FINANCIAL LITERACY AND RETIREMENT PLANNING AMONG WOMEN IN PRODUCTIVE AGE

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ABSTRACT

A survey conducted by World Bank Survey [1] shows that Indonesia have a low financial literacy level compared to other countries. We examine Financial Literacy and Saving Behavior among the productive age in Jakarta, the capital city of Indonesia, and see the impact from both aspects to their retirement preparedness. A survey was conducted using questionnaire in Jakarta with 226 respondents. This research diversified respondents into three types of planners: Simple, Serious and Committed Planner following [2] framework. Results of Logistics regression shows that only saving behavior is significantly affect someone for being a simple and Serious Planner while high financial literate people have higher probability to be a Committed Planner. Interestingly, we also found that education and maturity factors such as Marital Status, Age, and having children also affect someone preparedness for being a planner. The results also show women are lower in financial literacy level and retirement planning preparedness compared to men.

Keywords*: Financial Literacy, Retirement Planning, Gender Gap, Savings behaviors, Women financial literacy.*

INTRODUCTION

Financial literacy has been a big concern in many countries, including Indonesia since financial literacy often associated with global financial crisis. Financial literacy is really important for individuals or households to understand, since the level of how financial literate a person may indicate how well do they manage their money, understand the policies that may bring them to a better financial outcomes and how well they undertake their financial planning for their retirement days. Also research in behavioral finance points out that the low level of financial literacy may lead to unacceptable living quality and results in economy anxiety. This is in accordance with the suggesting by [3] that money management by the society that isn't effective may

bring outcomes to the behaviors of the society that is more likely fragile when a financial crisis happens.

Literature suggests that there is strong correlation between financial literacy, financial education and retirement planning [4]. Similar findings also found by [2]. [5]finds that sequences for saving turns out have a high correlation with someone retirement planning preparedness as found.

Recent evidences in Indonesia found that half of the Indonesian are not aware of financial literacy yet. A research by OJK bring evidence that from 20 provinces across Indonesia with 8,000 respondents indicate a low financial literacy rate and their tendencies to neglecting savings for their retirement planning. And compared to other countries Indonesia still considered low in financial literacy level.

We examine how financial literacy and saving behavior may affect someone preparedness in retirement planning by conducting a survey in Jakarta, as the capital city of Indonesia, through questionnaire with total respondents of 226 people taken randomly. We diversified the retirement planners into three types: Simple Planner, Serious Planner and Committed Planner following the previous study by [2]. Previous study found that indeed financial literacy and saving behavior may affect someone preparedness for retirement planning [2, 6]. The difference found in this study compared to the previous study by [2]is financial literacy only significant to Committed Planner.

However, in this research we focusing on the gender gap. We also study the difference level of the financial literacy and retirement preparedness between gender. Women is more likely to be less financial literate than men, as they have a lower result when women took a test about basic financial knowledge and have less confidence about their financial capabilities [7]. Another studies also showing the difference of the gender positively lead a different level of financial literacy and saving behavior [8, 9]. Consistent with the previous study, in this research the results shows that Jakarta women are less financially literate and less likely to be a planner.

LITERATURE REVIEW

Financial Literacy

Financial literacy is considered as important not just for business man, but for every individual and households. In 2015 a survey conducted by World Bank Survey shows how low the financial literacy in Indonesian society. The survey shows that from 150 thousands of respondents among 140 countries in the world, Indonesia still have a small percentage compared to others. Only 32% of Indonesian respondents are able to understand and literate related basic financial knowledge.

As financial literacy has gained interest to a lot of experts and researchers, financial literacy has many definitions. As for [10] defined financial literacy as “the ability to use knowledge and skills to manage one’s financial resources effectively for lifetime financial security”. And also defined by [7, 11] as a combination of awareness, knowledge, skill, attitude and behavior necessary to make sound financial decisions and ultimately achieve individual financial wellbeing. The US Government Accountability Office 2006 define financially literate people will be able to make informed judgements and they are able to take effective actions regarding the current and future management of money.

The importance of financial literacy among people raise as the understanding of financial literate people will be able to make a better finance decision. A person with a low level of financial literacy are more likely to make a poor decisions making on making financial management [12]. While a financial literate person is more likely to be able manage their money and handling financial affairs and often void from financial mistakes [13].

