Financial Knowledge And Financial Behavior Among Educati onal Staff *(A Survey on Educational Staff in Universitas Kuningan)*

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Abtract

This study aims to investigate the effect of demographic characteristics on financial knowledge and financial behavior as well as the effect of financial knowledge on financial behavior. The method applied in this study was descriptive and verification method. This study was conducted in Universitas Kuningan with educational staff as the unit of analysis. By applying Stratified Cluster Proportional Random Sampling, 105 educational staff was selected as the sample of this study. The results of descriptive analysis revealed that based on age group, education level, and income level, educational staff with age of >45 years old, education level of S-2, and income level of >Rp. 3 million has a higher level of financial knowledge and financial behavior compared to other educational staff. Meanwhile, the results of verification analysis indicated that education level and income level have a significant effect on financial knowledge and financial behavior, and financial knowledge has a positive effect on financial behavior.

Keywords: demographic characteristics, financial knowledge, financial behavior.

1. INRODUCTION

Nowadays, financial literacy is an interesting topic to study. In this case, a number of studies have revealed the importance of financial literacy to realize public welfare and economic stability. As stated by Nidar and Bestari (2012), national economy will not be easily affected by global economic crisis if people comprehend financial system. Public ignorance of financial system causes many people to suffer losses, such as extravagant consumption and spending as well as the use of credit cards that is not as expected. Atkinson and Messy (2012) from OECD note that the recent economic crisis is a proof of the lack of financial literacy among individuals that has caused tremendous negative effects on the economy. As proven by Banks *et al.* (2009), McArdle *et al.* (2009), Guiso and Jappelli (2008), and Alessie *et al.* (2008), financial literacy has a significant effect on public welfare and portfolio choices. Further, some researchers emphasize that financial literacy has an effect on the level of participation in formal financial markets and stock markets (Hogarth *et al.*, 1999;

Christelis *et al.*, 2010; Cole *et al.*, 2008). From debt side, empirical studies showed that the lack of financial literacy results in high-cost loans and high debt burdens (Lusardi & Tufano, 2009; Campbell, 2006; Stango & Zinman, 2009).

Financial literacy can be defined as the ability to read, analyze, manage and communicate personal financial conditions. Financial literacy includes the ability to distinguish financing options, discuss financial issues without worries, plan for the future, and respond competently to life events affecting daily financial decisions which include events in the economy in general (Vitt *et al.,* 2000).

Atkinson and Messy (2012) from OECD declare that financial literacy is a combination of financial knowledge, financial attitude, and financial behavior. First, financial knowledge refers to the understanding of financial terms and concepts needed for daily use in social life (Bowen, 2003). Second, financial attitude refers to the application of financial principles to create and maintain values through decision making and resources management (Rajna, 2011). Last,

financial behavior is defined as human behavior in relation to financial management (Xiao, 2009). Yet, this study will only focus on financial knowledge and financial behavior.

The level of financial literacy of the community or community groups differs from one another. This difference is due to differences in demographic characteristics. As proven by a survey, there is a close relationship between financial literacy and demographic characteristics (ANZ survey, 2008).

In the same vein, Kharchenko and Olga (2011) prove that the main variables affecting financial literacy in Ukraine are gender, education level, occupation, region and welfare. Meanwhile, Cole *et al.* (2008) declare that age is a significant characteristic to describe the level of financial literacy in India and Indonesia.

Recently, literature has shown a change in the focus of studies on the relationship between financial knowledge and financial behavior (Jappelli & Padula, 2013; Lusardi, Michaud & Mitchell, 2013; Willis, 2008). However, the relationship between financial knowledge and financial behavior does not always to be a causal relationship. As stated by Hastings, Madrian and Skimmyhorn (2012) in Batty (2015), this type of relationship is not always implied. In the same vein, Bir (2016) states that financial knowledge does not significantly predict financial management practices. On the other hand, Hogarth and Beverly (2003) in Serido *et al.* (2013) prove that there is a positive relationship between financial knowledge and financial behavior. Likewise, Serido *et al.* (2013) indicate that financial knowledge has a significant effect on financial behavior. In this case, if the financial knowledge is internalized, it results in the accepted financial behavior. Further, recent research reveals that a higher financial knowledge results in higher standards of financial behavior (Hilgert *et al.,* 2003; Loke, 2015; Potrich *et al.,* 2016; Servon & Kaestner, 2008).

