



## **Does the Sharia Personal Financial Management Require? Study of Sharia Financial Literacy Among Lecturers**

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### **ABSTRACT**

The purpose of this study was to analyze some of the critical factors in the socioeconomic variables that influence the sharia personal financial management. This research used a verification analysis. Verification analysis using logistic regression to determine the influence of socioeconomic, sharia financial literacy and personal financial management variables. Research on personal finance management is not much to do on the lecturer as a respondent, but uses the student as respondents. Therefore, teachers or lecturers as a party to impart knowledge to students, it is important to know how their personal financial management skills.

**Keywords:** Financial Knowledge, Financial Behaviors, Financial Attitudes, Sharia Financial Literacy, Sharia Personal Financial Management

**JEL Classifications:** D22, G02

### **1. INTRODUCTION**

The financial sector as part of supporting the country's economy has an important task in supporting the economic activities of the poor so that they can still carry out its activities, especially in the face of difficult times, after the global crisis that occurred in 2008 (Tsomocos, 2003). The financial system of a country becomes more complex, because it puts personal responsibility, to manage the financial details. Currently, it is very important for people to be able to manage personal finances. People should plan to finance long-term investment, pension and education for their children. People also need to decide the management of short-term savings, on a family holiday, the payment for a home, car loans, and consumer goods. In addition, they must manage health insurance and personal needs (Annamaria and Mitchell, 2011).

Many people still cannot make personal financial management, to invest in financial assets, to trade in the stock market or the financial markets, because they do not have enough knowledge. Meanwhile, financial education remains a major challenge in Indonesia. Financial education is a process in which in the long term can awaken people to have a financial plan, have prosperity in accordance with the pattern and the lifestyle they want (Dwiastanti, 2015).

The economy less vulnerable to fluctuating or affected by the world financial crisis if people have the financial knowledge and understanding of the financial system. Many people who do not understand the cause of financial losses suffered, due to the condition of the economy is bad, or there is inflation or the higher the expenditure items, so that the economic system tends to be wasteful, because an increasingly consumerist society. If the people understand the financial system adopted in the country, the economy will not easily waver if there is a global economic crisis. Incomprehension in the financial system caused many people to suffer losses, because the consumption, excessive, unnecessary spending and use of credit cards that are not controlled (Nidar and Bestari, 2012; Setyawati and Suroso, 2016).

Personal finance management is a person's behavior to perform the planning, implementation and evaluation of cash, credit, investment, insurance, life level and retirement planning (Chen, 1998). The success of financial management is determined by several factors, because there is a relationship between financial literacy with personal financial management practices with analytical unit employees of financial institutions and banks (Nyamute and Maina, 2013). The results showed that there are significant differences between respondents' personal financial

management practices that have the financial literacy to those who do not. Respondents who have financial knowledge have an appreciation and better applications in personal finance management practices so it concluded that financial literacy affect personal financial management practices (Nyamute and Maina, 2013).

Some studies suggest that there is a strong correlation between personal financial management with household welfare. Survey conducted on 1,770 households nationwide with financial knowledge and found that on average 42% of adults do not have a good personal financial management. These results indicate that the household financial decision-makers do not have a good understanding of basic financial concepts. Respondents do not have adequate knowledge and skills about managing their financial affairs (Jariah et al., 2016). Some studies suggest that there is a positive relationship between the three independent variables, namely gender, faculty and year of study, but two other independent variables; age and spending habits have a negative relationship with personal financial management of students. Researchers also found that there was no significant relationship between gender and personal financial management (Annamaria et al., 2010; Chen and Volpe, 2002; Jorgensen and Savla, 2010; Nidar and Bestari, 2012).

