FINANCIAL LITERACY AND RETIREMENT SAVINGS OWNERSHIP

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ABSTRACT

The purpose of this study is to determine the relationship of financial literacy and retirement savings ownership. This study also tested whether socio-economic variables such as marital status, number of children, length of work and monthly income can be a differentiator in a person's decision to have retirement savings in order to achieve future prosperity. The research method is quantitative, using Spearman correlation test with the sample number of 170 employees of State-Owned Bank (BUMN) in Payakumbuh, West Sumatera, Indonesia. The results showed that only the factor of the number of children and the length of work of the socio-economic characteristics had a relationship with the retirement savings ownership, while the factor of marital status and monthly income had no relationship with the retirement savings ownership. This suggests that the factor of child number and length of work is a differentiator in a person's decision to have a retirement savings. Someone who has longer working hours will further encourage him to have a retirement savings, even more if he has had a child. Another result is that financial literacy has a relationship with the ownership of retirement savings. This suggests that the role of basic financial knowledge owned by a person will also encourage him to have retirement savings. For that reason, it is necessary to increase the financial knowledge especially directly related to retirement savings along with the planning and membership as early as possible in order to increase penetration and the density of retirement savings in Indonesia for the welfare of individuals and society.
Keywords: Retirement Savings Ownership, Indonesian Socio-Economic Characteristics, Financial Literacy.

1. Introduction

1.1. Background

Retirement savings is one of the products of non-bank financial institutions whose penetration in Indonesian society is still very low. Data from the results of the Financial Services Authority (OJK) survey of literacy and financial inclusion in Indonesia show that the inclusion rate of retirement savings is only 1.53% in 2013 and 4.66% in 2016. That figure is the most low compared to other non bank financial products in 2016, that is insurance 12,08%, financing institutions 11.85% and pawnshops of 10.49%. Meanwhile, when compared to the inclusion rate of banking products in Indonesia, the figure is still far behind where the inclusion of banking products reached 57.28% in 2013 and 63, 63% in 2016 (OJK, 2016).

OJK survey results related to the understanding and participation of the people of Indonesia to the pension fund above is still very low. This shows at least two depictions of the condition of Indonesian society. The first indicates that many Indonesians do not understand that life after retirement is still long

enough, especially if they are still have dependents. Based on data in the book of the People's Welfare Indicator by Bureau of Statistc Centre (BPS, 2015), women live in Indonesia is 72.8 years and men is 68.9 years. Based on that number of 72.8 years, then active people whose work about 33 years (retirement age at 55 years and start working at 22 years), must do savings for 17.8 years after not productive anymore. In the productive period, in average, Indonesian people is able to meet the needs of their life and their family, but in retirement time, they are becomes dependent on others resulting from the lack of understanding of the length of life that will be lived after retirement.

The second indicates that very few Indonesians are guaranteed from pension funds upon retirement. This has caused many of the retired communities to become dependent on their children or on others. This makes it difficult for a family to break the chain of dependence or poverty, so financial freedom will be very difficult to achieve.

Understanding of retirement will be different for people from different backgrounds. For professions such as lawyers, doctors and musicians, retirement can be interpreted if they are not doing their profession anymore to enjoy their life, which means they can stop working whenever they want. As for employees, retirement is defined as stopping work due to an age-related rule to work in their respective companies. For employees, there are retirement age rules in 55 years, 58 years or even up to 65 years. From this overview of the understanding of pensions, it generally indicates that employees have tighter time limits which cause these employees must more discipline in preparing for their early retirement funds.

Discussion about corporate retirement savings, retirement savings is one of the key points offered by companies in the work environment to attrack, retain, motivate, and ultimately retire their employees. (Clark, Lusardi, Mitchell, 2017). In addition, the management of pension funds is one key to success for a family who wants financial freedom. This financial freedom can be obtained with the discipline of expenditure and discipline of financial income so that the target of retirement income of 80% of current income can be achieved. From a case study conducted in the United States against Federal Reserve workers, information can be obtained that the worker was asked to view a video entitled "Your Retirement Plan". From a video of no more than 30 minutes, one of his explanations is related to suggest that retirees should save enough to replace about 80% of their final earnings. This figure will certainly be an independent financial source for one's old age in particular and as a pool of funds that can be used for development within a country in general.