The financial mistakes that a financial literacy wants to avoid are in many forms. As [14]explains there are a lot of financial mistakes such as people with low level

financial literacy often participate in a stock market that have a low value, manage their own assets in a wrong way by selling assets that looks like have a low value but actually have a good future value, or even failed to measure interest rate such as mortgage. Other financial mistakes such as wrong investment, insurance packages, ineffective usage of debit and credit card, tax payments, and wrong assets management are happened frequently among people with low financial literacy level [7, 15, 16]. Being ignorant about basic financial knowledge are highly correlated to being lack of retirement planning, investment activities and poor decisions making on borrowing behavior [2, 17]

Linking between Financial Literacy and Retirement Planning

Retirement planning is a very strong predictor of wealth accumulation [5]. It is found that being ignorant about basic financial knowledge are highly correlated to being lack of retirement planning, investment activities and poor decisions making on borrowing behavior [2]

Various survey conducted related to financial literacy and its relation to the retirement

planning preparedness. In early 2006, [2, 5, 18]by using the Us Health and Retirement Study (HRS) Module conducted a survey, and the results show how financial illiteracy are widespread among older Americans who already reach their retirement year (the respondents of this research are people aged 50 years or older). In recent papers also conducted by [5]shows that there is positive correlation between financial literacy level of the respondents and their retirement planning preparedness. The relation between financial literacy and retirement planning preparedness is uncontested. [6, 19] in a survey with respondents of working people, undergraduate, housewives, and unemployed people in Malaysia found that different gender leads to different financial literacy that affecting the retirement preparedness between gender are different.

Gender Differences in savings behavior

The differences in gender have its effect on how different between genders their behaviors toward savings have. [6] Found that there are a large gender gaps in on saving behaviors and how prepared they are to retirement planning. Studies that have been conducted before also points out that it is real that there are large gender gaps on saving behavior [20]. Women are more likely to be less financial literate and have lower savings tendencies than men, also the risk-taking by women are more risk-averse than men on doing financial decisions [20, 21]. Another factors that make differences in saving behavior between genders are, women are more likely to have less incomes than men [6, 22]

METHODOLOGY

Questionnaire Development

In developing the questionnaire, we divide it into four sections. The First section of the questionnaire is about the demographic of the respondents to analyze the characteristic of the respondents. The Second section is to understand the respondents' saving behaviors. The Third section is to measure the financial literacy level of the respondents through 9 questions of Financial Literacy Measurement adapted from Measuring Financial Literacy [7]The Last section is to project the preparedness of the respondents toward their retirement planning by adopting the original questions of [2, 5, 7, 18].

After the questions were arranged and developed, the original questions then translated from English into Bahasa and being revised before it is distributed to the target population of respondents in Jakarta. The respondents are being told to answer as much as they know in the Financial Literacy section and to answer as similar as

possible with their current condition in Demographic, Saving Behavior and Retirement Planning section.

Respondents

This research examines the financial literacy level and retirement planning preparedness of productive age between women and men in Jakarta. Hence this study target population are Jakarta citizen who have entered the productive age (18 to 60 years old). The use of logistic regression demand sample size of minimum 10 per independent variables, thus, we target to get minimum of 130 respondents with the use 13 independent variables.

Logistic Regression

This research dependent variables are related to retirement planning preparedness where it will always have dichotomous nature. Hence Logistic Regression or Logit is used in conducting the statistical analysis for this research. Logistic Regression is a further technique of multiple regression analysis for a condition where the results of the statistical analysis might be in form of categorical results or dichotomous results such as probability of success/failure results, yes/no results or even presence/absence of disease. The purpose of using Logistic Regression is to describe the relationship between the binary dependent variable and independent variable. As stated before, the binary variable means only two results as the outcome, where success is coded as y=1 and failure is coded as y=0. Furthermore, Logistic Regression enable the researcher to predict the probability of the results that really occurred using the odds ratio analysis, where odds represent the relative frequency with which different result occur. In this research, the logistic regression dependent variables are the probability of someone is a Simple Planner, Serious Planner or a Committed Planner. We regress these dependent variables with demographic factors, financial literacy score, and saving behavior.

