-commerce in Indonesia, especially the Shopee platform, has triggered various innovations in marketing strategies to attract consumer interest. One of the increasingly popular strategies is influencer marketing, which utilizes well-known figures on social media to promote products. According to research by Jessica Novin Prananda Putri et al., (2023) , influencer marketing can increase brand awareness and consumer trust, thus potentially driving purchasing decisions. In addition, research by (Nyoman Anjali Seruni et al., 2024) shows that recommendations from trusted influencers can strengthen consumer purchase intentions, especially among the younger generation who are active on digital platforms. On the other hand, product innovation also plays an important role in attracting consumer attention and maintaining their loyalty. Research by Aldira Layza Madina, (2024) revealed that products that are constantly updated with new features are able to increase competitiveness in a competitive market. This innovation includes not only the physical aspects of the product but also digital features such as applications and customer service. This is in line with the findings by Firdaus et al., (2021), which show that innovations in e-commerce services, such as the development of interactive features and more flexible payment methods, can improve the consumer shopping experience and drive purchasing decisions. Thus, this study aims to analyze the effect of influencer marketing and product innovation on consumer purchasing decisions at Shopee. The results of this study can provide deeper insight into the factors that influence shopping behaviour on these e-commerce platforms. As stated by Subianto & Basuki, (2024), understanding the influence of these two factors is very important to formulate effective marketing strategies in facing competition in the e-commerce industry.

2. Literature review

2.1. Purchase Decision

Various external and internal factors influence consumer purchase decisions. In this study, it was found that influencer marketing significantly influences purchase decisions through increased trust and content relevance. Research shows that when consumers see recommendations from influencers they trust, they tend to be more open to trying new products, thus increasing the likelihood of a transaction. This is in line with research conducted by Fitrianti et al. (2022), who found that influencer marketing can significantly increase consumer purchasing decisions by creating a strong emotional connection between influencers and their audience (Arti Sukma Lengkawati & Taris Qistan Saputra, 2021; Majid & Nur Faizah, 2024). This confirms the importance of selecting influencers that match the target market to maximize the impact on purchase decisions.

2.2. Influencer

Influencer marketing has proven to be effective in building relationships between brands and consumers. Influencers who have an emotional attachment to their audience are able to create more authentic and relatable content, thus increasing engagement levels. Research by (Majid & Nur Faizah, 2024) shows that influencers with smaller but more engaged followings are often more effective compared to prominent influencers who are less personally connected to their audience. This suggests that influencer selection strategies should consider not just the

number of followers but also the quality of their interactions. Thus, marketers need to identify influencers who are not only popular but also have credibility and relevance within their market niche.

2.3. Product Innovation

Product innovation plays an important role in attracting consumer attention in the e-commerce market. New or updated products can meet the changing needs of consumers and increase brand competitiveness in the market. Research by (Aldira Layza Madina, 2024; Firdaus et al., 2021) shows that innovation not only increases customer satisfaction but also strengthens brand loyalty, as consumers tend to return to buy products from brands that continue to innovate and offer new solutions to their needs. Therefore, companies must continue to invest in product development to remain relevant in the market. The right product innovation can be a determining factor in attracting consumer attention and encouraging purchasing decisions.

2.4. E-Commerce

In the context of e-commerce, digital platforms such as Shopee provide easy access and convenience for consumers in making transactions. Research by (Arti Sukma Lengkawati & Taris Qistan Saputra, 2021; Majid & Nur Faizah, 2024) shows that a good shopping experience on an e-commerce platform can strengthen purchasing decisions. E-commerce not only functions as a distribution channel, but also as a medium to communicate product values to consumers. With various interactive features and flexible payment methods, e-commerce is able to create a pleasant shopping experience for consumers, thus increasing their likelihood of making a purchase. Therefore, the integration between influencer marketing, product innovation, and e-commerce platforms is crucial to increase consumer appeal and satisfaction.

3. Methodology

This study uses a quantitative approach with a survey method to collect data from consumers who actively shop on the Shopee e-commerce platform and are exposed to influencer marketing campaigns. The research sample consists of individuals who have shopping experience on Shopee and have been exposed to various promotions conducted by influencers (Budi Harto et al., 2023). Data was collected through a questionnaire designed to measure consumers' perceptions of influencer marketing, product innovation, as well as their purchasing decisions. The questionnaire included questions relating to the level of trust in the influencer, the appeal of the product innovation, and the influence of both on the decision to purchase. Data collection was conducted online to ensure broader and more representative participation from the target population.

The analysis technique used in this study is multiple regression analysis with SmartPLS statistical software. This method was chosen for its ability to handle complex models and provide more accurate parameter estimates in the context of relationships between variables. The test is carried out by setting a significance level of 5%, which is a reference to determine whether there is a significant influence between the independent variables (influencer marketing and product innovation) on the dependent variable (purchase decision). The results of this analysis are expected to provide deep insight into how these two factors interact and influence consumer shopping behavior on e-commerce platforms, as well as contribute to the development of more effective marketing strategies in the future.

4. Results and discussions

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Table 1. Average Variance Extracted (AVE) Test Results

	Average Variance Extracted (AVE)
Eccomerce	0.422
Influencer	0.465
Product Innovation	0.359
Customer Decision	0.449

Source: SmartPLS (2025)

Information Table 1 can be concluded that the Average Variance Extracted (AVE) value on each Influencer variable (X1) is 0.422, the Product Innovation variable (X2) is 0.465, the Ecommerce variable (X3) is 0.359 and the Purchasing Decision (Y) is 0.449. So, all variables in this study have an AVE value <0.50 and are declared invalid.

Reability Test Results

Table 2. Cronbach Alpha Test Results

	Cronbach's Alpha
Eccomerce	0.663
Influencer	0.704
Product Innovation	0.547
Customer Decision	0.694

Source: SmartPLS (2025)

Information table 2 can be concluded that the value of the Influencer variable (X1) has a Cronbach alpha value of 0.663 or> 0.70, which means that this variable has a low level of reliability. The Product Innovation variable (X2) has a Cronbach alpha value of 0.704 or> 0.70, which indicates that this variable also has a high level of reliability. In addition, the Ecommerce variable (X3) has a Cronbach alpha value of 0.547, which is also> 0.70 and indicates a low level of reliability and the dependent variable, namely Purchasing Decisions (Y), has a Cronbach alpha value of 0.694 or> 0.70, which means that this variable has a low level of reliability. From the reliability test results, it can be concluded that only the Influencer variable is declared reliable.

Inner Model Results

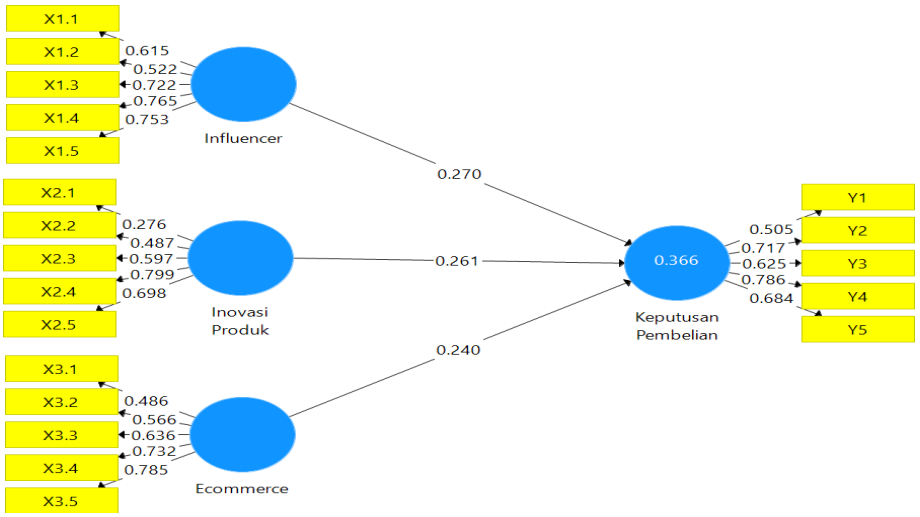
Table 3. R Square Test Results

	R Square	Adjusted R Square
Customer Decision	0.366	0.346

Source: SmartPLS (2025)

Table 3 information can be concluded that the R-Square value on the Purchase Decision variable is 0.366, which indicates that the model does not have a strong relationship. This means that 36.6% of the Purchasing Decision variable is influenced by the factors studied, while the remaining 63.4% is influenced by other variables that have not been studied.

Bootstrapping Test Results



Source: SmartPLS (2025)

Figure 1. Bootstrapping Test Results

The information in Figure 1 above is the result of this hypothesis test carried out to determine the effect of a construct on other constructs. Where a variable can be said to have an effect if the P-ValueP-Value value is> 0.05 or 5%, but if the P-ValueP-Value value is <0.05 or 5%, then the variable can be said not to affect other variables.

Path Coefficient Test Results

Table 4. Path Coefficient Test Results

	Original Sample (O)	Average Sample (M)	STD EV	(O/STDEV)	P Values
E → KP	0.240	0.262	0.121	1.978	0.049
I → KP	0.270	0.273	0.093	2.890	0.004
IP → KP	0.261	0.287	0.098	2.672	0.008

Source: SmartPLS (2025)

From Table 4 above, it can be concluded that:

E-commerce on Purchasing Decisions**:** It is known that the P Values value of 0.049 is smaller than 0.05. Therefore, there is an influence between the E-commerce variable on Purchasing Decisions. Influencer on Purchasing Decisions It is known that the P Values value of 0.004 is smaller than 0.05. Therefore, there is an influence between the Influencer variable on Customer Decisions. Product Innovation on Purchasing Decisions is known that the P Values value of 0.008 is smaller than 0.05. Therefore, there is an influence between the Product Innovation variable on Customer Decisions. Overall, the path coefficient analysis shows that all variables have a significant influence on Purchasing Decisions.

Discussion

The Effect of E-Commerce on Purchasing Decisions

The results showed that e-commerce has a significant influence on purchasing decisions, with a P-value of 0.049, which is smaller than 0.05. This shows that e-commerce variables contribute to facilitating the consumer buying process through the ease of access and convenience offered. This finding is in line with research by (Laudon Carol Guercio Traver et al., n.d.)), which states that user experience on e-commerce platforms greatly influences purchasing decisions. E-commerce not only functions as a distribution channel, but also as a

medium for communicating product values to consumers. Research by (Ye et al., 2023) highlights the importance of interactive features in e-commerce, which can increase consumer engagement and drive purchase decisions. Thus, marketers need to ensure that their e-commerce platforms are not only visually appealing but also functional to enhance consumers' shopping experience.

Influencer Influence on Purchasing Decisions

The influence of influencer marketing on purchasing decisions is also significant, with a P-value of 0.004. This shows that recommendations from trusted influencers can strengthen consumer purchase intentions, especially among the younger generation who are active on digital platforms. Research by (Freberg et al., 2011) supports these findings by showing that influencers can build trust and credibility among their audience, which in turn drives purchase decisions. In addition, (Kanwar and Huang, 2022) found that influencer marketing can create a strong emotional connection between brands and consumers, thus increasing the likelihood of a transaction. Therefore, marketers need to select influencers that match their target market to maximize the impact on purchase decisions.

The Effect of Product Innovation on Purchasing Decisions

The effect of product innovation on purchasing decisions also shows significant results, with a P-value of 0.008. Research by (Aldira Layza Madina, 2024) confirms that product innovation that is constantly updated with new features can increase competitiveness in a competitive market. This innovation includes not only the physical aspects of the product but also digital features such as applications and customer service, which contribute to increased consumer satisfaction. This finding is in line with research by (Firdaus et al., 2021), which shows that innovations in e-commerce services, such as the development of interactive features and more flexible payment methods, can improve consumers' shopping experience and drive purchasing decisions.

5. Conclusion

. The conclusion of this study shows that both influencer marketing and product innovation have a significant influence on consumer purchasing decisions on the Shopee e-commerce platform. The results of the analysis show that influencer marketing can increase consumer trust and content relevance, which in turn drives purchasing decisions. In addition, product innovation that is constantly updated with new features is also proven to contribute to consumer satisfaction and loyalty, Thus, to maximize marketing strategies in this digital era, e-commerce businesses need to integrate both aspects. Collaboration with the right influencers and development of relevant product innovations will be crucial to attract consumer interest and increase purchase decisions. This research provides valuable insights for marketers in formulating more effective marketing strategies to face competition in the e-commerce industry, and confirms that an in-depth understanding of consumer behavior is necessary to achieve success in digital marketing.

social, academic and societal implications of this research are significant. Socially, the results show that influencer marketing and product innovation not only have an effect on consumer purchasing decisions but also create stronger relationships between brands and audiences. This may encourage companies to pay more attention to ethics in selecting influencers, ensuring that they are not only popular but also have credibility and relevance to the products being promoted. On the academic side, the findings contribute to the digital marketing literature by highlighting the importance of product innovation and influencer strategy in the context of e-commerce in Indonesia. This research can serve as a reference for future studies that want to explore the relationship between digital marketing and consumer

behaviour, as well as provide insights for researchers to develop more comprehensive methods in analyzing the factors that influence purchasing decisions.

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FINANCIAL AGILITY IN FMCG FIRMS: ANALYZING THE POST-PANDEMIC NEXUS OF WORKING CAPITAL AND PROFITABILITY

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Abstract

This study aims to analyze the effect of working capital management and capital structure on the financial performance of Fast-Moving Consumer Goods (FMCG) companies in Indonesia after the COVID-19 pandemic. The independent variables used in this study include the Quick Ratio (QR) as an indicator of working capital management, and the Debt to Equity Ratio (DER) and Short-Term Debt to Asset Ratio (STDTA) as indicators of capital structure. Financial performance is measured using the Return on Capital Employed (ROCE). A quantitative approach with a panel data-based multiple linear regression method was applied. The sample consisted of 29 non-cyclical FMCG companies listed on the Indonesia Stock Exchange during the 2021–2024 period, selected using purposive sampling. The results show that QR and STDTA have a significant positive effect on ROCE, while DER does not have a significant effect. These findings highlight the importance of efficient liquidity and capital structure management in enhancing corporate profitability in the post-pandemic era.

Keywords: *Fast-Moving Consumer Goods; Quick Ratio; Debt to Equity Ratio; Short-Term Debt to Asset; ROCE*

VALUE CO-CREATION IN DIGITAL PLATFORMS: IMPACT ON CUSTOMER SATISFACTION AND WELL-BEING

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Abstract

In the era of digital transformation, it is increasingly urgent to understand how customer participation in service delivery impacts not only satisfaction but also long-term psychological well-being. This study explores how value co-creation (VCC) in digital platforms contributes to customer satisfaction and further enhances customer well-being. Grounded in the Service-Dominant Logic (S-D Logic) and Transformative Service Research (TSR), the research focuses on the influence of participatory digital experiences on affective and psychological consumer outcomes.

Data were gathered from 230 Indonesian users aged 17–27 who actively engage with digital platforms. Using Structural Equation Modeling with the Partial Least Squares (SEM-PLS) method, the analysis reveals that value co-creation significantly increases customer satisfaction. Furthermore, satisfied users demonstrate higher levels of emotional, psychological, and social well-being. This indicates that participatory actions—such as feedback provision, service customization, and collaborative content creation—not only improve service perception but also contribute to a more meaningful and empowering customer experience.

The findings strengthen the theoretical linkage between co-creation and well-being by validating satisfaction as a key driver. Practically, the study suggests that digital service providers should prioritize co-creative service strategies to deliver deeper, more fulfilling value to consumers.

1. Introduction

In the digital era, the nature of value creation in service delivery has undergone a major transformation. Customers are no longer passive recipients of products and services; they actively participate in shaping experiences, providing feedback, and co-creating value with service providers (Vargo & Lusch, 2004; Ramaswamy & Ozcan, 2016). This paradigm shift, conceptualized under the Service-Dominant Logic (SDL), emphasizes that value is not embedded in offerings but is co-created through dynamic interactions between firms and consumers (Vargo & Lusch, 2008). This interaction-centric view becomes especially relevant for younger generations who demand personalized, responsive, and meaningful digital experiences.

Despite the growing adoption of value co-creation strategies, its deeper psychological implications—particularly in terms of customer well-being—remain insufficiently explored. While customer satisfaction has long been recognized as a key outcome of service quality (Oliver, 1997), only a limited number of studies have extended this analysis to examine its role as a predictor of emotional, psychological, and social well-being (Anderson *et al*., 2013). Moreover, studies that integrate satisfaction as a bridge between value co-creation and well-

being in digital service environments, especially in emerging economies like Indonesia, are still scarce. This gap presents both a theoretical and practical challenge.

Therefore, the objective of this study is to examine how value co-creation in digital platforms influences customer satisfaction and how this satisfaction subsequently contributes to customer well-being. Using a simplified model based on empirical testing, the research focuses on understanding whether customer participation through digital services leads to affective and psychological gains, especially among Indonesian Gen Z users.

The findings of this study are expected to offer significant contributions. Theoretically, it provides empirical support for the integration of Service-Dominant Logic and Transformative Service Research (TSR), showing how customer participation can enhance not only satisfaction but also broader life outcomes (Anderson *et al*., 2013). Practically, this research can inform service designers and digital platform developers on how to structure more engaging, empowering, and meaningful service experiences that elevate user well-being.

To ensure conceptual clarity, the core variables of this study are defined as follows. Value Co-Creation refers to customer participation in the design, delivery, or evaluation of services, including giving feedback, customizing experiences, and generating content (Prahalad & Ramaswamy, 2004). Customer Satisfaction is defined as the consumer's emotional and cognitive evaluation of whether a service has met or exceeded expectations (Oliver, 1997). Customer Well-Being is defined as the perceived emotional, psychological, and social benefit that consumers gain from service interactions (Anderson *et al*., 2013).

2. Literature Review

2.1 Value Co-Creation (VCC)

Value Co-Creation (VCC) refers to the collaborative process in which consumers actively engage with service providers to create meaningful and personalized experiences. This concept originates from the Service-Dominant Logic (SDL) paradigm, which posits that value is not created solely by firms, but through the dynamic interaction between the firm and the customer (Vargo & Lusch, 2004, 2008). Unlike traditional marketing logic, which views customers as passive recipients, SDL emphasizes the active role of customers in shaping value through participation, customization, and feedback.

Prahalad & Ramaswamy (2004) further developed the VCC concept by introducing the four building blocks of co-creation: dialogue, access, risk-benefit, and transparency. In digital platforms, value co-creation is operationalized through user-generated content, online reviews, product customization, and co-design activities. Ramaswamy & Ozcan (2016) argue that digital technology has significantly expanded the scope of co-creation by enabling real-time interaction and user empowerment.

Empirical studies show that customers who engage in co-creation exhibit higher levels of engagement, loyalty, and perceived service quality (Yi & Gong, 2013). Moreover, co-creation leads to positive psychological responses, including a sense of control, autonomy, and

recognition (Chathoth *et al*., 2014). These responses are foundational to the development of customer satisfaction and longer-term relational outcomes.

2.2 Customer Satisfaction

Customer Satisfaction is a well-established construct in marketing literature, commonly defined as the customer's evaluative judgment regarding a service or product's ability to meet or exceed expectations (Oliver, 1997). It encompasses both cognitive assessments and emotional reactions, forming the basis for consumer loyalty, repeat purchase intentions, and positive word-of-mouth (Anderson & Srinivasan, 2003).

Satisfaction has often been conceptualized as the result of a disconfirmation process, where customer expectations are compared to perceived performance (Oliver, 1980). When performance matches or surpasses expectations, satisfaction increases. In digital service contexts, satisfaction is influenced by responsiveness, personalization, convenience, and interactivity (Zeithaml *et al*., 2002).

Recent literature also recognizes the mediating role of satisfaction in linking various experiential and psychological variables. For instance, satisfaction is seen as a critical intermediary outcome that translates service experience into more complex outcomes, such as trust, loyalty, or well-being (Brady & Cronin, 2001; Homburg, Koschate, & Hoyer, 2006).

In the context of value co-creation, studies suggest that when customers are involved in service design and decision-making, their satisfaction levels increase due to perceived control, personalization, and social validation (Grissemann & Stokburger-Sauer, 2012).

2.3 Customer Well-Being

Customer Well-Being (CWB) refers to the overall emotional, psychological, and social benefits that individuals derive from consumption experiences. It extends beyond transactional satisfaction and incorporates elements of positive affect, sense of purpose, autonomy, and social connectedness (Anderson *et al*., 2013; Sirgy, 2021). CWB is a central concept in Transformative Service Research (TSR), which seeks to explore how service systems can enhance the lives of individuals and communities (Ostrom *et al*., 2015).

In digital contexts, CWB is influenced by factors such as personalization, empowerment, emotional engagement, and perceived support (Rosenbaum & Massiah, 2011). When customers feel heard, respected, and involved in value creation, their service experiences contribute positively to their subjective well-being.

Anderson *et al*. (2013) propose that service experiences designed with empathy, transparency, and participatory principles are more likely to yield transformative effects, including enhanced quality of life and individual flourishing. Moreover, satisfaction has been found to be a strong predictor of well-being, suggesting that fulfilling service interactions lay the foundation for deeper emotional outcomes (Sirgy & Lee, 2006).

Thus, customer well-being should be considered a strategic goal for digital service providers seeking to build meaningful, long-term relationships with users—particularly in high-engagement sectors such as tourism, e-commerce, and digital platforms.

3. Methodology

3.1 Research Paradigm

This study adopts a **positivist paradigm**, which emphasizes objective measurement and hypothesis testing using quantitative data. The goal is to examine causal relationships between value co-creation, customer satisfaction, and customer well-being using empirical evidence. The positivist approach is appropriate for studies that aim to validate theories through statistical testing (Creswell, 2014), particularly when working with established constructs and structured instruments.

3.2 Unit of Analysis and Observation

The **unit of analysis** in this study is the **individual consumer** who uses digital platforms, while the **unit of observation** is each respondent's perception as captured through their answers in the survey instrument. Respondents were selected based on their active use of digital platforms and their experience in interacting with digital service features such as feedback mechanisms, customization, and content bicontribution.

3.3 Research Method

A **quantitative research method** was employed, using a **cross-sectional survey design** to collect data at a single point in time. This approach allows for the identification of statistical relationships between variables and is suitable for testing structural models using SEM-PLS. The survey method was chosen for its ability to reach a large number of participants efficiently and generate standardized data for analysis (Malhotra, 2010).

3.4 Operationalization of Variables

The three core constructs in this study were operationalized based on validated measurement scales from prior literature:

- **Value Co-Creation (VCC)** was measured using four dimensions: feedback participation, content contribution, co-design, and personalization (adapted from Prahalad & Ramaswamy, 2004; Yi & Gong, 2013).
- **Customer Satisfaction (CS)** was measured using cognitive and affective items capturing customer evaluation of service performance (Oliver, 1997).
- **Customer Well-Being (CWB)** was assessed using emotional, psychological, and social indicators (Anderson *et al*., 2013; Sirgy, 2021).

All items were rated using a **5-point Likert scale** ranging from 1 (strongly disagree) to 5 (strongly agree).

3.5 Questionnaire Design

The questionnaire was divided into three main sections:

1. **Demographic Profile:** Age, gender, occupation, frequency of digital platform use.
2. **Screening Questions:** Confirming active use of digital platforms and engagement with interactive features.
3. **Main Constructs:** A series of closed-ended statements measuring VCC, CS, and CWB.

The questionnaire was pre-tested with 30 respondents to ensure clarity, reliability, and face validity. Revisions were made based on feedback before full deployment.

3.6 Data Collection Procedure

Data were collected through **online distribution** using Google Forms over a four-week period. A **purposive sampling** method was applied, targeting individuals aged 17–27 who actively use digital platforms in Indonesia. To ensure data integrity:

- Each IP address was restricted to one submission.
- Incomplete responses were excluded.
- Participation was voluntary and anonymous, with informed consent provided at the beginning of the form.

3.7 Data Analysis Techniques

Data analysis was performed using **Structural Equation Modeling (SEM)** with the **Partial Least Squares (PLS)** technique, facilitated by SmartPLS 4.0 software. The following procedures were applied:

- **Descriptive Analysis:** To summarize respondent demographics.
- **Measurement Model Evaluation:** Testing reliability (Cronbach's Alpha, Composite Reliability), convergent validity (Average Variance Extracted/AVE), and discriminant validity (Fornell-Larcker criterion).
- **Structural Model Evaluation:** Path coefficient analysis, R^2 for endogenous variables, and bootstrapping to assess the significance of the relationships.

This method is suitable for predictive research and theory development, particularly when the model involves latent constructs with multiple indicators (Hair *et al*., 2019).

3.8. Research Model

H1:*Value Co-Creation positively influences Customer Satisfaction.*
H2:*Customer Satisfaction positively influences Customer Well-Being.*

4. Results And Discussion

4.1 Results

This study used **Partial Least Squares Structural Equation Modeling (PLS-SEM)** to examine the structural relationships between value co-creation, customer satisfaction, and customer well-being. Data from **230 respondents** were analyzed using SmartPLS 4.0, following two stages: evaluation of the **measurement model (outer model)** and the **structural model (inner model)**.

4.1.1 Measurement Model Evaluation

The measurement model was assessed to verify the reliability and validity of the constructs.

- **Convergent Validity**: All indicator loadings exceeded the recommended threshold of 0.70. The **Average Variance Extracted (AVE)** values were above 0.50 for all constructs, indicating adequate convergent validity (Hair *et al*., 2019).
- **Internal Consistency Reliability**:
  - Value Co-Creation: Cronbach's Alpha = 0.891; Composite Reliability (CR) = 0.917
  - Customer Satisfaction: Cronbach's Alpha = 0.866; CR = 0.901
  - Customer Well-Being: Cronbach's Alpha = 0.878; CR = 0.912
    All values exceeded the 0.70 threshold, indicating strong internal consistency.
- **Discriminant Validity**: The **Fornell-Larcker criterion** was satisfied for all constructs, where the square root of AVE for each variable was greater than the inter-construct correlations. Additionally, **cross-loading analysis** confirmed that all indicators loaded highest on their respective constructs.

4.1.2 Structural Model Evaluation

After confirming the measurement model, the structural model was tested using **bootstrapping (5,000 subsamples)**. The **coefficient of determination (R^2)** and **path coefficients** were used to evaluate model performance.

- **R^2 for Customer Satisfaction** = 0.486
  (48.6% of the variance in satisfaction is explained by value co-creation)
- **R^2 for Customer Well-Being** = 0.531
  (53.1% of the variance in well-being is explained by satisfaction)

The **path coefficients and their statistical significance** are presented below:

Path	**Coefficient (β)**	**t-value**	**p-value**	**Result**
Value Co-Creation → Satisfaction	0.678	14.27	< 0.001	Supported
Satisfaction → Customer Well-Being	0.649	12.81	< 0.001	Supported

These results confirm that both relationships in the model are statistically significant and positive. Value co-creation has a strong and direct effect on customer satisfaction, and satisfaction significantly enhances customer well-being.

4.2 Discussion

The findings of this study reveal that customer participation in value co-creation on digital platforms plays an important role in enhancing customer satisfaction. When customers are involved in giving feedback, customizing services, or contributing content, they feel more

valued and empowered in shaping their own service experience. This sense of involvement leads to a more positive perception of the platform and increases overall satisfaction.

This aligns with the perspective of Service-Dominant Logic, which emphasizes that value is not delivered by the company alone, but is co-created through interaction between the service provider and the customer (Vargo & Lusch, 2008). In digital environments, value co-creation becomes easier and more dynamic, allowing users to feel directly involved in the service process.

Moreover, the study confirms that customer satisfaction contributes significantly to customer well-being. Satisfied customers do not just feel happy with the service—they also experience emotional and psychological benefits such as feeling appreciated, more connected, and emotionally uplifted. This supports the foundation of Transformative Service Research, which suggests that well-designed service experiences should improve the lives of customers beyond mere functional value (Anderson *et al*., 2013).

In conclusion, value co-creation enhances satisfaction, and satisfaction plays a key role in fostering customer well-being. Satisfaction is not only an end goal for service providers but also a powerful bridge toward building long-term emotional and psychological well-being for digital users.

5. Conclusion

5.1 Conclusion

This study investigated the relationship between value co-creation, customer satisfaction, and customer well-being within the context of digital platforms. The findings confirm that value co-creation plays a critical role in enhancing customer satisfaction, and that satisfaction, in turn, contributes meaningfully to customer well-being. These results highlight the importance of shifting from traditional, provider-centric service approaches to participatory models where customers are actively involved in shaping their own experiences.

By integrating Service-Dominant Logic and Transformative Service Research, this study affirms that services should not only meet functional needs but also foster emotional, psychological, and social benefits for users. Satisfaction is shown to be a key mechanism through which co-created experiences translate into well-being, especially for digital users who seek interactive and empowering service journeys.

5.2 Limitations

While the study provides valuable insights, several limitations must be acknowledged. First, the sample was limited to 230 respondents within the 17–27 age group, which may not represent older or less tech-savvy populations. Second, the research applied a cross-sectional design, capturing perceptions at a single point in time. This limits the ability to infer long-term behavioral or psychological effects. Third, self-reported measures may be subject to social desirability bias or inaccuracies in individual perception.

5.3 Future Research Directions

Future studies could expand on this research in several ways. Longitudinal research designs would allow scholars to examine how satisfaction and well-being evolve over time through continuous co-creation. Comparative studies across age groups, industries (e.g., tourism, e-commerce, health tech), or cultural settings would enhance generalizability. Furthermore, future research may explore **moderating variables**, such as **trust**, **digital literacy**, or **user personality traits**, to understand under what conditions value co-creation has the strongest impact on satisfaction and well-being.

By addressing these areas, researchers and practitioners alike can gain a more comprehensive understanding of how digital services can be designed to support both satisfaction and holistic customer well-being.

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THE EFFECT OF BRAND AMBASSADOR AND WORD OF MOUTH ON REPURCHASE INTENTION THROUGH BRAND IMAGE MINERAL WATER AQUA IN DKI JAKARTA

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Abstract

This study focused on how much influence the figure known to the public as a Brand Ambassador and word of mouth can influence Repurchase Intention through Brand Image. The sample used in this study was 96 respondents who were consumers of AQUA mineral water in DKI Jakarta. The results of this study indicate that Brand Ambassador does not influence Repurchase Intention and does not have a significant positive effect on Brand Image, so Brand Ambassador does not have a positive and significant effect on Repurchase Intention through Brand Image. Brand Image has a positive and significant effect on Repurchase Intention. While Word of Mouth has a positive and significant effect on Repurchase Intention and Brand Image. So Word of Mouth has a positive and significant effect on Repurchase Interest through Brand Image.

Keywords: *Brand Ambassador, Word of Mouth, Brand Image, Repurchase Intetion*

ANALISIS BEBAN KERJA TERHADAP ORGANIZATIONAL CITIZENSHIP BEHAVIOR PADA GURU HONORER SD NEGERI PASIRIPIS

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Abstract

Organizational Citizenship Behavior (OCB) refers to voluntary work behaviors beyond formal duties that positively impact the effectiveness and productivity of an organization, including educational institutions. One factor that can encourage the emergence of OCB is a well-managed workload. This study aims to analyze the influence of workload on Organizational Citizenship Behavior (OCB) among honorary teachers at SD Negeri Pasiripis. These teachers are not only responsible for teaching but also carry out administrative duties, which significantly increase their workload. This research employs a qualitative approach, with data collected through observation, interviews, and documentation involving six honorary teachers as informants. The findings indicate that an appropriate workload such as dual roles in teaching and administration contributes to the development of strong OCB traits, including altruism, courtesy, and civic virtue. However, excessive workloads also lead to physical and mental exhaustion, which can diminish teaching quality. Therefore, while workload can enhance OCB, a balanced task distribution is necessary to maintain optimal teacher performance. This study provides valuable insights into human resource management in the educational sector, particularly in managing the responsibilities of honorary teachers, by emphasizing the importance of OCB in creating a positive work environment, strengthening collaboration among colleagues, and encouraging performance that exceeds formal expectations. These findings underscore the need for serious attention to the development and reinforcement of OCB among educators.

Keywords: *Workload, Organizational Citizenship Behavior*

PREDICTION OF CNY/IDR EXCHANGE RATE USING MOVING AVERAGE, EXPONENTIAL SMOOTHING, AND REGRESSION FAMILY MODELS

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Abstract

This research aims to compare the forecasting performance among moving average, exponential smoothing, and regression models. The forecast object is CNY/IDR exchange rate. CNY has been known to be a managed float currency and the literature is scant that attempt to forecast CNY exchange rates. The data in this research spanned from the first week of 2018 until the second week of December 2024. The data were split into training and test data. The forecast accuracy is measured using Mean Absolute Percentage Error (MAPE). The results showed that moving average (MA) with an order of 4 is the best performing among MAs. For exponential smoothing, the α of 0.1 is the best for the exponential smoothing models. Lastly, regression using autoregressive component and trend is the best for regression models. When we compare MA with exponential smoothing and regression models, exponential smoothing is the best. This indicates that exponential smoothing with α of 0.1 can deal with uncertainties. Because this means 10% of the forecast component of exponential smoothing coming from the actual value, and the rest from previous forecasts. This previous forecast component is able to cope with uncertainty in the exchange rate movement. The forecast error of exponential smoothing is 0.281% while MA(4) is 0.286%. For regression with an autoregressive component and a trend the error is 0.343%. Future research may compare the performance of the exponential smoothing method with deep learning method.

