

Financial education, financial literacy, and financial Behaviour: What does really matter?**Umi Widyastuti^{a*}, Ati Sumiati^a, Herlitha^a and Inaya Sari Melati^b**^a*Faculty of Economics, Universitas Negeri Jakarta, Indonesia*^b*Faculty of Economics, Universitas Negeri Semarang, Indonesia***CHRONICLE***Article history:*

Received: January 20, 2020

Received in revised format:

March 25 2020

Accepted: April 26, 2020

Available online:

April 30, 2020*Keywords:**Financial literacy**Financial education**Financial behaviour***ABSTRACT**

This study aims to determine the effect of financial education, financial literacy, and financial behaviour from teacher's perspective. Primary data were obtained using questionnaire to measure all variables by surveying 96 teachers of senior high school and vocational school in Greater Jakarta, Indonesia. Due to the different scales in measuring the variables, data were analysed using Structural Equation Model-Partial Least Square. The findings conclude that there was a positive relationship between financial literacy and financial behaviour, but financial education had an insignificant effect on financial behaviour and financial literacy.

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1. Introduction

Financial illiteracy was spread widely and made a serious implication on some kinds of financial behaviour (Lusardi & Mitchell, 2007b). Atkinson, Monticone, and Mess (2016) also reported that adult's levels of financial behaviour were relatively low in many countries. Therefore, the importance of financial literacy is very clear. High level of financial literacy will lead someone to take effective financial behaviour (de Bassa Scheresberg, 2013). Recently, policymakers concern on the strategy to enhance the level of financial literacy (Grohmann & Menkhoff, 2015).

Both developed and developing countries are recognizing the importance of financial literacy and considering to invest the resources through financial education programs to enhance financial literacy (Xu & Zia, 2012). Some previous studies have been conducted to prove the impact of financial education on financial literacy.

The result was supported by Wagner (2015) who stated that financial education was positively related to the level of financial literacy. As further consequence, financial education will lead people to act in the right financial behaviour. The research conducted by Lusardi (2008) stated that financial education program could enhance saving and financial decision making. Conversely, some scholars found that the effect of financial education on financial behaviour is less certain (Mandell & Klein, 2009). Kaiser and Menkhoff (2017) who found financial education was less effective to influence specific financial behaviour, specifically handling a debt.

Beside financial education, the factor which is also important in contributing to affect financial behaviour is financial literacy. Kumar, Watung, Eunike N, and Liunata (2017) stated financial literacy supported an individual to take financial behaviour effectively, such as stock market participation (Rooij, Lusardi, & Alessie, 2011) and saving behaviour (Jamal, Ramlan, Karim, & Osman, 2015). While Kunovskaya (2010) revealed that financial literacy did not affect the decision to use financial services.

* Corresponding author.

E-mail address: umiwidyastuti_feuji@unj.ac.id (U. Widyastuti)

Based on these scholars, this study highlights the contradictive findings which have to be tested further empirically. Therefore, this study will contribute to explore the direct impact of financial education, financial literacy, and financial behaviour. Due to the limited literature about financial education, financial literacy, and financial behaviour from teacher's perspective, so this study is conducted to fill this research gap.

2. Literature Review

In this section, we explain the relationship between financial education, financial literacy and financial behaviour where each construct has a different meaning. To prove that financial education appears to have significantly impact on financial literacy, Wagner (2015) classified financial education into seven categories including high school, college, employer, high school and college, high school and employer, college and employer, and combinations of all three courses. Another research measured financial education based on the personal financial management course (Mandell & Klein, 2009) and economics or finance course (Alhenawi, 2013), which have been attended by respondent. These studies found that someone with higher financial education tends to have a higher level of financial literacy.

Another research also tried to explain the influence of financial education on financial behaviour. Discussing about saving behaviour, Schreiner (2002) found people tend to behave more saver when he/she had attended some college. It is also in line with Wagner (2015), when financial education appeared to be effective in long-term behaviour, but conversely it had not a role in short term behaviour.

In several literature, financial literacy commonly was defined as financial knowledge (Chen & Volpe, 1998; Lusardi & Mitchell, 2005, 2008), while some scholars explain that these terms were different construct (Huston, 2010). Huston (2010) stated that financial literacy is one of the components of human capital which reflect not only financial knowledge dimension but also application dimension. When measuring financial literacy, it is important to determine people's knowledge about financial concept and also how people used their knowledge to make financial decisions in their living.

