**CHARACTERISTICS OF CO-WORKING SPACES IN BANGKOK**

Sonthya Vanichvatana[[1]](#footnote-1), Navapa Varapark[[2]](#footnote-2) and Porntida Poontirakul3

Martin de Tours School of Management and Economics

Assumption University of Thailand

**ABSTRACT**

This research explored co-working spaces located in Bangkok as of May, 2017. Among all 67 projects found, divided into three geographically classifications (Core CBD, Outer CBD and Non-CBD), most project locate in the central business districts, CBD (Core and Outer). Popular opening hours are at regular business opening hours (8 to 9am), while popular closing hours are until late hours (6 to 10pm). Rental spaces provided include both *open space*, hot desk and fixed desk, and *enclosed space*, private office, meeting room, and event room. Among as many as 17 types of facilities/equipment offered in the overall projects, the top five facilities/equipment are Wi-Fi, Snacks and Drinks, Printing, Mail Box, and Projectors.

***Keywords***: Co-working spaces, Bangkok, office spaces

**INTRODUCTION**

The main purpose of an office environment is to support its occupants in performing their job (wiki-1, 2017). Such office environment/space varies widely from a small office such as a bench in the corner of a small business of extremely small size, through entire floors of buildings up to and including massive buildings dedicated entirely to one company (wiki, 2017).

In modern terms an office usually refers to the location where white-collar workers are employed (Wiki-1, n.d.). However, for startup (a business or undertaking that has recently begun operation (the American Heritage Dictionary, 2013)), office environments mean differently. Co-working spaces have been increasingly popular ([coworkinghandbook.com](https://www.coworkinghandbook.com), n.d.) including in Bangkok. The ***Objective*** of this research is to explore the characteristics of co-working spaces in Bangkok. The ***Scope*** covers all co-working projects that can be searched through popular website search engines, Google Maps and www.coworker.com.

**LITERATURE REVIEW**

The term ‘work space’ means an area rented or sold used or required for one's work for commercial purposes, as in an office or home (Dictionary.Com, n.d.) (Oxford Dictionaries, n.d.). This part reviewed: Types of Work Spaces, Components of Office Spaces, Office Spaces in Bangkok, Evolution and Popularity of Co-Working Spaces and Types of Co-Working Spaces.

Types of Work Spaces

There are many forms of office for startups and entrepreneurs including: Home Office, Virtual Office, Co-working Spaces, Leased Offices and Purchased Office (Coloso, 2015) (Taylor, n.d.). *Home office* is the easiest and cheapest way to start and operate a business. Many popular, known and global companies begun with the home office type, such as Apple, Facebook and Alibaba (Coloso, 2015). In addition to work at home, work at public space, like a public library, also provides free working space, with possible of free wifi, but with downside of no cell phone. *Virtual Office* is an office in a prime business district but physical business does not normally locate there, but only in cyberspace. Virtual Office provides services including important-sound address, a professional phone-answering service or real operators, vocational rental of office space and conference rooms (Investopedia, n.d.). *Co-working spaces* is a shared working environment, often an office and independent activity. Unlike in a typical office environment, those coworking are usually not employed by the same organization (Foertsch, 2013). More details of co-working space has been explained further in the following section*. Leased office* is a typical rental office which belongs to a landlord or company owing the unit or building. Lease contract is usually in fixed term –six-months, one-year or more. However, some few offices also allow monthly basis rental office space. Such office space Lastly, *Purchased office space* is another option of work space. There have been many discussions of pro and con whether to lease or to buy office spaces (Zahorsky, 2017) (AllBusiness, n.d.). There are many factors supporting buying office (tax deductions, additional income, retirement saving) as well as factors not supporting side (lack of flexibility and upfront costs). Also that, there are many factors supporting leasing office space (prime property, free up working capital, no headaches to run a property, no mortgage, negotiable rates) and not supporting side (variable costs and no equity).

Components of Office Spaces

Office spaces usually include: (1) Work spaces (2) Meeting spaces and (3) Support spaces (Wiki-1, n.d.). Work spaces can be formed in any of the following nine types: open office, team space, cubicle, private office, shared office, team room, study booth, work lounge and touch down. These work spaces suitable variedly based on the number of user, levels of concentration required (high, medium, low), characteristics of spaces (enclosed, semi-enclosed, open space) and characteristics of activities.