1) $Pr(Y = Simple\ Planner = 1 \mid X, FL, SB) = F(\beta_0 + \beta_1.Gender + B_2.Education + \beta_3.Univ.Student + \beta_4.Entrepreneur + B_5.Govt.Employee + \beta_6.Private\ Employee + \beta_7.Income + B_8.Risk\ Profile + \beta_9.Saving\ Behavior + B_{10}.Financial\ Literacy + \beta_{11}.Marital\ Status + \beta_{12}.Age + \beta_{13}.Children)$

2) $Pr(Y = Serious\ Planner = 1 \mid X, FL, SB) = F(\beta_0 + \beta_1.Gender + B_2.Education + \beta_3.Univ.Student + \beta_4.Entrepreneur + B_5.Govt.Employee + \beta_6.Private\ Employee + \beta_7.Income + B_8.Risk\ Profile + \beta_9.Saving\ Behavior + B_{10}.Financial\ Literacy + \beta_{11}.Marital\ Status + \beta_{12}.Age + \beta_{13}.Children)$

3) $Pr(Y = Committed\ Planner = 1 \mid X, FL, SB) = F(\beta_0 + \beta_1.Gender + B_2.Education + \beta_3.Univ.Student + \beta_4.Entrepreneur + B_5.Govt.Employee + \beta_6.Private\ Employee + \beta_7.Income + B_8.Risk\ Profile + \beta_9.Saving\ Behavior + B_{10}.Financial\ Literacy + \beta_{11}.Marital\ Status + \beta_{12}.Age + \beta_{13}.Children)$

Demographic Variables:

GENDER is a dummy variable with Female = 1, and Male = 0.
EDUCATION was coded into continuous variables with High School = 0, Bachelor = 1 and Master = 2. Occupation we divided into 4 dummy variables which are *Univ. Student, Entrepreneur, Govt. Employee,* and *Private Employee,* and we exclude *Unemployment* from the regression to avoid singular matrix.
UNIV. STUDENT is a dummy variable where respondent is a university student = 1 and otherwise = 0. *AGE* is coded into continuous variable showing age of the respondent.
ENTREPRENEUR is a dummy variable where respondent is a entrepreneur = 1 and otherwise

= 0. *GOVT. EMPLOYEE* is a dummy variable where respondent is a government employee = 1 and otherwise = 0. *PRIVATE EMPLOYEE* is a dummy variable where respondent is a private employee = 1 and otherwise = 0.
INCOME was coded into continuous variables indicating the level of the respondents' monthly income ranging from 0 to 5. The higher the income, the higher also the score
RISK PROFILE was coded from -1 to 1, to show how willing the respondent to take a risk regarding financial risk. We coded people with Risk Averse Profile = -1, Risk Moderate Profile = 0, and Risk Taker Profile = 1.
MARITAL STATUS was coded into continuous variable with Single = 0, Married = 1 and Divorced = 2.
AGE is coded into continuous variable showing age of the respondent.
CHILDREN was coded into continuous variable with Have No Children = 0, One Children = 1, Two Children = 2, and Three or more Children = 3.

Saving Behavior: we coded *SAVING BEHAVIOR* into five levels of saving frequencies to show the how often the respondents' do saving regularly. Those five levels of saving behavior are: Never, Rarely, Sometimes, Often, and Always. The more often the respondents do saving regularly, the higher the score.

Financial Literacy: from the questionnaire correct responses were scored as 1, otherwise were 0. The sum of scores are ranged from 0 to 9. Then the sum of the scores measured as *FINANCIAL LITERACY*, where the higher the scores, indicate the higher the respondents'
financial literacy level and vice versa.

Reliability Test

We conduct reliability test to test the consistency of our questionnaire response using Cronbach's alpha (Cronbach, 1951) since it includes psychological questions. Cronbach's alpha estimate trustworthiness of our subject response by testing its internal structure.

Table 3

Cronbach's Alpha Reliability Test

Test scale = mean(unstandardized items)

Average interitem covariance:	.044033
Number of items in the scale:	9
Scale reliability coefficient:	0.7069

The result show that our responses reliability coefficient is 0.706 which mean that it is 70.6% reliable. With the alpha bigger than 0.7, it shows that our data pass reliability test.