The behavior of the public about the planning, implementation and evaluation of cash, credit, investment, insurance, and life level planning and retirement planning is not only the conventional, well that is sharia. Some research suggests that the main purpose of people chose the Islamic financial institutions only for religious reasons, but it is acceptable Islamic financial institutions in the non-Muslim community. In addition, the need to understand customer behavior becomes more intense, because the service menu between Islamic financial institutions and conventional financial institutions to be the same, so that competition in the financial services industry is stronger than ever (Metawa et al., 2009).

The purpose of this study was to analyze some of the critical factors in the socioeconomic variables that influence the sharia personal financial management. Research on personal financial management is mostly done in various countries, and most studies, using high school students or college students as a respondent. But the research on sharia personal finance management, using lecturers as a respondent, the author's knowledge has not been done.

The contribution of this research is how to understand sharia personal financial management for lecturers, they will become an important consumer segment. Knowledge of lecturers' behavior will allow for the design of appropriate educational programs and with financial knowledge and skills so that they can function as effective personal financial managers in unlimited markets and complex financial markets.

## 2. LITERATUR REVIEW

### 2.1. Personal Financial

Personal finance shows how individuals or families obtain, budget, save and spend financial resources over time, noting a variety

of financial risks and the events to come. Personal financial components include checking accounts, savings accounts, credit cards and consumer loans, investment in capital markets, planning for retirement, social security benefits, insurance policies, and the management of income tax (Chen and Volpe, 2002; Garman et al., 1999). Every day, everyone is always faced with hundreds of decisions. Some of the decisions are complex and have a long-term impact on the personal financial situation. Personal finance activities include three main decisions, namely spend, saving, and share (Tennyson, 2014).

Many studies have found results that most people of a country have little knowledge about personal financial management. The surveyed 924 college students in the United States, examined the personal financial literacy of students; the relationship between literacy and student characteristics; and the impact of literacy on the opinions and decisions of students. The results showed that the participants answered 53% of the questions correctly. The results showed that the non-business majors, women, students in the lower ranks, classes, the age under 30, and with little work experience have a low level of financial knowledge. Students tend less knowledgeable tend to have the wrong opinion and make the wrong decision. It was concluded that the students did not have knowledge of personal finance. Low levels of knowledge would limit their ability to make decisions (Chen, 1998).

Some research conducted on high school students, indicating that students who are interested in economics and business and then follow the lesson, usually have a good management in personal finance, because in the lesson introduced the term personal finance. However, these results can not be used to conclude that the lessons in the school of economics and business will improve financial literacy (Cameron et al., 2013; Cude et al., 2006; Howcroft et al., 2002).

There are two approaches that can be used to measure the level of financial literacy, namely self-assessments and objective measures approach (Kharchenko, 2011). Based on the self-assessments approach, respondents were asked to assess their literacy skills and also to provide information about the attitude towards their financial decisions, financial knowledge and financial information (Tullio, 2010). Objective measures approach based on objective tests, to assess the respondents' knowledge of financial terms, the understanding of financial concepts and the ability to use numerical skills in certain situations connected with finances. Objective test to assess the financial literacy of respondents who better than the self-assessment (Atkinson and Messy, 2011). Objective test has been used by various researchers in different ways to measure financial literacy. The most popular test that is based on three questions. Three questions, test understanding of respondents about compound interest, inflation, and risk diversification, concepts essential for saving decision and investment activity (Annamaria and Mitchell, 2007).

Various factors may cause people to be unbanked, both from the supply side (providers) and demand (community), because the price barrier (expensive), information barrier (do not know), product design barrier (product matches) and the corneal barrier (means corresponding). The ever increasing attention to the

problem of personal financial management caused by a number of factors among which are the rapid changes in technology and market innovation, the growing practice of borrowing the debt in question, the emergence of consumer issues such as the issue of loans disastrous (predatory lending), high levels of consumer debt and low savings rate. Another important factor which led to increased attention to personal financial management is a factor of social change (population diversity) and market trends, as well as the increased responsibilities of consumers in the management of credit and investment (Braunstein et al., 2002).