Table 1: Analysis of the Nine Types of Work Spaces

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Types of Work Spaces | Number of User(s) | Level of Concentration | Characteristics of Spaces | Characteristics of Activities |
| Open Office | >10 | Low | Open Space | Demand frequent communication with little concentration |
| Team Space | 2-8 | Medium | Semi-enclosed | Team work demand internal communication |
| Cubicle | 1 | Medium | Semi-enclosed | Demand medium interaction |
| Private Office | 1 | High | Enclosed | Confidential activities or many small meetings |
| Shared Office | 2-3 | Medium | Enclosed | Collaborative work in small groups |
| Team Room | 4-10 | Low | Enclosed | Team work demand frequent internal communication |
| Study Booth | 1 | High | Enclosed | Short-term activities |
| Work Lounge | 2-6 | Low | Open Space – (a lounge-like work space) | Short-term demand collaboration and/or allow impromptu interaction |
| Touch Down | 1 | Low | Open Space | Short-term |

Table 1 analyzes these nine types of work spaces. Meeting spaces can be arranged in many ways including: small meeting room, large meeting room, small meeting space, large meeting space, brainstorm room and meeting point. Support spaces for office spaces include filling space, storage space, print and copy area, mail area, pantry area, break area, locker area, smoking room, library, games room, waiting area and circulation space (Wiki-1, n.d.).

Office Spaces in Bangkok

Office locations in Bangkok can be geographically classified into two main regions: (1) Bangkok CBD (central business districts) including Core CBD (Silom, Sathorn, Wireless and Ratchadamri Road, passing through Rama IV and Ploenchit Road) and Outer CBD (primarily residential areas of Bangkok along the BTS sky train route, specifically the early Sukhumvit area and Asoke up to Sukhumvit Soi 24) and (2) Non-CBD (CBRE-1, n.d.).

Leasing office space required rather fixed lease terms and several kinds of costs. Office leases term for commercial office space in Bangkok are usually for three years with option to renew lease. Rental cost is based on price per square meter. Most office landlords quote areas on a net lettable basis, measured from the window to the core area including columns but excluding common corridors, washrooms and plant rooms. Office deposits are generally for 3 months’ gross rental, non-interest bearing, refundable upon expiry of the lease (CBRE-2, n.d.).

Lease office space in Bangkok cost not only rental costs but also other property operating costs including: electricity (for lightings, power and air-conditioning), telephone lines, car parking, management fees, service charges and local property tax and fitting out costs (CBRE-2, n.d.).

Evolution of Co-working Space

Co-working space has changed working style from traditional office space to collaborative working office space (Foertsch & Cagnol, 2013) (CBRE, 2016). The first pre-models of co-working spaces were created in Berlin as a physical location for hackers’ community to meet and work in 1995. In 1999, a software company created “42 West 24” as a pleasant work environment with flexible desks for individuals and teams. The first official co-working space was opened in San Francisco as reaction to unsocial business centres and unproductive work life at home office which is organized as non-profit corporation. (Foertsch & Cagnol 2013).

Popularity of Co-working spaces

Nowadays, co-working spaces are popular work space in top world capitals. This is due to the increasing of entrepreneurialism and possible rise of workforce. There has been substantial change in the way people work and where they get work done. (JLL U.S.A., 2016). There are records of popularity of co-working spaces in countries like U.S.A. (JJL U.S.A., 2016), U.K. (The Instance Group, 2016), Asia (Creffield, 2016) and also in Bangkok, Thailand (Ewart-James, 2016).

Spreitzer (et.al. 2015) conducted research interviews with several co-working space founders and community managers and surveyed several hundred workers from dozens of co-working spaces around the U.S. in 2015. Users are membership-based from diverse groups of freelancers, remote workers, and other independent professional work together in a shared, communal setting. This on-going research found out what makes co-working spaces so effective. One interesting predictor is that users have more job control in terms of work schedule, lack of routine and can choose to socialize and discuss over coffee in the café or to be left alone elsewhere in the building.

Spreitzer (et.al. 2015) stated that “With the combination of a well-designed work environment and a well-curated work experience are part of the reason people who co-work demonstrate higher levels of thriving than their office-based counterparts. But what matters the most for high levels of thriving is that people, who co-work, have substantial autonomy and can be themselves at work.”

Types of Co-working Spaces

There are three types of co-working spaces: (1) Share Office: Business lease spare desks to outsiders to create co-working environment. These are usually the cheapest option. (2) Co-working Space Business: Businesses that have office space for the sole purpose of leasing desk-space out to freelancers and small companies. And, (3) Co-working Incubators: Co-working space with add benefits by providing features of a co-working space but geared towards startups and small businesses with incubators, advice, training and funding (Spare Desk, n.d.).