Multicollinearity Test

Multicollinearity is a condition when two or more variables in the model are highly Intercorrelated, thus may damage the data and provide too much responses that are identical and make biases to the analysis process. With the occurrence of multicollinearity of the variables in the model might increase the standard errors and reduce data's reliability. To avoid this situation, a Multicollinearity test is conducted.

Table 2

Correlation Matrix of Independent Variable

gender	1.0000											
edu	-0.188	1.0000										
univstud	0.1026	-0.553	1.0000									
entrepreneur	-0.051	0.0496	-0.195	1.0000								
govemployee	0.0478	0.1371	-0.172	-0.109	1.0000							
privateemp~e	-0.150	0.3679	-0.553	-0.352	-0.311	1.0000						
income	-0.157	0.5090	-0.504	0.1170	-0.009	0.4442	1.0000					
marital	-0.032	0.3136	-0.448	-0.046	0.0417	0.3426	0.5570	1.0000				
riskprofile	-0.2456	0.1631	-0.1248	0.0981	0.0513	0.0730	0.2115	0.0866	1.0000			
savingbeha~r	-0.068	0.2392	-0.271	0.1216	0.1321	0.1348	0.2597	0.0744	0.0989	1.0000		
finlit	-0.133	0.2648	-0.144	-0.112	-0.005	0.2428	0.2761	0.1423	0.1903	0.1613	1.0000	
children	-0.054	0.2905	-0.3875	-0.052	0.0542	0.2605	0.5129	0.8008	0.0347	0.0589	0.1648	
age	-0.075	0.4225	-0.413	-0.068	0.0358	0.3211	0.6441	0.7665	0.0126	0.1317	0.2073	1.0000

From table 2 we can see that there is multicollinearity between marital, children, and age since its correlation is bigger than 0.7. The correlation between marital and child is 0.80, the correlation between marital and age is 0.76, and the correlation between age and children is 0.74. which make these three variables must be regressed in different model.

RESULTS

To better understand the characteristics of the subjects of the study, this research analyzes their demographic based on questionnaire response. The questionnaire response is collected through online questionnaire on www.bit.ly/literasikeuangan and offline questionnaires which directly spread to respondents. At first, we successfully gather 258 respondents but some of them show bias and outlier results which need to be excluded. We remove all the data which has 0 financial literacy score but agree to all the retirement planning question. We exclude 32 data and leave us with 226 observations for the analysis.

Simple Planner, Serious Planner, Committed Planner

Retirement planning is not a simple process. One need to assess the variable of pension, social security, interest rates, inflation, and not to mention calculate all those variable in the future. The complexity of retirement planning makes it hard for people to fully commit and succeed in becoming one. Since this research aim to analyze different level of retirement planning preparedness, it is not enough to only use a basic question such in [23]. This research follows [2] retirement planning preparedness by categorizing people into Simple Planner, Serious Planner, and Committed Planner.

Table 3

Retirement Planning Question

Question	Simple Planner Criteria	Serious Planner Criteria	Committed Planner Criteria
Have you ever tried to figure out How much your household would need to save for retirement? Yes or No	Yes	Yes	Yes
Have you developed a plan for Retirement savings? Yes; More or less; No	No	Yes / More or less	Yes / more or less
How often have you been able to Stick to this plan? Almost, mostly, rarely, never	*Never*	Rarely or never	Mostly or always
Total (out of total respondents)	138	108	86

Simple Planner respondents are those who answered that they have ever tried to figure out how much their household would need to save for retirement. 61% of total respondents are categorized as Simple Planner. These number is continuously declining to a higher level of retirement planner. Serious Planner are people that have figured the need of retirement saving and has "more or less" or developed a retirement plan. From 226 respondents, 108 respondents fulfill the criteria of Serious Planner or only about 47% of total respondents. The criteria for Committed Planner is even more rigorous: people who developed a retirement plan and mostly or always able to stick to the plan. Only 38% of total respondents fulfil these criteria. However, there are 88 respondents (38.9% of total respondents) that don't fit all of these criteria which make them categorized as non-planner. These number, however, are better than [2] research on American worker with only 30% of their respondents being a Simple Planner.