PROFITABILITY UNDER PRESSURE: THE INTERPLAY OF FINANCIAL RISKS AND CORPORATE AGE IN INDONESIAN BANKING AND MULTIFINANCE SECTORS

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Abstract

This study aims to analyse the effects of credit, liquidity, and operational risks on the profitability of companies in the banking and multifinance sectors, with the age of the company's IPO as moderator. The study uses multiple linear regression analysis with moderated regression analysis (MRA) as interaction variables. The sampling method used is purposive sampling with a sample of 172 companies in the banking and multifinance sectors listed on the Indonesia Stock Exchange from 2020 to 2023. The results of the study show that credit risk and liquidity risk do not affect the profitability of banking and multifinance companies, while operational risk in banking and multifinance companies has a negative impact on profitability. The IPO age variable in banking companies shows a negative impact on profitability, while in multifinance companies, the IPO age has a positive impact on profitability. Additionally, the IPO age variable only moderates the operational risk variable in banking companies.

Keywords: Credit Risk, Liquidity Risk, Operational Risk, Profitability, IPO

PENGARUH MODEL TAM TERHADAP *ATTITUDE* DAN *BEHAVIORAL INTENTION*: SEBUAH KAJIAN TERHADAP DOKTER DI RUMAH SAKIT KELAS C DI PULAU JAWA

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Abstract

Digital transformation through the implementation of Electronic Medical Records (EMR) is a strategic national agenda in Indonesia. However, the adoption rate of EMR remains low, particularly in Type C hospitals, reflecting significant barriers to technology acceptance among medical professionals. This study investigates the influence of the Technology Acceptance Model (TAM) on physicians' attitudes and behavioral intentions, while also examining the roles of discomfort, outcomes expectation, and technology self-efficacy. Data were collected from doctors at Type C hospitals across Java and analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM). The results reveal that TAM, through perceived usefulness and perceived ease of use significantly affects attitude, and that attitude significantly influences behavioral intention. Behavioral intention was also found to have a significant effect on actual use. Discomfort negatively but significantly impacts TAM perceptions. However, the direct relationship between TAM and behavioral intention was not supported. Additionally, outcomes expectation failed to moderate the attitude–behavioral intention link, and technology self-efficacy did not moderate the relationships between TAM and either attitude or behavioral intention. These findings underscore the importance of addressing internal psychological and organizational readiness in promoting EMR adoption. The integration of TAM and Resource-Based Theory provides valuable insights for developing targeted interventions in resource-constrained hospital settings.

Keywords: Technology Acceptance Model (TAM), Electronic Medical Records (EMR), attitude, behavioral intention, actual use, discomfort, self-efficacy, outcomes expectation

STRENGTHENING GREEN LOYALTY: HOW GREEN MARKETING, GREEN PERCEIVED VALUE, AND ENVIRONMENTAL CONCERN DRIVE GREEN SATISFACTION A STUDY OF UNIQLO'S CONSUMER IN BANDUNG METROPOLITAN

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Abstract

The objective of this study is to identify, examine, and analyze the influence of green marketing on green customer satisfaction, the influence of green perceived value on green customer satisfaction, the influence of environmental concern on green satisfaction, and the influence of green satisfaction on green customer loyalty of Uniqlo consumers in Bandung Metropolitan. Data were collected from respondents aged between 17 and 55 years old, residing in the Bandung Metropolitan area, and having purchased Uniqlo's green products at least twice in the past year. The analysis was performed using Lisrel - Structural Equation Modeling version 8.8. The findings reveal that green marketing, green perceived value, and environmental concern simultaniously contribute 73.6% to green customer satisfaction with Uniqlo in Bandung Metropolitan, while the remaining 26.4% is influenced by other variables. Partially, green marketing contributes 18.5%, green perceived value 24.4%, and environmental concern 30.7% to green satisfaction. Additionally, green satisfaction has been proven to have a significant influence of 79.9% on green loyalty among Uniqlo consumers in Bandung Metropolitans.

Keywords: Green Marketing, Green Perceived Value, Environmental Concern, Green Satisfaction, Green Loyalty

DETERMINANTS OF CAPITAL STRUCTURE IN INFRASTRUCTURE COMPANIES LISTED IN INDONESIA

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Abstract

This research examines the Determinants of Capital Structure in Infrastructure Companies listed in Indonesia during the 2017-2023 period. The study employs purposive sampling to select 16 companies as the research sample and uses multiple linear regression for data analysis. The findings reveal that Firm Size, Profitability, Business Risk, and Current Ratio significantly affect the Capital Structure of infrastructure sector companies, while Asset Structure has no significant effect on Capital Structure.

Keywords: Capital Structure, Asset Structure, Firm Size, Profitability, Business Risk, Current Ratio.

DISRUPTIVE BANKING TECHNOLOGIES AND INSTITUTIONAL PERFORMANCE: A PANEL ANALYSIS OF INDONESIAN BANKS

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Abstract

This study aims to discover and analyze the influence of the development of digital banking on the performance of banks listed in IDX 2016-2024. The sample technique applied by the researcher was purposive sampling and it was found that there are twelve banks that were in accordance with KBMI book 3 and KBMI book 4 which adopted digital banking services earlier and later than which were listed on IDX 2016-2024. The variables examined in this study consist of Return on Assets (ROA). Return On Equity (ROE), Net Profit Margin (NPM), digital banking, firm size, Non-Performing Loan (NPL), and Non-Interest Income (NII). This study compares the financial performance of banks which adopted digital banking services earlier and later and uses using multiple linear regression model with IBM SPSS 25 software. The result shows that there are differences on financial performance of banks in Indonesia on 2016-2024 where banks that adopted digital bank services earlier had better financial performance and bank that adopted later had not been able to show better banking performance.

Keywords: Digital Banking, Profitability Ratio, Firm Size, Non-Performing Loan, Non-Interest Income.

THE EFFECT OF PROFITABILITY AND LIQUIDITY ON DIVIDEND POLICY IN REGISTERED PRIVATE COMMERCIAL BANKS ON THE INDONESIA STOCK EXCHANGE 2020-2024 PERIOD

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Abstract

This study aims to determine the effect of Profitability and Liquidity on Dividend Policy. This study is a quantitative study. The type of data used is secondary data obtained fromwww.idx.com . The analysis model used is Multiple Linear Regression Analysis using SPSS Software version 20. The population in this study is Private Commercial Banks Listed on the Indonesia Stock Exchange for the period 2020-2024. The sampling method used is purposive sampling with a sample size of 9 over a period of 5 consecutive years, resulting in 45 processed data. The results of this study indicate that partially profitability has a positive effect. on Dividend Policy while Liquidity has no effect on Dividend Policy and simultaneously Profitability and Liquidity have a significant effect on Dividend Policy.

Keywords: Dividend Policy, Profitability, Liquidity.

THE EFFECT OF ESG DISCLOSURE ON THE FINANCIAL PERFORMANCE OF COMPANIES LISTED ON THE INDONESIA STOCK EXCHANGE IN PERIOD 2021 – 2023

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Abstract

This study explores the impact of Environmental, Social, and Governance (ESG) disclosure on the financial performance of companies listed on the Indonesia Stock Exchange (IDX) especially IDX ESG Leader during the period 2021 - 2023. ESG disclosure has become a major concern for companies and investors, as it not only reflects corporate social responsibility but is also considered a factor that can influence financial performance. This research uses panel data regression methods to analyze data from companies listed on the IDX ESG Leader, measuring sustainability and financial performance through indicators ESG Score and profitability. The results of the study indicate that ESG disclosure has a significant impact on the financial performance of companies. These findings provide important insights for companies and investors regarding the importance of ESG disclosure in improving financial performance. Additionally, the study highlights the additional benefits of ESG disclosure, such as enhanced corporate reputation, easier access to capital, and increased customer loyalty. Thus, this research contributes to a better understanding of the relationship between ESG disclosure and the financial performance of companies in Indonesia.

Keywords: ESG disclosure, profitability, return on asset (ROA)

EXPLORATION OF A HYBRID CRM APPROACH IN BUILDING LONG-TERM RELATIONSHIPS WITH STUDENTS IN DISTANCE EDUCATION ENVIRONMENTS

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Abstract

Distance education faces challenges of low student engagement and high dropout rates due to limited relational interactions. This study developed and tested a Hybrid Customer Relationship Management (CRM) model integrating technology (AI-based chatbots, learning analytics) with human interactions (academic advising) to enhance student retention in Indonesian distance education institutions. Employing a mixed methods approach, the research combined a literature review, Focus Group Discussions (FGDs) with 30 students, 10 lecturers, and 5 academic administrators, and questionnaires completed by 200 distance education students at Universitas Siber Muhammadiyah. FGDs identified students' relational needs, while questionnaires assessed engagement, satisfaction, and perceptions of the Hybrid CRM. A semester-long trial of the Hybrid CRM prototype increased student retention by 18% and student-institution interaction frequency by 25% compared to conventional CRM systems. Thematic analysis of FGDs revealed that combining responsive chatbots with personalized advising strengthened student trust. Linear regression analysis of questionnaire data indicated that service personalization ($\beta=0.62$, $p<0.01$) and technological responsiveness ($\beta=0.48$, $p<0.05$) were key predictors of engagement. The resulting Hybrid CRM model provides a strategic framework for distance education institutions, offering context-specific implementation recommendations. This study contributes to the theory of digital relationship management and the practice of higher education transformation, aligning with Indonesia's National Research Master Plan 2017–2045.

Keywords: Hybrid CRM; Distance Education; Student Retention; Human-Tech Collaboration; *Academic Engagement*

ECO-FINANCE SYNERGIES: HOW GREEN BANKING INITIATIVES AFFECT FINANCIAL PERFORMANCE METRICS IN INDONESIAN BANKS

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Abstract

Environmental damage is now a central concern in society, pushing companies to adopt sustainability practices [1]. This study aims to examine the impact of green banking and financial performance—measured by Capital Adequacy Ratio (CAR), Non-Performing Loans (NPL), Operational Costs to Operational Income (BOPO), and Loan to Deposit Ratio (LDR)—on the profitability of commercial banks in Indonesia listed on the Financial Services Authority (OJK) during the 2020–2024 period [4]. Return on Assets (ROA) is used to measure profitability [10]. Using a quantitative approach, secondary data were collected from annual and sustainability reports [5]. Fifteen banks were selected using purposive sampling [6]. Data were analyzed using multiple linear regression with SPSS. Findings show that green banking and BOPO negatively impact ROA, while CAR, NPL, and LDR have a positive effect [3]. Simultaneously, all variables significantly influence bank profitability. These findings suggest a trade-off between sustainability investment and short-term profit [1].

KEYWORDS: *Green Banking, Financial Performace, Return on Assets, Bank Profitability*

A QUANTITATIVE APPROACH WAS CONDUCTED WITH MEDICAL STAFF IN TYPE C AND D HOSPITALS, AND DATA WERE ANALYZED USING PARTIAL LEAST SQUARES STRUCTURAL EQUATION MODELING (PLS-SEM)

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Abstract

The implementation of health information systems such as Electronic Medical Records (EMR) requires a comprehensive understanding of the psychological and behavioral factors influencing healthcare professionals' technology adoption. This study aims to examine the influence of digital competence and personal innovativeness on technology perceptions within the Technology Acceptance Model (TAM) framework, while also assessing the moderating role of age. A quantitative approach was conducted with medical staff in Type C and D hospitals, and data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM). The results show that both digital competence and personal innovativeness significantly affect perceived usefulness and perceived ease of use (TAM). Furthermore, TAM significantly influences attitude, which in turn has a significant impact on intention to use. However, age did not moderate the relationship between TAM and attitude. These findings highlight the strategic importance of enhancing digital literacy and fostering individual innovativeness to support the effective adoption of health information systems, while also indicating that demographic variables such as age may not be decisive factors in shaping technology acceptance.

Keywords: *Technology Acceptance Model, digital competence, personal innovativeness, attitude, intention to use, age, EMR*

THE EFFECT OF INCOME LEVEL, TAX KNOWLEDGE, AND TAX AUTHORITIES' SERVICES ON EMPLOYEE TAXPAYER COMPLIANCE WITH TAX POLICY AS A MODERATING VARIABLE

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Abstract

The study aims to determine the effect of income level, tax knowledge, and the quality of tax authorities' services on employee tax compliance. Data were obtained through a questionnaire involving 97 respondents and analyzed using the Partial Least Squares (PLS) method with SmartPLS 4.0. The results showed that the three factors have a positive influence on tax compliance. In addition, tax policy strengthens the effect of income level and the quality of tax authorities' services on tax compliance, but has no effect on the relationship between tax knowledge and compliance. Based on these findings, the study recommends KPP Pratama Jagakarsa to increase the socialization of tax policies through various methods, such as special education classes, and encourage the government to improve the tax administration and calculation system to make it fairer for the community. Theory Planned Behavior in this study relates to the role of taxpayer behavior. Taxpayers who have a high level of income, have a lot of tax knowledge and good fiscal services will affect tax compliance.

Keywords: *Tax Policy; Taxpayer Compliance; Tax Knowledge; Fiscal Service; Income Level.*

1. Introduction

Developed countries are formed through good governance and sustainable national development for the welfare of the people. National development requires funds, which come from the tax and non-tax sectors. According to Adriani, translated by R. Sasonto Brotodiharjo (1991:2), taxes are voluntary contributions made by the people to the state (with a coercive nature) without compensation, used to finance the state's general expenditures and related to the state's duties in managing the government. Based on the State Budget, the tax sector is the largest contributor to state revenue. In 2023, tax revenue reached 1,718.0 trillion, an increase of 6.8% from the previous year. (Source: APBN 2023, data processed in 2004) Tax revenue is the accumulation of revenue collected by tax offices throughout Indonesia, one of which is the Jagakarsa Tax Office.

Based on data on the tax compliance of individual taxpayers who are employees of the Jagakarsa Tax Office, there is a significant difference between the number of individual taxpayers who are employees who report their tax returns (SPT) and those who do not. In 2023, the number of individual taxpayers who reported their taxes was recorded at 28,815, while those who did not report totaled 161,561 (KPP Jagakarsa, 2025). Submitting tax returns is one aspect of tax compliance. Based on these data, it can be concluded that many taxpayers are still not compliant in fulfilling their tax obligations.

Tax compliance is influenced by internal and external factors (Pradhana, 2020). Internal factors that influence tax compliance include tax knowledge, income level, socialization, and so on, while external factors include the quality of fiscal services.

Income is the first internal factor that influences taxpayer compliance. According to Kukuh

Bhagaskara et al (2023), tax collection must take into account the taxpayer's ability to pay taxes, as this depends on their income level. Therefore, taxes should be collected when taxpayers have the funds to pay them.

Another factor in taxpayer compliance is the taxpayer's own knowledge. According to Ardiano Abdullah (2023), taxpayer knowledge is a method used by taxpayers to recognize their tax obligations through data on taxes, including the type of tax to be paid, tax rates, tax benefits, consequences, penalties, and other tax regulations. Based on research by Hidayati et al (2022), it was revealed that if taxpayers have good knowledge of tax regulations and tax administration, it will increase taxpayer compliance. Taxpayer knowledge can be concluded to have a strong influence on taxpayer compliance.

Tax compliance is not only due to taxpayers' knowledge of taxation, but must also be supported by good fiscal services in order to improve tax compliance. Service is the attitude of helping to take care of everything that is needed, while a fiscal officer is a tax official. Fiscal service is the way tax officials help and take care of everything that taxpayers need.

Good tax services provided by tax officials will make taxpayers feel comfortable, thereby encouraging them to comply with their tax obligations. Previous studies have shown different results regarding the factors that influence taxpayer compliance. Barlan et al. (2021) found that income levels affect taxpayer compliance, while Amanda et al. (2023) stated the opposite. Hapsari & Ramayanti (2022) mention that tax knowledge influences compliance, but Amanda et al. (2023) show different results. Similarly, Hidayati et al. (2022) found that tax administration services have an influence, while Fitria, E et al. (2021) state that they do not.

To address this controversy, this study adds a moderating variable in the form of taxation policy. One of the policies implemented is the Average Effective Rate, which simplifies tax calculations but has the potential to cause underpayment or overpayment risks. Anne Monica Sijabat & Christina Dwi Astuti (2024) found that the public agrees with this policy, while Andreas et al. (2023) highlighted challenges related to the refund mechanism and companies' readiness to bear employee taxes.

Based on this background, this research is about "The Influence of Income Level, Tax Knowledge, and Tax Services on the Tax Compliance of Individual Employee Taxpayers with Tax Policy as a Moderating Variable."

2. Literature Review

2.1 Theory of Planned Behavior (TPB),

The Theory of Planned Behavior (TPB) developed by Ajzen (1980, 1991) explains that a person's behavior is influenced by three main factors: behavioral belief, normative belief, and control belief. Behavioral belief refers to an individual's perception of the consequences of a behavior. In the context of taxation, a good understanding of the tax system can increase awareness of the benefits of taxation, thereby encouraging compliance. Normative beliefs relate to social pressure or the expectations of the surrounding environment. Interaction with tax officials shapes subjective norms that influence taxpayer behavior, where good service can increase compliance. Meanwhile, control belief refers to an individual's belief in their ability to control internal and external factors. In taxation, the taxpayer's income level is the main factor determining compliance, as the availability of resources affects the ability to pay taxes. Thus, TPB explains how understanding, social environment, and economic conditions play a role in taxpayer compliance.

2.2 Taxes

Taxes are mandatory contributions from the public to the state that are enforced by law, without direct compensation. Taxes are used to finance public interests such as infrastructure, education, and health (Soeparman Soemahamidjaja, 1993 & Mardiasmo, 2016). Law No. 28 of 2007 emphasizes that taxes are intended for the prosperity of the people. Thus, taxes play an important role in national development and community welfare.

2.3 Tax Compliance

Tax compliance is the awareness of fulfilling tax payment and reporting obligations, both monthly and annually (Agun et al., 2022). This compliance is influenced by tax sanctions, income levels, and tax knowledge (Barlan et al., 2021). Formal compliance occurs when taxpayers fulfill administrative requirements in accordance with regulations. Material compliance is achieved when taxpayers not only fulfill administrative aspects but also ensure that their tax obligations are correct in substance.

2.4 Income Level

Everyone's income varies depending on their job and position. In taxation, tax rates vary based on annual salary, PTKP, taxable objects, and tax brackets. Taxable income is income received from work to meet living needs (Amamnda et al., 2023). Income is closely related to income tax and influences taxpayers' compliance in paying taxes (Pardi 2009., in Beddu et al., 2022).

2.5 Tax Knowladge

Taxpayer knowledge is an understanding of tax obligations through information related to tax types, rates, benefits, interest, penalties, and tax regulations (Abdullah, 2023). (Yulia et al, 2020) add that tax knowledge includes understanding regulations, registration procedures, calculations, reporting, and benefits. Taxpayers with good knowledge will be more aware of their tax obligations, thereby increasing tax compliance.

2.6 Tax Services

Services are efforts to assist and provide convenience for taxpayers (Aprilia & Fidiana, 2021). Tax officials are responsible for providing quality services, with expertise, knowledge, and experience in taxation (Nugraha et al., 2020). Tax officials are required to educate and guide taxpayers to understand their tax rights and obligations (klikpajak.com). In modern administrative systems, there are Account Representatives (ARs) stationed at Medium Tax Offices (KPP Madya) and Basic Tax Offices (KPP Pratama). ARs play a role in tax consultation, refunds, regulatory interpretation, data verification, dissemination of new regulations, and monitoring taxpayer compliance to minimize the risk of administrative sanction.

2.7 Tax Policy

Tax policy is the government's effort to improve taxpayer compliance by simplifying the tax system. One of the policies implemented is the Average Effective Rate (AER), which aims to simplify the calculation of employee taxes by accumulating income and non-taxable income in determining the percentage of tax payable. The AER was issued on December 27, 2023, through Government Regulation No. 58 of 2023 and PMK No. 168 of 2023. This rate has three categories: Category A for taxpayers with unmarried status (TK/0), TK/1, and married without dependents (K/0); Category B for TK/2, TK/3, K/1, and K/2; and Category C for married taxpayers with three dependents (K/3).

The Average Effective Rate (TER) has a much simpler calculation compared to the progressive rate. The TER calculation only uses the formula Gross Income x TER according to the taxpayer's PTKP status, which is divided into three categories: A, B, and C.

In practice, the use of TER may result in underpayment (KB) or overpayment (LB) conditions. If underpayment occurs, the tax deduction in December will be larger and affect the take-home pay. However, if overpayment occurs, it will become a tax credit for the next tax period.

3. Methodology

This type of research uses a quantitative approach and data was collected through questionnaires distributed via Google Forms to 97 respondents at the Jagakarsa Tax Office in Jakarta. The sampling technique used was probability sampling, with a simple random sampling approach. The data was analyzed using Partial Least Squares (PLS) with SamrtPLS4.0..

4. Result And Discussion

4.1 Analisis Deskriptif Statistik

The descriptive statistical analysis in this study aims to provide an overview of the data collected in the questionnaire for each variable. The statistical description consists of the minimum value, maximum value, mean, and standard deviation (Table 1).

Table 1. Statistical Description of Independent Variables (X), Dependent Variables (Y), and Moderating Variables (Z)

Variabel	Simbol	N	Min	Max	Mean	Std. Deviation
Income Level	X1	97	7	20	17.35	2.753
Tax Knowledge	X2	97	12	20	18.07	2.117
Tax Services	X3	97	13	25	21.28	3.291
Compliance of Individual Employee Taxpayers	Y	97	9	20	17.50	2.259
Tax Policy	Z	97	10	20	15.17	2.798
Valid N (listwise)		97				

Source: data processed by author

Each variable shows an average value greater than the standard deviation, so it can be concluded that the overall data of the variables is evenly distributed.

4.2 Measurement Model Evaluation (Outer Model)

Multicollinearity testing was conducted to ensure that the regression model had correlations between its independent variables. The results showed that all variables met the multicollinearity requirements, with Variance Inflation Factor (VIF) values < 5 (Figure 1).

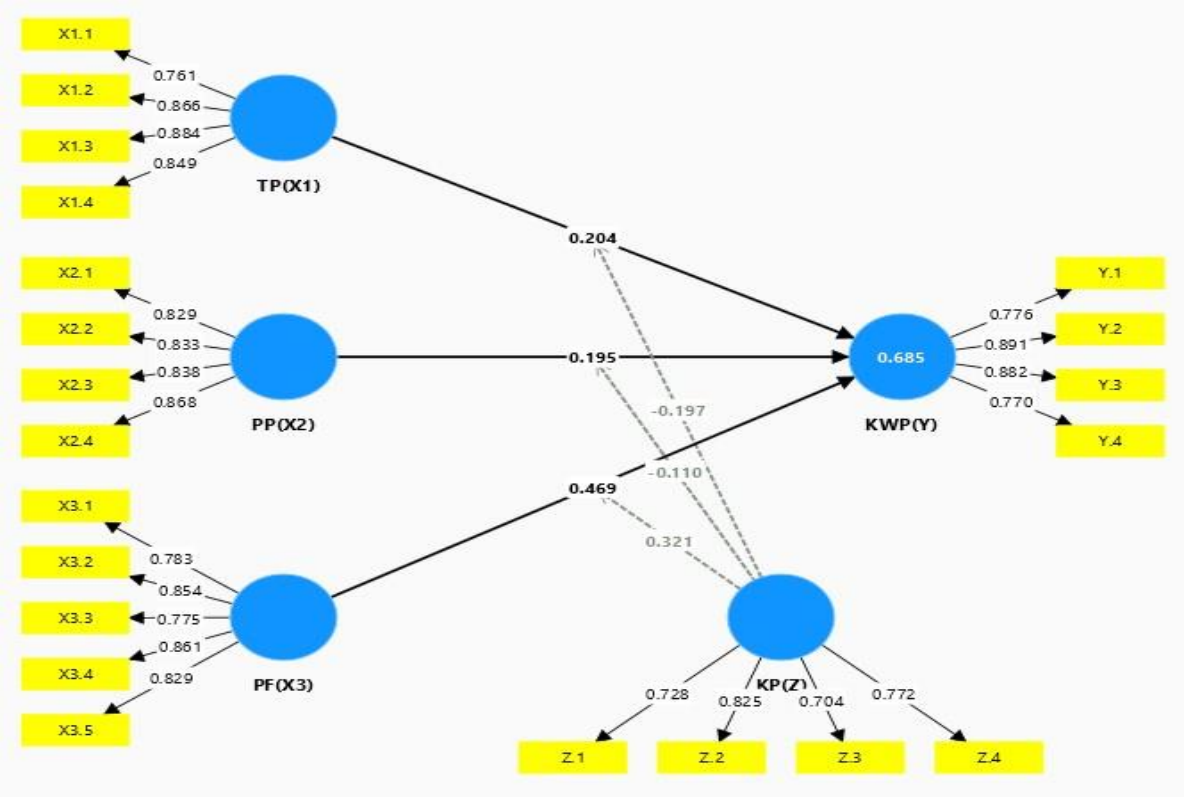

Figure 1. Multicollinearity of All Test Variables

4.3 *Convergent Validity Test*

The convergent validity test was conducted by looking at the loading factor and Average Variance Extracted (AVE) value. The results showed that all variables used in this study had a loading factor of more than 0.7, indicating high validity. Table 2 shows the AVE values of all research variables above 0.5, indicating good convergent validity. Thus, it can be said that convergent validity has been fulfilled by this study.

Table 2. Average Variance Extracted (AVE) Test Results

Variabel	**Simbol**	***Average variance extracted* (AVE)**
Income Level	X1	0.708
Tax Knowledge	X2	0.709
Tax Services	X3	0.675
Compliance of Individual Employee Taxpayers	Y	0.692
Tax Policy	Z	0.576

Source: SmartPLS output, data processed in 2025

4.4 Disctiminant Validity Test

Tabel 3 shows the correlation between constructs, with the numbers on the diagonal representing the AVE square root values. The results indicate that the AVE square root values. The results indicate that the AVE square root values of each construct are higher than the correlations between constructs.

Tabel 3. Results of the discriminant validity test for each research variable

	Z	Y	X3	X2	X1
Z	**0.759**				
Y	0.405	**0.832**			
X3	0.440	0.747	**0.821**		
X2	0.372	0.667	0.693	**0.842**	
X1	0.285	0.671	0.668	0.612	**0.842**

4.5 Validity and Reliability Test

Table 4 shows that the Composite Dependability and Cronbach's Alpha values for all research variables exceed 0.7. Therefore, it can be said that all variables used in this study are reliable.

Tabel 4. Reliability test results for each research variable

Variabel	Cronbach's alpha	Composite reliability	Reliabel
Income Level	0.863	0.906	✓
Tax Knowledge	0.863	0.907	✓
Tax Services	0.879	0.912	✓
Compliance of Individual Employee Taxpayers	0.850	0.899	✓
Tax Policy	0.754	0.844	✓

Sources: SmartPLS output, data processed 2025

4.6 R-Square Test

Table 5 shows that the R-Square value for the tax compliance variable is 0.661, which means that the tax compliance variable can be explained by the variables of Income Level, Tax Knowledge, and Fiscal Services by 66.1%. Meanwhile, the remaining 33.9% is influenced by other variables outside the scope of this study.

Tabel 5. Structural Model Evaluation Results (Inner Model)

	R-*square*	R-*square adjusted*
Kepatuhan Wajib Pajak	0.685	0.661

The SRMR value in Table 6 represents the probability that the hypothesized model can describe the input data well. The model fit can be said to be appropriate with an SRMR value < 0.08.

Tabel 6. Model fit test results

	Saturated Model	Estimated Model
SRMR	0.075	0.75

4.7 Uji Hipotesis

Tabel 7 shows the results of hypothesis testing for each variable studied.

Tabel 7. Hypothesis test results

Hubungan	Koefisien	T-*statistics*	P-*values*	Hasil
$X_1 \rightarrow Y$	0. 204	1987	0.047	Significant Positive
$X_2 \rightarrow Y$	0.195	2.006	0.045	Significant Positive
$X3 \rightarrow Y$	0.469	4.044	0.000	Significant Positive
$Z \times X_1 \rightarrow Y$	-0.197	2.14	0.032	Has Moderating Effect
$Z \times X_2 \rightarrow Y$	-0.110	0.958	0.338	Not Significant
$Z \times X_3 \rightarrow Y$	0.321	2.514	0.012	Has Moderating Effect

Source: SmartPLS output, data processed in 2025; T-table for sample 97, 1661.

Hypothesis testing shows that Income Level (X1) has a positive effect on individual taxpayer compliance with a coefficient of 0.204 and a P-value of 0.047 < 0.05, so H1 is accepted. Tax Knowledge (X2) also has a positive effect with a coefficient of 0.195 and a P-value of 0.045 < 0.05, so H2 is accepted. Furthermore, Tax Services (X3) has a stronger positive effect with a coefficient of 0.469 and a P-value of 0.000 < 0.05, so H3 is accepted. Tax Policy was found to moderate the relationship between Income Level and Taxpayer Compliance with a coefficient of -0.197 and a P-value of 0.032 < 0.05, but in this case, it weakened the relationship, so H4 is accepted. Meanwhile, the interaction on taxpayer compliance, as indicated by the coefficient of -0.110 and P-value of 0.338 > 0.05, leads to the rejection of H5. Finally, Tax Policy was found to strengthen the relationship between Tax Administration and Taxpayer Compliance with a coefficient of 0.321 and a P-value of 0.012 < 0.05, so H6 is accepted.

Discussion

The Effect of Income Level on Tax Compliance Among Individual Employees The results of the test show that income level has a positive effect on tax compliance. The higher a person's income, the more likely they are to fulfill their tax obligations, as they have greater financial capacity. In line with the Theory of Planned Behavior (Ajzen, 1991), tax compliance is influenced by attitude, subjective norms, and behavioral control. Taxpayers with sufficient income tend to have a positive attitude toward taxation and find it easier to fulfill their obligations. Additionally, subjective norms from the surrounding environment also encourage compliance, especially if the tax system is perceived as fair and transparent. This finding is

consistent with research (Ariwangsa & Kariyani, 2022) stating that the higher an individual's income, the greater the likelihood of their compliance with tax obligations.

The Effect of Tax Knowledge on Tax Compliance Among Individual Taxpayers The results of the study indicate that the higher the taxpayers' understanding of tax regulations, the better their tax compliance. In line with the Theory of Planned Behavior (TPB), tax knowledge shapes positive attitudes, intentions, and behavioral control, which encourage taxpayers to be more compliant. Better understanding increases confidence in fulfilling tax obligations and reduces errors due to the complexity of regulations. This is consistent with research (Triandani & Apollo, 2020), which states that taxpayer compliance increases as taxpayers' understanding of tax compliance increases, because non-compliance is often not caused by intent but by difficulties in understanding complex regulations.

The influence of tax administration services on the compliance of individual taxpayer employees from the test results shows that the better the services provided by the tax administration, the higher the level of taxpayer compliance in fulfilling their obligations. In line with the Theory of Planned Behavior (TPB), professional, responsive, and transparent services can foster positive attitudes, intentions, and behavioral control, thereby increasing taxpayers' trust and comfort in fulfilling their tax obligations. Clear information from tax authorities also reduces confusion and increases the intention to pay on time. Additionally, good service accessibility improves taxpayer behavioral control, enabling them to fulfill their obligations without obstacles. This is consistent with research (Hidayati et al., 2022) stating that the better the quality of tax administration services, the higher the taxpayer compliance.

The influence of taxation policy as a moderating variable of income level on the compliance of individual taxpayers has the effect of weakening the compliance of individual taxpayers who are employees. Taxation policy has different impacts depending on the tax deduction mechanism. Employees whose taxes are directly withheld by the company tend to be administratively compliant, although in the long term, this policy may affect well-being through reduced benefits. Conversely, employees who pay taxes independently may feel burdened if tax policies are perceived as complex and burdensome, potentially reducing compliance. In line with the Theory of Planned Behavior (TPB), a decrease in control over tax obligations can reduce compliance intentions. Therefore, clear policy socialization and administrative support are needed to minimize the negative impact of tax policies on taxpayer compliance.

The influence of tax policy as a moderating variable of tax knowledge on individual taxpayer compliance cannot moderate the influence of tax knowledge on taxpayer compliance. The inability of tax policy to moderate this relationship may be due to taxpayers' lack of understanding of the policy or suboptimal implementation due to insufficient socialization. Additionally, limitations in the research, such as an unrepresentative sample or moderating variables that do not fully capture the relationship between tax knowledge and compliance, may also be factors. Therefore, an evaluation of the effectiveness of the TER PPh 21 policy is needed, along with other strategies such as increased socialization, simplification of regulations, or the provision of incentives so that tax policies are more effective in improving compliance. Further research can be conducted with a broader sample coverage and consideration of other external factors to produce more targeted policies.