People can have personal financial management if they have the financial literacy. Most of the research that has been done before in the field of finance, the survey has been testing the level of personal financial management of adults. The results showed that the majority of adults do not have sufficient knowledge in finance (Atkinson and Messy, 2011; Cameron et al., 2013; Chen and Volpe, 2002; Furtuna, 2008; Jariah et al., 2016).

## 2.2. Financial Literacy

Financial literacy can be considered a combination of awareness, knowledge, skills, attitudes and behaviors required to make sound financial decisions and ultimately achieve financial well-being of individuals (Atkinson and Messy, 2011; Braunstein et al., 2002; Huston, 2010). Financial literacy is defined as the ability of people to read, interpret and analyze, manage money, to communicate about the condition of personal finance that affect the welfare of the material, calculate, develop assessment in decisions, and take actions that result from these processes in order to thrive in our complex the financial world. This includes the ability to discern financial choices, discuss money and financial issues without (or despite) discomfort, plan for the future, and respond wisely to life events that affect everyday financial decisions, including events in the general economy (Furtuna, 2008; Volpe et al., 2006).

Many factors may cause people to be understanding about the bank, or do not even have a bank account, among other things caused by the providers and the public demand, expensive, information that is not delivered, the product constraints and obstacle channels (Bruhn and Love, 2009; Chaia et al., 2009; Johnston and Morduch, 2008). The attention to the problem of managing personal finances continued to rise, caused by factors of which is the rapid change in technology and market innovation, credit growth, public increasingly understand the danger of borrowing the loan shark, the higher consumer debt and the lower level savings. Another important factor which led to increased attention to personal financial management is a factor of social change (heterogeneity of the population) and the development of markets, the increased responsibilities of consumers in managing credit and investment (Braunstein et al., 2002; Dwiastanti, 2015).

## 3. METHODOLOGY

This research attempts to test following hypotheses:

- H<sub>1</sub>: Socioeconomic factors positively impact on sharia personal financial management  
 H<sub>2</sub>: Sharia financial literacy positively impact on sharia personal financial management

- H<sub>3</sub>: Socioeconomic factors and sharia financial literacy positively impact on sharia personal financial management.

### 3.1. Proposed Model for Testing

Data obtained by distributing questionnaires to lecturers in Java Island, Indonesia. The population in this study is all lecturers at institutes in Java. Based on data obtained from PDPT higher education, the number of lecturers is 2,611 people. To determine the sample size, we used the Slovin formula with an error rate of 5%, the samples obtained was 347.

In this research, there are three variables: Demographic and socioeconomic, sharia financial literacy and sharia personal financial management. Demographic and socioeconomic variables divided over the dimensions of gender (GD), age (AG), educational level (EL), domicile (DM), the spending per month (SM), and marital status (MS). Sharia financial literacy variable divided into financial knowledge (FK), financial behavior (FB) and financial attitudes (FA). Sharia personal financial management variable as dimensions of financial management, retirement and estate planning, general management, risk management.

The variables considered have been grouped and in the Figure 1 we consider the relational variable to analyze.

The most appropriate logistic regression model used for the purposes of this study because of the sharia personal financial management as the dependent variable is a dummy variable. The logistic regression model was used in previous studies (Beal and Delpachitra, 2003; Krishna et al., 2007; Nidar and Bestari, 2012; Volpe et al., 2006). The general model logistic regression as follows (Gujarati and Porter, 2010):

$$\pi_i = \frac{1}{1+e^{-z_i}} = \frac{e^{z_i}}{1+e^{z_i}} \quad (1)$$

Where in,

$Z_i = \beta_0 + \beta_1 X_i$  and  $(1 - \pi_i)$  is unlikely occurrence of an event, which is formulated as follows:

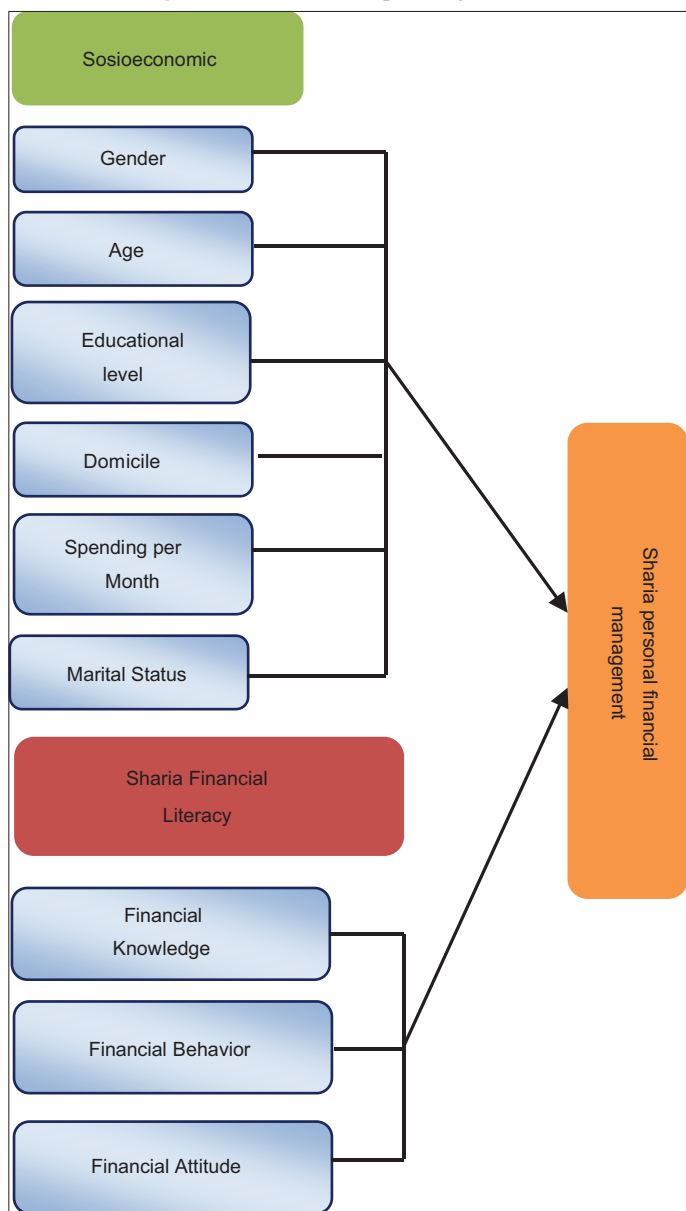
$$1 - \pi_i = \frac{1}{1+e^{z_i}}$$

Then

$$\frac{\pi_i}{1 - \pi_i} = \frac{1+e^{z_i}}{1+e^{-z_i}} = e^{z_i}$$

This study is divided into 3 Models. In Model 1, socioeconomic variables (GD, AG, EL, DM, SM and MS) are treated as independent variables, while the dependent variable is sharia personal financial management. Model 2, sharia financial literacy (FK, FB, FA) as independent, while the dependent variable is sharia personal financial management. In Model 3, socioeconomic variables (GD, AG, EL, DM, SM and MS) and sharia financial literacy (FK, FB, FA) are treated as independent variables, while the dependent variable is sharia personal financial management. In this study, we used Statistical Product and Service Solutions

**Figure 1:** The relationship among variables



(SPSS) v.22 to analyze three models. The logistic regression formulated as follows:

**Model 1**

$$\ln(\rho/1-\rho) = \rho_1 = \beta_0 + \beta_1 GD + \beta_2 AG + \beta_3 EL + \beta_4 MS + \beta_5 SM + \beta_6 DM + \epsilon_1$$

Where about,

$\rho_1$  = Probability of the respondents has a higher level of sharia personal financial management

GD = 1 if the respondent male, 0 if female

AG = 1 if the respondents aged over 50 years, 0 if not

EL = 1 if the respondents' education doctorate, 0 if not

MS = 1 if the respondents were married, 0 if not

EM = 1 if the respondent monthly spending of more than IDR 10 million, 0 if not

DM = 1 if the respondent lived in Jakarta, 0 if outside Jakarta.