Types of Workspace for Rent

There are four types of rental spaces provided by co-working spaces projects surveyed: Hot Desk, Fixed Desk, Private Office, Meeting Room, and Event Room. Among these four types, ‘Hot Desk’ is a new term of rental spaces. *Hot Desk*, as defined by Oxford Dictionary (-2, n.d.), is a desk allocated to a worker when required or on a rota system, rather than belonging to a particular worker. Hot desk, or hot desking, is basically time-sharing desk which allows the costs to be lower than a dedicated fixed desk. Using hot desk has many benefits for startup including: get more flexible renting terms; allow possible intrinsically social-networking built-in; can encounter a great learning environment by being surrounded by other freelancers of varying experience for asking questions and learn new things; make users feel part of a community of like-minded professionals (Rentadesk, n.d.) (Spreitzer, et.al 2015). Hot desk and fixed desk are the top income streams for co-working spaces (coworkinghandbook.com, n.d.).

**METHODOLOGY**

The research used quantitative research approach. Data of the total of 79 projects were collected during April and May, 2017 from the two sources: Google Maps and [www.coworkers.com](http://www.coworkers.com).

Google Maps is a free web mapping service developed by Google. Global-Web-index reported that Google Maps is the world’s most popular smartphone app (Hinks, 2013). 54% of world smartphones accessed Google Maps. Google Maps has been applied in both academic (Vandeviver, 2014) (TheThinkingStick, 2015) and businesses (Fuquay, n.d.). ‘www.coworker.com’ is the other source to search for co-working spaces in Bangkok. This website offers search engine to explore over 4,000 co-working spaces around the world (Coworker.com, n.d.).

Data

The total of 79 co-working space projects were found via the two sources. Out of these 79, only 67 projects conform to the scope of this research. The other unused 12 projects: 3 projects are out of business, 1 project offer service only to a specific group of telecommunication members, 5 projects are virtual offices, and 3 projects provide a long-term contract of 6 months up.

**FINDINGS**

Four groups of co-working spaces’ features of the 67 projects were found: (1) Location, (2) Open Hours, (3) Types Spaces and Rental Rates, and (4) Facilities and Equipment.

(1) Location

This research uses ‘office space geographically classification in Bangkok’ by CBRE. The total of 67 projects were put into three groups: (1) Core CBD – 30 projects (44.78%), (2) Outer CBD of 29 projects (43.28%), and (3) Non-CBD –6 projects (11.94%), as shown in Figure 1.

Figure 1: Three Co-Working Spaces Geographically Classification in Bangkok

*The proportion of the number of co-working spaces is highest in Core CBD and getting fewer in Outer CBD and the least in Non-CBD. About 88% of the projects locate in CBD.*

Out of these 67 projects, 48 projects (71.64%) locate on-or-close to ‘Main Road’ and the other 19 projects (28.36%) locate on ‘Sub-Main Road’. Projects locate in Core CBD, 25 projects (83%) are on-or-close to main road and 5 projects (17%) are on sub-main road. Projects locate in Outer CBD, 19 projects (66%) are on-or-close to main road and 10 projects (10%) are on sub-main road. Projects locate in Non-CBD, 4 projects (50%) are on-or-close to main road and 4 projects (50%) are on sub-main road. Figure 2 summarizes these project location relating to main road.

Figure 2: Summary of the Proportions of Projects’ Location in Relation to Main Road

*The proportion of co-working spaces located on or close to main roads is the highest (83%) for those in Core CBD and getting fewer in Outer CBD (66%) and the least in Non-CBD (50%).*

(2) Operating Hours

There are two co-working spaces that post 24 hours operations, one in Core-CBD and the other in Outer-CBD. Open hours range from 7:00am to 11:00am. *Most projects open at normal business hours, 8:00am/8:30am/9:00am.* Some projects open as late as 10:00 to 11:00am.

Close hours vary wildly from 5:00pm to midnight, with one project close at 1:00am. *Popular closing hours are between 6:00pm and 10:00pm.* Figure 3 displays open and close hours of the co-working spaces surveyed.