The influence of tax policy as a moderating variable of fiscal services on the compliance of individual taxpayers can strengthen the relationship between the quality of fiscal services and tax compliance by providing a clear regulatory framework, facilitating understanding of deduction rules, reporting, and administrative compliance. The TER PPh 21

policy supports the effectiveness of fiscal services by reducing uncertainty and increasing voluntary compliance. Additionally, this policy functions as a reinforcer by providing incentives, simplifying rules, and creating harmony between the rights and obligations of taxpayers. Transparency in tax withholding allows tax authorities to focus more on education and guidance rather than merely enforcing rules. Therefore, it is necessary to optimize tax services and conduct more extensive policy outreach to ensure effective policy implementation and encourage taxpayer compliance.

5. Conclusion

The analysis shows that income level, tax knowledge, and fiscal services each have a positive effect on taxpayer compliance. Taxpayers tend to be more compliant as their income increases, their tax knowledge improves, and fiscal services are optimized. Tax policies can moderate the influence of Income Level on compliance, where recent policies increase compliance but reduce net revenue efficiency, especially toward the end of the year. However, tax policies do not moderate the influence of Tax Knowledge on compliance because ongoing reforms make it difficult for taxpayers to adapt. Meanwhile, high-quality tax services can strengthen their impact on compliance, as taxpayers feel more supported and valued in fulfilling their tax obligations.

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THE INFLUENCE OF COMPANY GROWTH, SUSTAINABILITY REPORT AND IMPLEMENTATION OF GREEN ACCOUNTING ON PROFITABILITY COMPANIES IN THE ENERGY SECTOR COMPANIES REGISTERED IN INDONESIA STOCK EXCHANGE 2020-2024

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Abstract

The growth of energy sector not only contributes to economic development, but also has an impact on the environment. This stimulated accounting to development, not only focusing on financial reporting, but also including the presentation of sustainability information and the application of green accounting as a form of corporate social and environmental responsibility. This study focus to examine the influence of company growth, sustainability report and the application green accounting on company profitability. This study uses a quantitaive approach and focuses on the energy sector companies listed on the Indonesia Stock Exchange (IDX) during the eriod 2020 to 2024. Sample selection was caried ut using a purposive sampling technique, namely based on certain criteria that have been previously determined. The number of samples used in this study were 90 companies. To prcess data and test the model used, the analysis was done using the multipe linear regression method using the assistance of SPSS version 26 software.

Keywords: Company Growth, Sustainability Report, Green Accounting, Profitability

PENGARUH BRAND IMAGE, KUALITAS PRODUK, DAN HARGA TERHADAP MINAT BELI KONSUMEN PADA BRAND PUMA DI JAKARTA SELATAN

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Abstract

Industri fashion dan olahraga mengalami transformasi besar dalam satu dekade terakhir, dengan merek seperti Puma menjadi pemain utama di pasar global. Dalam konteks Indonesia, dengan pasar yang didominasi oleh merek seperti Nike dan Adidas, Puma menghadapi tantangan dalam meningkatkan daya saingnya. Penelitian ini bertujuan untuk menganalisis pengaruh brand image, kualitas produk, dan harga terhadap minat beli konsumen terhadap produk Puma di Jakarta Selatan. Fenomena ini penting untuk dipelajari karena persaingan yang semakin ketat di industri produk olahragaPenelitian ini menggunakan pendekatan kuantitatif dengan metode survei melalui penyebaran kuesioner kepada konsumen Puma di Jakarta Selatan. Sampel penelitian terdiri dari 100 responden yang diambil dengan teknik purposive sampling. Data yang dikumpulkan dianalisis menggunakan SPSS untuk menguji hubungan antara variabel brand image, kualitas produk, harga, dan minat beli konsumen melalui regresi linier berganda.Hasil penelitian menunjukkan bahwa ketiga variabel brand image, kualitas produk, dan harga memiliki pengaruh positif dan signifikan terhadap minat beli konsumen. Brand image yang kuat dan kualitas produk yang baik memberikan kontribusi besar terhadap keputusan pembelian, sementara harga yang kompetitif juga memengaruhi minat beli konsumen.penelitian ini menunjukan bahwa brand image, kualitas produk, dan harga memiliki pengaruh signifikan terhadap minat beli konsumen pada produk Puma di Jakarta Selatan. Oleh karena itu, perusahaan Puma perlu meningkatkan citra merek, memastikan kualitas produk tetap tinggi, dan menyesuaikan harga untuk memperkuat daya saing di pasar Indonesia.

THE INFLUENCE OF WORLD OF MOUTH AND BRAND IMAGE ON THE DECISION TO PURCHASE ROOM SERVICES AT THE GRAND MERCUE JAKARTA KEMAYORAN HOTEL

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Abstract

In this study, quantitative analysis methods were used, using data collected through questionnaires. A total of 100 respondents participated, and the data was analyzed using SPSS version 25. The analytical techniques used include descriptive and inferential analysis, with a particular focus on multiple linear regression. The results showed that both word-of-mouth and brand image have a significant positive impact on room service purchase decisions at Grand Mercure Jakarta Kemayoran Hotel.

Keywords**:** *Word of Mouth, Brand Image, Buying Decision*.

DOES THE AUDIT COMMITTEE MODERATE THE IMPACT OF AUDITOR REPUTATION AND TENURE ON FINANCIAL STATEMENT FRAUD?

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Abstract

This study investigates the impact of auditor reputation and audit tenure on financial statement fraud, with the audit committee acting as a moderating variable. The research analyzed 20 consumer cyclical companies listed on the Indonesia Stock Exchange from 2020 to 2023. Using a quantitative approach with multiple and moderated regression analysis. The results show that auditor reputation significantly reduces the likelihood of financial statement fraud, while audit tenure has no significant individual effect. However, the two variables jointly have a significant impact. Furthermore, the audit committee does not significantly moderate the relationship between either auditor reputation or audit tenure and financial statement fraud. These findings highlight the limited role of the audit committee in enhancing fraud prevention and suggest the need for strengthened governance mechanisms.

Keywords**:** *auditor reputation, audit tenure, audit committee, financial statement fraud, consumer cyclical companies*

ADOPTION OF AI TOOLS AND ITS IMPACT ON LEARNING BEHAVIOR AND ETHICAL CONDUCT: A STUDY OF FUTURE WORKFORCE READINESS AMONG UNIVERSITY STUDENTS

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Abstract

The rapid adoption of generative Artificial Intelligence (AI) tools such as ChatGPT, Gemini, and Copilot is reshaping higher education landscapes worldwide. While these tools offer unprecedented efficiency and support for learning, their integration raises complex pedagogical and ethical concerns. This study investigates how university students' adoption of AI tools influences their learning behavior, academic ethical conduct, and readiness for the future workforce. Using a modified Unified Theory of Acceptance and Use of Technology (UTAUT) framework, enriched with perceived risk, trust, and tech-savviness variables, we surveyed 320 undergraduate students across Indonesia through a structured online questionnaire. Structural Equation Modeling (PLS-SEM) was employed to analyze 14 hypotheses. The results reveal that trust and tech-savviness significantly drive students' intention to use AI, which in turn predicts actual usage. Moreover, actual AI usage has a strong positive impact on students' learning behavior, ethical awareness, and perceived job readiness. In contrast, traditional predictors such as performance expectancy, social influence, and institutional support were found to be non-significant. These findings highlight a paradigm shift: students are increasingly guided by intrinsic trust and digital competence rather than external enablers. The study offers critical insights for educators and policymakers in designing ethically grounded, future-oriented AI integration strategies in higher education.

Keywords: *Generative AI, Technology Adoption, UTAUT, Learning Behavior, Academic Ethics, Workforce Readiness*

SPIRITUAL CAPITAL THAT INCREASES THE RESILIENCE OF A CLEANING SERVICE IN DIFFICULT WORK SITUATIONS

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Abstract

This research examines the role of spiritual capital in enhancing the resilience of a cleaning service worker facing demanding work conditions at a banking unit in the border region of West Kalimantan. Using a qualitative-ethnographic approach, this study explores the lived experience of a cleaning service who performs various tasks with extended working hours beyond the normal standard. Data were collected through participatory observation, in-depth interviews with the cleaning service and colleagues, and documentation over a six-month period. The findings reveal that the subject's spiritual capital—comprising religious beliefs, routine worship practices, and transcendental meaning-making—plays a crucial role in building resilience. Significant dimensions of spiritual capital include gratitude, perceiving work as a form of worship, and belief in divine assistance during hardships. This resilience manifests in the ability to adapt to high workloads, overcome physical fatigue, and maintain a positive attitude amid challenging work situations. This research enriches our understanding of spiritual capital as an internal resource that organizations can develop to enhance employee resilience, especially for those working under pressured and underappreciated conditions.

Keywords: Spiritual Capital, Resilience, Cleaning Service, Demanding Work Conditions, Ethnography

FROM INFORMATION OVERLOAD TO ACTION: BEHAVIORAL BIASES AND GEN Z'S EQUITY INVESTMENT BEHAVIOR

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Abstract

Generation Z is a digital-native generation that is now becoming increasingly active as investors in the stock market. As individuals raised during the age of information and technology, they have extensive access to financial data, yet they remain vulnerable to emotional influences and psychological biases in making investment decisions. This study aims to examine the influence of behavioral biases—overconfidence bias, herding bias, loss aversion bias, and anchoring bias—on Generation Z's investment decisions in the stock market. A quantitative method was applied using multiple linear regression analysis with a Weighted Least Squares approach to address potential heteroscedasticity. The results reveal that overconfidence bias and loss aversion bias significantly influence investment decisions among Generation Z. Meanwhile, herding bias has no significant effect, indicating that Generation Z tends to make investment decisions independently and is less likely to follow majority opinions or market trends. This contrasts with the findings of several previous studies and highlights Generation Z's more rational and financially literate behavior. Anchoring bias also shows no significant effect at the 5 percent level, but it does show a positive influence at the 10 percent significance level. These findings suggest that Generation Z is relatively adaptive to new information and accustomed to reevaluating their decisions, making them less fixated on initial references.

Keywords: Behavioral Bias; Overconfidence Bias; Loss Aversion; Anchoring Effect; Stock Investment Decision

FINANCIAL LITERACY AND THE GENDERED DYNAMICS OF FINANCIAL BEHAVIOUR: EVIDENCE FROM HOUSEWIVES IN AN EMERGING COUNTRY

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Abstract

Currently, financial literacy is the most important point for creating a healthy and organized financial condition, which is focused on housewives so that housewives have directed financial behavior. This study aims to determine the impact of financial literacy, debt ownership and home ownership on the financial behavior of housewives in Yogyakarta. This study uses a quantitative method with the population used being housewives in Yogyakarta. In addition, this study used 122 samples for research. The results of this study are, first: financial literacy has an effectpositive and significanton the financial behavior of housewives in Yogyakarta, second: debt ownership has an effectpositive and significanton the financial behavior of housewives in Yogyakarta, and finally home ownership has an effectpositive and significanton the financial behavior of housewives in Yogyakarta.

Keywords: Financial Literacy, Debt Ownership, Home Ownership, Financial Behavior

ACCOUNTING STANDARDS IN THE DIGITAL ERA: ADAPTING REGULATIONS TO TECHNOLOGICAL INNOVATIONS — A CASE STUDY OF A MILITARY-AFFILIATED FOUNDATION IN INDONESIA

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Abstract

This study investigates the adaptation of accounting regulations to digital transformation within a semi-government nonprofit entity, the Kartika Eka Paksi Foundation (YKEP), affiliated with the Indonesian Army. Technological innovations such as Enterprise Resource Planning (ERP), Artificial Intelligence (AI), and cloud-based accounting have been increasingly adopted in public sector reporting systems. However, regulatory adaptation remains limited, especially in hybrid organizations where institutional, bureaucratic, and military frameworks intersect. Using a qualitative case study approach involving in-depth interviews and field observations, the research reveals that while YKEP has initiated digital transformation through ERP and MYOB systems, reporting practices still heavily rely on internal military guidelines. Although ISAK 335 is referenced, full alignment with nonprofit accounting standards is lacking. Findings suggest that regulatory reform, standardized reporting frameworks, and capacity building are essential for ensuring accountability and transparency in digital financial reporting. The research contributes to public sector accounting literature by highlighting the regulatory and institutional challenges faced by military-affiliated nonprofit organizations in Indonesia.

Keywords: digital accounting, ERP, nonprofit standards, military foundation, ISAK 335, regulatory adaptation, institutional pressure

ASSESSING STUDENTS' ACCEPTANCE OF ACCURATE SOFTWARE IN THE TEACHING AND LEARNING PROCESS

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Abstract

This study aims to analyze students' acceptance of the Accurate accounting application. The background of this research is the low student pass rate in certification exams, which is assumed to be caused by a lack of readiness in using technology. This study adopts the Technology Readiness Acceptance Model (TRAM), which combines personality dimensions from the Technology Readiness Index (TRI) and constructs from the Technology Acceptance Model (TAM). Four TRI dimensions—optimism, innovativeness, discomfort, and insecurity—are examined to determine their effect on perceived ease of use and perceived usefulness of Accurate, which in turn are analyzed for their impact on students' intentions to take the certification. Data were collected through questionnaires distributed to students of Politeknik YKPN Yogyakarta who had participated in the accounting application certification exam, and analyzed using the SEM-PLS method. The findings are expected to provide input for higher education institutions in improving students' technology readiness and participation in certification exams.

Keywords: *Accurate, Technology Acceptance Model, Technology Readiness Acceptance Model*

INTEGRATING INSTITUTIONAL, STAKEHOLDER, AND LEGITIMACY THEORIES: INSIGHTS FROM A SYSTEMATIC REVIEW OF GOVERNMENT STRATEGIES FOR SUSTAINABLE DEVELOPMENT

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Abstract

The research draws its data from peer-reviewed journal articles found in Scopus-indexed sources between 2015 and 2025. The research encompasses a range of national contexts from various countries, with a particular emphasis on emerging economies. The research combines institutionalism with stakeholder theory and legitimacy theory to synthesise findings through an integrative framework. The overarching structure of the framework is designed to facilitate the analysis of governmental approaches to sustainable development, with a particular emphasis on their progress in achieving the United Nations Sustainable Development Goals (SDGs). Government institutions primarily adhere to institutional norms through organizational mechanisms, while concurrently promoting stakeholder inclusion to enhance their policy effectiveness. Strategic communication functions as a vital instrument for developing public trust and legitimacy in sustainable governance initiatives. The review uncovers significant theoretical perspective deficiencies in empirical studies concerning their integration across disparate political and cultural contexts. The research indicates an immediate requirement for detailed studies that analyse multiple levels of analysis. It is imperative that research be conducted to explore the interplay between institutional pressures and the dynamics of stakeholder legitimacy over time. The development of sustainable development strategies necessitates this approach. The policy environment of our globalised world has become increasingly complex. The research findings will facilitate the development of sustainable development policies by governments that are better aligned with institutional limitations and stakeholder needs. The policy's success is contingent upon its acceptance by a wide range of stakeholders.

Keywords: *isomorphism, institutional, stakeholder, legitimacy, sustainable, SDGs, government, public-sector*

1. Introduction

The global adoption of Sustainable Development Goals (SDGs) has compelled governments to reconfigure their institutional systems and governance structures in order to address complex sustainability issues. The process of converting universally accepted goals into national and local action is faced with significant obstacles due to institutional barriers, stakeholder engagement issues, and legitimacy concerns. Park & Park (2024) demonstrate that the Republic of Korea, with its advanced system, faces obstacles in implementing the Sustainable Development Goals (SDGs). The implementation of the SDGs is encumbered by the fact that it extends beyond the realms of technical and functional aspects. The implementation of Sustainable Development Goals (SDGs) is contingent upon the dynamic nature of social institutions, which exhibit fragmentation and conflicting sustainable development values, as well as unclear interpretations. The process of implementing the Sustainable Development

Goals (SDGs) necessitates the establishment of comprehensive institutional frameworks. In order to align with the requirements of the local environment, global standards must undergo an internal adaptation process.

The adoption of analogous sustainability strategies by governments can most effectively be comprehended through the lens of institutional theory and its associated concepts, as elucidated by Dimaggio & Powell (1983a). The alignment of policy frameworks does not inherently ensure the attainment of effective or legitimate outcomes. As Monteiro *et al.* (2024) assert, the disclosure and communication efforts related to the SDGs on the part of Portuguese municipalities are generic in nature, with meaningful engagement being absent. It is evident that the majority of local governments are not effectively disseminating comprehensive information or explicit references regarding the SDGs through their designated official platforms. The difference between compliance and genuine progress demonstrates how stakeholder engagement together with legitimacy serve as essential factors for achieving actual advancement. Local government governance transparency depends on institutional elements for its advancement. Brás *et al.* (2025) show that this development remains unbalanced because regional inequalities continue to persist. The research shows that institutional pressures fail to produce the desired results. Active stakeholder participation together with contextual adaptation becomes necessary to achieve both equitable and effective results. Micro-level actors develop sustainable intentions and behaviors through institutional components which consist of government initiatives and social conventions. Koe *et al.* (2024) suggest that emerging economies need special attention because their sustainability transformation remains in its initial phase.

The relationship between quality governance and sustainable development outcomes is most apparent in healthcare administration. As asserted by Rahman *et al.* (2025), the efficacy of public health investment in achieving Sustainable Development Goals (SDGs) is augmented by the presence of robust governance systems. Conversely, the absence of effective institutions has been demonstrated to result in the degradation of the value of such expenditures, a phenomenon that is particularly pronounced in BRICS economies. The accumulated research evidence indicates that the implementation of an integrated analytical framework is imperative. The research framework must integrate institutional analysis with stakeholder involvement and legitimacy assessment. This analysis provides a necessary framework for the improvement of government strategies with regard to sustainable development.

The extant literature demonstrates fragmentation, as it lacks sufficient empirical evidence regarding institutionalism and its relationship with stakeholder engagement and legitimacy-building during the implementation of the Sustainable Development Goals. The discrepancy is most evident in emerging economies, as these forces evolve dynamically according to context-specific requirements. The objective of the present research is to address the following fundamental questions.

RQ1: How do institutional isomorphism mechanisms shape government strategies for SDGs implementation across varied political and cultural contexts?

RQ2: What role does stakeholder engagement play in mediating the effectiveness of isomorphic sustainability policies?

RQ3: How do governments leverage strategic communication to legitimize sustainability initiatives amid competing institutional and stakeholder demands?

The research methodology consists of a systematic literature review that examines peer-reviewed articles from the Scopus database between 2015 and 2025, while incorporating the mentioned key studies. The present study synthesises the findings from these works to establish a robust multi-level framework. The framework demonstrates how institutional pressures, together with stakeholder dynamics and legitimacy, evolve to produce effective government strategies for SDG achievement that adapt to specific contexts.

The research adds substantial value to existing knowledge by creating a new analytical framework which unites institutionalism with stakeholder theory and legitimacy theory to analyze Sustainable Development Goals implementation challenges. The research uses empirical data from three separate settings which include Korean institutional fragmentation and adaptation challenges (Park & Park, 2024) and Portuguese municipal transparency evolution (Brás *et al.*, 2025) and institutional elements that affect sustainable entrepreneurial intentions (Koe *et al.*). The research establishes a novel framework which connects macro-level institutional conformity to micro-level stakeholder engagement and meso-level legitimacy construction. The research results match the findings from 2024 and 2025. The method enables standard comparison between global and local contexts which helps policymakers and practitioners develop sustainable development policies that work effectively across different national environments (Dimaggio & Powell, 2021; Monteiro, Ribeiro, Gomes, *et al.*, 2024a).

2. Literature Review

Achievement of Sustainable Development Goals (SDGs) is contingent on institutional approaches and stakeholder participation and legitimacy construction. It is imperative for organisations and governments to address these challenges by navigating the intricate balance between global standards, local needs and the varied governance capabilities inherent in their respective contexts. The institutional theory posits that policy convergence is precipitated by three primary forces: coercive, mimetic and normative pressures. The internalisation of SDGs in Korea is evidenced by the aforementioned processes, as demonstrated by the fragmented administrative structure and unclear objectives of the nation, in addition to the requirement for collective governance among various stakeholders (Dimaggio & Powell, 1983; Park & Park, 2024). At the local level, there is an absence of uniformity in the practices pertaining to stakeholder engagement and transparency. The majority of Portuguese municipalities make general SDG disclosures; however, there are substantial variations in transparency levels between regions, attributable to institutional and geographic factors (Brás *et al.*, 2025; Monteiro, Ribeiro & Gomes, 2024). The success of the implementation of the Sustainable Development Goals (SDGs) is contingent upon the presence of effective governance and institutional support. Research indicates that government effectiveness, in conjunction with e-government maturity, contributes to the reduction of gender inequality among nations (Kumar *et al.*, 2024). Furthermore, institutional factors have been observed to enhance sustainable entrepreneurial intentions among Malaysian MSMEs (Koe *et al.*, 2024). The extant literature maintains its fragmented nature because it focuses on technical indicators and voluntary reporting yet fails to examine the intricate socio-political and historical aspects of SDG localization and implementation. The governance of Sustainable Development Goals (SDGs)

necessitates comprehensive frameworks that integrate island adaptation with participatory stakeholder processes and strategic legitimacy-building, given the complex institutional and contextual challenges confronting emerging economies (Dimaggio & Powell, 1983; Monteiro, Ribeiro, & Gomes, 2024; Park & Park, 2024).

2.1 Theoretical Framework

A robust theoretical framework serves as the foundation for the study of the interaction between institutional elements, stakeholder interests, and legitimacy factors during the implementation of Sustainable Development Goals (SDGs). The theoretical framework consists of institutional theory and stakeholder theory and legitimacy theory which serve as its base. The framework enables complete evaluation of how governments implement global Sustainable Development Goals (SDGs) norms through their work with different actors to build policy legitimacy. The theories provide separate yet harmonious perspectives, which collectively form a fundamental basis for answering research questions and achieving the objectives of this study.

2.1.1 Institutional Isomorphism: Conformity and Adaptation in SDGs Implementation

The institutional theory of isotropy, as proposed by Dimaggio and Powell (1983a, 2021), posits that organisations, including governmental entities, tend to exhibit increasing similarities over time as a result of coercive, mimetic, and normative pressures. The Sustainable Development Goals (SDGs) illustrate coercive isolationism through mandatory international agreements and national regulations that compel governments to implement SDGs frameworks (Dimaggio & Powell, 1983; Park & Park, 2024). The practice of governments adopting Sustainable Development Goals (SDGs) strategies from successful peers or leaders is known as mimeticomorphism (Park & Park, 2024). The combination of professionalisation with the dissemination of best practice can result in normative isolation. The implementation of these practices is primarily facilitated by expert networks in conjunction with international organisations and civil society groups (Brás *et al.*, 2025). The Korean case study by Park & Park (2024) demonstrates that implementation pressures from these sources do not invariably result in effective or contextually appropriate SDG outcomes. The internalisation of global norms is a complex process, hindered by the fragmentation of institutions across distinct sectors. Additionally, the term "sustainable development" is ambiguous, allowing stakeholders to present their individual values. The adaptation and localization process is of the utmost importance, as it facilitates genuine transformation for organisations (Dimaggio & Powell, 1983; Koe *et al.*, 2024).

2.1.2 Stakeholder Theory: Multi-Actor Engagement and Participatory Governance

The Stakeholder Theory demands that governments understand and manage multiple interests between civil society and local communities, businesses and international organisations for the achievement of the SDGs. (Monteiro, Ribeiro, Gomes, *et al.*, 2024a). The theory posits that inclusive engagement is conducive to enhanced public policy effectiveness and legitimacy (Freeman, 1984). The size and location of municipalities, in conjunction with stakeholder expectations and pressures, have been demonstrated to influence local governments to disclose their SDGs and maintain transparency practices in Portugal (Brás *et al.*, 2025; Monteiro, Ribeiro, Gomes, *et al.*, 2024a).

The effectiveness of SDGs-oriented policies is contingent on stakeholder participation. For example, Rahman *et al.* (2025) definitively find that in BRICS economies, strong governance and stakeholder engagement amplify the positive impact of public health expenditure on SDG 3 outcomes. Fragmented or superficial participation undermines policy

outcomes. Many local governments disclose limited and generic SDGs (Monteiro, Ribeiro, Gomes, *et al.*, 2024a).

2.1.3 Legitimacy Theory: Trust is Built Through Transparency And Communication

Suchman (1995a) established legitimacy theory as the foundational framework for studying organisational acceptance in society among public entities and private firms. Organisations are able to maintain social approval through their actions and disclosures, which must align with societal norms and values and public expectations. Suchman (1995) defines legitimacy as "a generalized perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definitions" (p. 101). Legitimacy is defined as an organisational resource that is required to be managed actively by organisations. This is due to the fact that it is a dynamic resource. However, this management is especially important when organisations are facing increased public attention and social disputes.

Suchman (1995) proposed a taxonomy of legitimacy comprising three distinct categories: pragmatic, moral and cognitive legitimacy. Pragmatic legitimacy is derived from the evaluative appraisals of organisations' primary stakeholders, who stand to directly benefit from the activities of the organisation. The concept of moral legitimacy is predicated on the premise that an organisation's actions are in accordance with established ethical standards and societal values, as recognised and endorsed by societal approval. The concept of cognitive legitimacy emerges when organisations engage in activities that are inherently understood by individuals as being fundamental to their social environment. It is evident that organisations employ a variety of strategies with the objective of building and maintaining, or rebuilding, stakeholder approval of their actions. Transparent reporting, in conjunction with stakeholder engagement and regulatory or global standards alignment, has been demonstrated to assist organisations in building their legitimacy (Suchman, 1995a).

Suchman (1995b) asserts that organizations must align their actions with social expectations if they wish to gain public trust and acceptance. As posited by Monteiro *et al.* (2024a), the legitimacy of the SDGs is enhanced by the complete disclosure of pertinent information, in conjunction with strategic communication methodologies, which have been demonstrated to engender specific benefits for stakeholders. The legitimacy of SDGs initiatives is contingent upon two factors: the fulfilment of global norms and the effective demonstration of their relevance and impact to local populations.

Monteiro *et al.* (2024) reveal that the majority of Portuguese municipalities lack meaningful SDGs-related website content because they neglect to link their disclosures to local strategies and narratives. Brás *et al.* (2025) define "pseudo-transparency" as the practice of disclosing information that lacks real substance in their research. The organisations must develop appropriate communication methods to connect with stakeholders and establish trust and address particular situations even though procedural compliance does not automatically guarantee legitimacy.

3. Methodology

3.1 Research Design

The research design employs systematic literature review (SLR) methodology which adheres to the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines. The PRISMA framework functions as the standard framework for systematic review processes because it establishes transparent and rigorous methods for literature selection and evaluation. The research methodology integrates article synthesis with analysis to examine the connections between Isomorphism and stakeholder theory and legitimacy and sustainability and governmental involvement.

3.2 Literature Search Criteria

The search for relevant articles was conducted in the Scopus database. The search was restricted to articles published between the years 2015 and 2025. The key search terms included in the title, abstract, and keywords were: ((("isomorphism" OR "institutional-theory") OR ("stakeholder-theory") OR ("legitimacy-theory")) AND ((("sustainable-development-goals" OR "SDGs") AND ("government" OR"governmental" OR "public-sector")). This combination of search terms was selected to ensure that the review focused on articles discussing the intersection of institutional theory, stakeholder theory, legitimacy, sustainability, and government about sustainable development goals (SDGs). The search criteria were meticulously defined, and the initial retrieval of 69 articles from Scopus was successful.

3.3 Exclusion Criteria

The first exclusion criterion required a publication year filter to be applied to articles. The review focused on articles from 2015 to 2025 because all articles before or after this period were excluded from evaluation. The total number of retrieved articles reached 69 because no articles were available beyond this time range. The second exclusion criterion was the removal of book chapters. The evaluation process showed that nine articles served as book chapters. The evaluation process continued with 60 articles after removing them from consideration. The third exclusion criterion specified that articles needed to be written in English. The total number of articles stayed at 60 because all articles were published in English.

3.4 Screening Process

The remaining 60 articles were subjected to a screening process to ascertain their relevance to the research focus following preliminary inclusion and exclusion procedures. The subsequent stage of the research involved the examination of articles that focused on government subjects as opposed to corporate or private sector topics. The analysis indicates that 44 articles concentrate on corporate domains rather than governmental domains. As a consequence of the exclusion process, which resulted in the removal of 16 articles that met the established eligibility criteria, articles were eliminated.

3.5 Final Selection

The remaining 16 articles were directly related to the research question and were therefore eligible for further analysis. The analysis of these articles will be performed to extract relevant findings which will help answer the research questions about the relationship between isomorphism, stakeholder theory, legitimacy, and sustainability in the context of government and SDGs. The final analysis will comprise 16 articles, and their insights will be synthesised to provide a comprehensive understanding of the topic.

3.6 Data Collection and Extraction

The systematic literature review (SLR) process required data collection and extraction after articles were determined eligible for inclusion. The researchers retrieved the full versions of the 16 articles that made it to the review stage. The extraction of vital information from each article concentrated on essential themes which addressed the research questions during this phase. The extraction process produced information about government strategies together with institutional corruption problems and stakeholder involvement and legitimacy within sustainable development systems. The review assessed the research methods used in each study together with their geographical locations and theoretical frameworks. The researchers used a standardized template to perform data extraction. The researchers used this method to achieve uniformity and precision in their analysis of all articles. The systematic process helped researchers to organize their findings and compare results across different settings. This method maintained the review to both extensive and scientifically sound standards.

3.7 Analytical Framework and Data Analysis

The research design integrated institutionalism with stakeholder theory and legitimacy theory to analyze government strategies for implementing the Sustainable Development Goals. The research investigated how institutional forces shape policy alignment while stakeholder participation creates legitimacy and strategic communication acts as the key factor for building public trust. The research framework supported a thematic analysis of 16 Scopus-indexed articles from 2015 to 2025 which showed governments use coercive, mimetic and normative pressures to execute SDG policies. The effectiveness of these policies depends on their ability to adjust to specific situations while motivating stakeholders to actively participate. The research evaluation showed institutionalisation faces ceremonial compliance problems while stakeholder engagement remains tokenistic and disclosure practices remain generic. The synthesis of qualitative data showed that sustainable governance needs institutional conformity to achieve authentic collaboration and context-sensitive communication. The framework allowed researchers to structure their findings systematically while connecting them to their research goals. The European Union demonstrated its role in standardizing global policies. The research established that local legitimacy development together with adaptive governance systems must be established to achieve Sustainable Development Goals because this process enables the conversion of commitments into concrete and fair results. The following image illustrates the PRISMA process that was applied in this study:

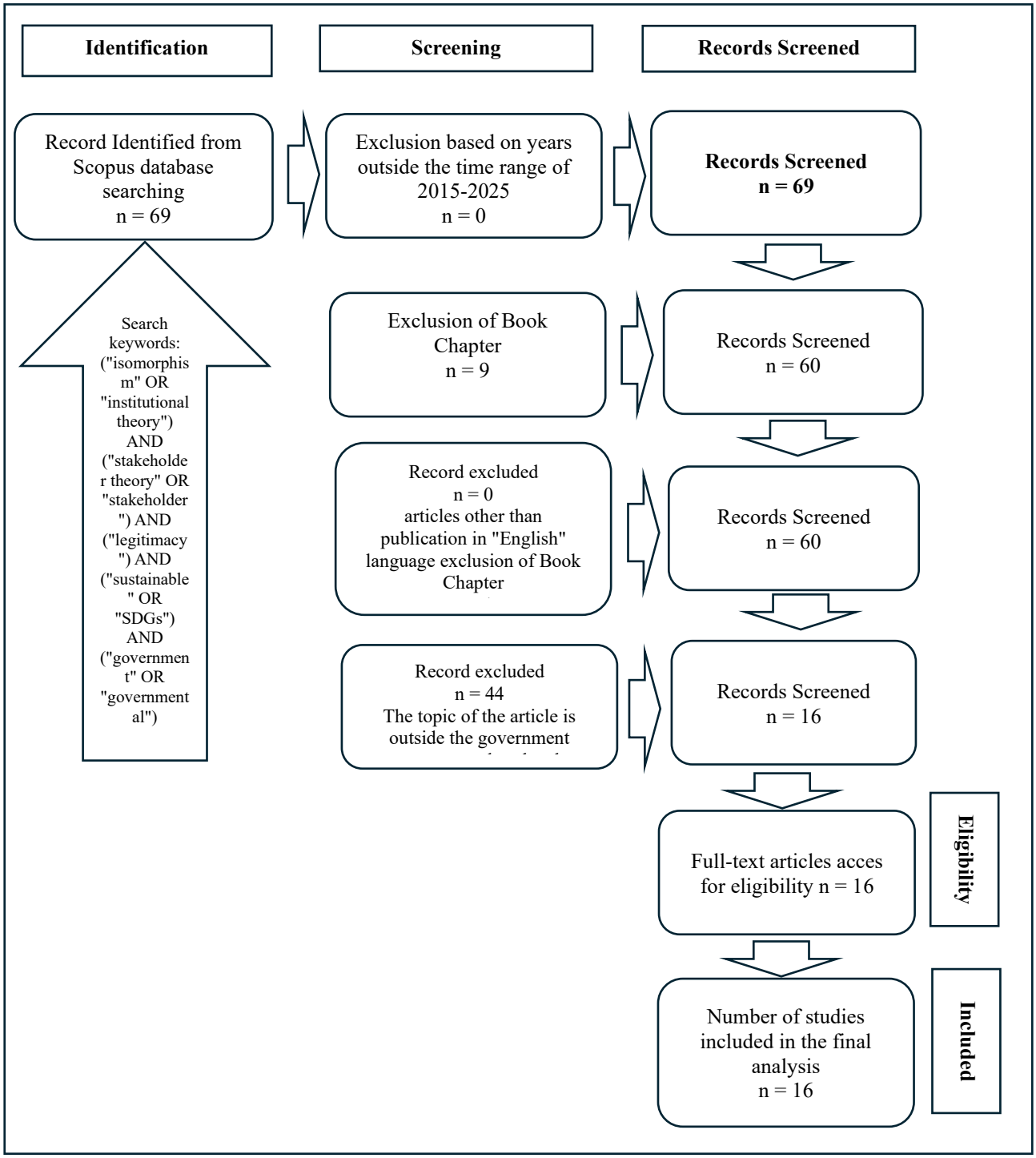

Figure 1. PRISMA Framework

The data collection and extraction process together with the analytical framework and data analysis provided a thorough understanding of government strategies for achieving the SDGs. The PRISMA guidelines were used to guide the methodology to ensure transparency, rigour and consistency in the systematic literature review.