**Model 2**

$$\ln(\rho/1-\rho) = \rho_2 = \beta_1 + \beta_6 FK + \beta_7 FB + \beta_8 FA + \epsilon_2$$

Where about,

$\rho_2$  = Probability of the respondents has a higher level of sharia personal financial management

FK = The rate of financial knowledge

FB = The rate of financial behavior

FA = The rate of financial attitude.

**Model 3**

$$\ln(\rho/1-\rho) = \rho_3 = \beta_3 + \beta_9 FK + \beta_{10} FB + \beta_{11} FA + \beta_{12} GD + \beta_{13} AG + \beta_{14} EL + \beta_{15} MS + \beta_{16} SM + \beta_{17} DM + \epsilon_3$$

Where about,

$\rho_3$  = Probability of the respondents has a higher level of sharia personal financial management.

**3.2. Econometric Evaluation of the Results of Logistic Regression**

Validity test is a test used to indicate how far the measuring instrument is used in measuring what is measured. A questionnaire is said to be valid if the question on the questionnaire is able to reveal something that will be measured by the questionnaire (Gujarati and Porter, 2010).

In this research, validity test using Pearson product moment correlation. If  $r$  calculate  $\geq r$  table (2 tail test with sig. 0.05), the instrument or question items correlate significantly to the total score (otherwise valid). The results of statistical processing show that each item question have  $r$  calculate  $> r$  table, thus the question items are able to provide support in revealing what it wants to reveal (valid).

The reliability test is used to measure a questionnaire that is an indicator of a variable or construct. The reliability test is performed with alpha cronbach's. The results of the cronbach's alpha reliability test are guided by the decision-making base that has been determined. If the alpha value is  $> r$  table, then the questionnaire items used are reliable or consistent, otherwise if the alpha value is  $< r$  table, the questionnaire items used are not reliable or inconsistent (Greene, 2002). The result of statistical processing, it is known that alpha is 0,526, while  $r$  table is 0,1666. So alpha  $> r$  table (0.526  $>$  0.16666), meaning the items of questionnaire of financial literacy of shariah at lecturer in Indonesia can be said as reliable or reliable as data collecting tool in research.

The feasibility test of the logistic regression model was assessed using Hosmer and Lemeshow's Goodness of Fit, as measured by Chi-square values. The Hosmer and Lemeshow's Goodness of Fit Test tests the null hypothesis that empirical data matches or fits the model (there is no difference between the model and the data so the model is fit). If the statistical value of Hosmer and Lemeshow's Goodness of Fit Test  $\leq 0.05$ , then there is a significant difference between the model and the observed value so Goodness of Fit Test is not good because the model cannot predict the observed value.



If the statistical value of Hosmer and Lemeshow's Goodness of Fit Test  $> 0.05$ , it means the model is able to predict the observed value or it can be said that the model is acceptable because it matches the observed data.

Testing the coefficient of determination in logistic regression by using Nagelkerke's  $R^2$ . The purpose of this test is to find out how large combinations of independent variables are able to explain the variation of their dependent variables. These three models, Nagelkerke's  $R^2$  have a value above 50%.

The value of Nagelkerke's  $R^2$  is only an approximation, because in logistic regression, the coefficient of determination cannot be calculated as linear regression. To predict more correctly, reflected by the value of the classification plot. Logistic regression model is good enough, if the overall percentage in the classification table is  $>50\%$ . The overall percentage value of all three models is 77.2%.