Table 4

Detailed Descriptive Statistic

Demographic	Factor	Simple Planner		Serious Planner		Committed Planner		Non-Planner		Total	
		N	%	N	%	N	%	N	%	N	%
Gender	Female	14	6.19	6	2.65	37	16.37	50	22.1	107	47.35
	Male	16	7.08	16	7.08	49	21.68	38	16.8	119	52.65
Total		30	13.2	22	9.73	86	38.05	88	38.9	226	100.00
Education	High School	6	2.65	6	2.6	4	1.77	21	9.29	37	16.37
	Bachelor	20	8.85	8	3.54	57	25.22	59	26.1	144	63.72
	Master	4	1.77	8	3.54	25	11.06	8	3.54	45	19.91
Total		30	13.2	22	9.73	86	38.05	88	38.9	226	100.00
Occupation	College Student	12	5.31	6	2.65	8	3.54	27	11.9	53	23.45
	Entrepreneur Gov.	1	0.44	2	0.88	13	5.75	9	3.98	25	11.06
	Employee Priv.	2	0.88	1	0.44	8	3.54	9	3.98	20	8.85
	Employee	12	5.31	13	5.75	52	23.01	36	15.9	113	50.00
	Unemployed	3	1.33	0	0.00	5	2.21	7	3.10	15	6.64
Total		30	13.2	22	9.73	86	38.05	88	38.9	226	100.00

Income		3	1.33	2	0.88	3	1.33	8	3.54	16	7.08
	< Rp. 1.000.000	16	7.08	8	3.54	12	5.31	34	15.0	70	30.97
	Rp 1.000.001 - Rp 5.000.001 - Rp	8	3.54	2	0.88	20	8.85	20	8.85	50	22.12
	10.000.001 - Rp 15.000.001 -	2	0.88	1	0.44	10	4.42	12	5.31	25	11.06
	> Rp 20.000.000	1	0.44	1	0.44	8	3.54	6	2.65	16	7.08
		0	0.00	8	3.54	33	14.60	8	3.54	49	21.68
Total		30	13.2	22	9.73	86	38.05	88	38.9	226	100.00
Marital Status		23	10.1	12	5.31	32	14.16	66	29.2	133	58.85
	Single Married	7	3.10	9	3.98	53	23.45	20	8.85	89	39.38
	Divorced	0	0.00	1	0.44	1	0.44	2	0.88	4	1.77
Total		30	13.2	22	9.73	86	38.05	88	38.9	226	100.00
Risk profile		19	8.41	9	3.98	31	13.72	42	18.5	101	44.69
	risk averse risk	6	2.65	8	3.54	34	15.04	34	15.0	82	36.28
	neutral risk taker	5	2.21	5	2.21	21	9.29	12	5.31	43	19.03
total		30	13.2	22	9.73	86	38.05	88	38.9	226	100.00
Saving		0	0.00	0	0.00	0	0.00	1	0.44	1	0.44
	Never Rarely	1	0.44	1	0.44	2	0.88	12	5.31	16	7.08
	Sometimes Often	12	5.31	8	3.54	14	6.19	32	14.1	66	29.20
	Always	13	5.75	11	4.87	42	18.58	27	11.9	93	41.15
		4	1.77	2	0.88	28	12.39	16	7.08	50	22.12
Total		30	13.2	22	9.73	86	38.05	88	38.9	226	100.00
Financial	High	20	8.85	9	3.98	64	28.32	46	20.3	139	61.50
	Low	10	4.42	13	5.75	22	9.73	42	18.5	87	38.50
Total		30	13.2	22	9.73	86	38.05	88	38.9	226	100.00
Age		22	9.73	9	3.98	25	11.06	59	26.1	115	50.88
	18 - 25 y.o	2	0.88	1	0.44	8	3.54	6	2.65	17	7.52
	26 - 30 y.o	3	1.33	3	1.33	4	1.77	3	1.33	13	5.75
	31 - 35 y.o	2	0.88	4	1.77	11	4.87	6	2.65	23	10.18
	36 - 40 y.o	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
	41 - 45 y.o	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
	46 - 50 y.o	1	0.44	1	0.44	11	4.87	2	0.88	15	6.64
	51 - 55 y.o	0	0.00	4	1.77	27	11.95	12	5.31	43	19.03
	56 - 60 y.o	30	13.2	22	9.73	86	38.05	88	38.9	226	100.00
Total											
Children		25	11.0	13	5.75	36	15.93	68	30.0	142	62.83
	0	2	0.88	2	0.88	13	5.75	4	1.77	21	9.29
	1	2	0.88	5	2.21	22	9.73	9	3.98	38	16.81
	2	1	0.44	2	0.88	15	6.64	7	3.10	25	11.06
	3 or more	30	13.2	22	9.73	86	38.05	88	38.9	226	100.00
Total											