4. Results and Discussions

The research base for this section comes from a systematic literature review about government strategies for implementing Sustainable Development Goals (SDGs) in emerging economies. The review shows how institutional pressures work with stakeholder dynamics and legitimacy concerns. Governments adopt international sustainability frameworks through institutional convergence because of global standards and national laws that generate coercive and mimetic pressures. The process of stakeholder engagement plays a crucial role in shaping policy relevance and legitimacy because it helps governments adapt global standards to local contexts. The long-term success of SDG initiatives depends on transparency and accountability together with public trust which can be improved through strategic communication and institutional support.

4.1 Articles Analyzed to Address the Research Questions

The section presents a concise overview of Scopus-indexed publications from 2015 to 2025 that investigate institutional pressures and stakeholder dynamics and legitimacy concerns during government Sustainable Development Goals (SDGs) implementation in emerging economies. The evaluation process chose articles that directly addressed the research questions. The selected articles employ institutionalism and stakeholder theory and legitimacy theory to deliver both theoretical and empirical insights. The review integrates the scope and methodologies with vital findings of included studies to demonstrate the existing research landscape while exposing gaps and establishing a strong base to answer the research questions. The following table summarizes the articles that underwent analysis.

Table 1. List of Articles

No.	Authors	Title	Source Title/Journal/Proceeding
1	(Erin *et al.*, 2025)	Sustainable development goal research in accounting: a systematic literature review and direction for future research	Journal of Financial Reporting and Accounting
2	(Rahman *et al.*, 2025)	Health expenditure, governance and SDGs3 nexus: a longitudinal analysis in BRICS economies	Globalization and Health
3	(Brás *et al.*, 2025)	Exploring the Progression of Local Transparency Considering Institutional and Geographical Factors: A Latent Growth Model	Public Integrity
4	(Raimo *et al.*, 2024)	Toward sustainable cities: Assessing drivers of SDGs performance in Italian municipalities	Sustainable Development
5	(Park & Park, 2024)	Addressing institutional challenges in sustainable development goals implementation: Lessons from the Republic of Korea	Sustainable Development

6	(Kumar *et al.*, 2024)	E-Government Maturity, Gender Inequality and Role of Government Effectiveness: A Longitudinal Study Across Countries	IFIP Advances in Information and Communication Technology
7	(Monteiro, Ribeiro, Gomes, *et al.*, 2024)	What are the drivers of sustainable development web-reporting in Portuguese local governments?	Measuring Business Excellence
8	(Erin *et al.*, 2024)	The state of SDGs and sustainability practices of public sector entities: Evidence from under-investigated context	Journal of Cleaner Production
9	(Nicolò *et al.*, 2024)	Substantive versus symbolic paths in SDGs disclosure via social media: evidence from Italian local governments	Public Money and Management
10	(Monteiro, Ribeiro, & Gomes, 2024)	Determinants of the Sustainable Development Goals Disclosure on Websites of Portuguese Municipalities	Revista Portuguesa de Estudos Regionais
11	(Benito *et al.*, 2023)	What factors make a municipality more involved in meeting the Sustainable Development Goals? Empirical evidence	Environment, Development and Sustainability
12	(Tetteh *et al.*, 2023)	Institutional pressures and strategic response to auditing implementation of sustainable development goals: the role of public sector auditors	Journal of Applied Accounting Research
13	(Wihlborg *et al.*, 2022)	Regional strategies for sustainable healthcare - the winding path of UN SDGs into Swedish regional healthcare systems	International Journal of Public Policy
14	(Catzín-Tamayo *et al.*, 2022)	Stakeholder mapping and promotion of Sustainable Development Goals in local management	Journal of Environmental Studies and Sciences
15	(Cordery & Hay, 2022)	Public sector audit in uncertain times	Financial Accountability and Management
16	(Joseph *et al.*, 2019)	Realising sustainable development goals via online integrity framework disclosure: Evidence from Malaysian and Indonesian local authorities	Journal of Cleaner Production

The researcher employed VOSviewer to analyse the connections between theoretical frameworks and government SDG achievement. The following image illustrates the results of the data analysis conducted in this study using VOSviewer:

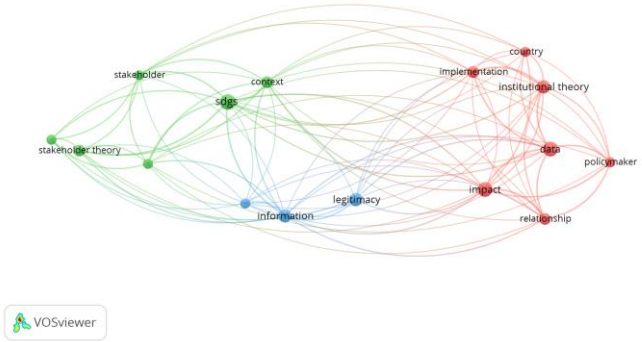

Figure 2. Network Visualization

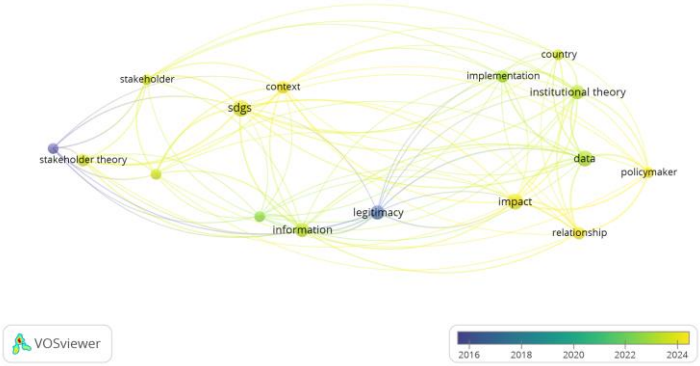

Figure 3. Overlay Visualization

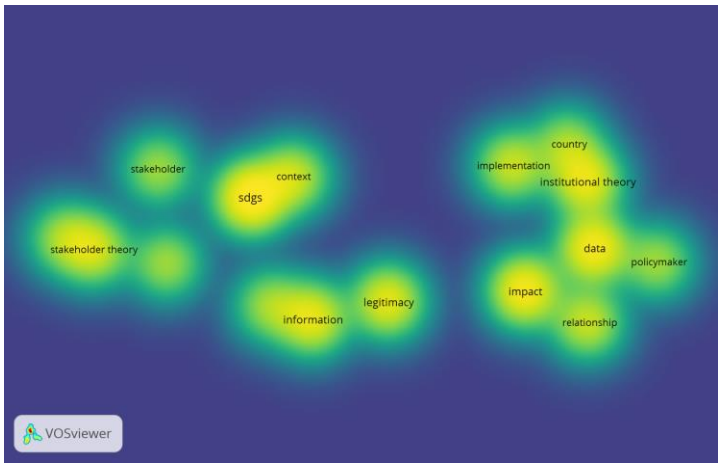

Figure 4. Density Visualization

The VOSviewer software produces network maps which show three connected clusters that manage the Sustainable Development Goals governance framework. The institutional framework produces various internal pressures that affect governments. The three types of institutional pressures which affect governments include coercive and mimetic and normative forces. Governments face institutional forces which push them to adopt global frameworks that they modify to suit their local needs. The policy alignment in Korea together with Portugal's

transparency practices demonstrate this phenomenon. Municipalities which involve stakeholders in their processes demonstrate stakeholder engagement. The two cases in point illustrating this phenomenon are Italy's climate reporting and Portugal's ODSLocal. The combination of global norms with local requirements in these processes demonstrates how they achieve better legitimacy and effectiveness. South Korea and Portugal implement digital tools for strategic communication to enhance transparency which builds public trust and establishes legitimacy. The research shows that Sustainable Development Goals (SDGs) achievement needs strategies which combine universal standards with local creative approaches and stakeholder partnerships and context-specific priority definition. The growing academic interest in these dynamics indicates governments need to build complete governance frameworks which address institutional barriers alongside participation issues and legitimacy concerns to achieve fair and practical sustainability results.

4.2 Synthesis of Research Articles

The articles that answer the research question are presented in a diagrammatic form for synthesis. The SDG Strat. The "SDG Strat. The "Influences" diagram shows how institutional drivers and contextual factors combine to produce government SDG strategy legitimacy which determines their effectiveness. The diagram integrates institutionalism with stakeholder engagement and strategic communication through local capacity and cultural context as moderating factors. The analysis draws its influences from a range of empirical studies, including those conducted in Italy, Spain, Korea and Portugal, as well as from global research findings.The left-hand side of the diagram delineates three forms of institutionalism: coercive, mimetic and normative pressures. These are posited as foundational drivers. Research has shown that coercive pressures arise from a combination of external requirements and regulatory mandates, including national Sustainable Development Goal frameworks and international agreements (Dimaggio & Powell, 1983; Erin *et al.*, 2025). These pressures have been known to force governments to adapt their practices to meet global standards. The process of mimetic pressures has been demonstrated to result in governments emulating the successful approaches of top-performing organisations, particularly during periods of uncertainty or heightened competition. Documentation of this phenomenon has been recorded in northern Italian and Spanish municipalities (Benito *et al.*, 2023; Raimo *et al.*, 2024). The pressures that stem from professional standards, in conjunction with societal expectations, form the basis of normative influences. Such influences encompass transparency norms that have been observed in Portugal and Korea. The present study seeks to contribute to the extant literature on the subject by exploring the relationship between such norms and the adoption of established models of good governance by governments.

The diagram uses continuous stakeholder engagement approaches to show how authentic participation differs from symbolic participation. Authentic multi-actor participation produces better policy legitimacy and relevance and Korean and Portuguese compliance remains minimal when symbolic participation occurs (Monteiro *et al.*, 2024; Park & Park, 2024). Strategic communication serves as a key element because governments employ reporting channels alongside digital platforms and public campaigns to create legitimacy and control stakeholder expectations during Sustainable Development Goals accomplishment displays. Such communication becomes effective based on its transparency level and credibility together with its presentation of both successes and challenges (Brás *et al.*, 2025; Nicolò *et al.*, 2024). This study demonstrates that cultural elements together with institutional capabilities function as adjustment variables which modify the way organisational forces and stakeholder

involvement produce legitimacy. SDG strategies implemented by local governments face resource constraints together with complicated governance systems and varied population demographics which affect their adaptability (Erin *et al.*, 2024; Raimo *et al.*, 2024).

The diagram shows these components working together to create "legitimacy." The concept of legitimacy goes beyond the basic requirement of outside regulatory compliance. This method requires two fundamental components that include substantial engagement and dependable communication. The diagram shows that the legitimacy of an initiative determines the achievement of Sustainable Development Goals (SDGs). The results of modern politics depend heavily on stability levels as well as fragmentation patterns and local governance systems (Benito *et al.*, 2023; Park & Park, 2024).

The diagram shows that institutional pressures work together with stakeholder engagement and strategic communication to determine the success of the SDG strategy. A particular strategy's success depends on building local capacity and understanding the context which validates the strategy. The present framework is supported by extant research evidence. SDGs require actual stakeholder involvement together with open information sharing and adaptive universal norm enforcement to achieve implementation success (Brás *et al.*, 2025; Dimaggio & Powell, 1983; Monteiro, Ribeiro, Gomes, *et al.*, 2024b; Park & Park, 2024; Raimo *et al.*, 2024).

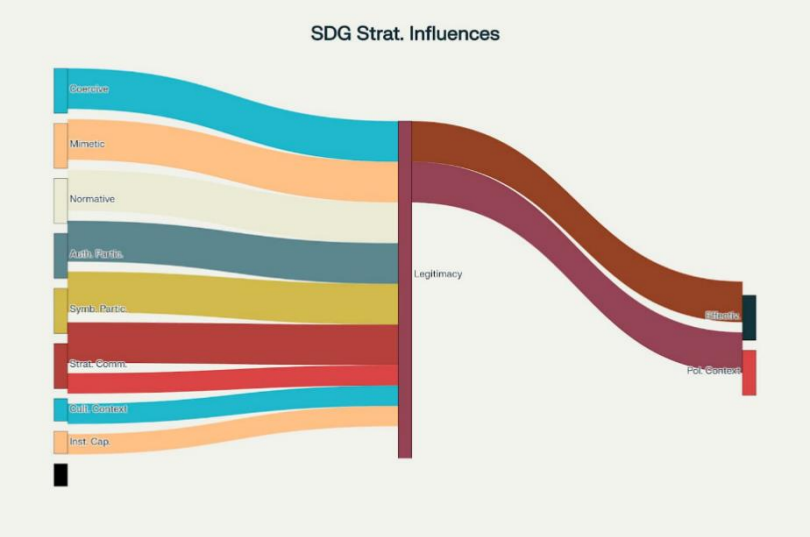

Figure 5. Conceptual Model of Institutional and Stakeholder Influences on SDG Legitimacy and Effectiveness

The illustration demonstrates that SDGs achievement requires both external institutional pressures and effective government stakeholder engagement and communication. The diagram demonstrates how these factors interact dynamically to require integrated sustainability governance approaches (Brás *et al.*, 2025; Nicolò *et al.*, 2024).

5. Conclusion

The systematic literature review methodically addresses research questions by conducting a comprehensive analysis of 16 Scopus-indexed articles from 2015 to 2025. The research findings demonstrate that governments of emerging economies are able to successfully implement the Sustainable Development Goals (SDGs) through the utilisation of institutionalism and stakeholder engagement, which in turn results in stakeholder legitimacy. The review provides a thorough exposition of the mechanisms through which policy

convergence is achieved, utilising coercive, mimetic and normative pressures, as well as authentic stakeholder participation and strategic communication. These mechanisms serve to enhance the legitimacy and efficacy of the process. The extant literature on this topic is fragmented due to a paucity of comprehensive empirical research which examines these three theoretical perspectives across various political and cultural contexts. The research provides satisfactory answers to the research questions, but it is important to note that it is subject to certain limitations. The research faces challenges because of empirical and contextual gaps which prevent a complete or exhaustive resolution. The study is subject to certain limitations, as it is dependent on a specific time period of Scopus-indexed English articles. The majority of research studies are conducted within the confines of national boundaries, a factor which serves to limit the ability to generalise the findings. It is imperative that future research incorporates multi-level, cross-country methodologies, in conjunction with adaptive, participatory and context-sensitive frameworks. A comprehensive study of institutional pressures and stakeholder engagement and legitimacy in sustainable development governance requires this approach. The implementation of Sustainable Development Goals (SDGs) strategies must be both compliant and effective, while also being inclusive and legitimate in various local contexts.

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THE EFFECT OF INFLATION, INTEREST RATES AND EXCHANGE RATES ON THE FINANCIAL SECTOR STOCK PRICE INDEX FOR THE PERIOD 2019-2023

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Abstract

This study aims to analyze the effect of macroeconomic variables such as inflation, interest rates and exchange rates on the financial sector stock price index for the 2019-2023 period. The type of research used is verification research with explanatory survey research methods. In this study, the research objects used are Inflation (INF1), Interest Rates (SBI2), Exchange Rates (NT3), and the Stock Price Index. The unit of analysis of this research is data from the Financial Sector Stock Price Index (IHSK) or the Financial Index (JKFINA). The type of research data used is quantitative data and the data source in this study is secondary data in the form of time series data. While the data analysis method used is multiple linear regression analysis. With the help of SPSS 26 software. The results of this study partially show that inflation has a positive effect on the financial sector stock price index for the 2019-2023 period. Interest rates have a negative effect on the financial sector stock price index for the 2019-2023 period. The exchange rate has no effect on the financial sector stock price index for the 2019-2023 period. Simultaneously shows that inflation, interest rates and exchange rates affect the financial sector stock price index for the 2019-2023 period.

Keywords: Inflation, Interest Rate, Exchange Rate, Financial Sector Stock Price Index

DETERMINANTS OF CLOUD-BASED ACCOUNTING ADOPTION IN MSMES: A BIBLIOMETRIC ANALYSIS AND SYSTEMATIC LITERATURE REVIEW

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Abstract

The purpose of this study is to conduct a thorough analysis of the literature concerning the determinants of cloud-based accounting adoption of the MSMEs. It aims to provide an organizing framework to identify research gaps and propose future research directions. By analyzing data from the Scopus database, the research reveals significant patterns in publication trends, authorship, and thematic evolutions. These findings serve as a guide for designing and positioning new research projects in this domain. This study used a systematic literature review methodology, with data collected from the Scopus database. A bibliometric analysis was performed using VOSviewer software. In this stufy, scholarly articles were scrutinized to construct a conceptual framework and identify thematic trends related to the adoption of cloud-based accounting in MSMEs. This review provides a comprehensive overview of the determinants of cloud-based accounting adoption in MSMEs, simultaneously uncovering significant research trends, prominent authors, and the most influential countries and journals. By identifying research gaps and suggesting future research directions, its findings contribute to the design and positioning of subsequent studies in this field. The study's limitations may stem from its reliance on a limited set of databases and the inherent possibility of selection bias in the reviewed literature. To build upon this research, future studies could broaden its scope by including additional databases or by integrating qualitative methods to achieve a richer understanding of determinants of cloud-based accounting adoption within MSMEs. This study offers actionable insights for software developers, accountants, policymakers, government, practitioners, management, accountants, and academics by identifying the key determinants of cloud-based accounting adoption among MSMEs. These insights can inform strategic decision-making, the creation of effective adoption policies, and the establishment of frameworks designed to foster the uptake of cloud-based accounting within the MSME sector. Understanding the determinants that drive the long-term success of cloud-based accounting adoption in MSMEs has significant social implications, particularly for non-adopting firms. By focusing on these key determinants, targeted interventions can empower MSMEs to improve their financial management efficiency and effectiveness, which in turn contributes to wider socio-economic development. This study contributes to the existing literature by providing a comprehensive analysis of cloud-based accounting adoption factors in MSMEs and employing bibliometric analysis to reveal research trends. The paper's primary contribution is the development of a structured map of the field, which delineates thematic clusters, highlights the most influential works, and pinpoints specific gaps for subsequent academic exploration.

BUILDING BRAND EQUITY IN INDONESIAN PRIVATE UNIVERSITIES: THE ROLE OF STRATEGIC ATTRIBUTES AND THE MEDIATING POWER OF BRAND TRUST

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Abstract

In a competitive Indonesian higher-education market, private universities must leverage brand equity to distinguish themselves. Grounded in Aaker's and Keller's frameworks, this study investigates four strategic attributes marketing activities (H1, H5), service attributes (H2, H6), symbolic attributes (H3, H7), and provider attributes (H4, H8), and tests their direct effects on brand equity, while positioning brand trust (H9) as a mediator (H10a–H10d). We surveyed 487 undergraduates (97.4% response rate) across five accredited PTS in Bandar Lampung (May–June 2025) and applied LISREL-based SEM. Empirical results show that marketing activities (β = .380, p < .001), symbolic attributes (β = .269, p < .001), and provider attributes (β = .422, p < .001) significantly enhance brand equity, whereas service attributes do not (β = .095, p = .104). All four antecedents also predict brand trust (β's .318–.576, p's < .001), and bootstrapped mediation tests confirm substantial indirect effects of each attribute on equity via trust (H10a: .272; H10b: .191; H10c: .347; H10d: .298; all p < .001). By validating key direct paths and mapping a conceptual mediation model, this study extends higher-education branding theory and offers SDG-aligned guidance for building institutional credibility and stakeholder loyalty.

Keywords: brand equity; higher education; brand trust; strategic branding; SEM-LISREL; Indonesia; SDGs

ANALYSIS OF THE COMPARISON OF FINANCIAL PERFORMANCE OF COMPANIES BEFORE AND AFTER ACQUISITION IN PUBLIC COMPANIES FROM 2020 - 2024

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Abstract

This study aims to analyze the impact of merger and acquisitions on the financial performance of companies using publicly listed companies on the Bursa Efek Indonesia as the research objects. The population consists of 106 companies, from which a purposive sampling method was applied, resulting in a sample of 6 public companies. The analysis focuses on the comparison of financial ratios use Current Ratio (CR), Debt to Equity Ratio (DER), Nett to Profit Margin (NPM), and Total Asset Turnover (TATO). This research employs a descriptive quantitative approach using secondary data sources. The 6 selected companies experienced mergers and acquisitions in 2019. The analytical method used include descriptive statistics, a normality test using the shapiro wilk method due to the sample size being fewer than 50 observations, and the Wilcoxon Signed-Rank Test, processed using SPSS version 30. The results indicate that among the four financial ratios, only the DER showed a significant change, while the CR, NPM, and TATO did not exhibit significant differences. This suggests an increase in debt as a result of the merger and acquisition process. The suggests an increase in the proportion of debt to equity capital as a result of the merger and acquisitions process.

Keywords: *Merger and Acquisitions, Financial Performance, Financial Ratio, Wilcoxon Signed Rank-Test.*

1. Introduction

Indonesia has shown relatively stable economic growth over the past decade, however it remains vulnerable to external shocks that can trigger financial crises (Hadjaat et al., 2021). One of the largest crises that hit the world, including Indonesia, is the COVID-19 pandemic, which emerged at the end of 2019 and had widespread impacts on almost all industrial sectors. According to data from the Central Statistics Agency (2020), the accommodation and food and beverage industries experienced a revenue decline of more than 90%, followed by the transportation, warehousing, and property sectors (Nurhaliza, 2021).

This situation has prompted companies to make immediate adjustments, one of which is through corporate actions such as mergers and acquisitions to strengthen capital structure and operational efficiency (Paramarta, 2024). Mergers and acquisitions have become adaptive strategies in facing market uncertainties and addressing cash flow pressures due to the crisis (Damodaran, 2005). Large companies tend to acquire firms in crisis to expand their business ecosystem and create long-term synergies. Although this strategy is widely adopted, research findings regarding the impact of mergers and acquisitions on corporate financial performance still show varied conclusions. Normalita (2018) found that mergers and acquisitions have a significant impact on the financial ratios of Debt to Equity Ratio (DER) and Return on Assets (ROA), while Dewi (2020) and Suryantini (2024) concluded that there were no significant changes in the majority of financial indicators. These differing results indicate a gap in the

literature, particularly in examining the long-term effects of mergers and acquisitions post-pandemic on public companies in Indonesia.

Therefore, this study aims to analyze the differences in financial performance of companies before and after conducting mergers and acquisitions during the period of 2020-2024, focusing on four financial ratios: liquidity ratio measured by the Current Ratio (CR), solvency ratio measured by the Debt to Equity Ratio (DER), profitability ratio measured by the Net Profit Margin (NPM), and activity ratio measured by the Total Asset Turnover (TATO). This research is expected to contribute to the academic literature and business practitioners by providing empirical insights into the effectiveness of merger and acquisition strategies in enhancing corporate financial performance after the global crisis caused by the COVID-19 pandemic.

2. Literature review

3.7. There is a Difference in Financial Performance of the Liquidity Ratio (Current Ratio) After Merger and Acquisitions.

This ratio is used to determine the extent to which a company's current assets are utilized to settle current liabilities that are due. It is expected that acquisitions and mergers can increase the value of the Current Ratio (CR), as a higher CR is considered better, indicating that the company is more liquid. This is supported by the research findings of Putri Novaliza and Atik Djajanti (2013). According to Sartono (2012), the higher the current ratio, the greater the company's ability to meet its obligations. Sutrisno (2012) states that liquidity ratios reflect a company's ability to pay obligations that must be fulfilled immediately. The obligations that need to be met are short-term debts. The ratio used as a measurement tool is the Current Ratio. In terms of short-term finance, this ratio is a comparison between current assets and current liabilities.

Dewi (2012) stated that the current ratio experiences an average increase in the five years following merger and acquisition activities, which contradicts the findings of Putri (2013), where the current ratio showed no significant difference after mergers and acquisitions. The research conducted by Dewi (2012) indicates that liquidity, measured by the current ratio, experiences an average increase in the five years following merger and acquisition activities. Therefore, the hypothesis in this study is as follows:

H1: There is a difference in the value of the liquidity ratio after mergers and acquisitions.

3.8. There is a Difference in Financial Performance of the Leverage Ratio (Debt to Equity Ratio) After Merger and Acquisitions.

The Debt to Equity Ratio (DER) reflects the financing decisions made by management, especially when a company utilizes debt to fund the acquisition process. This is supported by Mulherin et al. (2004), who state that acquisitions generally lead to an increase in DER as a result of external financing. Additionally, Jaffe et al. (2013) add that DER is also an important indicator for investors and creditors to assess the financial risk of a company following a merger. Therefore, significant changes in DER can signal adjustments in capital structure or potential financial risks arising from the acquisition. Thus, the hypothesis in this study is as follows:

H2: There is a difference in leverage levels after mergers and acquisitions.

3.9. There is a Difference in Financial Performance of the Profitability Ratio (Nett to Profit Margin) After Merger and Acquisitions

The Net Profit Margin (NPM) reflects the efficiency of cost management by management post-acquisition, making it a benchmark for the effectiveness of a company's performance after the acquisition. This is also stated by Sari, who indicates that NPM serves as concrete evidence of whether growth strategies through acquisitions have a positive impact on financial performance or instead burden operations. Thus, the hypothesis in this study is as follows:

H3: There is a difference in profitability values after mergers and acquisitions.

3.10. There is a Difference in Financial Performance of the Activity Ratio (Total Asset Turnover) After Merger and Acquisitions

Total Asset Turnover (TATO) is a ratio that indicates a company's efficiency in using its assets to generate a certain volume of sales (Sari et al., 2014). This ratio reflects the level of efficiency in the overall use of the company's assets to generate sales volume, and it is expected that acquisitions and mergers can improve this ratio. If asset turnover slows down, it indicates that the assets held by the company are greater than the company's ability to make sales. A higher total asset turnover figure indicates that the company is more effective in managing its assets (Hanafi, 2013:40). This is supported by the research findings of Agustin (2016).

H4: There is a difference in activity levels after mergers and acquisitions.

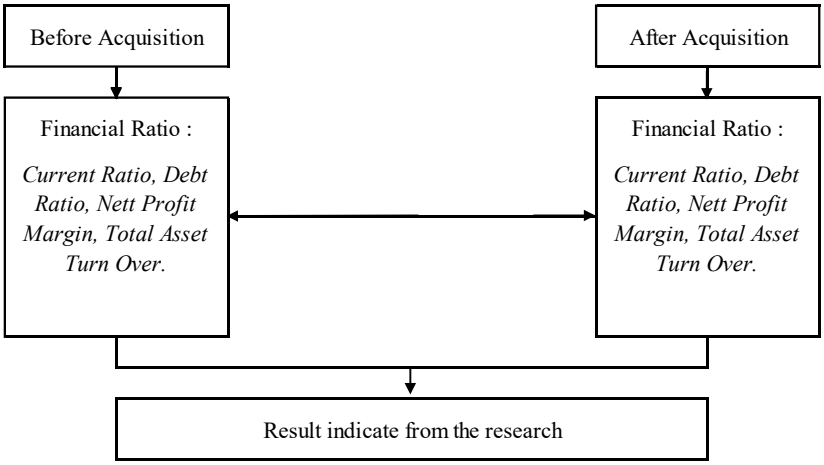

Figure 1. Conceptual Framework

3. Methodology

The type of research used in this study is descriptive research with a quantitative approach. The quantitative research method involves using data obtained from a population. The use of descriptive research in this study aims to describe the research object or the research results. This study will examine the financial performance of companies before and after merger and acquisition activities in publicly listed companies on the Indonesia Stock Exchange (IDX).

This research will review the financial performance before and after acquisitions in publicly listed companies on the Indonesia Stock Exchange (IDX) for the period of 2020 – 2024. The research object used in this study is merger and acquisition activities and their impact on a company's financial performance, which is reflected in its financial statements measured using financial ratios, including Current Ratio (CR), Debt to Equity Ratio (DER), Net Profit Margin (NPM), and Total Asset Turnover (TATO).

The unit of analysis is adjusted to the issues being studied regarding the financial performance of companies, specifically the annual financial statement data of companies listed on the Indonesia Stock Exchange. The unit of analysis consists of financial data from publicly listed companies that have undergone mergers and acquisitions during the year 2019.

The type and source of data used in this study are quantitative data, which is a type of information represented by numerical symbols. Based on these numerical symbols, which constitute secondary data, quantitative calculations can be performed. Secondary data generally consists of evidence, records, or historical reports that have been compiled in archives. This data is obtained from the Indonesia Stock Exchange through its website www.idx.co.id. Other sources include literature such as books, journals, and data from other internet sites that support the research, including sahamok.com, www.kppu.go.id, and the websites of the companies sampled in this study.

Regarding data total assets, total equity, net income, total debt, sales, current assets, and current liabilities are obtained from the audited annual financial statements of each company for the five years before and five years after the merger and acquisition activities on the Indonesia Stock Exchange (IDX). This study analyzes descriptively the measurement of the financial performance of companies before and after mergers and acquisitions. Therefore, it is necessary to test the hypotheses that have been presented. Hypothesis testing is conducted according to the research methods and analyses designed in accordance with the variables being studied to obtain accurate results. Essentially, the variables in this study are the financial performance of the company represented by four financial ratios, including the Liquidity Ratio measured by the Current Ratio, the Solvency Ratio measured by the Debt to Equity Ratio, the Profitability Ratio measured by the Net Profit Margin, and the Activity Ratio measured by the Total Asset Turnover.

Table 1. Variable Operationalization

Variable	Indicator	Instrument	Schale
X Variable : Acquisition & Merger	Financial Statement of Companies that have Merger and Acquisition	The number one (1) for companies that have undergone mergers and acquisitions, and the number zero (0) for companies that have not.	Ordinal
Y Variable : Financial Performance			
Liquidity Ratio	*Current Ratio*	$\frac{Current\ Asset}{Current\ Liabilities}$	Ratio
Leverage Ratio	*Debt to Equity Ratio*	$\frac{Liabilities}{Equity}$	Ratio
Profitability Ratio	*Nett Profit Margin*	$\frac{Nett\ Income}{Nett\ Sales}$	Ratio
Activity Ratio	*Total Asset Turnover*	$\frac{Sales}{Total\ Assets}$	Ratio

4. Results and Discussions

4.1 Collection Data Result

The data used in this study is secondary data in the form of financial statements from publicly listed companies that underwent mergers and acquisitions during the 2019 period, registered on the Indonesia Stock Exchange (IDX). The financial statements used cover the period from 2014 to 2024, including the Income Statement, Statement of Financial Position, and Notes to the Financial Statements (CALK), which were obtained from www.idx.co.id and the respective company homepages.

Table 2. Current Ratio In 2014 – 2024

No	Companies	Before Acquisition					In Period	After Acquisition				
		2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
1	BBCA	1,05	1,11	1,14	1,16	1,52	1,17	1,20	1,15	1,13	1,15	1,19
2	DSNG	1,14	0,39	0,13	1,65	1,03	0,82	1,14	0,20	1,07	1,00	1,15
3	BBNI	0,22	0,26	0,17	0,14	0,18	0,19	0,14	0,20	0,21	0,20	0,20
4	ASSA	0,40	0,43	0,49	4,12	3,53	0,53	0,44	0,90	0,86	0,88	0,84
5	TBIG	0,36	1,36	0,68	0,99	0,32	0,53	0,23	0,36	0,41	0,34	0,21
6	MIDI	0,82	0,79	0,77	0,72	0,73	0,78	0,65	0,07	0,76	0,95	0,94

Based on the results of the liquidity ratio calculation using the current ratio (CR), it can be seen that in the five years prior to the mergers and acquisitions, the company with the lowest CR was ASSA at 0,13%, while the highest CR was recorded by DSNG at 4,12%. In the five years following the mergers and acquisitions, the lowest CR was recorded by MIDI at 0,07%, and the highest CR was recorded by BBCA at 1,20%.