Further research from many countries around the world shows that not only that individuals display low levels of financial literacy, but also that financial illiteracy can be linked to lack of financial planning and insufficient resources in retirement (Lusardi and Mitchell, 2011a) . This is inline with the conditions in Indonesia, where the level of understanding and membership of pension funds is still very low. Conducting research in one of BUMN in Payakumbuh, West Sumatra, this study aims to see the relationship between financial literacy and retirement savings ownership with the consideration of the phenomenon that the penetration and density of pension products in Indonesia, especially in the province of West Sumatra is still very low, while on the other hand, the membership of the pension fund is actually an obligation for all employees in Indonesia by the Government. Meanwhile, unpreparedness of retirement time will be a fatal mistake that results in a very long term, causing dependence and welfare for the individual and leading to an increase in the poverty rate and the level of crime of poverty in a country. Therefore, this study will also look at the relationship between socio-economic factors such as marital status, number of children, length of works and monthly income on the ownership of retirement saving. The objective is to strengthen the analysis of the findings by determining whether there are differences in the decision of retirement savings ownership based on marital status, number of children, length of work and individual monthly income.

1.2. Problem Formulation

Based on the above background, the formulation of this research problem are:
1. Are the socio-economic characteristics correlated with the retirement savings ownership?
2. Is financial literacy correlated with the retirement savings ownership?

2. Literature Review

The Life-cycle Hypothesis theory of Modigliani (1966) states that the individual or household in the economy will delay consumption by saving. The savings will be collected until the individual /household reaches retirement age. After retirement, new individuals use their retirement savings to meet retirement needs. The author uses the theory of Modigliani as a basis in doing this research where actually realized or not, the individual will do saving activities to face his retirement. Furthermore, whether the level of individual financial literacy associated with the retirement savings ownership will be investigated in this study.

2.1. Socio-economic Characteristic

Based on research conducted by several experts in several countries in the world, most of the research found related to the relationship between demographic characteristics with pensions preparation. There are empirical differences among some countries. Based on age demographic factors, Clark, Lusardi and Mitchel (2017) found that in the United States, that each additional 10 years of age was associated with 1,2 percentage points more pay being contributed to the DC plan. The findings in the Netherlands conducted by Rooji, Lusardi and Alessie (2011), show that respondents do not tend to think much about retirement when they are young and retirement is a distant concept. Similar findings from a study conducted in Canada by Boisclair, Lusardi, Michaud (2015) found that age also has a significant effect, with older individuals being more likely to hold retirement savings. Different findings are found in Germany by Koenen and Lusardi (2015) which reveal that there is no significant difference in retirement planning between age groups, and there are large differences in planning across education. Furthermore, the authors still have not found a study that specifically examines the relationship between socio-economic characteristics with the retirement savings ownership.

Therefore, in this research will investigating the relationship of socio-economic characteristics include marital status, number of children, length of work and monthly income of individuals with retirement savings ownership. Hypothesis as follows:
H1. There is a significant relationship between socio-economic characteristics and the retirement savings ownership
H1a. There is a significant difference in retirement savings ownership based on marital status
H1b. There is a significant difference in retirement savings ownership based on the number of children
H1c. There is a significant difference in retirement savings ownership based on length of work
H1d. There is a significant difference in retirement savings ownership based on monthly income.

2.2. Financial Literacy

Several financial literacy studies in relation to retirement planning have been conducted in several countries such as America, Canada and the Netherlands. The results of studies in these countries show some issues related to the relationship of financial literacy with the level of management of private pension funds. A case study conducted on Federal Reserve employees in America found that the most financially knowledgeable employees are more likely to participate in their pension plans, contribute a higher percent of their pay, and hold more equity in their account requirements (Clark, Lusardi and Mitchel, 2017). Findings from a Canadian study found that retirement planning is strongly associated with financial literacy. Typically in the Netherlands, most of the retirement saving decisions of the system are one in eight, claiming to have a lot about retirement (Rooij, Lusardi, Alessie, 2011).