From the research results previously described, it can be seen that there are inconsistencies in the results of the previous research. Accordingly, this study will investigate the effect of demographic characteristics (age, education level, and income level) on financial knowledge and financial behavior as well as the effect of financial knowledge on financial behavior. The issues discussed in this study are formulated into the following questions:

a. Do demographic characteristics (age, education level, and income level) have an effect on financial knowledge?

b. Do demographic characteristics (age, education level, and income level) have an effect on financial behavior?

c. Does financial knowledge have an effect on financial behavior?

Theoretical Review and Theoretical Framework
Financial knowledge

Financial knowledge is defined as an understanding of financial terms and concepts needed for daily use in social life (Bowen, 2003). It includes the understanding of inflation, rate of return, compounding rate of return, investment vehicles, and risk management (Rajna, 2011).

In this case, Atkinson and Messy (2012) use eight core questions designed to measure financial knowledge. These eight questions measure respondents' knowledge about division, time value of money, interest paid on a loan, calculation of interest plus principle, compound interest, risk and return, definition of inflation, and diversification.

Financial behavior

Financial behavior is defined as human behavior in relation to financial management (Xiao, 2009). Each individual needs financial knowledge to make decisions that will improve their quality of life at the present and in the future. Here, individual's behavior will reflect the application of knowledge.

In this case, Atkinson and Messy (2012) mention four questions that allow people to provide more information and statements about their financial behavior. First is statement relating to the consideration in making a purchase; whether the respondent has the ability to pay for his potential purchase or not. Second is statement regarding whether the respondent normally pay his obligations on time. Third is statement asking how often the respondent looks at his financial notes. Fourth is statement relating to long-term planning actions; whether the respondent sets long-term financial goals and efforts to achieve them or not.

Theoretical Framework

Financial knowledge and financial behavior are two of the proxies of financial literacy. The level of financial literacy of the community or community groups differs from one another. This difference is due to differences in demographic characteristics. As proven by a survey, there is a close relationship between financial literacy and demographic

characteristics (ANZ survey, 2008). In the same vein, Kharchenko and Olga (2011) prove that the main variables affecting financial literacy in Ukraine are gender, education level, occupation, region and welfare. Meanwhile, Cole *et al.* (2008) declare that age is a significant characteristic to describe the level of financial literacy in India and Indonesia.

Hogarth and Beverly (2003) in Serido *et al.* (2013) prove that there is a positive relationship between financial knowledge and financial behavior. Likewise, Serido *et al.* (2013) indicate that financial knowledge has a significant effect on financial behavior. In this case, if the financial knowledge is internalized, it results in the accepted financial behavior. Further, recent research reveals that a higher financial knowledge results in higher standards of financial behavior (Hilgert *et al.,* 2003; Loke, 2015; Potrich *et al.,* 2016; Servon & Kaestner, 2008).

2. METHOD

This study focuses on describing financial knowledge and financial behavior of educational staff in Universitas Kuningan based on its demographic characteristics (age, education level, and income level). In addition, this study also aims to investigate the effect of demographic characteristics on financial knowledge and financial behavior as well as the effect of financial knowledge on financial behavior. Accordingly, this study applies descriptive and verification methods.

The population in this study was 141 educational staff in Universitas Kuningan. Of this population, the sample was selected by using Slovin Formula with an error rate of 5%. Based on the calculation, 105 educational staff was selected as the sample of this study. The sampling technique using the Cluster Proportional Random Sampling method was done by following these stages; 1) the population was firstly divided into several clusters based on its work unit; 2) the proportion of the sample of each cluster was calculated by dividing the number of educational staff in the cluster by the total population; 3) based on the proportion of each cluster, the number of samples for each cluster is determined by multiplying the proportion of samples for each cluster with the total sample that has been previously determined; and 4) the sampling was then carried out randomly in each cluster.