Figure 3: Open and Close Hours of the Co-Working Spaces

(3) Types of Spaces and Rental Rates

Rental spaces provided include both *open space*, hot desk and fixed desk, and *enclosed space*, private office, meeting room, and event room. Rental rates vary depending on types of usages: hot desk, fixed desk, and private office. Other factors that affect rental rates include membership, room size, and length of contract. Membership rates are normally quoted in monthly term while non-membership rates are in daily term. To compare all surveyed projects, all renting rates for ‘Hot Desk’, ‘Private Office’ and ‘Meeting Room’ were converted into ‘Thai Baht per Day’, and for ‘Event Room’ into ‘Thai Baht per Hour’. Table 2 summarizes rental rates of the four types of spaces into minimum, average and maximum rates of the three geographical groups.

Table 2: Rental Rates of Different Types of Working Spaces

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Core CBD | | | Outer CBD | | | Non-CBD | | |
|  | min | average | max | min | average | max | min | average | max |
| Hot Desk (Baht/Day) | 91 | 263 | 450 | 66 | 244 | 399 | 150 | 263 | 350 |
| Private Office (Baht/Day) | 220 | 718 | 1,633 | 218 | 636 | 1,416 | 600 | 1,389 | 2,950 |
| Meeting Room (Baht/Day) | 375 | 4,093 | 10,200 | 300 | 2,996 | 14,000 | 700 | 2,252 | 3,000 |
| Event Room (Baht/hour) | 1,400 | 3,708 | 10,000 | 750 | 3,181 | 11,750 | 6,075 | 10,538 | 15,000 |

Note: As of June 1st, 2017 USD 1 = 34.09 Thai Baht, EUR 1 = 38.39, AUD 1 = 25.28 Thai Baht.

It can be noticed that the above rates vary widely. Rental rates for hot desk is the lowest in every project. Rental rates, from low to high, are from hot desk, private office, meeting room, and to event room, respectively. Maximum rental rates for hot desk in Core CBD is the highest (450 Baht per day) among the three graphically classifications. Figure 4 summarizes rental rates for ‘Hot Desk’ in the three geographical groups.

Figure 4: Hot-Desk Rental Rates of the Three Geographical Groups

(4) Facilities/Equipment

There are as many as 17 types of facilities provided among the 67 co-working space projects surveyed: (I) Basic Facilities, (II) Office Equipment, (III) Business Support, and (IV) Supporting Space.

1. Basic Facilities: (1) Wi-Fi, and (2) Drinks and Snacks;
2. Office Equipment: (1) Printing, (2) Projector, (3) White Board, and (4) Free PC;
3. Business Support: (1) Mail Box, (2) Locker, (3) Business Address, (4) Extra Storage, (5) Direct Line, and (6) Access Card
4. Supporting Spaces/Activities: (1) Lounge Seats, (2) Workshop, (3) Reading Corner, (4) TV, and (5) Theater Room.

Table 3: The Number and Percentages of Facilities/Equipment Posses in the Three Groups

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Facilities/ Equipment | Overall Projects | | | Core-CBD | | Outer-CBD | | Non-CBD | |
| Count | % | Ranks | Count | % | Count | % | Count | % |
| Basic Facilities |  | | |  | |  | |  | |
| 1.Wifi | 67 | 100% | 1 | 30 | 100% | 29 | 100% | 8 | 100% |
| 2.Drinks and Snacks | 52 | 78% | 2 | 22 | 73% | 25 | 86% | 5 | 63% |
| Office Equipment |  | | |  | |  | |  | |
| 1. Printing | 47 | 70% | 3 | 21 | 70% | 20 | 69% | 6 | 75% |
| 2. Projector | 28 | 42% | 5 | 12 | 40% | 13 | 45% | 3 | 38% |
| 3. White Board | 12 | 18% | 12 | 5 | 17% | 5 | 17% | 2 | 25% |
| 4. Free PC | 4 | 6% | 16 | 1 | 3% | 3 | 10% | 0 | 0% |
| Business Support |  | | |  | |  | |  | |
| 1. Mail Box | 29 | 43% | 4 | 8 | 27% | 16 | 55% | 5 | 63% |
| 2. Locker | 25 | 37% | 6 | 14 | 47% | 11 | 38% | 0 | 0% |
| 3. Business Address | 15 | 22% | 10 | 8 | 27% | 4 | 14% | 3 | 38% |
| 4. Extra Storage | 14 | 21% | 11 | 7 | 23% | 5 | 17% | 2 | 25% |
| 5. Direct Line | 9 | 13% | 13 | 5 | 17% | 1 | 3% | 3 | 38% |
| 6. Access Card | 8 | 12% | 14 | 5 | 17% | 3 | 10% | 0 | 0% |
| Supporting Space |  | | |  | |  | |  | |
| 1.Lounge seats | 23 | 34% | 7 | 12 | 40% | 7 | 24% | 4 | 50% |
| 2. Workshop | 20 | 30% | 8 | 8 | 27% | 12 | 41% | 0 | 0% |
| 3. Reading Corner | 16 | 24% | 9 | 8 | 27% | 6 | 21% | 2 | 25% |
| 4. TV | 7 | 10% | 15 | 2 | 7% | 5 | 17% | 0 | 0% |
| 5. Theatre Room | 3 | 4% | 17 | 2 | 7% | 1 | 3% | 0 | 0% |