Based on the detailed descriptive statistic of the respondents in table 5; we can see from gender perspective, female has lower level of retirement planning preparedness. In simple, serious, and Committed Planner, the number of female is always below male. Add with the fact that female non-planner also has a higher number compared to male.

From education perspective, higher education background doesn't always mean better retirement plan preparation. Bachelor graduates have the highest probability of non-planner compared to master graduates and high school graduates. However, master graduates have the lowest probability of being a non-planner with only 3.5%.

Under occupation perspective, private employee has the highest probability with a total 35% of them being a planner compared to government employee that only contribute 9.5% of them being a planner. This can be a result of government retirement program where government employee automatically enrolled to retirement planning program while not every private company has that benefits for the employee. The lack of retirement planning program from private company force private employee to make their own retirement plan.

From financial literacy perspective, people with high financial literacy has bigger probability of being Simple Planner and Committed Planner as high financially literate people has more knowledge on making a good retirement plan. From descriptive analysis, this result is aligned with [2] where financial literacy has positive impact towards retirement planning preparedness.

Logistic Regression Results

Simple Planner

Table 5

Simple Planner Logistic Regression Results

	I (Simple – Marital)			II (Simple – Age)			III (Simple – Children)		
Variable	β	Odds	P-value	β	Odds	P-value	β	Odds	P-value
Gender Edu	-0.506	0.60	0.104	-0.442	0.642	0.149	-0.440	0.64	0.152
University	0.682	1.97	0.044**	0.566	1.76	0.090*	0.652	1.92	0.052*
Student	0.688	1.99	0.332	0.443	1.55	0.526	0.588	1.80	0.405
Entrepreneur									
Gov. Employee	0.184	1.20	0.814	0.127	1.13	0.873	0.155	1.16	0.843
Priv. Employee	-0.608	0.54	0.434	-0.586	0.55	0.45	-0.574	0.56	0.456
Income	-0.019	0.98	0.977	0.007	1.00	0.991	0.057	1.05	0.931
Risk Profile	-0.016	0.98	0.905	0.014	1.01	0.922	0.031	1.03	0.812
Saving Behavior	-0.060	0.94	0.710	-0.030	0.97	0.359853	-0.040	0.95	0.801
Financial Literacy	0.542	1.72	0.004***	0.498	1.64	0.006***	0.520	1.68	0.005***
Marital	0.116	1.12	0.102	0.107	1.11	0.124	0.106	1.11	0.131
Age									
No. of Children	0.991	2.69	0.007***						
Constant				0.126	1.13	0.101			
							0.350	1.41	0.048**
	-3.308		0.002	-2.93		0.005	-3.129		0.003
No. Obs	226			226			226		
P-value (chi-square)	0.0001			0.0003			0.0002		
Pseudo R^2	12.8%			11.2%			11.71%		

Note: *Significant at 10% level, **Significant at 5% level, ***Significant at 1% level

The regression results show that between financial literacy, and saving behavior, saving behavior and education are consistently having positive significant impact towards the probability a person is a simple retirement planner. For simple-marital regression, saving behavior is significant at 1% (p=0.004) with odds ratio of people with better saving behavior has 1.72 higher chance of being a Simple Planner compared to people who has bad saving behavior. In simple-age and simple-children regression, compared to people with bad saving behavior, people with good saving

behavior has 1.64 (p=0.006) and 1.68 (p=0.005) higher chance of being a Simple Planner. For simple-marital regression, education is significant at 5% (p=0.044) with odds ratio of people with higher education has 1.97 higher chance of being a Simple Planner compared to people who has lower education level. In simple-age and simple-children regression, compared to people with low education, people with high education has 1.76 (p=0.090) and 0.92 (p=0.052) higher chance of being a Simple Planner. For financial literacy, we found no significant impact towards the probability of people being a Simple Planner. We also regress our model with demographic variables and find that marital and number of children has positive significant impact towards the probability of people being a Simple Planner.