Considering of the low of pension product penetration and density in Indonesia, researchers are interested in investigating the relationship between financial literacy and the retirement savings ownership. Whether someone who has higher financial literacy will show a higher level of retirement savings ownership will be known from the results of this study. The hypothesis tested as follows:

H2. There is a significant relationship between financial literacy and retirement savings ownership.

3. Methodology

3.1. Research approach

In this study, the approach used is a quantitative approach through the use of hypotheses to find the relationship between variables.

3.2. Sample and Data Collection

Methods of data collection using questionnaires that are directly distributed to all employees of one of the BUMN located in Payakumbuh, West Sumatra Province of Indonesia. The total population was 274 people and the number of questionnaire returns was 170 people, then it set as the number of samples in this study. For information, as requested, the name of BUMN is not mentioned in this research. The need for more information of research object can contact the author directly.

3.3. Questionnaire design

Questionnaire design in this research consists of 2 parts:

3.3.1. Section of information related to background and socio-economic characteristics of respondents

3.3.2. The question section consists of 5 questions to determine the level of basic financial literacy of the respondents where the question standard refers to Babiarz & Robb's research, 2014. The author adjusts some questions solely for ease of understanding of respondents in Indonesia and adjustment of the economic condition of the respondent without removing the meaning indeed from the question.

3.4. Measurement of Variables

Measurements of variables in this study are described in table 1.

3.5. Technique of Data Analysis

The analysis of the relationship between socio-economic characteristics with the ownership of retirement savings and the relationship between financial literacy and retirement savings ownership using Spearman correlation test using SPSS 20 statistical tool.

4. Empirical Result

4.1. Descriptive Statistic

The description statistics provide an overview of the data used in the study. Descriptive statistics results are listed in table 2.

Table 1.

Definition of Operational Variables

Variable	Phenomenon	Measure
Dependent variable		
Retirement savings ownership	Retirement savings ownership	1 if respondent answered "Yes" to the question: "Do you have an added retirement savings beside your company's benefit ?" ; 0 if respondent answered "No"
Independent variable		
Financial Literacy	Financial knowledge	Sum of correct answers to the financial knowledge questions listed below :
	1. Interest (correct)	1 if respondent answered correctly to the question : "Supposed you had Rp. 1 million in a savings account and the interest rate was 6% per year. After 5 years, how much do you think you would have in the account if you left the money to grow ?' (Answers : a. "More than Rp. 1.300.000", b. "Exactly Rp. 1.300.000", c. "Less than Rp. 1.300.000", d. "Don't know", e. "Prefer not to say"); = 0 otherwise
	2. Inflation (correct)	= 1 if respondent answered correctly to the question : "Imagine that the interest rate on your savings account was 6% per year, and inflation was 10% per year. After 1 year, how much would you be able to buy with the money in this account ?" (Answer: a. "more than today", b. "Exactly the same", c. "Less than today", d. "Don't know", e. "Prefer not to say"); = 0 otherwise
	3. Bond price (correct)	= 1 if respondent answered correctly to the question : "If interest rates rise, what will typically happen to bond prices ?" (Answers : a. "They will rise", b. "They will fall", c. "They will stay the same", d. "there is no relationship between bond prices and the interest rates', e. "Don't know", f. "Prefer not to say") ; = 0 otherwise
	4. Mortgage (correct)	= 1 if respondent answered correctly to the question : "A 15-year mortgage typically requires higher monthly payments than a 30-year mortgage, but the total interest paid over the life of the loan will be less." (Answers : a. "True", b. "False", c. "Don't know", d. "Prefer not to say") ; = 0 otherwise
	5. Portofolio (correct)	= 1 if respondent answered correctly to the question : "Buying a single company's stock usually provides a safer return than a stock mutual fund." (Answers : a. "True", b. "False", c. "Don't know", d. "Prefer not to say") ; = 0 otherwise
	Score of Financial Literacy	Correct answer 0 = Very low
		Correct answer 1 = Low
		Correct answer 2 = Medium
		Correct answer 3 = High enough
		Correct answer 4 = High
		Correct answer 5 = Very High
Social Economic Characteristic		
Marital Status	Marital Status category	Variables that use categorization 0.1,2. Consecutively category 0 = single ; 1 = married ; 2 = divorce
Number of Children	Number of children category	Variables that use categorization 0.1,2,3,4. Consecutively category 0=0; 1=1; 2=2; 3=3; 4=>4
Length of work	Length of work category	Variables that use categorization 1,2,3. Consecutively category 1=<5 years ; 2=5 sd 10 years; 3=>10 years
Monthly income	Monthly income category	Variables that use categorization 1,2,3. Consecutively category 1 = <5 million ; 2 = 5 million - 10 million ; 3 => 10 million