The data collection technique employed in this study was a questionnaire technique in which the collection of primary data was carried out by distributing the questionnaire to the sample of the study. The questionnaire used in this study was a modification of the questionnaire used by previous researchers.

There are two data analysis techniques applied in this study, namely Descriptive Analysis and Verification Analysis. Descriptive analysis was used to find out general description of financial knowledge and financial behavior based on demographic characteristics (age, education level, and income level) of educational staff in Universitas Kuningan. Meanwhile, verification analysis is used to investigate the effect of demographic characteristics (age, education level, and income level) on financial knowledge and financial behavior as well as the effect of financial knowledge on financial behavior.

In verification analysis, the following regression models were used:

Model 1
$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$$
Model 2
$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$$
Model 3
$$Y = \beta_0 + \beta X + \varepsilon$$

Meanwhile, hypothesis testing was carried out by using t-test with the following criteria:

If: $t_{count} \geq t_{table}$, H_0 is rejected
$t_{count} < t_{table}$, H_0 is accepted
Or based on the probability,

If: Probability ≥ 0.05, H_0 is accepted
Probability < 0.05, H_0 is rejected

3. RESULTS AND DISCUSSION

A general description of financial knowledge and financial behavior of educational staff in Universitas Kuningan based on its demographic characteristics is presented in Table 1

Tabel 1
Financial Knowledge and Financial Behavior based on Demographic Characteristics

Demographic Characteristics	Average Score of Financial Knowledge	Average Score of Financial Behavior
Age Group: < 30 years old 30 – 45 years old > 45 years old	4,714286 6,025 7,095238	13,28571 19,9625 25,38095

Demographic Characteristics	Average Score of Financial Knowledge	Average Score of Financial Behavior
Education Level: SD, SLTP, SLTA	4,555556	14
S-1	6,350877	20,98246
S-2	7,545455	27,18182
Income Level: < Rp 2 million	4,428571	12,71429
Rp 2 - 3 million	5,660714	18,21429
> Rp 3 million	7,093023	24,7907

Source: Processed data

Table 1 shows that there is a significant difference in the average level of financial knowledge and financial behavior of Educational staff in Universitas Kuningan based on age group, education level and income level. In this case, the higher the age group, the education level, and the income level, the higher the average level of financial knowledge and financial behaviour will be. Educational staffs with the age group of more than 45 years old, the master degree of education, and the income of more than Rp. 3 million have a higher level of financial knowledge compared to other groups.

Meanwhile, the results of the regression analysis concerning the effect of age, education level and income level on financial knowledge are presented in Table 2 and Table 3.

Table 2. Coefficients of the Results of Regression Analysis concerning the effect of age, education level and income level on financial knowledge

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.081	.466		4.470	.000
	Age	.009	.015	.046	.639	.524
	Education Level	1.041	.197	.556	5.289	.000
	Income Level	6.013E-007	.000	.284	2.508	.014

a. Dependent Variable: Financial knowledge

Table 3. Summary of the Results of Regression Analysis concerning the Effects of Age, Education Level and Income Level on Financial Knowledge

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
	.844[a]	.712	.704	.690

a. Predictors: (Constant), Income Level, Age, Education Level
b. Dependent Variable: Financial knowledge

Based on the results of data analysis, the regression model can be formulated as follows:

$Y= 2.081 + 0,009X1 + 1,041X2 + 6.013E\text{-}007X3 + e$

From Table 2, it can be seen that age, education level and income level have a positive effect on financial knowledge. The higher the age, the education level and the income level, the higher the level of financial knowledge will be. Table 2 also shows that for the variables of education level and income level, the p-value is $<\alpha$ (0,000 and 0.014 <0.05), while for the variable of age, the p-value is $> \alpha$ (0.524> 0.05). Thus, it can be concluded that education level and income level have a significant effect on financial knowledge. It indicates that differences or variations in education level and income level will result in differences or variations in the level of financial knowledge. Hence, people who have a higher education level and income level will have a higher level of financial knowledge.