Table 3. Debt to Equity Ratio In 2014 – 2024

No	Companies	Before Acquisition					In Period	After Acquisition				
		2014	2015	2016	2017	2018	2014	2015	2016	2022	2023	2024
1	BBCA	6,09	5,63	5,00	4,71	4,44	4,28	4,82	5,06	4,94	4,81	4,51
2	DSNG	2,13	2,13	0,67	0,67	2,21	2,11	1,27	0,95	0,88	0,82	0,76
3	BBNI	5,84	5,51	5,78	5,78	6,35	5,50	6,57	6,60	5,74	6,66	5,77
4	ASSA	2,54	2,38	1,85	1,85	2,57	2,62	2,59	2,42	1,94	1,82	1,78
5	TBIG	9,41	13,86	14,14	14,14	7,54	5,08	3,12	3,46	3,12	2,95	3,48
6	MIDI	3,17	3,39	3,76	3,76	3,59	3,09	3,23	2,79	2,48	0,99	1,04

Based on the results of the solvency ratio calculation using the debt to equity ratio (DER), it can be observed that in the five years prior to the mergers and acquisitions, the lowest value was recorded by DSNG at 0,67%, while the highest value was recorded by TBIG at 14,14%. In the five years following the mergers and acquisitions, the lowest value was again held by DSNG at 0,76%, while the highest value was recorded by BBNI at 6,66%.

Table 4. Nett to Profit Margin Ratio In 2014 – 2024

No	Companies	Before Acquisition					In Period	After Acquisition				
		2014	2015	2016	2017	2018	2014	2015	2016	2022	2023	2024
1	BBCA	0,80	0,80	0,80	0,80	0,79	0,79	0,81	0,81	0,81	0,81	0,80
2	DSNG	0,38	0,26	0,27	0,34	0,29	0,12	0,27	0,37	0,39	0,33	0,38
3	BBNI	0,80	0,79	0,80	0,80	0,76	0,80	0,25	0,34	0,36	0,34	0,81
4	ASSA	0,13	0,08	0,14	0,21	0,23	0,12	0,09	0,16	0,29	0,02	0,22
5	TBIG	0,27	0,49	0,39	0,70	0,20	0,23	0,06	0,08	0,10	0,11	0,29
6	MIDI	0,10	0,08	0,09	0,04	0,06	0,07	0,06	0,08	0,10	0,11	0,14

Based on the results of the profitability ratio calculation using the nett profit margin (NPM), it can be seen that in the five years prior to the mergers and acquisitions, the lowest

value was recorded by MIDI at 0,04%, while the highest NPM was held by BBCA at 0,80%. In the five years following the mergers and acquisitions, the lowest value was recorded by ASSA at 0,02%, while the highest value was again recorded by BBCA at 0,81%

Table 5. Total Asset Turnover In 2014 – 2024

No	Companies	Before Acquisition					In Period	After Acquisition				
		2014	2015	2016	2017	2018	2014	2015	2016	2022	2023	2024
1	BBCA	0,07	0,08	0,08	0,08	0,08	0,08	0,07	0,06	0,07	0,07	0,07
2	DSNG	0,68	0,56	0,48	0,61	0,41	0,49	0,47	0,52	0,63	0,59	0,81
3	BBNI	0,08	0,07	0,07	0,06	0,06	0,07	0,06	0,05	0,05	0,06	0,06
4	ASSA	0,45	0,48	0,52	0,51	0,46	0,48	0,08	0,84	0,81	0,61	0,64
5	TBIG	0,15	0,15	0,16	0,16	0,15	0,15	0,15	0,15	0,15	0,14	0,15
6	MIDI	2,34	2,22	1,99	2,00	2,16	2,33	2,14	2,15	2,26	2,23	2,28

Based on the results of the activity ratio calculation using the total asset turnover (TATO), it can be observed that in the five years prior to the mergers and acquisitions, the lowest TATO was recorded by BBNI at 0,06%, while the highest TATO was recorded by MIDI at 2,34%. In the five years following the mergers and acquisitions, the lowest TATO was again held by BBNI at 0,05%, while the highest TATO was recorded by MIDI at 2,28%.

4.2 Descriptive Statistical Analysis Before and After Mergers and Acquisitions

It can be noted that the number of samples used in this study is six, with a research period covering five years of activity before the mergers and acquisitions, resulting in N = 30.

Table 6. Descriptive Statistical Test Before Merger and Acqusitions

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
CR	30	0,13	4,12	0,9267	0,89948
DER	30	0,67	14,14	5,0837	3,61686
NPM	30	0,04	0,80	0,4230	0,29869
TATO	30	0,06	2,34	0,5790	0,73968
Valid N (listwise)	30				

The maximum and minimum values of the current ratio (CR) before the mergers and acquisitions are 4,12 and 0,13, respectively. The average current ratio (CR) before the mergers and acquisitions is 0,9267, with a standard deviation of 0,899, indicating that the average ability of the companies to use current assets to meet current liabilities is 0,93%.

The maximum and minimum values of the debt to equity ratio (DER) before the mergers and acquisitions are 14,14 and 0,67, respectively. The average debt to equity ratio (DER) before the mergers and acquisitions is 5,0837, with a standard deviation of 3,617. The lower standard deviation compared to the average indicates less variation or a smaller gap between the minimum and maximum values. The average DER of 5,0837 shows that the average level of debt relative to the assets owned by the companies is 5,08%.

The maximum and minimum values of the net profit margin (NPM) before the mergers and acquisitions are 0,80 and 0,04, respectively. The average net profit margin (NPM) before the mergers and acquisitions is 0,4230, with a standard deviation of 0,29869. The low standard

deviation compared to the average indicates less variation or a smaller gap between the minimum and maximum values. The average NPM of 0,4230 indicates that the companies ability to generate profit is 0,42%.

The maximum and minimum values of the total asset turnover (TATO) before the mergers and acquisitions are 2,34 and 0,06, respectively. The average total asset turnover (TATO) before the mergers and acquisitions is 0,5790, with a standard deviation of 0,73968. The higher standard deviation compared to the average indicates more variation between the minimum and maximum values. The average TATO of 0,5790 shows that the ability of the funds invested in total assets to generate revenue is 0,58%.

Table 7. Descriptive Statistical Test After Merger and Acquitions

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
CR	30	0,14	1,20	0,6933	0,38761
DER	30	0,76	6,66	3,2457	1,89407
NPM	30	0,02	0,81	0,3263	0,26901
TATO	30	0,05	2,28	0,6140	0,77375
Valid N (listwise)	30				

The maximum and minimum values of the current ratio (CR) after the mergers and acquisitions are 1,20 and 0,14, respectively. The average current ratio (CR) after the merger and acquisition activities is 0,6933, with a standard deviation of 0,38761. The lower standard deviation compared to the average indicates less variation or a smaller gap between the maximum and minimum values. The average current ratio (CR) of 0,6933 shows that the average ability of the companies to use current assets to meet current liabilities is 0,69%.

The maximum and minimum values of the debt to equity ratio (DER) after the mergers and acquisitions are 6,66 and 0,76, respectively. The average debt to equity ratio (DER) after the mergers and acquisitions is 3,2475, with a standard deviation of 1,89407. The lower standard deviation compared to the average indicates less variation or a smaller gap between the maximum and minimum values. The average DER of 3,2457 shows that the average level of debt relative to the assets owned by the companies is 3,25%.

The maximum and minimum values of the net profit margin (NPM) after the mergers and acquisitions are 0,81 and 0,02, respectively. The average net profit margin (NPM) after the mergers and acquisitions is 0,3263, with a standard deviation of 0,26901. The lower standard deviation compared to the average indicates less variation or a smaller gap between the maximum and minimum values. The average NPM of 0,3263 indicates that the companies' ability to generate profit is 0,33%.

The maximum and minimum values of the total asset turnover (TATO) after the mergers and acquisitions are 2,28 and 0,05, respectively. The average total asset turnover (TATO) after the mergers and acquisitions is 0,6140, with a standard deviation of 0,77375. The higher standard deviation indicates more variation or a greater gap between the maximum and minimum values. The average TATO of 0,6140 shows that the ability of the funds invested in total assets to generate revenue is 0,61%.

4.3 Normality Test of Data

This study uses the Shapiro-Wilk Test as the method for testing normality. The decision criteria for the normality test are as follows: if the significance value (Sig.) > 0,05, then the data is normally distributed; and if the significance value (Sig.) < 0,05, then the data is not

normally distributed. The following are the results of the normality test for the variables used in the study.

Table 8. Shapiro Wilk Test Result

Tests of Normality			
Rasio	Shapiro-Wilk		
	Statistic	Df	Sig.
CR	0,726	30	<0,001
DER	0,822	30	<0,001
NPM	0,827	30	<0,001
TATO	0,678	30	<0,001

a. Lilliefors Significance Correction

Based on the results of the normality test data in Table 8, it can be seen that all significance values (Sig.) for each variable in the Shapiro-Wilk Test are less than 0,05. This indicates that the distribution of the four variables being analyzed is not normal. Consequently, in the hypothesis testing of this study, a non-parametric statistical method is used, specifically the Wilcoxon Signed-Rank Test, due to the failure to meet the normality assumption.

4.4 Hypothesis Testing and Interpretation of Research Results

Wilcoxon Signed-Rank Test for five years before and five years after the merger and acquisition process.

Table 9. Wilcoxon Signed Rank Test Result

Ranks				
		N	Mean Rank	Sum of Ranks
CR_After - CR_Before	Negative Ranks	17[a]	15,79	268,50
	Positive Ranks	12[b]	13,88	166,50
	Ties	1[c]		
	Total	30		
DER_After - DER_Before	Negative Ranks	20[d]	18,88	377,50
	Positive Ranks	10[e]	8,75	87,50
	Ties	0[f]		
	Total	30		
NPM_After - NPM_Before	Negative Ranks	14[g]	19,32	270,50
	Positive Ranks	15[h]	10,97	164,50
	Ties	1[i]		
	Total	30		
TATO_After - TATO_Before	Negative Ranks	15[j]	9,07	136,00
	Positive Ranks	9[k]	18,22	164,00
	Ties	6[l]		

	Total	30		
	CR_After - CR_Before	**DER_After - DER_Before**	**NPM_After - NPM_Before**	**TATO_After - TATO_Before**
Z	-1,103[b]	-2,983[b]	-1,149[b]	-0,401[c]
Asymp. Sig. (2-tailed)	0,270	0,003	0,251	0,688

Based on the results presented in Table 9, the following can be explained:

The analysis of the current ratio (CR) variable using the Wilcoxon Signed-Rank Test shows a significance value of 0,270 > 0,05, leading to the conclusion that **H_1 is rejected** based on the results of the Wilcoxon Signed-Rank Test because the significance value is greater than 0,05. Additionally, there is a difference in descriptive statistics between the periods before and after the mergers and acquisitions. This indicates that the companies ability to utilize their current assets to meet current liabilities has not been maximized after the merger and acquisition process. This may also occur because the amount of current assets increases each year, as does short-term debt. This indicates that the acquisition process is often financed by increasing short-term debt, which in turn raises short-term obligations, resulting in no significant change in liquidity ratios. These findings align with research conducted by Anggraini and Wibowo (2023), which found no significant change in the current ratio after merger and acquisition activities, as well as research by Normalita (2018), which indicated that mergers and acquisitions do not affect the current ratio (CR). In contrast, research by Aswinarti (2023) on the financial performance of companies before and after mergers and acquisitions in companies listed on the Indonesia Stock Exchange from 2014 to 2018 showed a significant change in the current ratio (CR) after the merger and acquisition process.

The analysis of the debt to equity ratio (DER) variable using the Wilcoxon Signed-Rank Test shows a significance value of 0,003 < 0,05, leading to the conclusion that **H_2 is accepted** based on the results of the Wilcoxon Signed-Rank Test because the significance value is lower than 0,05. This indicates that there is a significant change in the companies after engaging in merger and acquisition activities. The majority of companies experienced an increase in DER after the merger and acquisition activities, meaning that companies tend to increase their debt proportion relative to their equity. These findings are consistent with research conducted by Davin (2025), which stated that the debt to equity ratio variable experienced a significant increase post-merger and acquisition. This is also similar to the findings of Magdalena, et all (2024), which reported the same results, indicating a change in capital structure dominated by debt during the pandemic, with company operations relying on debt as a source of operational costs. Additionally, research by Sudiartha (2013) on financial performance in companies listed on the Indonesia Stock Exchange showed no significant change in the net profit margin (NPM) variable, but a significant increase in the DER variable, indicating an increase in debt proportion to finance company activities. This could negatively impact the company if the increase is not balanced with an increase in profitability (NPM). However, if the debt is used productively and efficiently, the company could benefit in the long term. This is connected to the COVID-19 pandemic, which led many companies to engage in mergers and acquisitions to restructure their finances due to cash flow pressures, ultimately resulting in an increase in DER (Lock Son, 2021). Companies opted to take on debt as an additional means of financial restructuring during the COVID-19 pandemic (Brooking, 2020). This phenomenon was not only observed in companies that recently underwent mergers and acquisitions during the pandemic but also in those that had previously engaged in such activities (Science Direct, 2023).

The analysis of the net profit margin (NPM) variable using the Wilcoxon Signed-Rank Test shows a significance value of 0,251 > 0,05, leading to the conclusion that **H_3 is rejected** based on the results of the Wilcoxon Signed-Rank Test because the significance value is greater than 0,05. This indicates that after the merger and acquisition, there is no significant change in the ability to generate profit or earnings with the capital available. Additionally, there is a difference in descriptive statistics between the periods before and after the mergers and acquisitions. The NPM did not change significantly because, in this study, the DER ratio increased, indicating an increase in debt to finance capital during the acquisition process. If most acquisitions are financed using debt, the company faces additional interest burdens, which directly impacts net income and profit margins. This may also be influenced by external conditions such as COVID-19, which occurred during the study period (2020-2024), leading to decreased revenues, increased operational costs, and market uncertainty, thereby constraining the company's ability to enhance its net income. These results align with research conducted by Sandika Putra and Sasi Agustin (2016), which stated that there were no significant changes in the net profit margin (NPM) after the merger and acquisition process, as well as research by Kurniati (2022), which also indicated no significant changes in the net profit margin (NPM). This suggests that, in general, merger and acquisition activities have not had a tangible impact on the company's profitability in the short term.

The analysis of the total asset turnover (TATO) variable using the Wilcoxon Signed-Rank Test shows a significance value of 0,688 > 0,05, leading to the conclusion that **H_4 is rejected** based on the results of the Wilcoxon Signed-Rank Test because the significance value is greater than 0,05. These results are consistent with research conducted by Suryantini (2024), where the researcher used a paired sample t-test on the total asset turnover (TATO) activity ratio variable, and the findings indicated no significant differences in financial performance before and after mergers and acquisitions in the banking sector in Indonesia. The TATO did not change significantly because asset growth was not matched by proportional sales growth, which can be linked to the profitability ratio (NPM) that did not experience significant changes after the acquisition process. External factors such as COVID-19 also affected the efficiency of asset utilization by reducing market demand and causing production capacity to be underutilized, resulting in stagnation in the company's activity ratios during the study period. This is also consistent with research conducted by Agustin (2016), which stated that there were no significant differences in the TATO variable after the acquisition of PT Indospring Tbk. Wibowo (2023) also reported similar findings, indicating no significant changes in the TATO variable post-acquisition in manufacturing companies listed on the Indonesia Stock Exchange. This suggests that merger and acquisition activities do not influence the company's ability to generate sales from its assets.

5. Conclusion

Based on the results of the Wilcoxon Signed-Rank Test on the financial performance of publicly listed companies before and after acquisitions, it can be concluded that there is no difference in financial performance before and after merger and acquisition activities in terms of liquidity ratios represented by the current ratio (CR). However, there is a significant difference in solvency ratios represented by the debt to equity ratio (DER), which experienced a significant change after the merger and acquisition activities. Meanwhile, the profitability ratio represented by the net profit margin (NPM) and the activity ratio represented by total asset turnover (TATO) did not show any changes, indicating that merger and acquisition activities have not yet had a tangible impact on the liquidity, profitability, and efficiency of asset utilization in the companies.

Overall, the results of this study indicate that post-acquisition, companies experience significant changes in the capital structure aspect (DER) but have not been able to demonstrate significant improvements in liquidity (CR), profitability (NPM), and asset utilization efficiency (TATO). The operational integration process, working capital management, asset utilization efficiency, and the influence of external factors such as the COVID-19 pandemic are factors that affect the financial performance of companies post-acquisition. This indicates an increase in the proportion of debt to finance company activities, which could negatively impact the company if the increase is not balanced with an increase in profitability (NPM). However, if the debt is used productively and efficiently, the company could benefit in the long term.

This study also suggests that companies should better prepare for post-merger and acquisition integration comprehensively, investors should conduct financial statement analyses before making decisions, and future researchers should expand the period and analysis indicators, including considering differences in industry types and merger and acquisition types for more in-debth results.

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ANALYSIS OF THE CONTRIBUTION OF TRANSFER FUNDS AND REGIONAL ORIGINAL REVENUE TO THE REALIZATION OF CAPITAL EXPENDITURE IN CIREBON CITY IN 2019-2023

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Abstract

This study aims to analyze the influence of Transfer Funds and Regional Original Revenue on Capital Expenditure in Cirebon City in 2019–2023. Capital expenditure is an important component in supporting sustainable regional infrastructure development. Transfer funds from the central government and Regional Original Revenue are the main sources of financing for capital expenditure, but the effectiveness of their contribution needs to be further studied. This study uses a quantitative approach with secondary data obtained from the Budget Realization Report (LRA) of the Cirebon City Government. The analysis method used is multiple linear regression to see the simultaneous and partial effect between independent variables (Transfer Funds and Regional Original Revenue) on dependent variables (Capital Expenditure). The results of the study show that simultaneously Transfer Funds and Regional Original Revenue have a significant influence. Partially, Transfer Funds have a positive and significant influence, showing that increased funds from the central government encourage an increase in regional capital expenditure. Meanwhile, PAD has no significant effect, indicating that its contribution is still limited. Therefore, it is important for Regional Governments to increase fiscal independence through the optimization of Regional Original Revenue so that regional development can be more sustainable.

Keywords : Transfer Funds, Regional Original Revenue, Capital Expenditure.

1. Introduction

Effective and efficient regional financial management is one of the ways local governments play a strategic role in national development. Since capital expenditure directly supports the sustainable provision of infrastructure and public services, its realization is a key metric for assessing the success of regional development. The dedication of local governments to encourage sustainable economic growth and improve people's welfare is demonstrated by capital expenditure.

Local governments are empowered to investigate revenue streams and control their own expenditures under the concept of regional autonomy. Regional Original Revenue and Transfer Funds from the central government, which include the General Allocation Fund, Special Allocation Fund , and Revenue Sharing Fund , are the two main sources of funding for regional spending. While transfer payments indicate the region's dependence on the federal government, the local revenue demonstrates the region's financial strength and autonomy. In reality, areas with low local revenue often rely on transfer money to cover capital expenditures and other development requirements.

Despite financial limitations, Cirebon City, one of the autonomous regions in West Java Province, has had difficulty improving public service and infrastructure standards. The COVID-19 pandemic crisis also impacted the fiscal dynamics of Cirebon City between 2019 and 2023, forcing local governments to reallocate funds and refocus on social safety nets and the health sector. This situation raises the question of how the current distribution of capital expenditure is affected by transfer funds and PAD.

This study is very important to assess how well Cirebon City's development funding works. In addition, it is anticipated that the findings of this study will help local governments create more autonomous fiscal policies that focus on sustainable development. The purpose of this study is to find out whether Fund Transfers and ROR have a significant impact on capital expenditure in Cirebon Regency between 2019 and 2023.

2. Sastra Riview

Capital expenditure is a component of the local government budget allocated for the development of fixed assets and long-term infrastructure. The increase in capital expenditure reflects the seriousness of local governments in building public services and supporting economic growth. In its implementation, capital expenditure is greatly influenced by regional financial capacity, especially from the source of Transfer Funds and Regional Original Revenue .

2.1 Public Accounting Theory

Public economic theory focuses on the role of government in allocating resources, distributing income, and stabilizing the economy. According to Musgrave (1959), the government has the main function in public finance, namely allocation, distribution, and stabilization functions. The allocation function is directly related to capital expenditure and is financed by regional original revenue and Fund Transfer in the context of providing public goods in the regions. In this context, capital expenditure is an important component because it reflects government investment in long-term development, such as infrastructure development, fixed asset procurement, and other public facilities.

The concept of public accounting, which emphasizes responsibility, openness, and efficiency in the use of public funds, is closely related to regional financial management. Public accounting is an information system used by the government sector to track, supervise, and report financial transactions related to the implementation of regional revenue and expenditure budgets, according to Mardiasmo (2018). Because it represents government investment in long-term development, including infrastructure development, fixed asset acquisition, and other public facilities, capital expenditure is an important component in this context.

2.2 Budget Theory and Budget Reallocation

The process of making and implementing government fiscal policies is based on budget theory. Budgets are the government's primary tool for setting development priorities, allocating revenues, and maintaining economic stability, according to Musgrave & Musgrave (1989). The percentage of capital expenditure in the regional budget shows the government's focus on physical development. Capital expenditure is usually funded by transfers from the central

government and Regional Original Revenue. While transfer funds help balance the region's ability to offer public services, the PAD represents the region's budget capacity.

However, budget reallocations have changed the budget structure in several circumstances, including the COVID-19 pandemic. According to Wildavsky (1986), reallocation is a step in the budget policy process that takes into account changes in urgent demands and external circumstances. To move funds from capital expenditure to operational costs, health, and social assistance, reallocations are done in different locations. This has an impact on how development projects are carried out hampered. The majority of local governments saw a decline in capital expenditure during the pandemic as a result of significant budget reallocation, according to Hasanah's (2022) research.

2.3 The Effect of Fund Transfer on Capital Expenditure

Fund transfers from the central government to the regions consist of the General Allocation Fund , the Special Allocation Fund , and the Profit Sharing Fund . The fund aims to support the implementation of government and regional development equally. In the context of capital expenditure, transfer funds are the main source of financing, especially for regions with low local revenue . However, a high reliance on transfer funds can hinder budget flexibility and development effectiveness, especially when there is a budget refocus such as during the COVID-19 pandemic.

Research by Made Ari Juniawan and Ni Putu Santi Suryantini (2019) It shows that transfer funds have a significant influence on changes in capital expenditure allocation, but tend to reduce regional fiscal independence. This finding is in line with the condition of Cirebon City, where most of the capital expenditure still comes from central transfers. Thursday, the hypothesis in this study is as follows:

H1: It is suspected that the Transfer of Funds has an effect on Capital Expenditure.

2.4 The Influence of Regional Revenue on Capital Expenditure

Regional revenue is a reflection of the ability of regions to explore sources of revenue from within their regions, such as regional taxes, levies, and results from regional asset management. The larger the region or, the greater the flexibility of local governments in determining development priorities, including in financing capital expenditure.

According to Ade Ony Sigaian (2020) The local revenue has a significant positive effect on capital expenditure because it shows the ability of the regions to finance development without being completely dependent on the central government. Areas with high locel revenue are usually more efficient and effective in managing their budgets on Thursdays, the hypothesis in this study is as follows:

H2: It is suspected that Regional Original Revenue has an effect on Capital Expenditure.

2.5 The Simultaneous Effect of Transfer Funds and Local Original Income on Capital

When Fund Transfer and local revenue are analyzed together, they are the main source in the regional revenue structure. The combination of the two will determine the amount of fiscal space available to be allocated for productive spending, such as capital spending. Regions with

strong local revenue can utilize Fund Transfers as a complement, not as the main source, so that capital expenditure becomes more optimal.

Marlina's research (2019) states that Fund Transfer and local revenue simultaneously have a significant influence on capital expenditure, and the efficiency of their management greatly determines the results of development. Thursday, the hypothesis in this study is as follows:

H3: It is alleged that the Transfer of Funds and Local Original Revenue simultaneously affect the Capital Expenditure.

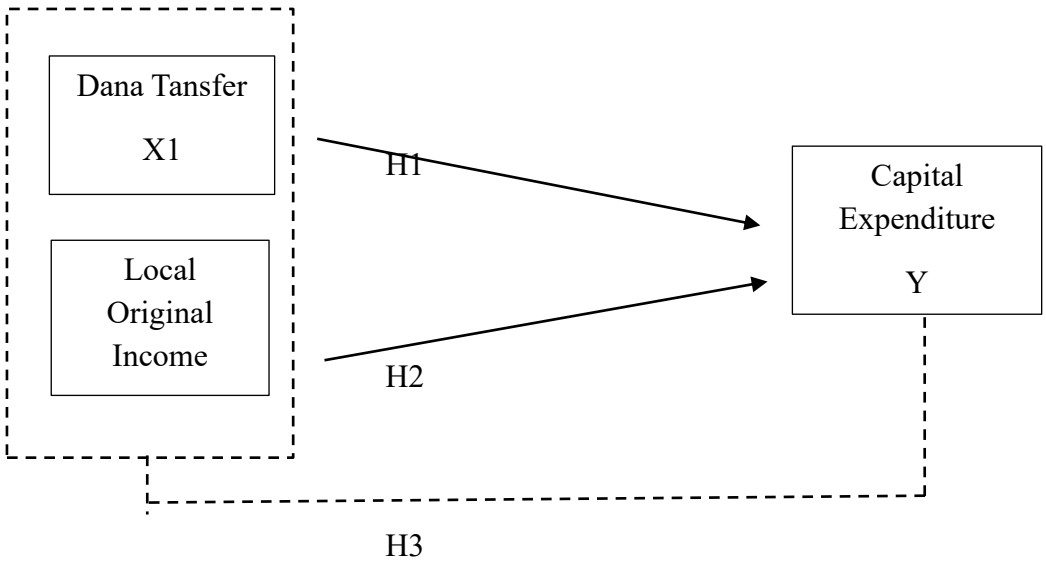

Figure 1. Conceptual Framework

3. Methodology

This study adopts a quantitative approach that aims to examine the relationship between independent variables—Fund Transfer and Local Revenue Income —and dependent variables, namely Capital Expenditure in Cirebon City during the period 2019 to 2023. This approach was chosen because it provides an empirical understanding of the relationship between variables based on actual financial data from local governments.

The data used in this study is secondary data, obtained through documentation from official institutions, especially the Cirebon City Government's Budget Realization Report, issued by the Regional Finance Agency , along with additional data from the Cirebon City Central Statistics Agency . The data analyzed includes the total amount of Transfer Funds, total regional original revenue, and total Capital Expenditure for the five-year period 2019 to 2023.

The number of residents in this study consists of all financial statements of the Cirebon City Government during the specified period. Due to the limited amount of data available and the fact that the data covered the entire population, the study used the intended sampling technique, where the selection of samples was based on special considerations.

This study uses one dependent variable, Capital Expenditure (Y), and two independent variables, namely Fund Transfer (X_1) and Local Revenue Income (X_2). The three variables are expressed in Indonesian Rupiah (IDR) and analyzed using natural logarithmic, transformations to reduce scale differences and improve the normality of data distribution.

Data processing and analysis is carried out using SPSS software version 26. The analysis procedure begins with a classical assumption test to ensure the reliability of the regression model, which includes the Normality test (to ensure that the data is distributed normally), the Multicollinearity test, (to detect high correlations between independent variables) the heteroscedasticity test (to identify unequal variances in the residue), and the Autocorrelation test, (to determine if there is a correlation between residues across the entire time period).

Once the regression model meets the assumptions, multiple linear regression analysis is performed to assess the effect of each independent variable on the dependent variables, either partially (using the t-test) or simultaneously (using the F-test). In addition, the determination coefficient (R^2) is used to determine how much variation of dependent variables can be explained by independent variables.

The entire analysis process is directed to test three main hypotheses, namely the Effect of Fund Transfer on Capital Expenditure, the Effect of regional original revenue on Capital Expenditure, and, The combined effect of Fund Transfer and regional original revenue on Capital Expenditure in Cirebon City.

The variables used in this study are explained as follows:

Variabel	**Sub-Variabel**	**Indicator**	**Measurement**	**Scale**
Transfer Dana	- Special Allocation Fund (DAK)- General Allocation Fund (DAU)- Profit Sharing Fund (DBH)	Regional Dependency Ratio	(Transfer of Funds / Regional Revenue) × 100%	Rasio
Locally Generated Revenue (PAD)	- Local taxes- Regional levies- Profits from separate regional assets- Other legitimate local revenues	Regional Financial Independence Ratio	(Local Revenue/Fund Transfer) × 100%	Rasio
Capital Expenditure	- Land capital expenditure- Expenditure	Capital Expenditure Activity Ratio	(Capital Expenditure / Total Regional	Rasio

	on equipment and machinery- Expenditure on buildings and structures- Expenditure on roads, irrigation and networks- Other capital expenditures		Expenditure) × 100%	

Table 1. Operational Variables

4. Results and Discussion

4.1 General Description of Cirebon City

Administratively, Cirebon City was officially designated as a Municipality based on Statute 1906 No. 125. The development of Cirebon City began in the 15th century when Prince Cakra Buana established the center of government in the area, then handed over power to his son-in-law, Syarif Hidayatullah, better known as Sunan Gunung Jati. Under his leadership, Cirebon developed into the first Islamic Sultanate in West Java, which played a major role in the spread of Islam and the culture of the north coast of Java.

After Indonesia's independence, Cirebon was maintained as an administrative city. Based on Law Number 16 of 1950, Cirebon was designated as a level II autonomous region with the name Cirebon City, which means it has the authority of self-government, equivalent to a district. Based on Law No. 22 of 1999 concerning Regional Government, Cirebon City has obtained broad autonomy. Since then, the Mayor and Deputy Mayor are directly elected by the people through general elections. City governments have begun to develop public services that are more transparent, accountable, and technology-based. Cirebon City is currently divided into 6 sub-districts and 22 sub-districts with the support of technical institutions such as agencies, agencies, and public service offices.

4.2 Development and Business Activities of the Cirebon City Government

Cirebon City is one of the cities in West Java Province, which is located in the administrative area of West Java Province. Geographically, Cirebon City has a strategic position as a link between West Java and Central Java Provinces, as well as being the center of economic, trade, and government activities in the Greater Cirebon area. In the context of regional financial management, Cirebon City receives transfer funds from the central

government and manages Regional Original Revenue as a source of funding to finance expenditures, including capital expenditures.

The economy of Cirebon City is supported by the trade, services, and small to medium industries sectors. From the fiscal side, the regional revenue structure of Cirebon City consists of Transfer Funds (balancing funds, regional incentive funds, and others), and Regional Original Revenues, such as regional taxes, regional levies, and the results of regional wealth management.

During the period 2019 to 2023, there were dynamics of transfer fund receipts and regional original revenue which had an impact on the level of capital expenditure in Cirebon City. Cirebon City experiences fluctuations in transfer fund receipts and regional original revenue, which affects the amount of regional expenditure allocation, especially capital expenditure. Budget realization data shows the relationship between revenue and establishing spending priorities. Therefore, it is important to look at how the relationship between transfer funds, PAD, and capital expenditure over a given period is concerned.

4.3 Description or Realization of the Variables Studied

In this study, there are three components or data, namely Fund Transfers, Regional Original Revenue, and Capital Expenditure. To describe and test the influence between independent and dependent variables, this section will present a description of the data that has been obtained. The data presented and obtained in the following table :

Year	Transfer Fumd	Local Revenue	Capital Expenditure
2019	IDR 817,473,644,852	IDR 370,836,491,722	IDR 98,850,576,254
2020	IDR 817,506,344,852	IDR437.212.356.611	IDR 294,349,725,481
2021	IDR 781,480,595,484	IDR 401.086.141.279	IDR 113,104,657,435
2022	IDR 785,571,543,248	IDR 540.343.015.082	IDR 150,426,743,343
2023	IDR 794,770,094,338	IDR 532,653,850,484	IDR 92,790,771,193

Table 2. Total Realization of Transfer Funds, Regional Original Revenue (LOI), and Capital Expenditure in Cirebon City 2019-2023

Table 2 shows that transfer funds originating from the central government to the regions through the Special Allocation Fund, General Allocation Fund , and Revenue Sharing Fund schemes have a large portion in the APBD, which is more than 55% during the 2019-2023 period. In 2020-2021, there was a decrease in the realization of transfer funds due to the refocusing of the Covid-19 budget.

Then in table 4.1 for Regional Original Revenue, it is relatively small compared to transfer funds. The contribution is around 26-36% of the total regional revenue. The pandemic also led to a decline in 2020-2021 from the hotel, restaurant, and entertainment tax sectors. After 2022, there will be a recovery of regional original revenue in line with the increase in digital economic activity of the tax system. Because it is limited, PAD is more widely used to cover mandatory and non-binding expenses.

Capital expenditure is an expenditure for the construction or procurement of fixed assets such as roads, bridges, buildings, and heavy equipment. The proportion of capital expenditure

in Cirebon City is still very low, which is around 16-10% of the total APBD. The pandemic has led to a reallocation of capital expenditures for health spending and social assistance. It can be seen in table 4.1 that there was an increase in 2022 and 2023 as a form of infrastructure recovery. However, there is no consistent pattern between the increase in transfer funds and regional revenues and capital expenditures.

4.4 Data Analysis

The descriptive statistical test aims to provide an overview of the characteristics of each research variable based on the mean value, maximum value, minimum value, and standard deviation. The variables analyzed in this study include Fund Transfer (X_1), Regional Original Revenue (X_2), and Capital Expenditure (Y). Based on quantitative descriptive statistical analysis, the following description was obtained:

Descriptive Statistics

	N	Minimum	Maximum	Mean	Hours of deviation
Transfer Fund	5	7.81481E+11	8.17506E+11	7.99361E+11	17235356068
ROR	5	3.70836E+11	5.40343E+11	4.56426E+11	76827912195
Capital expenditure	5	90964667870	2.06155E+11	1.49905E+11	42368329563
Valid N (listwise)	5				

Table 3. Descriptive Statistical Analysis of Transfer Funds, Local Original Income, and Capital Expenditure

Based on the results of the descriptive statistical test, it is known that:

Transfer funds have an average value of IDR 799 billion with a minimum value of IDR 781 billion and a maximum of IDR 935 billion. Standard deviation of Rp 17,23 billion, indicating that the value of transfer funds received by Cirebon City from 2019 to 2023 fluctuated quite largely.