Simultaneous testing (omnibus test of model coefficient) is done to test whether the independent variables simultaneously affect the dependent variable. Hypothesis testing is done by comparing the probability value (sig) with the level of significance ( $\alpha$ ). To determine acceptance or rejection of hypothesis is based on the level of significance ( $\alpha$ ) 5%. From the results of statistical processing, Chi-square calculated  $>$  Chi-square table, and probability value (sig)  $<$  level significance ( $\alpha$ ). This means independent variables affect the dependent variable. The result of statistical processing, sig  $> 0.05$ , so that the logistic regression model used has enough to explain the data.

Assessing the entire model (overall model fit test) is used to assess the model that has been hypothesized to be fit or not with the data. Testing is done by comparing the value between  $-2$  log likelihood at the beginning (block number = 0) with the value of log  $-2$  likelihood at the end (block number = 1). Decreasing the value between  $-2$  LL initial (initial  $-2$  LL function) with the  $-2$  LL value in the next step ( $-2$  LL final) shows that the hypothesized fit model with the data.

Partial test is performed to determine the influence of every independent variable to partially independent variable. The value of this test can be seen on the value of z or when using a P value can be seen on the item sig. If the sig value is smaller than 0.05, then the independent variable significantly influence the dependent variable.

The multicollinearity test in logistic regression uses correlation matrix between the independent variables to see the magnitude of the correlation between the independent variables.

In making estimates in this study, used econometric approach with the results presented in Table 1.

## 4. RESULTS AND DISCUSSION

The estimation results of the three models of the study are presented in Table 2.

The estimation results of the three models, the level of personal financial management have a positive and significant impact with age, educational level and domicile (Model 1), and gender, age and domicile (Model 3). Overall, the lecturers have a high level of personal financial management, most of them have enough knowledge and understanding of the financial concepts, especially the concept of division, time value of money, profit sharing, the risks and return, inflation, diversification, financial management, retirement and estate planning, and general management.

From Table 2, in Model 1, age, educational level and domicile have a significant effect on the level of personal financial management, while the other variables (gender, marital status, and spending per month) do not significantly affect. This indicates that variations in the age and domicile will cause variations in the level of personal financial management. The odds ratio from age by 0.484 mean that lecturer with older age, has a probability of personal financial management 0.484 times than younger lecturers. This makes sense, because the lecturer with older age would be more prudent in making decisions about their personal finances.

**Table 1: Econometric evaluation of the results of logistic regression**

Test of econometric evaluation	Model 1	Model 2	Model 3
The validity test	Significant correlation	Significant correlation	Significant correlation
The reliability test	Cronbach's alpha $>$ r table	Cronbach's alpha $>$ r table	Cronbach's alpha $>$ r table
Goodness of fit			
Hosmer Lemeshow	Sig=0.288 $>$ 0.05	Sig=0.145 $>$ 0.05	Sig=0.595 $>$ 0.05
Negalgarka $R^2$	0.594	0.573	0.673
Overall percentage	77.2	77.2	77.2
Overall model fit test	The beginning (block number=0), $-2$ Log Likelihood=481,044	The beginning (block number=0), $-2$ Log Likelihood=481,044	The beginning (block number=0), $-2$ Log Likelihood=481,044
	The end (block number=1), $-2$ Log Likelihood=359,571	The end (block number=1), $-2$ Log Likelihood=369,298	The end (block number=1), $-2$ Log Likelihood=358,566
Omnibus tests of model coefficient	Chi-square calculate=121,473	Chi-square calculate=111,746	Chi-square calculate=122,478
Partial test (variable of equation)	Sig=0.05 Two variables (AG, DM) affected personal financial management	Sig=0.05 None variable affected personal financial management	Sig=0.05 Three variables (GD, AG, DM) affected personal financial management
Multicollinearity test	$r < 0.8$	$r < 0.8$	$r < 0.8$