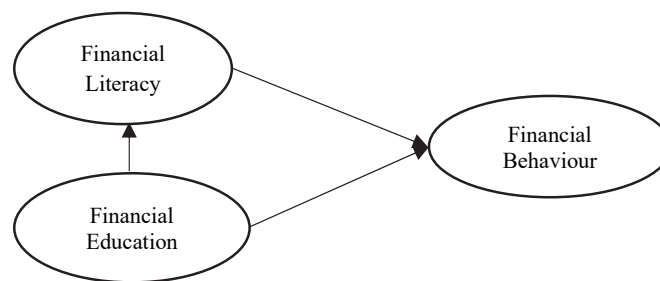


Fig. 1. Conceptual Framework

Several prior studies have been conducted to examine the impact of financial literacy on financial behaviour. Specifically, financial behaviour were observed in many types of behaviour including long-term planning (Alhenawi, 2013; Zulaihati, Susanti, & Widyastuti, 2020), retirement plan behaviour (Clark, Lusardi, & Mitchell, 2016; Lusardi & Mitchell, 2007a) or retirement saving (Bateman, Louviere, Thorp, Islam, & Satchell, 2017), saving behaviour (Lusardi, 2008; Murendo & Mutsonziwa, 2017), and many others. Allgood and Walstad (2016) concerned about the effect of both actual and perceived financial literacy on financial behaviour. They focused on credit cards, investment, loans, insurance, and the use of the financial advisor services. Figure 1 describes the proposed model based on literature review.

3. Research Methodology

3.1. Measures/Scale

The purposes of this study are to examine the influence of financial education, financial literacy, and financial behaviour from teacher's perspective. Primary data were collected using a questionnaire by surveying 96 respondents. The unit analysis in this study is teacher of senior high school and vocational school at the Greater Jakarta, Indonesia.

The questionnaire to measure financial literacy consists of five items which reflected subjective financial knowledge that adopted from Knoll and Houts (2012). While teacher's financial education was categorised into four groups, which described the academic background has been taken through formal education and/or training that have been attended. Financial behaviour reflected four types of behaviour, i.e. saving behaviour, shopping behaviour (Varcoe, Martin, Devitto, & Go, 2005), long-term and short-term financial behaviour (Wagner, 2015). It measured using twenty-one items to represent financial behaviour. Financial literacy and financial behaviour were operationalised using 5-points Likert's scale which were started from 1 to represents strongly disagree until 5 to represents strongly agree. On the other hand, financial education was measured using a nominal scale which is adapted from Alhenawi (2013).

3.2. Validity and Reliability Test

To test the validity of the instrument, we refer to the loading factor for each indicator of the outer model which reflected latent variable. Table 1 shows the loading factor of each indicator in outer model. If the loading factor is more than 0.6, it could be concluded that the indicator is valid. There were seven items which did not fulfil the criteria and they were deleted from the analysis. Discriminant validity was also needed to ensure that each construct was independent and did not intercorrelated each another. Table 2 shows the square root of AVE of each construct which have to be higher than the correlation with any other construct. The discriminant validity test for exogenous and endogenous variables proved that each construct had different meaning or did not associated.

