

FINANCIAL LITERACY AND FINANCIAL BEHAVIOR AMONG GOVERNMENT EMPLOYEES

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Abstract

Ideally retirement should be a celebratory event. With work taking most of our time, retirement provides the free time to spend with the family, exploring hobbies, or simply enjoying the newfound downtime. However, in Indonesia most workers are worried about their ability to retire, thinking the financial challenges they'll face in retirement will be hard to overcome, especially without a sound financial planning. Ample of research documents the importance of financial literacy to financial decision making. Having adequate financial literacy and knowledge is necessary tools especially in welcoming retirement, since by then individuals are completely in charge of their own financial security. The objective of this paper is to determine whether financial literacy has impact to financial behavior. The sample comprised 324 government employees in Bandung West Java. Our main findings are the following (1) on average the level of both financial literacy and financial behavior of government employees in Bandung are in good category (2) there are differences in the level of financial literacy and behavior in terms of age and career level (3) financial literacy has a positive relationship with financial behavior at 5% significance level

Keywords: Financial Literacy, Financial Behavior, Personal Finance

INTRODUCTION

Normal retirement age for government employees in Indonesia is 58. The retirement age in some contexts means the age which a person is expected to cease work and spend their time with family and engaging activities and adventures that one always wanted to do. However, in Indonesia, retirement can be worrisome. Some common concerns for the retirees are centered in the ability to maintain the adequate income that are sufficient to cover their living expenses during their golden years.

Until recent times, the source of pension funds for public service comes from the government as the job provider, which comes from the state expenditures and expenses budget (APBN) or known as pay as you go (PAYG). With this pension scheme, retirees receive 75% of their last basic salary, which is often considered insufficient, since the living costs are actually increases over time due to inflation. Moreover, if the retirees still have dependent relatives it can be challenging to maintain standard of living with declining productivity.

To overcome the challenges in preserving quality of life for the pensioners, as well as to ease the burden of the state budget, the Government of Indonesia plan to reform the pension system from PAYG to Fully Funded System. In new system, the pensioners will have the options whether to take the entire pension fund all at once when they retired, or they want receive it every month in smaller amount. The first option is available because the government wants to encourage pensioners to invest their money and get better return in the future. Any of the system implemented would bring impact to

financial security only if the pensioners are smart enough to efficiently plan for their retirement, so that they can accumulate wealth and not having the risk of outliving their resources.

On the other hand, public servants in the government institution often considered as the vulnerable group that do not possess proper knowledge in financial literacy (Bucher-Koenen and Lusardi 2011). The lack of financial literacy may cause incompetence on utilizing financial products and lack of planning for retirement. Which in the end could lead to economic hardship during retirement for an individual, and potentially, for the surviving spouse and other family members.

This research provides an overview on the level of financial literacy and financial behavior among the Public Servants in Bandung in regards to retirement planning. Additionally, we test the link between those two variables in order to find out the influence of financial literacy towards financial behaviour. Analyzing the relationship between financial literacy and financial behavior in the institutional context will provide the opportunity to improve the understanding the impact of financial decision making, specifically among the bureaucrats.

LITERATURE REVIEW

Financial literacy is the competence to comprehend knowledge of the aspects of finance, including financial products offered by financial institution. Chen and Volpe (2005) defines financial literacy as a field dealing with the study to manage financial and taking the necessary and appropriate financial behavior. *U.S Financial Literacy and Education Commission* (2007) defines financial literacy as the competence to utilize the comprehension of finance and to manage financial resources effectively for the purpose of financial prosperity. Comprehension of finance also includes the comprehension in relation with basic concepts of finance, such as compound interest, distinction between nominal and real value, risk diversification, and so on (Pritazahara and Sriwidodo 2015).

Over the last several years, the concerns about the degree of financial savvy are confirmed by different studies. Lusardi and Mitchell (2007) shows that many households are unfamiliar with even most basic economic concepts needed to make savings and investment decisions. Later on, study by Lusardi, Mitchell et al. (2010) shows that the capacity to do a simple interest rate calculation and the knowledge of inflation and risk diversification are strikingly low among the young.