PAD has an average value of IDR 540 billion, with a minimum value of IDR 370 billion and a maximum of IDR 540 billion. The standard deviation of IDR 76.83 billion indicates that the PAD of Cirebon City fluctuates quite large from year to year when compared to the average.

Capital Expenditure has an average value of IDR 150 billion, with a minimum value of IDR 79 billion and a maximum of IDR 24 billion. Standard deviation of IDR 57.81 billion. This value shows that there is a fairly high level of variation or fluctuation in the allocation of capital expenditure from year to year. A high standard deviation indicates that the amount of capital expenditure is inconsistent and undergoes significant changes between years.

In general, the results of these descriptive statistics show that although the Transfer Fund and PAD have increased slightly from year to year, the average capital expenditure remains relatively low, which reinforces the results of the previous activity ratio.

The Normality Test is performed to see whether the residual value is distributed normally or not.

The following are the results of the normality test analysis using SPSS.

Normality Test						
	Kolmogorov-Smirnova			Shapiro-Wilk		
	Statistics	Df	Itself.	Statistics	Df	Itself.
Non-Standard Residue	0,209	5	0.200*	0,929	5	0,590

Table 4. Normality Test Analysis

In table 4 the normality test is carried out using the Kolmogorov-Smirnov test, the test results showed that Sig. was 0.200 and Shapiro-Wilk was 0.590 This means that the significance value for all variables > 0.05, so that the data is declared normal.Hypothesis Testing and Interpretation of Research Results

The t-test is performed to see the influence of independent variables on partially dependent variables. This test is performed with the following criteria: H1 is accepted if Sig. < 0.05. H1 is rejected if Sig. > 0.05.

The multicollinearity test aims to see whether there is a high correlation between independent variables in a double linear regression model or not. By looking at the value of the Tolerance and Variance Inflation Factor (VIF).

Koefisiensa			
	By	Statistics Colinearitas	
		Tolerance	BRIGHT
1	(Konstan)		
	Transfer Fund	0,792	1,263
	ROR	0,792	1,263

Table 5. Multicollinearity Test

Table 5 shows the result that the Tolerance value of both variables >0.10 and VIF <10, i.e. for the Tolerance value in the variables Dana TranSphere (X1) and PAD (X2) is 0,792, and the value of VIF is 1,263. So that the data is stated that there is no multicollinearity between independent variables.

The t-test is performed to see the influence of independent variables on partially dependent variables. This test is performed with the following criteria: H1 is accepted if Sig. < 0.05. H1 is rejected if Sig. > 0.05.

Koefisiensa						
By		Non-Standard Coefficients		Standard Coefficients	t	Itself.
		B	Std. Error	Beta		
1	(Konstan)	-2.12075E+12	3.42897E+11		-6,185	0,025
	Transfer Fund	2,699	0,403	1,098	6,700	0,022
	ROR	0,248	0,090	0,449	2,738	0,111

Table 6. Partial Test T Test

Table 4 shows that the t-test results for each independent variable are as follows:

Variable X1 (Transfer Funds) Sig. = 0.023 < 0.05 , and for the value of T the calculation is 6,700 > Table T 4.303, meaning that the transfer funds have an effect positive and significant to capital expenditure. This indicate that an increase in the Transfer Fund is followed by

Increase capital expenditure. So it can be implied that H1 in receive, which means that partially transfer funds have a positive effect on capital expenditure.

Variable X2 (PAD) sig. = 0,111 > 0.05, and for the value of T the calculation is 2,738 < T table 4,303, which indicates that regional original revenue has on positive but insignificant to Capital Expenditure. This shows that Increased. PAD does not have a significant effect on Capital Expenditure. Although the direction of influence is positive, its statistical contribution is not strong enough to conclude that PAD significantly affects Capital Expenditure. This can be caused by fluctuations in regional original revenue, regional dependence on transfer funds, or low efficiency of expenditure allocation . So it can be concluded that H2 rejected, meaning that partially the original income of the region not affect capital expenditure.

Simultaneous f-tests or F-tests are performed to determine whether the independent variables simultaneously have a significant effect on the dependent variables.

ANOVA						
Pattern		Number of Squares	Df	Square Average	F	Sig.
1	Regression	6.87484E+21	2	3.43742E+21	22,506	0.043b
	Remnant	3.05462E+20	2	1.52731E+20		
	Entire	7.1803E+21	4			

Table 7. Simultaneous Test (F Test)

Based on the results of processing the data of the F test in table 7, the following results were produced, the calculated F value was 22.506, the significance value (Sig.) was 0.043

It can be concluded that simultaneously the variables of transfer funds and regional revenues together have a significant influence on capital expenditure in Cirebon City in 2019-2023. This is shown by the results of Sig. which shows a result of 0.043 < 0.05, and indigo F is calculated as 22.506 > T table 19.00.

5. Discussion and Interpretation of Analisys Results

Based on the results of multiple linear regression analysis conducted in this study, it was found that transfer funds have a positive and significant effect, and regional revenues have a positive and insignificant effect on capital expenditure.

Based on the ratio analysis, it is known that the data on the fiscal dependency ratio of Cirebon City during 2019-2023 shows that the average transfer funds provided is 55.33% of total regional revenue and is categorized as a moderate level of fiscal dependence. This ratio shows that most of the region's revenue still comes from transfer funds provided by the central government, including the General Allocation Fund, the Special Allocation Fund, and the Revenue Sharing Fund.

The results of the regression test in table 4.10 were obtained t calculated by 6,700 more big from the t table which is 4.303 and the significant value is 0.022 < 0.05, which concludes that the transfer funds have a significant effect and positive to capital expenditure. This

indicates that statistically transfer funds have a real contribution in encouraging an increase in capital expenditure in Cirebon City.

However, to finance regional spending during the pandemic, the Cirebon City Government relies more on Transfer Funds from the central government. This suggests that during the pandemic, transfer funds were more focused on routine and unexpected expenses (such as social assistance, medical care, and emergency surgeries) than on long-term projects such as capital expenditures.

When a region has a high dependence on transfer funds, its fiscal freedom or flexibility is limited. The allocation of expenditure is still highly dependent on central policy. In accordance with the initial discussion, Cirebon City has challenges in managing or allocating its budget, so that the ability of the region to allocate its budget independently, including capital expenditure, is limited.

Based on the results of the calculation of the financial independence ratio of the Cirebon City Government during 2019 to 2023, it shows that the level of fiscal independence is in the low category. During the observation period, local revenue only accounted for around 26% - 36% of the total regional revenue, which is with an average value 36,57%.

Based on general criteria, this value is in the low category, which means that the regions are still highly dependent on central government funds. The low ratio of independence in Cirebon City to finance government and development activities independently is still limited. Low regional original revenue causes regional fiscal space to become narrow and development policies are more influenced by the direction of central policy.

This indication is in line with the results of regression analysis which shows the results of the regression analysis showing a value of 0,111 > 0.05, and the t-value is calculated as 2,738 more small from t table which is 4.378 which means that. Local revenue does not have a significant effect on Capital Expenditure. Although the direction of influence is positive, its statistical contribution is not strong enough to conclude that local revenue significantly affects Capital Expenditure.This interpret that increase in regional original revenue from tofu to year, the increase is not statistically strong enough to encourage a significant increase in regional capital expenditure. When The COVID-19 outbreak that hit Indonesia, especially in 2020–2022, also had an impact on the dynamics of Cirebon City's budget throughout the 2019–2023 period. Due to declining purchasing power, limited business activities, and hampered regional economic activities, the pandemic has resulted in a decrease in regional original revenue. This can be seen in 2020, when the fiscal independence ratio was at the second lowest position at 26.76% and regional original revenue decreased compared to the previous year's trend.With these conditions, Cirebon City is not yet fully fiscally independent and needs to strengthen regional revenue capacity so that dependence on transfer funds can be reduced in the future.

Based on the analysis of the ratio of Cirebon City's capital expenditure activities to total regional expenditure in 2019-2023, the average percentage of capital expenditure is only 10% or is included in the Low category. This shows that only a small portion of local government annual spending is allocated to long-term investment and fixed asset development.

In 2020, the Capital Expenditure ratio had increased to 18.60% (Low category), which was most likely influenced by the need to handle infrastructure or certain capital expenditures

during the early days of the pandemic. However, this trend did not continue, even in 2023 it decreased drastically to 6.42%, so overall it returned to the Very Low category.

This low ratio indicates that most of the regional budget is used for routine spending. Moreover, during the pandemic, the budget for spending is more focused on routine spending such as social assistance, medical care, and emergency surgery. This is in line with the regression results, which show that.

Influential Transfer Funds positive and significant to capital expenditure. This means that theoretically and statistically, an increase in transfer funds should encourage an increase in capital and regional spending. However, empirical data shows that even though transfer funds are increasing, the proportion of capital expenditure is still fluctuating, even tending to decrease. This can be explained through the context of policies during the pandemic. During the pandemic, the central government instructed *refocussing* and budget reallocation to support healt] h care, economic recovery, and social protection.

The very low ratio of capital expenditure activities strengthens the finding that Cirebon City has not allocated the budget optimally for development investment. Dependence on Transfer Funds without the support of regional original revenue independence leads to fiscal limitations to increase the proportion of Capital Expenditure. Therefore, increasing regional original revenue and the efficiency of using transfer funds is key to encouraging future development spending activities.

Based on the results of multiple linear regression analysis conducted by this study, it was found that transfer funds have an influence on positive and significant, and local revenue has a positive effect but not significant to capital expenditure.

Based on the results of the study using a simultaneous test (f-test) in table 4.12, the Fcal value of Fcal > Ftabel or 22.506 > 19.00 was obtained, and the Sig. < value of the alpha value, which was 0.043 < 0.05. Then it can be concluded that transfer funds and local revenue have a joint effect on capital expenditure in Cirebon City in 2019-2023. This indicates that although only partial transfer funds have a positive and significant effect, when combined with PAD in one regimen, these two variables together are able to explain the variation that occurs in capital expenditure.

This is in line with the theory of spending effectiveness which states that regional development spending is influenced by several sources of regional revenue, both sourced from the central government and sourced from the region's own capabilities. However, it should be noted that the magnitude of the influence of each variable is different. Based on the previous t-test, Transfer Funds have a more dominant influence on capital expenditure than regional original revenue, which is statistically insignificant. This is also strengthened by the fiscal reality of Cirebon City which shows that the level of fiscal dependence on the central government is still high, and the proportion of capital expenditure is still very low, even though transfer funds are quite large.

The task faced by Cirebon City is to reduce dependence on transfer funds and increase the efficiency of the use of regional original revenue to encourage sustainable development.

Capital expenditure will continue to depend on central policies, which are not always in line with regional demands, unless regional fiscal power is strengthened.

6. Conclusion

The conclusions outlined above, the researcher provides the following suggestions. The Cirebon City Government is expected to further increase the effectiveness of the use of transfer funds, especially the General Allocation Fund, Special Allocation Fund, so that it is more directed to fund productive and sustainable capital expenditure. And also reduce dependence on central transfer funds by increasing fiscal capacity through innovation and intensification of regional original revenue management, so that development policies are not too affected by changes in central policies, especially in critical times. Optimizing sources of Regional Original Revenue must be a strategic priority, especially in potential sectors such as tourism, trade, and local services. This can be done by expanding the tax base, increasing taxpayer compliance, and improving the regional tax service system to be more digital and efficient. Capital expenditure planning must pay attention to fiscal resilience and sustainable development. Local governments need to prepare adaptive and anticipatory financial planning in risks, such as pandemics or economic crises, so that capital expenditure is not neglected and remains sustainable.

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THE EFFECT OF PER CAPITA INCOME, ECONOMIC GROWTH RATE, AND TAX RATE TOWARDS TAX RATIO IN ASIA PACIFIC ECONOMIC COOPERATION (APEC) COUNTRIES IN 2016-2022

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Abstract

This study aims to analyze the effect of Income Per Capita, Economic Growth Rate, and Tax Rate on the Tax ratio in Asia Pacific Economic Cooperation (APEC) countries in 2016-2022. This study is quantitative with secondary data and uses purposive sampling techniques, so that 8 countries were obtained as samples. The analysis method used is multiple linear regression. The results of the study partially show that Income Per Capita has a significant positive effect on the Tax ratio, Economic Growth Rate has no effect on the Tax Ratio, and Tax Rate has a significant negative effect on the Tax Ratio. Simultaneously, all three variables have a significant effect on the Tax Ratio. This finding indicates that increasing income per capita can encourage an increase in the tax ratio, while tax rates that are too high can actually reduce the tax ratio due to tax avoidance and economic growth does not always increase tax revenue. Therefore, an optimal fiscal policy is needed in determining tax rates and expanding the tax base in order to increase the tax ratio sustainably.

Keywords: *Income per capita, economic growth rate, tax rate, tax ratio*

1 Introduction

Among the sources of state revenue, taxes have always been the main source of funds for a country (Hanifa & Binekas, 2023). Taxes are an important element of resources for governments in various countries. The government utilizes revenue from taxes and other sources of revenue to support the economic stability of a country (Putriana, 2022). In the context of supporting economic stability in a country, there is an important role in state tax revenue. However, the issue of efficiency and effectiveness of tax revenue remains a significant challenge for several countries. In fact, some countries in the Asia Pacific region such as Sri Lanka, Bangladesh, Pakistan, Bhutan and Indonesia have relatively small tax revenue to Gross Domestic Product compared to countries in the Asian Region (Septian & Anis, 2024). Therefore, the tax ratio is an important measure in calculating the effectiveness of the tax system in a country.

Tax ratio is a measure used to assess tax revenue in a country. However, the tax ratio is not the only indicator used to measure tax revenue. Even today, the tax ratio is still considered an indicator that provides an overview of the taxation conditions in a country (Rinaldi, 2019). In 2022, the average OECD tax ratio in 2022 was 34%, while the tax ratio in Asia Pacific countries was an average of 19.3%. This indicates that the tax ratio in APEC countries is fairly low when compared to the OECD tax ratio. The Asia Pacific country that has a tax ratio exceeding the average OECD tax ratio is Japan with a tax ratio of 34.1% (OECD, 2024).

Asia Pacific Economic Cooperation (APEC) countries in the Asia Pacific region such as Sri Lanka, Bangladesh, Pakistan, and Bhutan have a small tax ratio compared to other countries in

the Asia Pacific Region. The OECD states that the tax ratio of these countries is below the Asia Pacific average of 19.3%. The tax ratio of Sri Lanka, Bangladesh, Pakistan, and Bhutan is lower by approximately 22 percentage points when compared to the OECD average (34%) (Wildan, 2024).

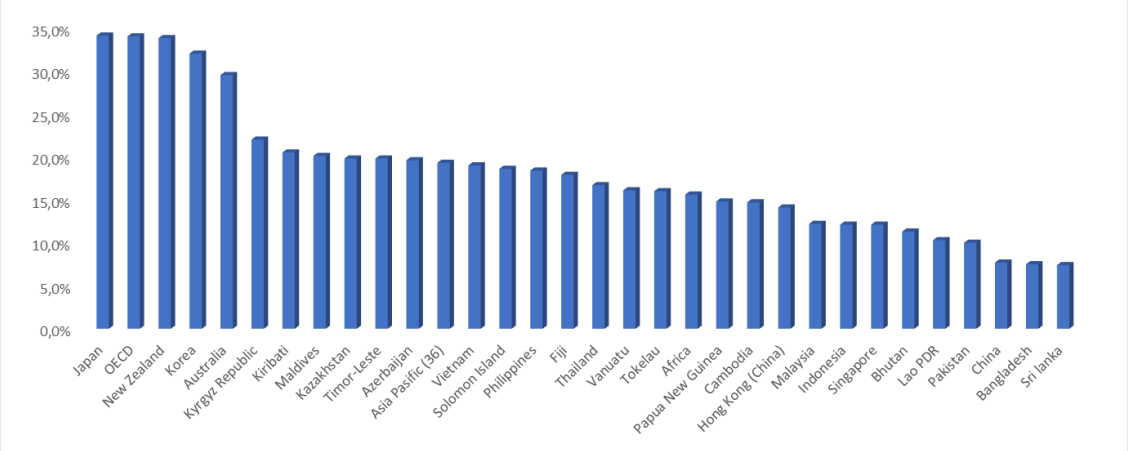

Figure 15. Tax ratio achievements of Asia Pacific countries

There are several factors that affect the tax ratio in a country, the first of which is per capita income (Rinaldi, 2019). Per capita income is measured using GDP divided by the population in the current period (Listikarini & Wijaya, 2023).

Research by Wulandari et al. (2020) states that the higher the country's income, the greater the ability to pay and collect tax revenue so that it will increase the tax ratio. Meanwhile, research by Septiani & Sastradipraja (2023) states that the situation where GDP per capita has increased but tax revenue has decreased.

The next factor that affects the tax ratio is the economic growth rate. A measure of development success, especially in the economic field (Damanik & Saragih, 2023). Research by Rahayu et al. (2023) states that if a country's economy increases, the country's tax ratio will increase. Meanwhile, research by Silfiani & Febyansyah (2022) states that the relationship between economic growth and tax ratio is not always linear.

Another factor that affects the tax ratio is the tax rate. Tax rate is a mandatory contribution paid after taking into account tax credits or tax deductions Silfiani & Febyansyah (2022). Erion & Taryana research (2021) explains that the increase in income tax as a result of the application of tax rates, the increase in income tax paid also increases the tax ratio. Meanwhile, research by Kurniawati & Fadillah (2020) states that the greater the tax rate, the higher the likelihood of people working on tax avoidance practices and causing people not to carry out tax obligations.

2 Literature Review

2.1 Theoretical background

2.1.1 Macroeconomic Theory

Macroeconomics can be defined as a branch of science that studies the economy as a whole. This science explains economic changes that affect households, companies, and markets (Syaiful et al., 2022). In macroeconomic issues, it tries to explain various problems that arise in the economy, one of the main problems in the economy is economic growth (Veritia et al., 2019). In addition, macroeconomics can emphasize that the main focus is on economic variables as a whole, such as national income, national product, savings, investment, unemployment, inflation, and so on (Likuayang & Matindas, 2021).

2.1.2 The Laffer Curve

A theory to relate tax rates to total tax revenue and illustrate how tax rates can be optimized to increase the country's tax revenue (Yossinomita et al., 2024). The curve describes the extreme levels of tax rates ranging from 0-100% that are used to drive increased tax revenue (Haq, 2023).

2.1.3 Tax Ratio

A measure used to evaluate a country's tax revenue. Although there is some evidence in the literature suggesting that the tax ratio is not the only indicator of tax performance, it is considered a measurement tool that provides an overview of a country's tax situation. Tax ratio can be measured by comparing a country's total tax revenue with GDP in the current year (Rinaldi, 2019).

2.1.4 Income Per Capita

It is an indicator of the welfare level of a society and facilitates comparison between one country and another. Per capita income can be calculated using GDP per capita. This value is obtained from dividing GDP by the total population in the relevant year (Veritia et al., 2019).

2.1.5 Economic Growth Rate

Economic growth is a process characterized by an increase in GNP (Gross National Product) or real national income (Syaiful et al., 2022). According to Wildan (2020) in research (Larasati & Purwanto, 2022) the Organization for Economic Coorperation and Development (OECD) states that contraction in Gross Domestic Product (GDP) growth will significantly erode tax revenue. Economic growth rate is related to the increase in output per capita. In this context, economic growth can occur if per capita income compares population growth, accompanied by fundamental changes in the economic structure of a country and the distribution of the population in the country (Syaiful et al., 2022). Economic growth can be measured by comparing the Gross Domestic Product (GDP) of the current year with the previous year multiplied by 100% (Veritia et al., 2019).

2.1.6 Tax Rate

The government sets tax rates in the form of percentages through laws and their derivative regulations, including government regulations for certain types of taxes (Fitriya, 2024). Tax collection rates that have a certain percentage for each amount used as the basis for tax imposition are called proportional or similar tax rates. This means that if the amount used as the basis for tax imposition increases, the tax to be paid will also increase. VAT, which is levied at 10% of the selling price, is one example (Karsam et al., 2022).

2.2 Theoritical framework and hypotheses

In macroeconomic theory, one of the variables at the center of economic attention is high per capita income to be able to emphasize tax payments so that it will increase the tax ratio (Likuayang & Matindas, 2021). In addition, economic growth is a major issue in macroeconomic theory, because the success of a country in carrying out economic activities can be seen from an increase in economic growth so that it can increase the tax ratio in a country (Rahayu et al., 2023). Laffer argues that the economy does not grow due to lack of demand, but because the tax burden is too high which can cause many taxpayers to practice tax avoidance, so the tax ratio will decrease if the tax rate is too high (Kurniawati & Fadillah, 2020).

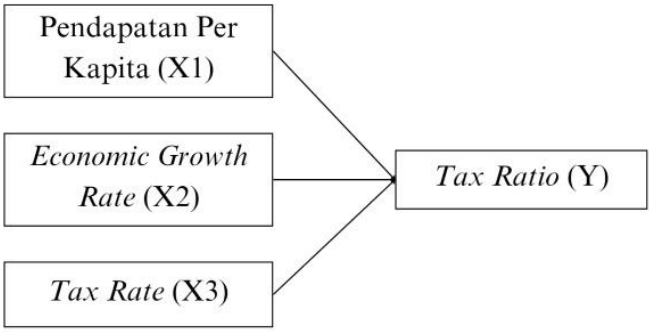

Figure 16. Framework of thought

The relationship between the independent variable and the dependent variable can be described by researchers as follows:

H_1 : Per Capita Income has a positive effect on the Tax Ratio.
H_2 : Economic Growth Rate has a positive effect on the Tax Ratio.
H_3 : Tax Rate has a negative effect on Tax Ratio.
H_4 : Per Capita Income, Economic Growth Rate, and Tax Rate simultaneously affect the Tax Ratio.

3 Methodology

The research adopts a quantitative approach, with the formulation of descriptive and associative problems. The object of this research is a country registered with the Asia Pacific Economic Coopertaion (APEC) with a total population of 11 countries. The sampling technique used is purposive sampling where the sample obtained is 8 countries with a research period of 7 years, thus the sample obtained is 56 samples.

4 Result and Discussion

4.1 Descriptive Statistical Analysis

Table 1: Descriptive Test Result

Descriptive Statistics					
	N	Minimum	*Maximum*	*Mean*	*Std. Deviation*
Income Per Capita	56	7308.00	71099799.00	7371387.7857	19310852.48143

Descriptive Statistics					
	N	Minimum	*Maximum*	*Mean*	*Std. Deviation*
Economic Growth Rate	56	-11.42	26.12	7.0039	7.63893
Tax Rate	56	0.00	20.00	8.2679	6.28271
Tax Ratio	56	1.18	14.89	10.6098	3.90700
Valid N (listwise)	56				

The results in table 1, the results of the analysis for the per capita income variable explain the value of the minimum of 7308.00 and the maximum of 71099799.00, with a mean of 7371387.7857 and a standard deviation of 19310852.48143. The economic growth rate variable explains the value of the minimum recorded -11.42 and the maximum value recorded 26.12, resulting in a mean of 7.0039 and a standard deviation of 7.63893. Meanwhile, the tax rate variable obtained a minimum value of 0.00 and a maximum of 20.00, with a mean of 8.2679 and a standard deviation of 6.28271. Finally, the tax ratio variable shows a minimum value of 1.18 and a maximum value of 14.89, with a mean of 10.6098, then a standard deviation of 3.90700.

4.2 Classical Assumption Testing

4.2.1 Normality Test

Table 2: Normality Test Result

One-Sample Kolmogorov-Smirnov Test	
	Unstandardized Residual
N	41
Asymp. Sig. (2-tailed)[c]	.200[d]

The results in table 2, show that after handling outliers, the significance value is recorded as 0.200, which exceeds 0.05. It can be concluded that the data for this study is normal.

4.2.2 Heteroscedasticity Test

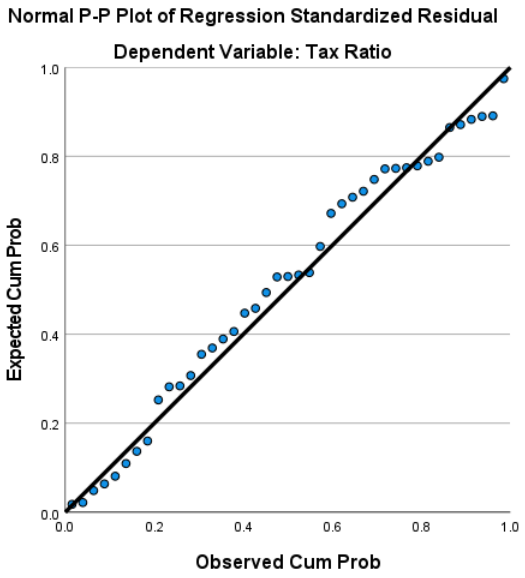

Figure 17. Regression P-Plot Test Result

The results of Figure 3, show that the heteroscedasticity test with the distribution of points above and below, and around zero on the x and y axes, without a certain pattern. Therefore, it is concluded that there is no heteroscedasticity in the regression model.

4.2.3 Multicollinearity Test

Table 3: Multicollinearity Test Result

Coefficients[a]			
Model		*Collinearity Statistics*	
		Tolerance	VIF
1	*(Constant)*		
	Pendapatan Per Kapita	0.814	1.228
	Economic Growth Rate	0.918	1.089
	Tax Rate	0.783	1.278
a. Dependent Variable: Tax Ratio			

The results of table 3, from the multicollinearity test show that the tolerance value for per capita income is 0.814, while the VIF value for per capita income is 1.228. For the economic growth rate variable, the tolerance value is recorded at 0.918, with a VIF value of 1.089. As for the tax rate variable, the tolerance value is 0.783, and the VIF value is 1.278. These results explain that independent variables with a VIF value of less than 10 and a tolerance value of more than 0.10, these variables do not experience multicollinearity, and can continue the next classical assumption test.

4.2.4 Autocorrelation Test

Table 4: Durbin-Watson Autocorrelation Test Result (Cochrane Ocrutt Method)

Model Summary[b]					
Model	*R*	*R Square*	*Adjusted R Square*	*Std. Error of the Estimate*	*Durbin-Watson*

1	.777[a]	0.603	0.570	0.94891	1.907
a. Predictors: (Constant), LAG_X3, ***Cochrane Ocrutt*** *LAG_X2, LAG_X1*					
b. Dependent Variable: LAG_Y					

The results of table 4 above, the dW value is recorded at 1.907. Referring to the Durbin-Watson table with n = 41, k = 3, the dU and dL values are 1.6603 and 1.3480 respectively, while the 4-dU value is 2.3397. This value meets the criteria dU < dW < 4-dU, namely 1,340 < 1,907 < 2,3397. Thus, no autocorrelation symptoms ocrutt.

4.3 Multiple Regression Analysis Test

Table 5: Multiple Linear Regression Analysis Result

Coefficients[a]						
Model		*Unstandardized Coefficients*		*Standardized Coefficients*	t	*Sig.*
		B	*Std. Error*	*Beta*		
1	*(Constant)*	13.638	0.444		30.745	0.000
	Pendapatan Per Kapita	2.014E-06	0.000	0.266	2.127	0.040
	Economic Growth Rate	0.047	0.036	0.153	1.293	0.204
	Tax Rate	-0.266	0.042	-0.815	-6.380	0.000
a. Dependent Variable: Tax Ratio						

The results in table 5, multiple linear regression analysis can produce an equation:
Y = 13.638 + 2.014E-06X1 + 0.047X2 - 0.266X3
The explanation of the multiple linear regression model above is as follows:

1. The constant is 13.638, meaning that if the independent variable is 0, the tax ratio is 13.638.
2. The regression coefficient value of per capita income (X_1) is 2.014E-06. These results explain the high income per capita will increase the tax ratio by 2.014E-06.
3. The regression coefficient value of economic growth rate (X_2) is 0.047. The higher the economic growth rate, the higher the tax ratio value by 0.047.
4. The value of the tax rate regression coefficient (X_3) is -0.266. The higher the tax rate, the lower the tax ratio value by -0.266.

4.4 Coefficient of Determination Analysis Test

Table 6: Coefficient of Determination Analysis Results

Model Summary[b]				
Model	R	R *Square*	*Adjusted R Square*	*Std. Error of the Estimate*
1	.726[a]	0.527	0.489	1.42775
a. Predictors: (Constant), Tax Rate, Economic Growth Rate, Pendapatan Per Kapita				
b. Dependent Variable: Tax Ratio				

The results in table 6, the coefficient of determination (Kd) value is recorded at 52.7% and the adjusted R Square value is 0.527. This value indicates that 52.7% of the variation in the dependent variable, namely the tax ratio, can be influenced by the independent variables. Meanwhile, the remaining 47.3% is explained by other independent variables outside the variables studied.

4.5 Inference Result

4.5.1 Partial Test Result (t Test)

Table 7: Partial Test Result (t Test)

Coefficients[a]						
Model		*Unstandardized Coefficients*		*Standardized Coefficients*	*t*	*Sig.*
		B	*Std. Error*	*Beta*		
1	(Constant)	13.638	0.444		30.745	0.000
	Pendapatan Per Kapita	2.014E-06	0.000	0.266	2.127	0.040
	Economic Growth Rate	0.047	0.036	0.153	1.293	0.204
	Tax Rate	-0.266	0.042	-0.815	-6.380	0.000
a. *Dependent Variable: Tax Ratio*						

As shown in Table 7, the significance value was recorded at 0.000 which is less than 0.005. The following is the interpretation of these results:

1.) The calculated t value of the per capita income variable is 2.127 > t table value of 2.026, it can be explained that the t count is greater than the t table and the significant value is 0.040 < 0.05. This means that income per capita has a significant positive effect on the tax ratio.
2.) The t value of the economic growth rate variable is 1.293 < the t table value of 2.026, it can be explained that the t count is smaller than the t table and the significant value is 0.204 > 0.05. This means that the economic growth rate has no significant effect on the tax ratio.
3.) The t value of the tax rate variable is -6.380 < the t table value of 2.026, it can be explained that the t count is smaller than the t table and the significant value is 0.000 < 0.05. This means that the tax rate has a significant negative effect on the tax ratio.

4.5.2 Simultaneous Test Result (F Test)

Table 8: Simultaneous Test Result (F Test)

ANOVA[a]						
Model		*Sum of Squares*	*df*	*Mean Square*	*F*	*Sig.*
1	*Regression*	84,143	3	28,048	13,759	.000[b]

ANOVA[a]						
Model		*Sum of Squares*	*df*	*Mean Square*	*F*	*Sig.*
	Residual	75,423	37	2,038		
	Total	159,566	40			
a. *Dependent Variable: Tax Ratio*						
b. *Predictors: (Constant), Tax Rate, Economic Growth Rate*, Pendapatan Per Kapita						

The results in table 8 explain that the F count value of all variables is 13.759 > 2.85 with a simultaneous significant value of 0.000 < 0.05, meaning that H_0 is rejected and H_a is accepted. These results explain that the independent variables have a significant effect on the tax ratio.

5 Conclusion

Based on the results of research on APEC countries during the period 2016 to 2022, it is found that the variables of Per Capita Income, Economic Growth Rate, Tax Rate, and Tax Ratio show a fluctuating pattern from year to year. The results of further analysis show that partially, Per Capita Income has a positive and significant effect on the Tax Ratio, which means that the higher the level of productivity per capita of a country, the tax revenue tends to increase, resulting in an increase in the tax ratio.

In contrast, the Economic Growth Rate does not show a significant effect on the Tax Ratio, indicating that high economic growth is not always followed by an increase in tax performance. Meanwhile, the Tax Rate has a negative and significant effect on the Tax Ratio, indicating that the higher the tax rate imposed, the greater the potential for tax evasion by taxpayers, which ultimately reduces state tax revenue. Simultaneously, the three variables - Income Per Capita, Economic Growth Rate, and Tax Rate - are proven to have a positive and significant effect on the Tax Ratio, indicating that together, they have an important contribution in shaping the performance of the tax ratio in APEC economies.