In the overall projects comparison, the top five facilities/equipment are Wi-Fi, Snacks and Drinks, Printing, Mail Box, and Projectors. Every project provides free Wi-Fi. Most projects in all three areas provide free drinks and snacks, 63% to 86%. Printing is another equipment that is provided by most projects, 69% to 75%, in the three geographically classifications. Contrary, Theater room and Free PC are the two lowest ranks provided.

**CONCLUSION AND DISCUSSION**

This research shows broad pictures of features provided in co-working spaces in Bangkok, as of May, 2017. The characteristics of co-working space projects in Bangkok can be concluded in four features as follows:

Location:

* Most projects locate in Core CBD (44.78%) and getting fewer in Outer CBD (43.28%) and the least in Non-CBD (11.94%). About 88% of the projects locate in CBD.
* The proportion of co-working spaces located on or close to main roads is the highest (83%) for those in Core CBD and getting fewer in Outer CBD (66%) and the least in Non-CBD (50%).

Operating Hours

* Most projects open at normal business hours, 8:00am/8:30am/9:00am.
* Popular closing hours are between 6:00pm and 10:00pm.

Types of Spaces and Rental Rates

* Rental spaces provided include both *open space*, hot desk and fixed desk, and *enclosed space*, private office, meeting room, and event room
* Rental rates for hot desk is the lowest in every project.
* Rental rates, from low to high, are from hot desk, private office, meeting room,
* Maximum rental rates for hot desk in Core CBD is the highest among the three graphically classifications.

Facilities/Equipment

* There are as many as 17 types of facilities/equipment offered in the overall projects.
* The top five facilities/equipment are Wi-Fi, Snacks and Drinks, Printing, Mail Box, and Projectors.
* Every project provides free Wi-Fi and most projects in all three areas provide free drinks and snacks.
* Theater room and Free PC are the two lowest ranks of facility/equipment provided.

Further Research

This research is an initial step to understand about co-working spaces in Bangkok. However, there are still many further aspects needed to be explored for both demand side (characteristics and co-work interaction) and supply side (business sustainability and strategies, small town opportunity in Thailand, and supply forecast).

**REFERENCES**

AllBusiness. (n.d.) Advantages to Leasing Your Office Space. Housing, Real Estate & Construction. Retrieved 2017, May 26 from https://www.thebalance.com/the-pros-and-cons-of-leasing-vs-buying-office-space-2951249.

CBRE-1 (n.d.) Bangkok Office & Commercial Property. Retrieved 2017, May 18 from https://www.cbre.co.th/en/Services/Office.

CBRE-2 (n.d.) Bangkok Office Information. Retrieved 2017, May 18 from https://www.cbre.co.th/en/SubServices/bangkokofficerentlease.

CBRE. (2016). The Rise of Co-Working Space in Asia Pacific Boon or Bane? CBRE Hong Kong. Retrieved, 2017, May 26 from http://www.cbre.com.hk/EN/aboutus/asiamedia/Pages/The-Rise-of-Co-working-Space-in-Asia-Pacific-Boon-or-Bane-.aspx.

Coloso, Katrina. (2015). 5 Types of Offices for Startups. Founder’s Guide. Retrieved, 2017, May 23 from http://www.foundersguide.com/5-types-of-offices-for-startups/.

Coworker.com. (n.d.). Are you coworking yet? Retrieved, 2017, May 20 from https://www.coworker.com/.

coworkinghandbook.com. (n.d.). Coworking Statistics, Surveys, Research Papers and Studies. Retrieved, 2017, May 23 from https://www.coworkinghandbook.com/stats/.

Creffield, Lisa. (2016). Getting Flexible: the Rise of Coworking in Asia. Retrieved, 2017, January 4 from https://allwork.space/2016/05/getting-flexible-the-rise-of-coworking-in-asia/.