Financial literacy literature also linked financial knowledge to several indicators of financial behavior. Using dataset called the Rand American Life Panel that offers a set of features for the analysis of literacy and retirement planning, Lusardi and Mitchell (2007) finds that financial literacy as a key determinant of retirement planning. Hence, financial literacy is vital to increase one's wealth, and possessing financial comprehension determines their financial behavior. Furthermore, Martin (2007) reviews past literature on the effectiveness of financial education, and find that in general financial education is necessary and that the programs available at the time were effective. The areas that benefit of financial education include retirement planning, savings, homeownership, and credit use. Hathaway and Khatiwada (2008) provide a comprehensive critical analysis of past studies that examine the impact of financial education programs on consumer financial behavior. Of what they examined, they recommend that for these types of programs to be highly targeted towards a specific audience and area of financial activity (e.g. credit card counseling, retirement planning).

Hypothesis

With sufficient financial literacy, comes sufficient financial behaviour.

RESEARCH DESIGN

Sample and Methodology

One of the main objectives of this study is the assessment of financial literacy and financial decision making among government employees. Therefore, this research requires the collection of data regarding peoples' knowledge about basic financial matters. We have developed a customized survey with a set of questions to discover how knowledgeable people are about financial concepts and their behaviour towards financial decision.

A random sample of 324 out of approximately 18,000 government employees working in Bandung City was selected. They were asked to fill a questionnaire that consists of 50 questions; 5 questions that are used to design a profile of the participants, 25 questions regarding financial literacy and 20 questions related to financial behavior. Questions related with financial literacy are in multiple choices with only one right answer. Correct answer is given 1 point and wrong answer is given 0 point. Questions related to financial behavior are in multiple choices with five choices in every question. Every choice has a score from 1 to 5. A person will get maximum 25 points for question related to financial literacy, and maximum 100 points for questions related to financial behavior. These questionnaires were handed to employees personally. After collected, the questionnaires then tabulated and the results were summarized for the purpose of analysis.

Financial literacy score for a public servant is divided into:

Financial Literacy	Score
Very Low	0 – 5
Low	6 -10
Fair	11 – 15
Good	16 – 20
Excellent	21 – 25

Competency in financial behaviour for a public servant is divided into:

Financial Behavior	Score
Very Low	1 – 20
Low	21 -40
Fair	41 – 60
Good	61 – 80
Excellent	81 – 100

Method used in this research is descriptive-verificative with the operational variable as follows on Table 1:

Table 1. Operational Variable

Variable	Concept	Indicator	Scale
Financial Literacy (X)	The competence in understanding financial knowledge which includes basic concepts of finance, savings, borrowing, investment and insurance	The basic knowledge of: • Financial concept • Savings	Ratio

	along with basic knowledge on financial institutions, bank or non bank	• Borrowings • Investment • Insurance • Banking Institution • Non-Banking Financial Institution	
Financial Behaviour (Y)	Financial planning and income allocation in many aspects in life to improve wealth in retirement.	• Income allocation planning • Allocation funds: i. Charity ii. Education iii. Insurance iv. Saving v. Borrowings & Repayment vi. Investment vii. Pension viii. Living Expenses ix. Life styles	Ratio

Other than descriptive analysis, the data also analysed using regression analysis to identify the influence of financial literacy towards financial behavior. In advance, there will be reliability and validity tests.

Ghozali (2009) stated that validity test is used to measure the validity of a set of questionnaires. A questionnaire is considered valid if the inquiries are able to reveal certain objectives that will be measured by the questionnaire itself.

$$ri = \frac{\sum xy}{\sqrt{(\sum x^2)(\sum y^2)}}$$

The inquiries of the questionnaire is valid if $r_{calculated} > r_{designated}$ or $\text{sig} < 0.05$, and if $r_{calculated} < r_{designated}$ or $\text{sig} > 0.05$, then the questionnaire is invalid.