Further, Table 3 indicates that the value of Adjusted R^2 is 0.704 meaning that financial knowledge can be described by demographic characteristics (70.4%), while the remaining 29.6% is described by other variables.

The results of the regression analysis concerning the effect of age, education level and income level on financial behavior are presented in Table 4 and Table 5.

Table 4. Coefficients of the Results of Regression Analysis concerning the Effect of Age, Education Level and Income Level on Financial Behavior

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	-2.421	3.181		-.761	.448
	Age	.185	.100	.172	1.859	.066
	Education Level	2.997	1.345	.303	2.229	.028
	Income Level	3.515E-006	.000	.314	2.146	.034

a. Dependent Variable: Financial Behavior

Table 5. Summary of the Results of Regression Analysis concerning the Effects of Age, Education Level and Income Level on Financial Behavior

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.720a	.519	.504	4.711

a. Predictors: (Constant),

b. Dependent Variable: Financial Behavior Income Level, Age, Education Level

Based on the results of data analysis, the regression model can be formulated as follows:

Y= -2.421+ 0,185X1 + 2,997X2 + 3.515E-006X3 + e

From Table 4, it can be seen that age, education level and income level have a positive effect on financial behavior. The higher the age, the education level and the income level, the higher the level of financial behavior will be. Table 4 also shows that for the variables of education level and income level, the p-value is $<\alpha$ (0.028 and 0.034 <0.05), while for the variable of age, the p-value is $>\alpha$ (0.066> 0.05). Thus, it can be concluded that education level and income level have a significant effect on financial behavior. It indicates that differences or variations in education level and income level will result in differences or variations in the level of financial behavior. Hence, people who have a higher education level and income level will be able to show a higher level of financial behavior.

Further, Table 5 indicates that the value of Adjusted R^2 is 0.504 meaning that financial behavior can be described by demographic characteristics (50.4%), while the remaining 49.6% is described by other variables.

The result of the regression analysis concerning the effect of financial knowledge on financial behavior is presented in Table 6.

Table 6. Coefficients of the Results of Regression Analysis concerning the Effect of Financial Knowledge on Financial Behavior

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-4.435	2.095		-2.117	.037
	Financial knowledge	4.052	.334	.767	12.129	.000

a. Dependent Variable: Financial Behavior

Based on the results of data analysis, the regression model can be formulated as follows:

Y= -4,435+ 4,052X + e

From Table 6, it can be seen that financial knowledge has a positive effect on financial behavior. The higher the level of financial knowledge, the higher the level of financial behavior will be. Table 6 also shows that the p-value is $<\alpha$ (0,000 <0.05. Thus, it can be concluded that the variable of financial knowledge has a significant effect on financial behavior. It indicates that differences or variations in financial knowledge will result in differences or variations in financial behavior. Hence, people who have a higher level of financial knowledge will be able to show a higher level of financial behavior.

4. CONCLUSION

a. The variables of education level and income level have a significant effect on financial knowledge. It indicates that differences or variations in education level and income level will result in differences or variations in the level of financial knowledge. Hence, people who have a higher education level and income level will have a higher level of financial knowledge.

b. The variables of education level and income level have a significant effect on financial behavior. It indicates that differences or variations in education level and income level will result in differences or variations in the level of financial behavior. Hence, people who have a higher education level an

d income level will be able to show a higher level of financial behavior.

c. The variable of financial knowledge has a significant effect on financial behavior. It indicates that differences or variations in financial knowledge will result in differences or variations in financial behavior. Hence, people who have a higher level of financial knowledge will be able to show a higher level of financial behavior.

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