4.2. Result

The statistical test results based on Crosstabulation of marital status and retirement savings ownership can be seen in table 3. Based on cross tabulation between marital status and retirement savings ownership in table 3, it can be seen that in unmarried respondents and did not have retirement savings of 26 people or 15,3%, while the respondents were unmarried and had retirement savings of 23 people or 13.5%. For married respondents who do not have retirement savings are 46 people or 27.1%, and married respondents who have retirement savings of 74 people or 43.5%. While from a divorced respondent, she did not have retirement savings. From the data above it can be noted that married respondents and has a retirement savings have the largest percentage, which is 43.5%. To find out whether there is a relationship between marital status with retirement savings ownership, it can be seen on spearman correlation test result in table 4. Based on Spearman correlation test between marital status and retirement saving

ownership, it can be seen that the significance value is 0,126 > 0,05, so it can be concluded that there is no relationship between marital status and retirement savings ownership.

Table 2. Descriptive Statistic

		Frequency	Percentage
Marital Status	Single	49	28,8
	Married	120	70,6
	Divorce	1	0,6
	Total	**170**	**100,0**
Number of Children	0	68	40,0
	1	49	28,8
	2	37	21,8
	3	16	9,4
	Total	**170**	**100,0**
Length of Work	<= 5 years	98	57,6
	5 - 10 years	49	28,8
	> = 10 tahun	23	13,5
	Total	**170**	**100,0**
Monthly Income	<= 5 million	145	85,3
	5 - 10 million	23	13,5
	> = 10 milliom	2	1,2
	Total	**170**	**100,0**
Financial Literacy	Very low	21	12,4
	Low	24	14,1
	Medium	56	32,9
	High enough	55	32,4
	High	13	7,6
	Very High	1	0,6
	Total	**170**	**100,0**
Retirement Savings Ownership	Do not have	73	42,9
	Have	97	57,1
	Total	**170**	**100,0**

Furthermore, based on cross-tabulation between the number of children and retirement savings ownership in table 5, it can be seen that the respondents who do not have children actually have the highest retirement savings ownership rate, which is 35 people or 20.6% of the total respondents. This figure is almost comparable with respondents who have no children and no retirement savings, ie as many as 33 people or 19.4% of the total respondents.

To determine whether there is a relationship between the number of children and retirement savings ownership, it can be seen on spearman correlation test in table 6 where the significance value is 0,020 < 0,05 so it can be concluded that there is relationship between number of children and retirement savings ownership.

For the factors of length of work and retirement savings ownership can be seen in cross tabulation in table 7 where the length of work is divided into 3 classes and most respondents are in the first class with the duration of work less than 5 years with a total of 98 respondents. For the largest number of retirement savings ownership in respondents with length of work is less or equal to 5 years, that is 49

people or 28,8% from respondent. This amount is exactly equal to the length of work less than or equal to 5 years and that has no retirement savings.

Based on Spearman correlation test between length of work and retirement savings ownership in table 8 it can be seen that the significance value is $0.014 < 0.05$ so it can be concluded that there is a relationship between length of work and retirement savings ownership.