Serious Planner

Table 6

Serious Planner Logistic Regression Result

Variable	I (Serious – Marital)			II (Serious – Age)			III (Serious – Children)		
	β	Odds	P-value	β	Odds	P-value	β	Odds	P-value
	-0.333	0.71	0.291	-0.282	0.75	0.371			
	0.384	1.46	0.237	0.249	1.28	0.447			
	0.583	1.79	0.441	0.625	1.86	0.42	-0.281	0.75	0.374
Gender Edu							0.371	1.44	0.254
University Student							0.597	1.81	0.434
Entrepreneur	0.677	1.96	0.406	0.938	2.55	0.27			
Gov. Employee	-0.181	0.835	0.822	0.946	1.04	0.955			
Priv. Employee	0.179	1.19	0.795	0.459	1.58	0.527	0.744	2.11	0.366
Income	0.239	1.27	0.065*	0.171	1.18	0.22	-0.091	0.91	0.911
Risk Profile Saving	0.076	1.07	0.642	0.153	1.16	0.359	0.343	1.41	0.627
Behavior Financial	0.534	1.71	0.005***	0.507	1.66	0.007***	0.249	1.28	0.054*
Literacy	0.058	1.06	0.429	0.048	1.04	0.508	0.105	1.11	0.522
Marital							0.528	1.69	0.005***
Age							0.048	1.05	0.51
No. of Children	0.994	2.71	0.006***						
Constant				0.216	1.24	0.005***	0.451	1.56	0.011**
							-3.761		0.001
	-3.815		0.001	-3.702		0.001			
No. Obs	226			226			226		
P-value (chi-square)	0.0000			0.000			0.000		
Pseudo R^2	17.9%			18.1%			17.6%		

Note: *Significant at 10% level, **Significant at 5% level, ***Significant at 1% level

The regression results show that between financial literacy, and saving behavior, only saving behavior consistently have positive significant impact towards the probability a person is a serious retirement planner. For serious-marital regression, saving behavior is significant at 1% (p=0.005) with odds ratio of people with better saving behavior has 1.71 higher chance of being a Serious Planner compared to people who has bad saving behavior. In serious-age and serious- children regression, compared to people with bad saving behavior, people with good saving behavior has 1.66 (p=0.007) and 1.69 (p=0.005) higher chance of being a Serious Planner. For financial literacy, we found no significant impact towards the probability of people being a Serious Planner. We also regress our model with demographic variables and find

that income, marital, age, and number of children has positive significant impact towards the probability of people being a Serious Planner.

Committed Planner

Table 7

Committed Planner Logistic Regression Result

Variable	I (Comitted – Marital)			II (Committed – Age)			III (Committed – Children)		
	β	Odds	P-value	β	Odds	P-value	β	Odds	P-value
Gender	0.104	1.11	0.754	0.163	1.17	0.626			
Edu	0.252	1.28	0.455	0.127	1.13	0.711	0.154	1.16	0.646
University	-0.332	0.71	0.680	-0.258	0.77	0754	0.252	1.28	0.459
Student							-0.280	0.75	0.730
Entrepreneur	0.380	1.46	0.648	0.675	1.96	0.438			
Gov.	-0.446	0.63	0.591	-0.227	0.79	0.791	-0.329	1.69	0.561
Employee							-0.175	0.71	0.694
Priv.	0.340	0.71	0.634	-0.070	0.93	0.926			
Employee							0.210	0.83	0.810
Income	0.207	1.23	0.115	0.130	1.13	0.361			
Risk Profile	0.106	1.11	0.536	0.186	1.20	0.287	0.405	1.23	0.109
Saving	0.693	2.00	0.001***	0.670	1.95	0.001***	0.139	1.14	0.422
Behavior							0.688	1.99	0.001***
Financial Literacy	0.191	1.21	0.014**	0.048	1.199	0.020**			
Marital							0.179	1.196	0.020**
Age	0.859	2.36	0.019**	0.200	1.22	0.008***			
No. of Children							0.405	1.50	0.018**
Constant		-4.869			-4.781		-4.850		0.000
		0.000			0.000				
No. Obs		226			226			226	
P-value (chi-square)		0.0000			0.000			0.000	
Pseudo R^2		20.28%			20.85%			20.31%	

The regression results show that between financial literacy, and saving behavior, both have positive significant impact towards the probability a person is a committed retirement planner.