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PENGARUH BUDAYA KERJA DAN *TEAMWORK* TERHADAP PRODUKTIVITAS KERJA KARYAWAN PADA PT. PRIMA GELORA AGUNG LESTARI KOTA PALU

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Abstrak

Penelitian ini bertujuan untuk menjelaskan pengaruh budaya kerja dan teamwork terhadap produktivitas kerja karyawan pada PT. Prima Gelora Agung Lestari Kota Palu. Penelitian ini menggunakan jenis penelitian (explanatory Research) dengan pendekatan kuantitatif. Variabel yang digunakan dalam penelitian ini ada tiga yaitu, budaya kerja, teamwork dan produktivitas kerja karyawan. Pengumpulan data diperoleh dari penyebaran kuesioner kepada karyawan yang bekerja di PT. Prima Gelora Agung Lestari Kota Palu. Teknik sampling yang digunakan dalam penelitian ini adalah proposional random sampling dengan jumlah sampel sebanyak 108 responden. Analisis data yang digunakan adalah analisis regresi linear berganda. Hasil penelitian ini menunjukkan bahwa budaya kerja dan teamwork secara serempak memiliki pengaruh yang signifikan terhadap produktivitas kerja karyawan. Selain itu penelitian ini juga membuktikan adanya pengaruh parsial budaya kerja terhadap terhadap produktivitas kerja karyawan dan kemudian pengaruh parsial teamwork terhadap produktivitas kerja karyawan.
Kata Kunci : *Budaya Kerja, Teamwork, Produktivitas Kerja Karyawan*

Abstract

This study aims to explain the influence of work culture and teamwork on employee work productivity at PT. Prima Gelora Agung Lestari, Palu City. This study uses an explanatory research type with a quantitative approach. There are three variables used in this study, namely, work culture, teamwork, and employee work productivity. Data collection was obtained from distributing questionnaires to employees working at PT. Prima Gelora Agung Lestari, Palu City. The sampling technique used in this study was proportional random sampling with a sample size of 108 respondents. Data analysis used was multiple linear regression analysis. The results of this study indicate that work culture and teamwork simultaneously have a significant influence on employee work productivity. In addition, this study also proves the partial influence of work culture on employee work productivity and then the partial influence of teamwork on employee work productivity.
Keywords : *Work Culture, Teamwork, Employee Work Productivity*

1. PENDAHULUAN

Sumber daya manusia (SDM) merupakan salah satu faktor yang sangat penting dalam organisasi, karena sumber daya manusia memiliki peran dalam membantu perusahaan mengembangkan usahanya agar terwujud apa yang menjadi tujuannya. Dalam kondisi masyarakat modern yang konteks dan cepat berubah, penelitian perilaku organisasi menunjukkan nilai mempertahankan kemampuan untuk mengelola perubahan, belajar dan meningkatkan daya saing perusahaan (Ibrahim *et a*l., 2024).

PT. Prima Gelora Agung Lestari merupakan salah satu perusahaan di Kota Palu yang bergerak dalam bidang *furniture*. Perusahaan ini dikenal juga dengan produk *bigland* dan *napolly*. PT. Prima Gelora Agung Lestari merupakan bagian dari Cahaya Buana Grup. Perusahaan

manufaktur dan perdagangan *furniture* yang berskala nasional yang berkantor pusat di Sentul Bogor. PT. Prima Gelora Agung Lestari berdiri pada tahun 2006, awal berdirinya perusahaan ini masih menjadi tempat penampungan produk jadi (gudang). Seiring bertambahnya kapasitas permintaan PT. Prima Gelora Agung Lestari akhirnya mulai memproduksi barang jadi pada tahun 2007 dimulai dengan memproduksi busa, dan dibuatkan kasur busa. PT. Prima Gelora Agung Lestari kini telah memperluas lini produknya untuk mencangkup kebutuhan dan permintaan pasar. Demi meningkatkan kualitas perusahaan. PT. Prima Gelora Agung Lestari mulai memproduksi *furniture* dari bahan *plastic* antara lain, memproduksi kursi, meja, dan memproduksi lemari pakaian dari plastik. Sejak tahun 2006 sampai saat ini PT. Prima Gelora Agung Lestari telah memproduksi berbagai macam produk yang berkualitas dengan harga terjangkau. Berdasarkan pengamatan yang dilakukan oleh peneliti, pada PT. Prima Gelora Agung Lestari Kota Palu masih terdapat berbagai masalah yang terjadi khususnya yang terkait dengan budaya kerja dan *teamwork* terhadap produktivitas karyawan PT. Prima Gelora Agung Lestari Kota Palu.

Hasil observasi ditemukan beberapa permasalahan terkait dengan budaya kerja dan *teamwork* yang belum maksimal, berkaitan dengan budaya kerja dan *teamwork* diantaranya disiplin kerja yang kurang optimal, kurangnya keterbukaan antar karyawan, dan kurangnya sikap saling menghargai. Kerjasama yang kurang, kekompakkan yang kurang dan kepercayaan yang kurang. Sebagai contoh dalam pengerjaan atau kegiatan yang diintruksikan oleh pimpinan kepada karyawan baik secara individu maupun tim kerja, dari segi budaya kerja masih belum memenuhi standar, yakni terjadi ketidak disiplinan disebabkan beberapa karyawan tidak mematuhi jadwal kerja dan tidak mengikuti prosedur yang di tetapkan, beberapa karyawan tidak merasa nyaman untuk berbagi pendapat dan ide terhadap sesama karyawan, beberapa karyawan tidak merasa dihargai dan diakui atas kontribusi mereka. Menurut Dwi & Maulana (2022) budaya kerja berararti kebiasaan yang dilakukan berulang-ulang oleh pegawai dalam suatu organisasi, pelanggaran dengan kebiasaan ini memang tidak ada sangsi tegas, namun dari perilaku organisasi, secara moral telah menyepakati bahwa kebiasaan tersebut merupakan kebiasaan yang harus ditaati dalam rangka pelaksanaan pekerjaan untuk mencapai tujuan.

Beberapa tim kerja tidak bekerja dengan efektif dikarenakan kurangnya komunikasi antar tim kerja mereka bekerja secara individualis, tidak terbangunnya komunikasi disebabkan kebiasaan kerja yang dilakukan secara mandiri yang sudah berlangsung selama mereka menjadi karyawan, sehingga terkesan beberapa karyawan merasa tidak percaya dengan cara kerja rekan kerja mereka, mereka merasa lebih maksimal ketika bekerja secara mandiri. Menurut Muclisin (2019) kerjasama tim (*teamwork)* adalah kolaborasi antara dua orang atau lebih untuk saling berbagi waktu, bakat dan pengetahuan dalam melaksanakan tugas sebagai upaya mencapai tujuan yang telah ditentukan. Setiap orang dalam *teamwork* memiliki derajat yang sama penting, memahami peran dan tugas, saling percaya, saling mendukung, bertanggung jawab serta saling berhubungan satu sama lain melalui pemimpin yang telah ditunjuk.Hal ini tentunya akan berdampak pada produktivitas kerja karyawan PT. Prima Gelora Agung Lestari Kota Palu. Faktor lain yang juga dapat mempengaruhi produktivitas kerja karyawan PT. Prima Gelora Agung Lestari Kota Palu adalah kondisi kesehatan individu (Tohardi, 2021).

2. LANDASAN TEORI

2.1 Budaya Kerja

Budaya kerja merupakan kelompok pola perilaku yang melekat secara keseluruhan pada diri setiap individu dalam sebuah organisasi. Membangun budaya berarti juga meningkatkan dan mempertahankan sisi positif, serta berupaya membiasakan pola perilaku tertentu agar tercipta suatu bentuk baru yang lebih baik. Budaya kerja berararti kebiasaan yang dilakukan berulang-ulang oleh pegawai dalam suatu organisasi, pelanggaran dengan kebiasaan ini memang tidak

ada sangsi tegas, namun dari perilaku organisasi, secara moral telah menyepakati bahwa kebiasaan tersebut merupakan kebiasaan yang harus ditaati dalam rangka pelaksanaan pekerjaan untuk mencapai tujuan (Dwi & Maulana, 2022).

Ruliyansa (2018) mengemukakan bahwa budaya kerja adalah cara kerja sehari-hari yang bermutu, mendasari nilai-nilai yang penuh makna. Sehingga menjadi motivasi, memberi inspirasi, senantiasa bekerja lebih baik dan memuaskan bagi masyarakat yang dilayani. Budaya kerja menurut Palendeng *et al*., (2022) yaitu pemahaman hidup yang berisikan nilai-nilai dalam bekerja yang dapat memberikan inspirasi tentang bagaimana fungsi, sitandar, pandangan dan perilaku setiap individu atau perkumpulan dalam melakukan suatu tugas untuk mencapai tujuan organisasi.

Budaya organisasi dapat di definisikan sebagai seluruh pengetahuan, kepercayaan, seni, hukum, moral, kemampuan dan kebiasaan yang dipelajari seseorang. Serta makna untuk seluruh pengetahuan sebagai mahluk sosial yang digunakan untuk memahami lingkungan sekitar dan pengalaman yang bisa menjadi pegangan dalam hidup dan kepribadiannya. Budaya organisasi seperangkat sistem nilai-nilai (*values*), keyakinan, asumsi atau norma-norma yang telah lama berlaku, disepakati, di ikuti oleh para anggota organisasi, sebagai pedoman perilaku dan pemecahan masalah organisasi. Sebelum menjelaskan konsep budaya organisasi, maka terlebih dahulu dijelaskan konsep organisasi. Organisasi adalah setiap bentuk perserikatan antara dua orang atau lebih bekerjasama untuk tujuan bersama, terkait secara formal dalam persekutuan yang terdapat hubungan antar seorang atau sekelompok orang disebut pemimpin dan seorang atau orang lain yang disebut bawahan (Sumartik & Abadiyah, 2022).

2.2 Teamwork

Muclisin (2019) menyatakan bahwa kerjasama tim (*teamwork)* adalah kolaborasi antara dua orang atau lebih untuk saling berbagi waktu, bakat dan pengetahuan dalam melaksanakan tugas sebagai upaya mencapai tujuan yang telah ditentukan. Setiap orang dalam *teamwork* memiliki derajat yang sama penting, memahami peran dan tugas, saling percaya, saling mendukung, bertanggung jawab serta saling berhubungan satu sama lain melalui pemimpin yang telah ditunjuk. Kerjasama tim (*teamwork)* adalah upaya kolaborasi dari suatu kelompok untuk mencapai tujuan bersama atau menyelesaikan tugas dengan cara yang paling efektif dan efisien secara berkelompok.

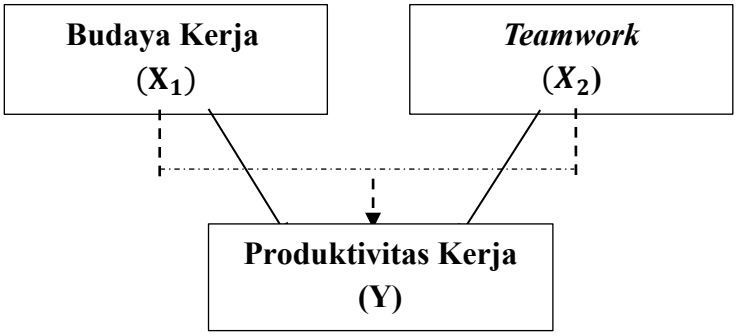
Kerjasama tim (*teamwork*) merupakan suatu tindakan yang harus kita bangun antar karyawan. Karena di dalam suatu organisasi terdapat tujuan yang sama, apabila kerjasama tim telah berjalan dengan baik maka setiap karyawan akan terfokus dalam kelompoknya, oleh karena itu kita harus bekerjasama untuk mencapai tujuan tersebut (Amanda, *et al*., 2020). Kesenjangan terjadi diantaranya, sehingga tidak adanya kerjasama yang baik antar karyawan didalam suatu *department* tidak perduli dengan tanggung jawabnya sehingga menyebabkan masalah bagi karyawan lain. *Team* kerja atau kerjasama tim yaitu kerja kelompok dengan keterampilan yang saling melengkapi serta berkomitmen untuk mencapai visi yang sudah disepakati sebelunya untuk mencapai tujuan bersama secara efektif dan efisien (Hidayat, 2021).

Tim kerja yang efektif memberikan anggota-anggotanya saling berkolaborasi dan kompak untuk mencapai tujuan bersama dan memiliki sikap yang saling mendukung dalam kerjasama tim. Kerjasama tim menjadi hal yang penting, karena dapat melengkapi dan membantu pekerjaan agar lebih mudah dan cepat terselesaikan. Kerjasama tim dapat terwujud dengan baik ketika karyawan bekerja secara kohesif dengan menciptakan suasana dan lingkungan kerja yang positif. Suatu kerjasama tim lebih penting dari skil dan finansial, namun seringkali dalam sebuah tim tidak bisa bekerjasama dengan baik yang dapat menyebabkan hilangnya inovasi, efektifitas dan efisiensi kerja. Hal ini dapat berpengaruh terhadap produktivitas dan kinerja, (Gultom, *et al.*, 2023).

2.3 Produktivitas Kerja

Tohardi (2021) mengemukakan bahwa produktivitas merupakan sikap mental yang meyakini bahwa seseorang dapat melakukan pekerjaan lebih baik dari pada hari kemarin dan esok akan lebih baik. Produktivitas kerja adalah kemampuan seseorang atau sekelompok orang guna menghasilkan suatu produk, baik berupa barang maupun jasa, yang secara kualitatif maupun kuantitatif semakin bertambah dari waktu ke waktu. Faktor penting yang turut menentukan produktivitas tenaga kerja yaitu, kondisi kesehatan individu. Produktivitas kerja sangat penting untuk menjaga ritme atau tempo perjalanan organisasi atau perusahaan, terutama dalam menghadapi persaingan yang semakin sulit dari waktu ke waktu. Pemahaman pimpinan atau manajer terkait manajemen sumber daya manusia, terutama produktivitas kerja, merupakan sesuatu yang wajib dan penting untuk dimiliki.

Produktivitas karyawan adalah kemampuan karyawan dalam berproduksi dibandingkan dengan input barang atau jasa sesuai dengan hasil yang diharapkan dalam waktu yang singkat atau tepat (Apriani & Sriathi, 2019). Produktivitas berasal dari bahasa inggris *Productive* yang artinya menghasilkan, dan *productivity having the ability make or kreate, creative* yang artinya kekuatan atau kemampuan dalam menghasilkan sesuatu karena dalam organisasi yang kreatif. Produktivitas kerja yang dihasilkan adalah wujud dari tujuannya. Jadi, produktivitas sangat penting untuk meningkatkan kesejateraan nasional (Damayanti, *et al*., 2022).



Gambar 1. **Kerangka Pemikiran**

Keterangan :
Pengaruh Secara Serempak : - - - - - ▶
Pengaruh Secara Parsial : ——▶

3. METODE

Jenis penelitian yang digunakan adalah jenis penelitian *eksplanatory research* dengan menggunakan metode penelitian kuantitatif. Penelitian ini melakukan pengujian analisis data dengan menggunakan program *software statistical product solution* (SPSS) versi 23 dengan beberapa tahap untuk menganalisis data sebagai berikut : Uji Validitas, Uji Reliabilitas, Uji Normalitas, Uji Multikolinearitas, Uji Heteroskedastisitas, Uji t (Uji Signifikansi Parsial), dan Uji F (Uji Serempak), Uji Determinasi.

4. HASIL PENELITIAN

Uji Validitas

Uji validitas merupakan derajat ketetapan antara data yang akan terjadi dengan objek penelitian dan data yang dapat dilaporkan oleh peneliti. Dengan demikian data yang valid merupakan data yang tidak berbeda dengan data yang dilaporkan oleh peneliti dan data yang sesungguhnya terjadi pada objek penelitian.Untuk menguji validitas instrumen penelitian apabila koefisien-koefisien korelasi antara skor suatu indikator, dengan skor total seluruh indikator (*corrected Item Total Correlation*) lebih besar dari 0,1891(≥ 0,1891)maka instrumen tersebut dianggap valid.

Tabel 1. Hasil Uji Validitas

No	Variabel Penelitian	Indikator Penelitian		*Corrected Item-total correlation*	Keterangan
1	Budaya kerja (X1)	**Disiplin (X1.1)**			
		X1.1	Saya datang tepat waktu untuk bekerja	0,606	Valid
		X1.1	Saya istirahat sesuai ketentuan perusahaan	0,505	Valid
		X1.1	Saya pulang sesuai ketentuan perusahaan	0,518	Valid
		Keterbukaan (X1.2)			
		X1.2	Saya khawatir bahwa keterbukaan dalam bekerja dapat membahayakan keamanan atau kerahasiaan perusahaan	0,602	Valid
		X1.2	Saya mengemukakan pendapat secara langsung	0,582	Valid
		X1.2	Saya percaya bahwa keterbukaan dalam bekerja dapat membantu meningkatkan kepercayaan antar karyawan	0,504	Valid
		Saling Menghargai (X1.3)			
		X1.3	Saya menghormati pendapat rekan kerja	0,502	Valid
		X1.3	Saya merasa sangat dihargai ketika rekan kerja mengakui prestasi saya	0,676	Valid
		X1.3	Saya percaya bahwa saling menghargai antar rekan kerja dapat membantu menciptakan lingkungan kerja yang lebih positif	0,707	Valid
2	*Teamwork* (X2)	**Kerjasama (X2.1)**			
		X2.1	Saya sangat menghargai kerjasama yang baik dengan rekan-rekan dalam menyelesaikan pekerjaan	0,571	Valid
		X2.1	Saya percaya bekerjasama dengan rekan kerja dapat meningkatkan kinerja	0,672	Valid
		X2.1	Saya percaya dengan kerjasama yang baik dapat meningkatkan kualitas produk	0,644	Valid
		Kepercayaan (X2.2)			

No	Variabel Penelitian	Indikator Penelitian		*Corrected Item-total correlation*	Keterangan
		X2.2	Saya sangat menghargai kepercayaan yang telah dibangung antar tim kerja	0,661	Valid
		X2.2	Saya percaya kepercayaan yang kuat antar tim kerja dapat meningkatkan produktivitas	0,652	Valid
		X2.2	Saya percaya bahwa kepercayaan yang kuat antar tim dapat membantu memecahkan masalah	0,504	Valid
		Kekompakkan (X2.3)			
		X2.3	Saya percaya bahwa kekompakkan tim yang baik dapat meningkatkan komunikasi yang efektif dalam tim kerja	0,546	Valid
		X2.3	Saya percaya bahwa kekompakkan tim dapat membantu menyelesaikan masalah	0,658	Valid
		X2.3	Saya percaya bahwa kekompakkan tim dapat membantu menyelesaikan masalah	0,674	Valid
3	Produktivitas kerja (Y)	**Kemampuan melaksanakan tugas (Y.1)**			
		Y.1	Saya menyelesaikan pekerjaan tepat waktu agar produktivitas kerjaterja	0,524	Valid
		Y.1	Saya menggunakan waktu kerja sebaik mungkin	0,808	Valid
		Y.1	Dengan menggunakan waktu kerja secara efektif saya dapat menyelesaikan pekerjaan dengan lebih cepat dan akurat	0,654	Valid
		Meningkatkan hasil (Y.2)			
		Y.2	Y.2 Saya percaya dengan meningkatkan kualitas bahan baku dapat meningkatkan hasil produksi	0,576	Valid
		Y.2	Y.2 Saya percaya dengan meningkatkan kualitas proses produktif dapat meningkatkanhasil produksi	0,807	Valid
		Y.2	Y.2 Saya memiliki kemempuan untuk berinovasi dan berkreasi untuk meningkatkankualitas produk	0,421	Valid
		Efisiensi (Y.3)			
		Y.3	Saya percaya denganjumlah karyawan yan memadai dapat meningkatkan efisiensi dalamproses produksi	0,817	Valid
		Y.3	Saya percaya bahwa dengan meningkatkan efisiensi kerja	0,809	Valid

No	Variabel Penelitian	Indikator Penelitian		*Corrected Item-total correlation*	Keterangan
			dapat mencapaitujuan organisasi		
		Y.3	Saya percaya bahwa kuantitas karyawan yang memadai sangat penting untuk menunjang proses produksi	0,761	Valid

Berdasarkan hasil uji validitas terhadap instrument yang di uji pada penelitian sesuai *table* di atas, maka dapat diketahui bahwa 27 pernyataan semuanya valid.

Uji Reliabilitas

Sebuah kuesioner dikatakan *reliable* atau handal jika jawaban sesorang terhadap pertanyaan adalah konsisten atau stabil dari waktu ke waktu (Ghozali & Imam, 2018). Pengukuran reliabilitas dilakukan dengan cara *one shot* atau pengukuran sekali saja dengan alat bantu SPSS uji statistic *Crounbach alpha* (a). Suatu konstruk atau *variable* jika memberikan nilai *Crounbach alpha*>0,60.

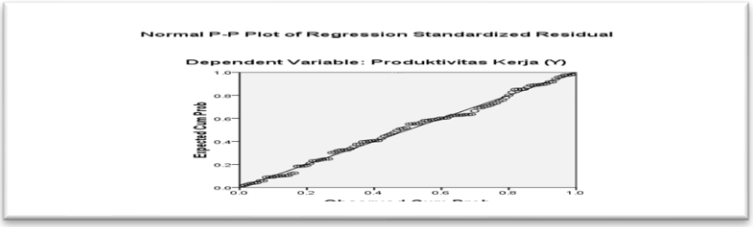
Tabel 2. HasilUji Reliabilitas

Variabel Penelitian	*Croundback Alpha*	*Alpha* Toleransi	Ket.
Budaya Kerja (X1)	0,764	0,60	Reliabel
Teamwork (X2)	0,776	0,60	Reliabel
Produktivitas Kerja (Y)	0,759	0,60	Reliabel

Hasil uji validitas dan reliabilitas terhadap *instrument* penelitian (kuesioner) sesuai *table* di atas, maka dapat diketahui bahwa semua variabel telah memenuhi syarat uji validitas dan reliabilitas. Sehingga kuesioner ini telah layak untuk disebar dan dilakukan penelitian lebih lanjut.

Uji Normalitas

Bertujuan untuk menguji apakah sebuah model regresi variabel terikat (*dependen*) dan variabel bebas (*independent*), ataupun keduanya memiliki distribusi normal (Ghozali & Imam, 2018). Seperti diketahui bahwa uji F dan uji t mengasumsikan bahwa nilai residual mengikuti distribusi normal. Jika asumsi dilanggar maka uji statistik menjadi tidak *valid* untuk jumlah sampel kecil. Deteksi normalitas dilakukan dengan melihat penyebaran data berupa titik-titik pada sumbu diagonal dan grafik.



Gambar 2. Hasil Uji Normalitas

Berdasarkan gambar 2 diatas dapat diketahui bahwa distribusi normal yang ditunjukkan pada titik-titik yang menyebar dan penyebarannya mengikuti asumsi normalitas.

Uji Multikolinearitas

Uji multikolinearitas adalah menguji apakah pada model regresi ditemukan adanya korelasi antar variabel bebas (*independent*), apabila terjadi korelasi, maka terdapat masalah multikolinearitas (Ghozali & Imam, 2018). Nilai *cut off* yang umumnya dipakai untuk menunjukkan adanya multikolinearitas adalah nilai *tolerance* <0,10 atau sama dengan nilai VIF >10. Apabila dalam sebuah model regresi tidak ditemukan asumsi deteksi seperti diatas, maka model regresi yang digunakan dalam penelitian ini bebas dari multikolinearitas dan sebaliknya.

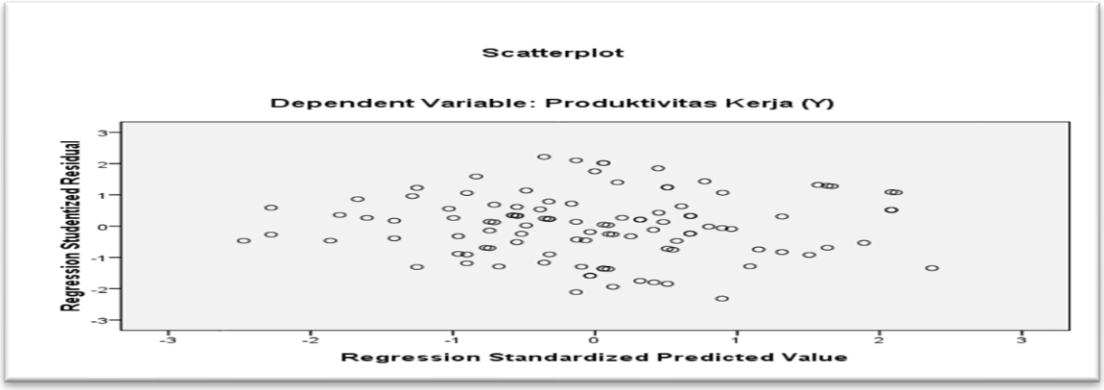
Tabel 3. Hasil Uji Multikolinearitas

Variabel bebas	Toleransi	VIF	Keterangan
Budaya kerja	,993	1,007	Non Multikol
Teamwork	,993	1,007	Non Multikol

Berdasarkan tabel diatas bahwa nilai VIF dari variabel-variabel independen dalam model regresi yang digunakan kurang dari angka 10 sedangkan nilai *tolerance* lebih besar dari ≥0,10 sehingga dapat disimpulkan bahwa variabel-variabel tersebut tidak terdapat gejala multikolinearitas. Dengan demikian asumsi non multikulinearitas dalam model regresi yang digunakan terpenuhi maka semua variabel memenuhi kriteria dalam analisis dapat dilanjutkan.

Uji Heteroskedastisitas

Uji heteroskedastisitas adalah untuk menguji apakah model regresi terjadi ketidaksamaan varians dari residual satu pengamatan ke pengamatan yang lain tetap. Maka disebut heteroskedastisitas dan jika varians berbeda disebut heteroskedastisitas. Model regresi yang baik adalah yang heteroskedastisitas atau tidak terjadi heteroskedastisitas (Ghozali & Imam, 2018).



Berdasarkan gambar 3 diatas terlihat tidak ada pola yang jelas, serta titik-titik menyebar diatas dan dibawah angka 0 pada sumbu Y, dengan demikian pada model regresi diatas tidak terjadi heteroskedastisitas.

Uji Simultan (Uji F)

Ghozali & Imam (2018) dalam penelitian ini, uji F digunakan untuk mengetahui tingkat signifikasi pengaruh variabel-variabel independen (Budaya Kerja dan *Teamwork*) secara bersama-sama (simultan) terhadap variabel dependen (Produktivitas Kerja).

Tabel 4. Hasil Pengujian Serempak

ANOVA[b]

Model		*Sum of Squares*	df	*Mean Square*	F	Sig.
1	Regression	299.041	2	149.520	11.576	.000[a]
	Residual	1356.172	105	12.916		
	Total	1655.213	107			

a. Predictors: *(Constant), Teamwork2*, Budaya Kerja

b. Dependent Variable: Produktivitas Kerja

Berdasarkan hasil uji regresi pada tabel di atas diperoleh F hitung sebesar 11,576 dengan tingkat signifikasi 0,000 ≤ 0,05 yang dapat diartikan bahwa variabel budaya kerja Karyawan (XI) dan *teamwork* (X2) secara serempak berpengaruh signifikan terhadap variabel produktivitas kerja (Y).

Uji Parsial (Uji t)

Uji t digunakan untuk menguji signifikasi hubungan antara variabel X dan Y, apakah variabel X1 dan X2 (Budaya kerja dan *Teamwork*) benar-benar berpengaruh terhadap variabel Y (Produktivitas kerja) secara individual atau parsial Ghozali & Imam, (2018).

Tabel 5. Hasil Pengujian Secara Parsial

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	32.388	4.929		6.571	.000
	Budaya Kerja	.370	.109	.300	3.388	.001
	Teamwork2	-.321	.088	-.323	-3.649	.000

a. Dependent Variable: Produktivitas Kerja

Uji t dilakukan dengan membandingkan nilai t signifikansi lebih kecil dari ≤a maka dapat dipastikan bahwa variabel independen berpengaruh signifikan terhadap variabel dependen, sebaliknya jika nilai t signifikasi lebih besar dari a maka dapat dipastikan bahwa variabel independen berpengaruh tidak signifikan terhadap variabel dependen, dapat dijelaskan hasil uji t dan variabel independen adalah sebagai berikut:

1. Budaya kerja (XI)

Variabel budaya kerja memiliki tingkat signifikasi t sig (0,001) ≤a (0,05). Hal ini bermakna secara parsial variabel budaya kerja karyawan ditempat kerja berpengaruh signnifikan terhadap produktivitas kerja karyawan PT. Prima Gelora Agung Lestari Kota Palu. Berdasarkan hasil diatas, maka hipotesis untuk variabel budaya kerja ditempat kerja dalam penelitian yang telah dilakukan dalam hal ini terbukti di terima. Artinya variabel budaya kerja di tempat kerja berpengaruh signifikan terhadap produktivitas kerja karyawan di PT. Prima Gelora Agung Lestari Kota Palu.

2. *Teamwork* (X2)

Variabel *teamwork* memiliki tingkat signifikasi t sig (0,000) ≤a (0,05). Hal ini bermakna secara parsial variabel *teamwork* ditempat kerja berpengaruh signifikan terhadap produktivitas kerja karyawan PT. Prima Gelora Agung Lestari Kota Palu. Berdasarkan hasil

atas, maka hipotesis kedua untuk variabel *teamwork* di tempat kerja dalam penelitian yang telah dilakukan dalam hal ini terbukti di terima. Artinya variabel *teamwork* ditempat kerja berpengaruh signifikan terhadap produktivitas kerja karyawan PT. Prima Gelora Agung Lestari Kota Palu.

4.1 Pembahasan

Pengaruh Budaya Kerja dan Teamwork Terhadap Produktivitas Kerja Karyawan

Penelitian ini menunjukkan bahwa adanya pengaruh positif budaya kerja dan *teamwork* terhadap produktivitas kerja karyawan PT. Prima Gelora Agung Lestari Kota Palu. Budaya kerja karyawan dan *teamwork* berpengaruh terhadap produktivitas kerja karyawan, meskipun pengaruhnya *relative* kecil. Hal ini menunjukkan bahwa apabila budaya kerja karyawan dan *teamwork* pegawai ditingkatkan maka produktivitas kerja karyawan di PT. Prima Gelora Agung Lestari Kota Palu juga akan meningkat. Hasil penelitian ini sejalan dengan hasil penelitian yang dilakukan oleh, (Arham & Rosadi, 2023). Dengan tiga (3) dimensi pada *teamwork* adalah memiliki kerjasama, kepercayaan, dan tanggung jawab yang jelas. Jika hal tersebut terwujud maka *teamwork* (kerjasama tim) akan meningkat. Peningkatan *teamwork* juga akan berpengaruh positif pada produktivitas kerja karyawan. Hasil penelitian juga membuktikan bahwa *teamwork* merupakan tolak ukur untuk meningkatkan produktivitas kerja karyawan. Hasil tersebut menunjukkan bahwa untuk dapat meningkatkan produktivitas kerja diperlukan *teamwork* agar memberikan kontribusi yang positif bagi sebuah perusahaan yang nantinya akan menuju peningkatan produktivitas.

Pengaruh Budaya Kerja Terhadap Produktivitas Kerja Karyawan

Hasil pengujian menunjukkan bahwa budaya kerja berpengaruh positif terhadap produktivitas karyawan PT. Prima Gelora Agung Lestari Kota Palu. Hasil penelitian ini sejalan dengan penelitian (Asnora, 2020) yang menunjukkan bahwa budaya kerja berpengaruh terhadap produktivitas kerja karyawan. Peningkatan produktivitas kerja karyawan akan tercapai bila aturan perilaku, norma, nilai domina, filosofi dan peraturan dijadikan sebagai sebuah kebiasaan yang dilakukan setiap hari dalam bkerja oleh karyawan PT. Prima Gelora Agung Lestari Kota Palu. Kebiasaan-kebiasaan yang dilakukan karyawan, peraturan yang berlaku dan nilai-nilai yang dijalani oleh seorang karyawan merupakan pembentuk perilaku organisasi (Mulyani & Amin, 2021). Untuk meningkatkan produktivitas kerja karyawan maka kebiasaan-kebiasaan karyawan harus sesuai dengan peraturan yang dilaksanakan dengan penuh penghayatan. Maka dengan kebiasaan tersebut akan mampu menjalankan dan menyelesaikan tugas yang diberikan dengan baik. Budaya kerja terdiri dari tiga (3) dimensi, yaitu disiplin waktu kerja, keterbukaan antar karyawan dan sikap saling menghargai. Hasil penelitian ini juga menunjukkan membuktikan bahwa budaya kerja merupakan tolak ukur untuk meningkatkan produktivitas kerja karyawan. Menunjukkan bahwa untuk dapat meningkatkan produktivitas kerja karyawan diperlukan budaya kerja karyawan agar memberikan kontribusi yang positif bagi PT. Prima Gelora Agung Lestari Kota Palu.