The next factor is monthly income which can be seen in cross tabulation result in table 9 where monthly income is divided into 3 classes and most respondents are in first class with income below Rp. 5 million with the number of retirement savings ownership is 79 people or 46.5% of the total respondents and who have no retirement savings ownership is 66 people or 38.8% of the total respondents. Then when further examined, respondents with income greater than or equal to 10 million who do not have retirement savings are 2 or 1.2%.

To find out whether there is a relationship between income with retirement savings ownership, it can be seen on spearman correlation test in table 10 where the significance value is $0,125 > 0,05$ meaning no relationship between monthly income with retirement savings ownership.

The last factor observed is the financial literacy and retirement savings ownership that can be seen in cross tabulation in table 11. The division of the financial literacy level is divided into 5 classes, namely very low, low, medium, high enough and high. For the largest number of respondents are in the medium class of financial literacy with a total of 56 respondents. For the largest number of retirement savings ownership in respondents with financial literacy is high enough, as many as 40 people or 23.5% of the total respondents.

Furthermore, based on Spearman correlation test results between financial literacy and retirement savings ownership in table 12 it can be seen that the significance value of $0.002 < 0.01$ so it can be concluded that there is a relationship between financial literacy and retirement savings ownership.

5. Discussion and Conclusion

Considering the result of the above statistical test, related to the socio-economic characteristic relationship to retirement savings ownership, it is seen that number of children, length of work and financial literacy factor have significant relationship with retirement savings ownership. As for the marital status and monthly income based on statistical test results found no significant relationship.

From the results of the number of children with retirement savings ownership there is a significant relationship. Cross tabulation results can be seen that those with children less than or equal to 1, the ratio between respondent which have and do not have a retirement savings almost the same. But once the individual has more than or equal to 2 children, the ownership of the retirement savings is two to four times higher than that which has no retirement savings. It is possible that the need for the cost of child education still exists when the individual has retired.

From the results of the length of work with retirement savings ownership, there is a significant relationship. Cross tabulation results show that when an individual enters a period of less than or equal to 5 years, the amount of retirement savings equals those with no retirement savings. However, entering a period of employment above 5 years, the percentage of retirement savings ownership is higher than the percentage with no retirement savings of 1.5 to 3 times. It is possible that individuals are increasingly aware that retirement is getting closer so they prepare their retirement savings.

From the results of financial literacy with retirement savings ownership, there is a significant relationship as well. Cross-tabulation results show that individuals with very low financial literacy have retirement savings ownership levels of 4.7%, lower than those without retirement savings of 7.6% of a total of 12.4% of respondents who have literacy rates very low. Furthermore, the percentage comparison of the ownership rate of retirement savings is higher than the percentage that has no retirement savings when the level of individual literacy is higher. The most distinguishable percentage difference is in the

high level of financial literacy where individuals with retirement savings reach almost 3 times that of no retirement savings. This suggests that financial literacy is a driver of retirement savings. This is also inline with the results of previous studies which found that financial literacy has a relationship or influence on retirement planning or retirement savings, such as Clark, Lusardi and Mitchel, 2017 and Rooij, Lusardi, Alessie, 2011.

In relation to the results of this study with the low penetration rate and the density of pension fund products in Indonesia, it can be said that there are still incomplete programs to improve the financial literacy of Indonesian people especially for pension products, either by the government or other stakeholders. In addition, it should be noted also the culture of the community who make pension fund preparation by utilizing traditional instruments such as investing in land, building land, gold or gold pledge. Traditional investment is not recorded in the system but rampant done by the community, especially people in West Sumatra who became the location of research. This is expected to cause the penetration rate and the density of pension fund products to be low.

For future research, it is very interesting to do the development of a society culture perform traditional ways of preparing for retirement. In addition, the development of research can also be done by using qualitative research methods with the intent to find in more depth how the true meaning of the relationship or the influence of financial literacy on retirement savings ownership in Indonesia.

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