For committed-marital regression, saving behavior is significant at 1% (p=0.001) with odds ratio of people with better saving behavior has 2.00 higher chance of being a Committed Planner compared to people who has bad saving behavior. In committed-age and committed- children regression, compared to people with bad saving behavior, people with good saving behavior has 1.95 (p=0.001) and 1.99 (p=0.001) higher chance of being a Committed Planner For committed-marital regression, financial literacy is significant at 5% (p=0.014) with odds ratio of people with higher level of financial literacy has 1.21 higher chance of being a Committed Planner

compared to people who has low financial literacy level. In committed-age and committed-children regression, compared to people with low financial literacy level, people with high financial literacy level has 1.199 (p=0.020) and 1.196 (p=0.020) higher chance of being a Committed Planner. We also regress our model with demographic variables and find that marital, age, and number of children has positive significant impact towards the probability of people being a Committed Planner.

Mean Difference Test

To test if there is a significant different between man and woman financial literacy and retirement planning preparedness, this research conduct mean comparison using paired t-test.

Table 8

T-Test Results

	Financial Literacy		Simple Planner		Serious Planner		Committed Planner	
T-Test Result	Female	Male	Female	Male	Female	Male	Female	Male
Mean	5.476	6.14	0.5356	0.6902	0.4017	0.5575	0.3848	
Std. Error	0.2328	0.1921	0.0469	0.0436	0.0461	0.0469	0.0448	
Mean diff.	-0.6635		-0.1545		-0.1557		-0.0677	
Std. Error diff.	0.3036		0.0613		0.0685		0.0662	
Pr (T < t)	0.0155**		0.0066***		0.0125**		0.1545	
Pr (T ≠ t)	0.0311**		0.0131**		0.0249**		0.309	
Pr (T > t)	0.9845		0.9934		0.9875		0.8455	
No. Obs	107		113		113		113	

Note: *Significant at 10% level, **Significant at 5% level, ***Significant at 1% level

From the mean comparison, female financial literacy mean is 5.4 while male financial literacy mean is 6.1. This mean difference is supported by the t-test result. The probability of female financial literacy is lower than male financial literacy is significant at 5% level.

On Simple Planner mean comparison, female probability of being Simple Planner mean is 53% while male Simple Planner probability mean is 69%. This mean difference is supported by the t-test result with the probability of female Simple Planner is lower than male Simple Planner is significant at 1% level.

Female probability of being Serious Planner mean is 40% while male Simple Planner probability mean is 55%. This mean difference is supported by the t-test probability result. The probability of female Serious Planner is lower than male Serious Planner is significant at 5% level.

Committed Planner mean comparison shows female probability of being Serious Planner mean is 34% while male Simple Planner probability mean is 41%. However, the t-test show insignificant result since the null hypothesis is not rejected.

CONCLUSION AND RECOMMENDATION

From this research the author can conclude that only Saving Behavior consistently significant in increasing the probability of someone being a Simple Planner and Serious Planner. However along with Saving Behavior, in Committed Planner, Financial Literacy only significant in increasing the probability of someone being a Committed Planner since they have to know the amount of savings they needed, built their own retirement planning and consistently stick to plan. This research also found that

productive aged women in Jakarta are less financial literate and less likely to be a planner in retirement planning. The implication the Author suggest to the government and financial institution in Jakarta is add more socialization or campaign related basic finance knowledge to the society, especially to women who has lower level in financial literacy and retirement planning preparedness. Also the Author recommend the government, financial institutions and every individual to embrace saving behavior since it has a strong correlation of being a planner for the security on their retirement days.

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