Reliability Test

The reliability score is shown by a certain set of numbers called reliability coefficient (*alpha Cronbach*). *Alpha Cronbach* formula is used to calculate the reliability score:

$$R = \alpha = \frac{n}{n-1} \left(\frac{s - \sum Si^2}{S} \right)$$

Legend:

α = reliability coefficient of cronbach's alpha

n = the sum of the inquiries in the questionnaire

S = variants of the overall scores

Si = variants of each inquiry

If the value of alpha > 0.7 , reliability has been sufficed. Furthermore, if the value of alpha > 0.8 , it suggests that all of the inquiries and the overall test are constantly reliable and have a strong reliability coefficient. Alternatively, there is a different interpretation towards the test:

If the value of alpha > 0.9 , it has an absolute reliability. If the value of alpha $0.7 - 0.9$, it has a high rate of reliability. If the value of alpha $0.5 - 0.7$, it has a fair rate of reliability. If the value of alpha < 0.5 , it has a low rate of reliability. If the value of alpha is low, possibly one or several inquiries are unreliable.

FINDINGS AND DISCUSSION

On average, the respondents have a good financial literacy with the description as follows: 7% has an excellent score of financial literacy, 45% has a good score, 35% has a fair score, and 13% has a low score of financial literacy level.

Respondents who have career level III or IV are 73% of the total respondents, and on average, they have a good score of financial literacy. On the other hand, those who have career level I or II are 27% of the total sample, and still have a very low and fair score of financial literacy. This means that career level of a public servant is affected by the person level of education and the length of working period. This result can also be interpreted as the level of education and work experience affects the level of financial literacy.

Table 2. Financial Literacy based on Carreer Level

Career level	Excellent	Good	Fair	Low	Very Low	Average Score of Financial Literacy
I	0	0	0	2	1	Very Low
II	5	35	28	15	0	Fair
III	16	78	66	20	0	Good
IV	1	32	19	6	0	Good
Total	22	145	113	43	1	

Respondents who are between the ages of 20-45 are 50% of the total sample, and have a good rate of financial literacy on average. Another 50% of the total respondents are aged between of 46-58 years, and have a fair score of financial literacy, despite the fact that they are entering retirement age at that point. This shows that public servants who are entering their retirement age do not fully understand about various financial products offered by financial institutions. This research finds that public servants only have some understanding regarding financial products offered by banking institutions (specially saving and borrowings), and lack of knowledge on the products that are offered by non-bank financial insitutions. Hence, they have not yet enjoyed the benefits of some products, such as insurance, pension fund, and investment instruments such as stock and bonds.

Table 3. Financial Literacy based on Age

Age (Years)	Excellent	Good	Fair	Low	Very Low	Average Score of Financial Literacy
20 – 25	0	3	0	1	0	Good
26 – 35	8	19	6	5	0	Good
36 – 45	8	56	41	13	1	Good
46 – 58	6	67	66	24	0	Fair
TOTAL	22	145	113	43	1	

Public servants in Bandung have a good rate of financial behavior, with the results are as follow: 2% has an excellent rate of financial behavior, 70% has a good rate, and 28% has a fair rate. Public servants who have a fair rate of financial behavior spread accross all career level and if focused on level I and II, they still have a very low and fair rate of financial literacy.

Table 4. Financial Behavior based on Carreer Level

Carreer Level	Excellent	Good	Fair	Low	Very Low	Average Score of Financial Behavior
I	0	1	1	0	0	Good
II	0	55	29	0	0	Good
III	7	126	47	0	0	Good
IV	0	44	14	0	0	Good
TOTAL	7	226	91	0	0	

Public servants who have a fair score of financial behavior scattered in all group age. Especially on the group of respondents who are between the ages of 46-58, there are still 42 respondents who are classified as having a fair score of financial behavior, similar to its financial literacy rate. This finding shows that government employees are highly dependent on their income as public servants, that comes in the form of salary and fringe benefit. Income allocation also mainly allocated to cover living expenses, education, loan repayments, and charity consecutively.

The surveys also find that the majority of respondents are not familiar to keep record of their expenses. They are also not customized to make financial planning on income allocation. As a result, there are some respondents who have financial trouble at the end of the month.

Respondents who have savings will use it in time of financial trouble or for helping relatives or family member who need the money. Since all of the public servants are a part of Social Security Administrator for Health in Indonesia (BPJS), most of respondents feel it is unnecessary for them to join another insurance or any retirement programme in another financial institutions.

The findings above indicate that although on average the government employees have a good financial literacy, they are very dependent to the retirement funds provided by the government, and not effectively plan for longer term. Although the score in financial literacy does increase with age and education, higher level of financial literacy is not followed by a sound financial behavior in making longer financial plan in the future.