AG: Age, GD: Gender, DM: Domicile

**Table 2: Results of research estimation model**

Variable	Model 1	Model 2	Model 3
	Dependent variable probability of PFM	Dependent variable probability of PFM	Dependent variable probability of PFM
GD	0.649		0.572*
AG	0.484**		0.437***
EL	1.635***		1.632
MS	540297962,244		562500669,457
EM	1.285		1.136
DM	7.646***		5,997**
FK		0.958	0.964
FB		0.989	1.050
FA		0.996	1.000
n	347	347	347
Nagalarke R <sup>2</sup>	0.594	0.573	0.673

\*,\*\*,\*\*\*Indicates significant at the 1 per cent, 5 per cent and 10 per cent levels respectively

The odds ratio from level of education by 1.635 mean that lecturers with doctoral degree probability have a personal financial management 1.635 times than lecturers who hold a master's degree. Therefore, lecturers with a doctorate will have a personal financial management higher than lecturers who hold a master's degree. The result of this hypothesis is supported by the descriptive analysis, shows that the higher level of education lectures had an average score of financial knowledge than lower levels of education. The results of this study are consistent with research in which the students as respondents have low financial knowledge, thus making the wrong financial decisions. In its descriptive analysis stating that the lecturers are highly educated level, have a higher average score of financial knowledge than lecturers with lower levels of education (Chen, 1998). Likewise, the odds ratio from domicile by 7.646 means that the lecturer who domicile in Jakarta, has a probability of personal financial management 7.646 times than the lecturers who domicile outside Jakarta (Setyawati and Suroso, 2016).

In Model 2, the level of financial knowledge, financial behavior, financial attitude have not a significant effect on the level of personal financial management. This indicates that variations in the level of financial knowledge, financial behavior, financial attitude will not cause variations in the level of personal financial management. Some research states that financial knowledge, financial behavior, financial attitude significant effect on personal financial management, because financial literacy is an understanding of financial terms and concepts necessary for everyday use in public life (Bowen, 2002). Financial literacy of inflation, profit sharing, compounding rate of return, investment vehicles, risk management are some examples of financial knowledge (Bowen, 2002). Most people in the country, can perform calculations on the division is simple. Fewer respondents give a logical answer to the question that is designed to identify how inflation affects purchasing power. The concept of interest payments has been widely understood (Atkinson and Messy, 2011). Thus, lecturers in Indonesia still have difficulty in calculating the profit and loss sharing and in describing the effect of profit and loss sharing; the definition of inflation rather than the impact of inflation on the purchasing power and not to know the answer to the question of diversification.

In Model 3, the gender, age and domicile have a significant effect on personal financial management, while the other variables (educational level, marital status, and spending per month financial knowledge, financial behavior, financial attitude) do not significantly affect the personal financial management. This indicates that variations in the gender, age and domicile will cause variations in personal financial management. The odds ratio from gender of 0.572 mean that man lecturers, has a probability 0.572 times than with woman lecturers. The odds ratio from age by 0.437 mean that lecturer with older age, has a probability of personal financial management 0.437 times than younger lecturers. Likewise, the odds ratio from domicile by 5.977 means that the lecturer who domicile in Jakarta, has a probability of personal financial management 5.977 times than the lecturers who domicile outside Jakarta.

## 5. CONCLUSION

In Model 1, age, level of education level and domicile have a significant effect on the level of personal financial management. In Model 2, the level of financial knowledge, financial behavior, financial attitude also have not a significant effect on the level of personal financial management. While in Model 3, age, gender and domicile have a significant effect on personal financial management. This means age, gender, educational level, domicile, affected the personal financial management.

This research was conducted within the scope of limited community, i.e., among lecturers Java Island, Indonesia and the variables studied are still very limited so we need further research. Research on personal financial management committed against lecturers were very limited. Many studies using student in high school or university as respondents. Therefore, further research can be conducted on a lecturer in various countries and can be separated between lecturer in developing countries within developed countries.

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