Pengaruh Teamwork Terhadap Produktivitas Kerja Karyawan

Hasil pengujian menunjukkan bahwa variabel *teamwork* berpengaruh negatif terhadap produktivitas kerja karyawan PT. Prima Gelora Agung Lestari Kota Palu. Pengaruh negatif ini menunjukkan bahwa *teamwork* pada PT. Prima Gelora Agung Lestari Kota Palu tidak terbangun dengan baik. Pada hasil observasi langsung peneliti menemukan fenomena bahwa para karyawan dalam bekerja saling menonjolkan diri sehingga lebih mencerminkan cara bekerja individualis. Dari hasil wawancara terbuka pada umumnya karyawan mengungkapkan bahwa mereka masih mampu menangani pekerjaannya secara individu, bahkan mereka merasa

lebih produktif jika bekerja secara mandiri dibandingkan kerja tim, mereka mengatakan, komunikasi yang kurang baik justru tidak mendukung mereka bekerja secara tim, mereka tidak mampu berkoordinasi dengan baik, malah membuat mereka memiliki ketergantungan dalam melakukan pekerjaan sehingga lebih tidak produktif jika bekerja secara tim maka inilah yang menyebabkan teamework memiliki pengaruh negatif terhadap produktivitas kerja. Pekerjaan yang diselesaikan secara individu tentunya tidak akan produktif, sebagaimana Anggraini & Yusuf, (2024) memandang bahwa *teamwork* merupakan fondasi dari sukses yang sejati. Karyawan yang ingin merasakan kesuksesan dalam pekerjaan haruslah karyawan yang memiliki *teamwork* yang tinggi. Namun para karyawan PT. Prima Gelora Agung Lestari, dapat membuktikan bahwa dengan menyelesaikan pekerjaanya secara individu mereka justru dapat lebih produktif karena menurut pengakuan para karyawan, mereka lebih fokus dan menikmati pekerjaannya ketika bekerja secara individu dibandingkan sacara teamwork, mereka mengakui sudah sangat menguasai pekerjaannya masing-masing sehingga tidak terlalu membutuhkan penyelesaian pekerjaan secara tim, karena mereka rata-rata sudah sangat berpengalaman. Hasil penelitian ini sejalan dengan hasil penelitian Arif, *et al*, (2023) bahwa *teamwork* berpengaruh secara parsial terhadap produktivitas kerja karyawan PT. Prima Gelora Agung Lestari Kota Palu.

5. KESIMPULAN

1. Variabel budaya kerja dan *teamwork* secara simultan berpengaruh terhadap produktivitas kerja karyawan PT. Prima Gelora Agung Lestari Kota Palu.
2. Variabel budaya kerja dan *teamwork* berpengaruh signifikan terhadap produktivitas kerja karyawan PT. Prima Gelora Agung Lestari Kota Palu.
3. Variabel *teamwork* berpengaruh signifikan terhadap produktivitas kerja karyawan di PT. Prima Gelora Agung Lestari Kota Palu.

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BITCOIN VS FINANCIAL SECTOR STOCKS IN INDONESIA STOCK EXCHANGE: A SYSTEMATIC RISK COMPARISON

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Abstract

This research compares the systematic risk (beta) of Bitcoin and financial sector stocks in the Indonesian capital market, focusing on their sensitivity to macroeconomic fluctuations and market volatility in Indonesia. BBCA stock as the highest stock price in financial sector stock is compare to Bitcoin as a highest price in Cryptocurrency Index. The comparison is focusing on systematic risk between BBCA and Bitcoin, the measurement based on the return on each asset to the return of market that can be affected by macroeconomic fluctuations.

Using the Capital Asset Pricing Model (CAPM) as a method, this research analyze daily returns of selected financial stocks (BBCA) and Bitcoin (IDR-denominated) along 2024. Market returns are proxied by the Indonesia Stock Exchange Composite Index (IHSG), while the risk-free rate uses BI 7-Day Reverse Repo Rate. Regression analysis measures beta (β) to assess systematic risk.

Result of this research is Financial sector stock shows $\beta > 1$ (higher volatility), indicating stronger sensitivity to local market conditions. Bitcoin exhibit $\beta < 1$ (lower volatility than the market), reflecting stability due to regulatory oversight. Otherwise, Bitcoin exhibit higher beta (β) value on Nasdaq Cryptocurrency Index than IDX, indicating stronger sensitivity to global crypto trends than local market conditions.

The Implications is Investors can use these insights to optimize portfolios—combining low-beta Bitcoin for stability and high-beta Financial Sector for growth, while considering regulatory and macroeconomic risks.

Keywords: *Systematic risk, CAPM, Bitcoin, financial stocks, Indonesia Stock Exchange.*

1. Introduction

The comparison of Bitcoin and financial sector stocks on the Indonesia Stock Exchange (IDX) necessitates an examination of systematic risk—a crucial concept denoting risks that cannot be mitigated through diversification. Systematic risk is often measured using beta coefficients, reflecting the sensitivity of an asset's returns to overall market returns. Different studies illuminate the distinct behaviours of cryptocurrency, particularly Bitcoin, compared to traditional financial equities.

Firstly, Bitcoin's volatility presents it as a potential hedge against traditional market risks. Research indicates that Bitcoin operates independently of stock market fluctuations, showcasing uncorrelated movements with major stock indices, which suggests its utility for risk mitigation in diverse investment portfolios. According to Dyhrberg, Bitcoin not only functions as a "virtual gold" but also exhibits capabilities to hedge against stock market downturns, reinforcing its positioning as an alternate asset class distinct from traditional financial sector stocks (Dyhrberg, 2016). This perspective is essential in understanding how investors might allocate assets in varying market conditions.

In the context of Indonesia, specific studies have revealed that factors influencing systematic risk among traditional equities, such as those in the financial sector, differ from those affecting cryptocurrencies. For instance, research examining listed firms on the IDX

identifies that macroeconomic variables—including interest rates, inflation, and GDP growth—have significant effects on the stock returns of financial sector companies. Studies employing Vector Error Correction Model (VECM) methodologies have illustrated how sensitive financial sector stocks are to these macroeconomic indicators, leading to the conclusion that they are inherently exposed to systematic risk influenced by external economic conditions (Yusmia & Asianto, 2020).

Moreover, the unique systemic behavior of stocks on the IDX has been highlighted in studies examining different sectors. A study found that the degree of financial leverage directly influences the systematic risk of stocks, demonstrating that more leveraged firms exhibit increased sensitivity to market movements (Maulana et al., 2018).

Conversely, Bitcoin has attracted significant investor attention surrounding major events like the Bitcoin halving, which manifests in pronounced shifts in trading volumes and market activities. This phenomenon indicates a behavioral shift among investors who may seek cryptocurrencies during periods of uncertainty in traditional markets (Ramadhani, 2022). This suggests that during heightened market volatility, investors might opt for Bitcoin, viewing it as a less correlated investment, thus contributing to its appeal as an alternative asset class.

Finally, the implications for investor decisions between Bitcoin and financial sector stocks are further complicated by the inherent risks associated with each. Financial sector stocks are subject to extensive regulatory oversight which, while providing some level of risk transparency and governance, can significantly shape risk profiles through compliance requirements. Conversely, Bitcoin operates in a relatively unregulated environment, leading to heightened perceptions of risk and reward that could both attract and deter investors based on their risk tolerance levels.

In conclusion, the systematic risk associated with Bitcoin compared to that of financial sector stocks listed on the IDX presents a multifaceted evaluation paradigm. Bitcoin, recognized for its volatility and independence from traditional financial metrics, offers distinct hedging capabilities, while conventional stocks respond predictably to macroeconomic stimuli. This differentiation is critical for investors strategizing for diverse financial climates, illustrating the nuanced interplay between traditional equities and burgeoning cryptocurrency markets.

The advent of cryptocurrencies, particularly Bitcoin, has transformed investment paradigms, prompting an increasing number of investors to explore alternatives to traditional financial instruments. In Indonesia, the Indonesia Stock Exchange (IDX) provides a critical framework for comparing such investment options. The IDX serves as a platform for trading stocks and reflects investor sentiment, influenced by various macroeconomic factors including inflation rates, exchange rates, and economic growth indicators. Financial sector stocks listed on the IDX exhibit different levels of systematic risk exposure and volatility compared to Bitcoin.

Understanding the systematic risk associated with both Bitcoin and financial sector stocks is essential due to the distinct nature of these assets. Financial sector stocks are significantly affected by economic conditions, with their prices shaped by factors such as interest rates and market dynamics (Astuti & Yusuf, 2023); (Sitasari & Firmansyah, 2022). Conversely, Bitcoin has been characterized as an uncorrelated asset, which operates independently of traditional financial market fluctuations and is often viewed as a potential hedge against systemic risks in established financial markets, thus garnering substantial interest from retail and institutional investors (SİVRİKAYA et al., 2021).

Analyzing this dichotomy is particularly relevant in the current economic climate, where global disruptions, including the COVID-19 pandemic, have affected investment landscapes. The resilience of Bitcoin during such disruptions contrasts with the vulnerabilities

exhibited by financial sector stocks, which respond to macroeconomic shocks (Mugiarni & Wulandari, 2021); (Rachmawati, 2019). Research indicates that fluctuating economic indicators impact stock returns, emphasizing the necessity for a nuanced understanding of the interactions between Bitcoin and traditional equities (Zhafira et al., 2021a).

This study aims to systematically compare the systematic risk profiles of Bitcoin and financial sector stocks listed on the IDX. By investigating the factors influencing these risks and assessing investor behavior, this research seeks to provide a comprehensive understanding of how cryptocurrency and traditional financial securities operate within Indonesia's investment environment, offering valuable insights for investors navigating this evolving landscape.

2. Literature Review

Systemic Risk of Bitcoin as Cryptocurrency Highest Price

Bitcoin's systemic risk is significantly influenced by macroeconomic factors and global events. For instance, (Hsu & Wang, 2024) highlight how major fluctuations in macroeconomic indicators can trigger systemic jump risks, which are pertinent to Bitcoin given its reactive nature to global occurrences such as financial crises and pandemics. This insight is reinforced by Cayón and Sarmiento-Sabogal (Cayón & Sarmiento-Sabogal, 2021), who demonstrate that during the COVID-19 pandemic, the systemic risk affecting Bitcoin markedly increased, with a notable rise in its idiosyncratic risk as influenced by commodity and stock price movements.

Moreover, Bitcoin's volatility is not only higher than traditional equities but also exhibits susceptibility to spillover effects from major financial markets. (Zeng & Ahmed, 2022) examine the risk relationships between Bitcoin and East Asian stock markets, illustrating how risks in these markets can extend to Bitcoin and vice versa. This spillover effect indicates that Bitcoin's fluctuations can amplify overall market instability and presents a challenge for investors attempting to hedge risk effectively.

Financial Sector Systemic Risk in Indonesia

Market risk is another significant driver of systemic risk in Indonesia's financial sector. Research by Josepin Josepin (2022) highlights that fluctuations in global and domestic markets can have severe repercussions for banking performance, especially for foreign exchange banks. The study argues that these banks must navigate unpredictable market conditions which can lead to reduced financial performance and increased risk exposure (Josepin, 2022). Furthermore, Budiarso et al. Budiarso et al. (2020) demonstrate that the COVID-19 pandemic introduced new layers of complexity to the financial sector, causing disruptions that affected both financial performance and risk perception across various sectors (Budiarso et al., 2020).

The regulatory environment in Indonesia plays a pivotal role in shaping systemic risk. OJK's efforts to continuously enhance regulations to curb financial fraud are critical; however, the effectiveness of these measures has varied. Effective governance and transparency are crucial for sustaining confidence among investors and other stakeholders. According to Sa'Adah et al. (Sa'adah et al., 2024), the presence of women directors in executive roles positively impacts financial stability and reduces risks within banks. This highlights the importance of diversity in leadership as a mitigating factor against systemic risk.

Indonesia Stock Exchange and Interest Rate of Bank Indonesia

The relationship between the Indonesia Stock Exchange (IDX) and the Bank Indonesia (BI) interest rate constitutes a critical area of study, especially in the context of

macroeconomic stability and investment opportunities within Indonesia's financial sector. This synthesis illuminates various dynamics at play in this relationship, supported by empirical findings exploring how macroeconomic variables influence stock market performance.

Astuti and Yusuf (Astuti & Yusuf, 2023) emphasize the role of macroeconomic indicators in shaping the banking sector's share prices on the IDX, pointing to the interplay between market liquidity, profitability, and the prevailing interest rates. Their research aligns with Widyakto et al. (Widyakto et al., 2023), which finds that the net interest margin (NIM) significantly impacts share prices of banking companies, further indicating the intricate relations between bank performance metrics and stock valuation against the backdrop of fluctuating interest rates.

The influence of interest rates extends beyond the banking sector as well. Zhafira et al. (Zhafira et al., 2021b) show that during the COVID-19 pandemic, fluctuations in the BI interest rate influenced the exchange rate dynamics, which subsequently affected stock indices. This domino effect underscores the interconnectedness of inflation rates and interest rates and illustrates the overarching significance of monetary policy enacted by Bank Indonesia on investor sentiment and stock market performance.

Moreover, Sitasari and Firmansyah (Sitasari & Firmansyah, 2022) analyze how inflation, exchange rates, and interest rates collectively influence financial sector stock prices, with evidence supporting that changes in these macroeconomic factors lead to observable reactions in market performance. They argue that a stable monetary policy, reflected through controlled interest rates, is paramount for ensuring better performance of financial stocks listed on the IDX.

3. Methodology

CAPM (Capital Asset Pricing Model)

The Capital Asset Pricing Model (CAPM) is a foundational theory in finance that seeks to explain the relationship between systematic risk and expected return on investments. It aims to help investors make informed decisions regarding their portfolios by quantifying expected returns based on the risk of specific assets. This synthesis explores various aspects of the CAPM, including its principles, applications, limitations, and enhancements suggested in contemporary research.

At the core of the CAPM, developed by William Sharpe and later refined by others, is the notion that the return expected by an investor is proportional to the risk-free return plus a risk premium that compensates for the asset's systematic risk. This relationship is encapsulated in the formula:

$$E(R_i) = R_f + \beta(E(R_m) - R_f)$$

*(E(R*i)) represents the expected return of the asset, (R*f)* is the risk-free rate*, (beta*) is the measure of the asset's risk in relation to the market, and (E(R*m)) is the* expected return of the market.

Sample of The Reasearch

This study uses secondary data consisting of daily returns on Bitcoin prices (IDR/BTC) and financial sector stock prices. Samples were taken from BBCA (PT Bank Central Asia Tbk). BBCA was chosen as the sample because it has the highest stock price among banking stocks on the IDX. This price is assumed to be comparable to the cryptocurrency sector, where Bitcoin is the highest-priced coin on the Nasdaq Cryptocurrency Index. The IHSG return was used as

the independent variable to measure the impact of the Indonesian stock market on Bitcoin and financial sector stocks, specifically BBCA. The macroeconomic variable used to measure asset-specific risk is the BI Rate (BI 7DRR). Data was collected daily for each variable throughout 2024. Table 1 below shows an example of the data tabulation.

Table 1. Sampling Data

Date	BBCA Return	BTC Return	IDX Return	Risk-Free Rate (BI Rate)	Excess Return of BBCA	Excess Return of BTC	Excess Retrun of IDX
01/02/2024	3.28%	-1.36%	0.50%	5.75%	-2.47%	-7.11%	-5.25%
01/03/2024	-2.14%	1.23%	-1.29%	5.75%	-7.89%	-4.52%	-7.04%
...	...	...	...	...	...	...	...
12/30/2024	2.14%	1.94%	0.28%	6.00%	-3.86%	-4.06%	-5.72%

Hypothesis:

The hypothesis developed in this study aims to compare the systemic risk of Bitcoin and BBCA shares as financial sector shares is as follows.

H01: If ß BBCA < 1, then BBCA stock assets are safer and less sensitive to the market.

HA1: If ß BBCA > 1, then BBCA stock assets are highly sensitive to the market and carry greater risk.

H02: If ß BTC < 1, then Bitcoin assets are safer and less sensitive to the market.

HA2: If ß BTC > 1, then Bitcoin assets are highly sensitive to the market and carry greater risk.

The significance level of the market's influence on Bitcoin and BBCA stocks can be seen in the p-value of each model. If the p-value is less than 0.05, then Bitcoin and BBCA stock values are significantly influenced by the market and the macroeconomic variables included in the model (namely, the BI Rate [BI 7DRR]), and vice versa.

4. Result And Discussion

Measurement of CAPM (Capital Asset Pricing Model)

Before applying the CAPM, the daily returns on BBCA shares, Bitcoin prices, and the Composite Stock Price Index must be calculated. Next, calculate the excess return by examining the difference between each daily return and the free rate (BI rate), one of the macroeconomic variables influencing the Indonesian market. Finally, we calculate the CAPM model to compare the beta values of BBCA stock and Bitcoin through the market influence of the IDX. The results of the calculations are as follows:

CAPM (Capital Asset Pricing Model) of BBCA (Financial Sector Stock)

The CAPM (Capital Asset Pricing Model) is used to calculate the beta value of the excess return on BBCA shares influenced by the excess return of the Indonesia Stock Exchange Composite Index. The results are presented in Table 2 below.

Table 2. Result of BBCA and IDX

Variable	Coefficient	Std. Error	*t-Statistic*	*Prob*
C	-0.004392	0.003030	-1.449207	0.1478
ExRetIDX	0.930425	0.050620	18.38041	0.0000

As shown in Table 2, the ExRetIDX (Excess Return IDX) variable significantly affects the excess return of BBCA shares, as indicated by a probability level of less than 0.05 (namely, 0.0000). The beta in the model is 0.930425, meaning that beta is less than 1. If there is volatility or a change in the BI Rate macro variable affecting the Indonesia Stock Exchange Composite by one unit, the price of BBCA shares will change by 93.04%. A high beta value close to 1 indicates that BBCA shares are sensitive to the market and carry significant risk in the event of local market volatility. Therefore, in the CAPM, the BBCA share price supports the HA1 hypothesis. The high beta indicates that financial sector shares are highly volatile in response to local market conditions. The obtained R-squared value is 0.417168, meaning 41.72% of stock return variation is explained by market or independent variables. The CAPM model can be formulated as follows:

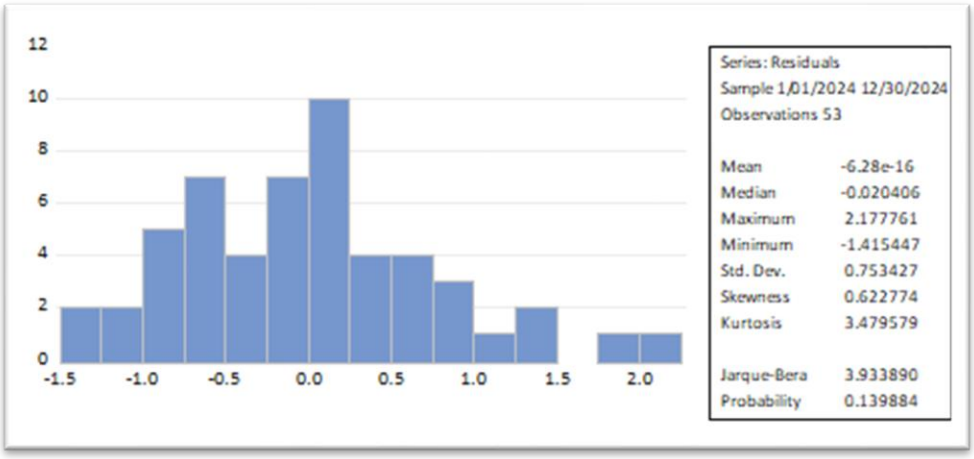
$$ExRetBBCA\text{E}(\text{R}i) = -0.004392 + 0.930425 ExRetIDX + e$$

To ensure the model is appropriate, several classical assumption tests are required. These tests include normality, heteroscedasticity, and linearity tests.

Normality Test

Normality testing is used to determine if the data used in the model is normally distributed. The following results were obtained using a histogram.

Picture 1. Normality Test



The normality test is indicated by the Jarque-Bera p-value of 0.139884, which is greater than 0.05. This means that the data in the model meets the normality assumption, i.e., that it is normally distributed.

Homoscedasticity Test

A homoscedasticity test was conducted to confirm the assumption that the residual variance (error) remains constant across all predictor values (independent variables). The White Test was used to examine interactions between non-linear variables. The results are as follows:

Table 3. Homoscedasticity Test

F-statistic	**0.621064**	**Prob. F(7.45)**	**0.6148**
Obs*R-squared	**4.669232**	**Prob. Chi-Square(7)**	**0.6024**
Scaled explained SS	**4.948047**	**Prob. Chi-Square(7)**	**0.7086**

The homoscedasticity test result in the above table is 0.6024, or a p-value greater than 0.05. This indicates that there is no heteroscedasticity problem with the model and that the model meets the homoscedasticity assumption.

Linearity test

The next step is the linearity assumption test, which determines whether the relationship between the independent and dependent variables is linear. Conducting the linearity test is hoped to result in a regression model with good prediction accuracy, correct model specifications, and validated linear regression. The results obtained through the Ramsey Reset Test are as follows.

Table 4. Linearity Test

	Value	Probability
t-statistic	1.754241	0.0858
F-statistic	3.077360	0.0858
Likelihood ratio	3.293438	0.0696

Based on Table 4, the p-value is 0.0858, which is greater than 0.05. This suggests a linear relationship between the dependent and independent variables in the BBCA Stock CAPM model.

CAPM (Capital Asset Pricing Model) of Bitcoin

The Capital Asset Pricing Model (CAPM) is used to calculate Bitcoin's beta value, which is influenced by the excess return of the Indonesia Stock Exchange Composite or local market conditions. The results are summarized in Table 5 below.

Table 5. Result of Bitcoin and IDX

Variable	Coefficient	Std. Error	*t-Statistic*	*Prob*
C	-6.395771	1.684753	-3.796267	0.0004
ExRetIDX	-0.103462	0.289471	-0.357418	0.7223

As shown in Table 5, the ExRetIDX (Excess Return IDX) variable does not affect the excess return of Bitcoin, as indicated by a probability level greater than 0.05 (0.7223). The beta in the model is -0.103462, meaning that beta is less than 1. This indicates that, if the BI Rate macro variable affecting the Indonesia Stock Exchange Composite changes by one unit, the price of Bitcoin will change by 10.3 percent. A low beta value indicates that Bitcoin is less sensitive to Indonesian market conditions and is less risky in the event of market volatility in Indonesia. Therefore, in the CAPM, Bitcoin prices support hypothesis H02. The low beta value indicates that Bitcoin is less volatile than local market conditions in Indonesia. The obtained R-squared value is 0.022010, meaning 2.2% of Bitcoin's return variation is explained by market or independent variables. The CAPM model can be formulated as follows:

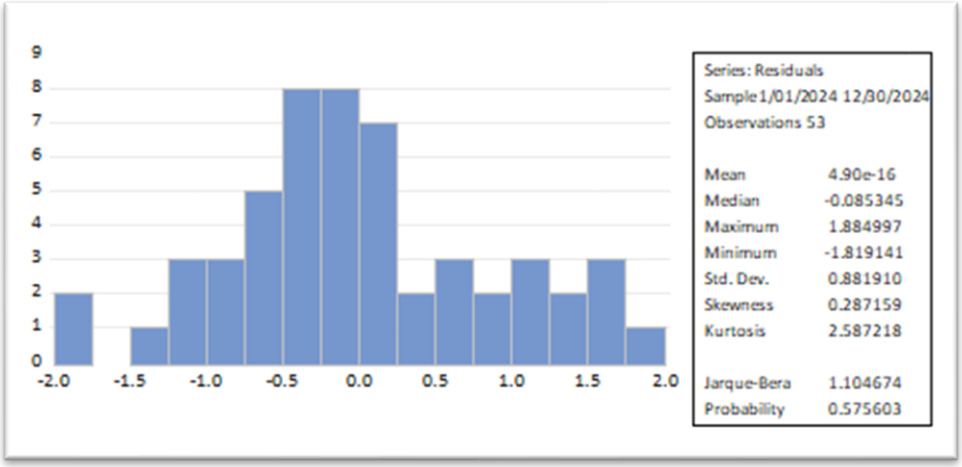
$$ExRetBTC\text{E}(\text{R}i) = -6.395771 - 0.103462 ExRetIDX + e$$

To ensure the model is appropriate, several classical assumption tests are required. These tests include normality, heteroscedasticity, and linearity tests.

Normality Test

Normality testing is used to determine if the data used in the model is normally distributed. The following results were obtained using a histogram.

Picture 2. Normality Test



The normality test is indicated by the Jarque-Bera p-value of 0.575603, which is greater than 0.05. This means that the data in the model meets the normality assumption and is normally distributed.

Homoscedasticity Test

A homoscedasticity test was conducted to confirm the assumption that the residual variance (error) remains constant across all predictor values (independent variables). The White Test was used to examine interactions between non-linear variables. The results are as follows:

Table 6. Homoscedasticity Test

F-statistic	**0.669459**	**Prob. F(7.45)**	**0.6485**
Obs*R-squared	**3.523660**	**Prob. Chi-Square(7)**	**0.6198**
Scaled explained SS	**2.293672**	**Prob. Chi-Square(7)**	**0.8072**

The homoscedasticity test result in the above table is 0.6198, or a p-value greater than 0.05. This indicates that there is no heteroscedasticity problem with the model and that the model meets the homoscedasticity assumption

Linearity test

The next step is the linearity assumption test, which determines whether the relationship between the independent and dependent variables is linear. Conducting the linearity test is hoped to result in a regression model with good prediction accuracy, correct model specifications, and validated linear regression. The results obtained through the Ramsey Reset Test are as follows.

Table 7. Linearity Test

	Value	**Probability**
t-statistic	1.244463	0.2195
F-statistic	1.548689	0.2195
Likelihood ratio	1.718238	0.1899

According to Table 7, the p-value is 0.2195, greater than 0.05. This suggests a linear relationship between the dependent and independent variables in the Bitcoin CAPM model.

CAPM (Capital Asset Pricing Model) of Bitcoin On Nasdaq Criptocurrency Index

The CAPM (Capital Asset Pricing Model) calculation on Bitcoin on the Nasdaq Cryptocurrency Index was used to expand the research results based on the finding that Bitcoin is not influenced by the local Indonesian market. Next, we examined the influence of the

global market on Bitcoin volatility in the same year through the Nasdaq Cryptocurrency Index (CCI). The results are shown in Table 5 below.

Table 8. Result of Bitcoin and CCI

Variable	Coefficient	Std. Error	*t-Statistic*	*Prob*
C	-0.000887	0.001365	-0.649893	0.5187
RetCCI	0.447626	0.061287	7.303778	0.0000

As shown in Table 8, the RetCCI (Excess Return Cryptocurrency Index) variable significantly affects the excess return of Bitcoin, as indicated by a probability level of less than 0.05 (0.0000). The model's beta is 0.447626, or 44.76%, meaning that beta is less than 1. This indicates that if there is a one-unit change in global macroeconomic variables affecting the Nasdaq Cryptocurrency Index, the price of Bitcoin will change by 44.76 percent. A low beta value indicates that Bitcoin is less sensitive to Indonesian market conditions, but more sensitive to global market volatility. This means that Bitcoin is less risky in the event of market turmoil in Indonesia, but more vulnerable to global markets. Therefore, in the CAPM, Bitcoin prices support hypothesis H02. The low beta value indicates that Bitcoin has low volatility in response to global market conditions. The R-squared value is 0.410178, meaning 41.02% of Bitcoin's return variation is explained by market or independent variables. The CAPM model can be formulated as follows:

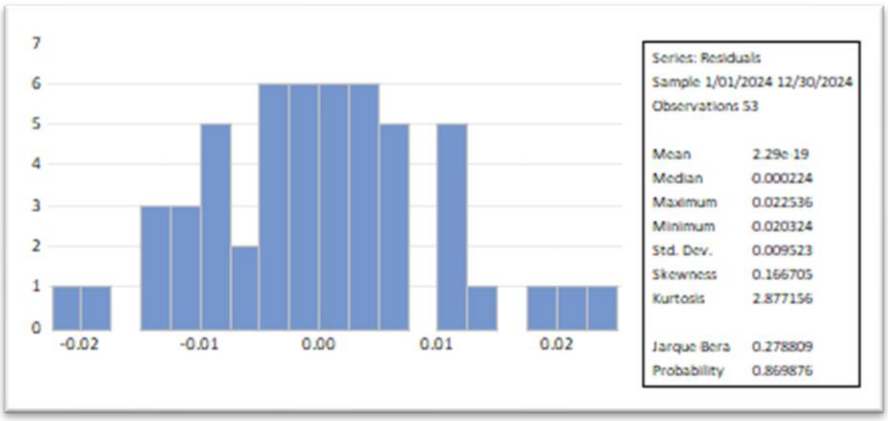
$$ExRetBTCE(Ri) = -6.395771 - 0.103462ExRetCCI + e$$

To ensure the model is appropriate, several classical assumption tests are required. These tests include normality, heteroscedasticity, and linearity tests.

Normality Test

Normality testing is used to determine if the data used in the model is normally distributed. The following results were obtained using a histogram.

Picture 3. Normality Test



The normality test is indicated by the Jarque-Bera p-value of 0.869876, which is greater than 0.05. This means that the data in the model meets the normality assumption, i.e., that it is normally distributed.

Homoscedasticity Test

A homoscedasticity test was conducted to confirm the assumption that the residual variance (error) remains constant across all predictor values (independent variables). The results are as follows:

Table 9. Homoscedasticity Test

F-statistic	**0.318547**	**Prob. F(2.50)**	**0.7287**
Obs*R-squared	**0.666823**	**Prob. Chi-**	**0.7165**
	1.634476	**Square(2)**	**0.4416**

Scaled explained SS	Prob. Chi-Square(2)

The homoscedasticity test result in the above table is 0.7287, or a p-value greater than 0.05. This indicates that there is no heteroscedasticity problem with the model and that the model meets the homoscedasticity assumption.

Linearity test

The next step is the linearity assumption test, which determines whether the relationship between the independent and dependent variables is linear. The results obtained through the Ramsey Reset Test are as follows:

Table 10. Linearity Test

	Value	Probability
t-statistic	1.067862	0.2908
F-statistic	1.140328	0.2908
Likelihood ratio	1.219283	0.2695

Based on Table 7, the p-value is 0.2908, greater than the critical value of 0.05. This suggests a linear relationship between the dependent and independent variables in the Bitcoin CAPM on CCI model.

Discussion

Based on the results obtained, there is a significant difference between Bitcoin and financial sector stocks on the Indonesia Stock Exchange Composite Index. The beta value generated through the Capital Asset Pricing Model (CAPM) shows that financial sector stocks are more vulnerable to domestic market volatility, which is mainly influenced by Bank Indonesia's interest rates. These rates, in turn, affect the Indonesia Stock Exchange Composite.

Table 11. Bitcoin vs Financial Sector Stock: A Systematic Risk Comparison

	Bitcoin	Financial Sector Stock (BBCA)
Beta (ß)	-0.103462	0.930425
R-Squared	0.022010	0.417168
p-value	0.7223	0.0000

Table 11 shows that the beta value for financial sector stocks is greater than that of bitcoin, with a value close to one. This indicates that financial sector stocks are more susceptible to local market volatility. This aligns with the observed market phenomenon where systemic risk resulting from changes in interest rates (BI Rate) significantly impacts the financial sector, affecting the performance of stocks. Financial sector stocks have a P-value of less than 0.05 (specifically, 0.000), indicating that changes in macroeconomic variables, particularly interest rates, significantly impact the volatility of BBCA stock prices. Therefore, systemic risk resulting from local market volatility is more likely to affect BBCA stock prices.

Conversely, Bitcoin's beta value is smaller than BBCA's at -0.103462, and the p-value is greater than 0.05 at 0.7233. This indicates that domestic macroeconomic volatility does not significantly impact Bitcoin prices in the market. Therefore, systemic risk on Bitcoin assets resulting from changes in economic policies and domestic market volatility does not occur, making Bitcoin risk lower than that of financial sector stocks. This phenomenon was observed during the 2020 pandemic, when stock markets worldwide fluctuated, yet Bitcoin prices moved differently. Similarly, when interest rates in Indonesia changed and consumer purchasing power weakened, the price of Bitcoin remained stable while the price of financial sector stocks on the Indonesia Stock Exchange Composite Index declined, including the price of BBCA shares, the highest priced shares in the financial sector.

To capture broader phenomena related to Bitcoin price movements, this study included the CCI (Cryptocurrency Index) variable, which represents the return on cryptocurrencies on the Nasdaq Cryptocurrency Index. This variable was included to observe the impact of changes in global economic conditions with a systemic effect on the cryptocurrency market. This could indicate systemic risk to Bitcoin due to global economic turmoil.

Based on Table 8, the p-value is less than 0.05 (specifically, 0.000), indicating that CCI significantly affects Bitcoin volatility. With a beta value of 0.447626 for CCI on Bitcoin, we can conclude that Bitcoin price performance is more susceptible to the impact of global economic turmoil than to local Indonesian market factors. The comparison shows that the beta value of CCI on Bitcoin is greater than the beta value of IDX on Bitcoin. Therefore, Bitcoin is more susceptible to systemic risk in the event of global market volatility.

However, when comparing the performance of BBCA shares against local market returns versus Bitcoin prices against the cryptocurrency index, the beta value of BBCA shares is greater than that of Bitcoin against the global market. This shows that financial sector stocks are more vulnerable to systemic risk than bitcoin.

5. Conclussion

This study aimed to compare the systemic risk of Bitcoin assets and financial sector stocks on the Indonesia Stock Exchange Composite. Based on the results, it can be concluded that Bitcoin has lower systemic risk than financial sector stocks. Therefore, Bitcoin is a safer asset against market volatility in Indonesia and in the global market. Therefore, investors can diversify into alternative assets, such as Bitcoin, rather than financial sector stocks.

Various global and local economic phenomena influence the volatility of financial sector stocks in Indonesia. However, this does not occur with Bitcoin, whose price remains more stable during economic volatility. Investors can use these insights to optimize their portfolios by combining Bitcoin's low beta for stability with financial sector stocks' high beta for growth while considering regulatory and macroeconomic risks.

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