The Influence of Financial Literacy towards Financial Behavior

Before conducting verificative analysis, the data collected has to be tested for validity and reliability. Based on the result, the inquiries in the questionnaire is valid if $r_{calculated} > r_{designated}$ or $\text{sig} < 0.05$, and if $r_{calculated} < r_{designated}$ or $\text{sig} > 0.05$, then the questionnaire is invalid.

For the inquiries relating to financial literacy (Table 4), there is one inquiry which is invalid, number 24 (.0854 rate calculated). On the other hand, other inquiries in the questionnaire are valid since $r_{calculated} > r_{designated}$. Therefore, further test may be conducted.

From the result of validity test (Table 5), it can be concluded that there is one inquiry for financial behavior questionnaire which is invalid, that is question number 4 (.042 rate calculated). Other inquiries in the questionnaire are valid since $r_{calculated} > r_{designated}$ or $\text{sig} < 0.05$. Therefore, further test may be conducted.

Table 5 Validity Test for Financial Literacy

Item	Correlation Coefficient	Item	Correlation Coefficient	Item	Correlation Coefficient
1	.179**	11	.534**	21	.402**
2	.347**	12	.407**	22	.350**
3	.518**	13	.205**	23	.396**
4	.448**	14	.445**	24	.0854
5	.365**	15	.358**	25	.354**
6	.360**	16	.480**		
7	.387**	17	.243**		

Table 6 Validity Test for Financial Behavior

Item	Correlation Coefficient	Item	Correlation Coefficient
1	.322**	11	.448**
2	.435**	12	.370**
3	.452**	13	.323**
4	.042	14	.405**
5	.210**	15	.183**
6	.263**	16	.318**
7	.267**	17	.131*
8	.431**	18	.352**
9	.502**	19	.269**
10	.296**	20	.198**

In terms of Reliability tests of the questionnaires, we find that the value of alpha Cronbach for financial literacy is 0.721 and for financial behavior is 0.533. Therefore, it may be concluded that the inquiries relating to financial literacy are reliable since the result of the reliability coefficient is between 0.70 and 0.90 alpha Cronbach and the inquiries relating to financial behavior are reliable since the result of the reliability coefficient is between 0.50 and 0.70.

Table 7 Reliability Test

Reliability Coefficient	Score
Financial Literacy	.721
Financial Behavior	.533

After eliminating the questions that is not valid (question number 24 on financial literacy and number 4 on financial behavior), we conduct statistical analysis to find out the relationship between financial literacy and financial behavior. Table 4 shows there is positive relationship between financial behavior and financial literacy, at 5 % significance level. This means that the respondents who have a good financial behavior are more likely to give correct answers to all of the questions on financial literacy, compare to the respondents who do not practice a sound financial behavior.

Tabel 8 Financial Behavior and Financial Literacy

Variable	Coefficients	P-value
(Constant)	52.851***	.000
Financial_Literacy (X)	.460***	.000
R ²	.056	
F	18.973	

***Significant at the 1% level

** Significant at the 5% level

* Significant at the 10% level

SUMMARY AND CONCLUSION

1. Financial literacy and financial behavior rate in Bandung are good on average. However, there are still public servants who have financial trouble in the end of the month;
2. Financial literacy rate for career level I and II still classified as very low and fair;
3. Financial behavior of public servants varying between the age of 46-58 is classified as fair;
4. Public servants in Bandung have better knowledge on products offered by banking institution (especially savings and borrowings) than non bank financial institution, hence the knowledge on insurance, investment and other non bank financial products is considered low
5. Most of the respondent are not familiar with financial planning for income allocation in the long future, hence financial planning is not optimum; and
6. Financial literacy positively influences financial behavior on 5% significant rate and financial literacy is able to explain 5.6% of financial behavior.

RECOMMENDATION

1. The administration in Bandung needs to provide the knowledge of financial literacy and financial behavior towards its public servants, either given before they are accepted as employees or before they retire;
2. Financial industries need to socialize and offer financial products so public servants will be drawn to be a part of investment society;
3. Millennials are an interesting subject for a future research since there is no guarantee or safeguard of their salary when they are no longer in their productive age.

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