Dictionary.Com. (n.d.). Work Space. Thesaurus.Com. Retrieved, 2017, May 23 from http://www.dictionary.com/browse/workspace.

Ewart-James, Virginia. (2016). Co-working Spaces on the Up. Thailand-Property. Retrieved, 2017, May 25 from https://www.thailand-property.com/blog/co-working-spaces.

Foertsch, Carsten. (2013). The Coworker’s Profile. Deskmag. Retrieved, 2017, May 23 from http://www.deskmag.com/en/the-coworkers-global-co-working-survey-168.

Foertsch, Carsten and Cagnol, Remy. (2013). The History of Coworking in a Timeline. Retrieved, 2017, January 4 from http://www.deskmag.com/en/the-history-of-coworking-spaces-in-a-timeline.

Fuquay, Matt. (n.d.) Three Ways to Use Google Maps in Any Subject. Retrieved, 2017, May 20 from https://sites.google.com/a/ccpsnet.net/edtechhub/tech-services/integrators/blog/threewaystousegooglemapsinanysubject.

Hanks, Jamie. (2013). Google Maps is the World’s Most Popular Smartphone App. ITProPortal. Retrieved, 2017, May 20 from http://www.itproportal.com/2013/08/08/google-maps-is-the-worlds-most-popular-smartphone-app/.

Investopedia. (n.d.) Virtual-office. Retrieved, 2017, May 23 from http://www.investopedia.com/terms/v/virtual-office.asp.

JJL. (2016). Shared Workspaces: the Market Perspective. Retrieved, 2017, May 26 from http://www.us.jll.com/united-states/en-us/research/office/coworking-space-the-landlord-perspective.

Oxford Dictionary-1. (n.d.) Workspace. Retrieved, 2017, May 23 from https://en.oxforddictionaries.com/definition/workspace.

Oxford Dictionary-2. (n.d.) Workspace. Retrieved, 2017, May 23 from https://en.oxforddictionaries.com/definition/hot\_desk.

Rentadesk. (n.d.) Hot Desking Advantages – Our Top 8 Reasons. Retrieved, 2017, May 28 from http://www.rentadesk.co.uk/coworking-blog/2014/7/31/hot-desking-advantages.

Spare Desk. (n.d.). Different Types of Coworking Spaces. Retrieved, 2017, May 22 from http://spare-desks.com/blog/different-types-of-coworking-spaces/.

Spreitzer, Gretchen, Bacevice, Peter and Garrett, Lyndon. (2015). Why People Thrive in Coworking Spaces. Harvard Business Review Blog. Retrieved, 2017, May 22 from <https://hbr.org>/2015/05/why-people-thrive-in-coworking-spaces.

Taylor, Phillips. (n.d.). 7 Types of Office Space for the Upstart Entreprenuers. PT Money. Retrieved, 2017, May 25 from https://ptmoney.com/types-of-office-space-for-entreprenuers/.

The American Heritage Dictionary. (n.d). Startup. Retrieved, 2017, May 20 from https://ahdictionary.com/word/search.html?q=start+up.

The Instance Group. (2016). Flexible Work Space Review // U.K. 2016. Retrieved, 2017, May 26 from http://www.theinstantgroup.com/media/209097/instant\_uk\_sor\_2016\_final.pdf.

TheThinkingStick. (2015). 10 Ways to Use Google Maps in the Classroom. Retrieved, 2017, May 20 from http://www.thethinkingstick.com/10-ways-to-use-google-maps-in-the-classroom/.

Vandeviver, Christophe. (2014). Applying Google Maps and Google Street View in Criminological Research. *Criminal Science*, Springer, 3:13, 1-16. Retrieved, 2017, May 25 from http://www.crimesciencejournal.com/content/3/1/13.

Wiki-1. (n.d.) Office. Wikipedia. Retrieved, 2017, May 21 from https://en.wikipedia.org/wiki/Office.

Zahorsky, Darrell. (2017). The Pros and Cons of Leasing vs. Buying Office Space. Small the Balance. Retrieved, 2017, May 26 from https://www.thebalance.com/the-pros-and-cons-of-leasing-vs-buying-office-space-2951249.

1. Associate Professor and Chairperson, 2 Undergraduate Student of the Department of Real Estate, 3 Lecturer of the Department of Insurance, Martin de Tours School of Management and Economics, Assumption University of Thailand. [↑](#footnote-ref-1)
2. [↑](#footnote-ref-2)