Table 1
Validity and Reliability Test

Indicators	Financial Literacy	Financial Behaviour	Financial Education
Financial Literacy: AVE = 0.618, CR = 0.866, CA = 0.794			
An investment with a high return is likely to be high risk.	0.812		
High inflation means that the cost of living is increasing rapidly.	0.718		
It is usually possible to reduce the risk of investing in the stock market by buying a wide range of stocks and shares.	0.793		
Buying a single company stock usually provides a safer return than a stock mutual fund.”	0.345		
It is less likely that you will lose all of your money if you save it in more than one place.	0.794		
Financial Behaviour: AVE = 0.634, CR = 0.957, CA = 0.951			
I set financial goals for the next 1-2 years for what I want to achieve with my money.		0.852	
I decide beforehand how my money will be used in the next 1-2 years.		0.830	
I actively consider the steps I need to take to stick to my budget in the next 1-2 years.		0.747	
I consult my budget to see how much money I have left for the next 1-2 years.		0.246	
I like to look at my budget for the next 1-2 years in order to get a better view of my spending in the future.		0.758	
It makes me feel better to have my finances planned out in the next 1-2 years.		0.802	
In a typical month, it is difficult for me to cover my expenses and pay all my bills.		0.164	
I always have a checking account.		0.453	
I set financial goals for the next 1-2 months for what I want to achieve with my money.		0.775	
I decide beforehand how my money will be used in the next 1-2 months.		0.843	
I actively consider the steps I need to take to stick to my budget in the next 1-2 months.		0.794	
I consult my budget to see how much money I have left for the next 1-2 months.		0.298	
I like to look at my budget for the next 1-2 months in order to get a better view of my spending in the future.		0.767	
It makes me feel better to have my finances planned out in the next 1-2 months.		0.866	
I'm likely to save money by packing my lunch instead of buying it out.		0.347	
Saving money for the future is something I think about.		0.733	
When I get money, I save some of it no matter what.		0.672	
I do a good job of budgeting my money.		0.794	
When I go shopping, I compare prices.		0.581	
When I go shopping, I impulse buy.		0.280	
When I go shopping, I wait to buy items on sale.		0.163	
Financial Education: AVE = 1.000, CR = 1.000, CA = 1.000			
Which of the following best describes your education in finance or economics? (mark all that apply)			
a) I have a major or a minor in finance or economics.			
b) I have taken some university courses in finance or economics.			1.000
c) I have taken some training (non-academic) courses in finance or economics.			
d) I have taken non-economic courses that included some economic-related content (political science, legal studies, etc.).			

Notes: AVE: Average Variance Extracted, CR = Composite Reliability, CA = Cronbach Alpha

The average variance extracted is the criteria used to test instrument's reliability. According to Hair, Hult, Ringle, and Sarstedt (2016), the minimum value of AVE is more than 0.5 to fulfil the requirement minimum value. Besides AVE, we have to check the Cronbach's Alpha for each construct as presented in Table 1. Based on both of the criteria, this study showed that the instrument for each variable was reliable.

Table 2
Discriminant Validity

Discriminant Validity	Financial Behaviour	Financial Literacy	Financial Education
Financial Behaviour	0.796		
Financial Literacy	0.493	0.786	
Financial Education	0.157	0.075	1.000

2.4. Data Analysis

Data were analysed using a quantitative approach Partial Least Square by considering the reasons namely: using different scale in the measurement and applied in small sample size (Hair et al., 2016). Partial Least Square is used to analyse the direct effect of the exogenous variables on endogenous variable.

2.5. Hypotheses

This study developed three hypotheses to be tested in a quantitative approach, as follow:

H1: There is a positive impact of financial education on financial literacy.

H2: There is a positive impact of financial literacy on financial behaviour.

H3: There is a positive impact of financial education on financial behaviour.

4. Results and Discussion

After validity and reliability test were proven, the next step is hypothesis testing. Table 2 describes the path coefficient that explains the direct effect of each variable included: (1) the effect of financial education on financial literacy, (2) the effect of financial literacy on financial behaviour, and (3) the effect of financial education on financial behaviour.

The impact of financial education on financial literacy is indicated by the positive coefficient which is denoted in the first column of Table 3. As a result, this study shows that the first hypothesis is rejected because the p-value is more than level of significance 0.05. Empirically, this result indicates an insignificant influence for this hypothesis. It could be interpreted that there is no impact of financial education on financial behaviour. The second hypothesis develop to prove the effect of financial literacy on financial behaviour and it is accepted statistically. There is a positive significant influence of financial literacy on financial behaviour. It means that higher financial literacy will encourage someone to act in effective financial behaviour. The third hypothesis examines the direct impact of financial education on financial behaviour, but the result shows that the hypothesis is rejected. It reveals that there is an insignificant positive impact of financial education on financial behaviour.

Table 4
Direct Effect

Direct Effect	Original Sample (O)	t-statistics (O/STDEV)	p-values	Result
Financial Education → Financial Literacy	0.075	0.882	0.189*	Rejected
Financial Literacy → Financial Behaviour	0.486	5.114	0.000**	Accepted
Financial Education → Financial Behaviour	0.121	1.291	0.099*	Rejected

Notes: * $p > 0,05$; ** $p < 0,05$

Table 4 presents four criteria to assess the structural model. R-square explains about the contribution of exogenous variable(s) on endogenous variable. The first inner model which explains financial literacy, has the R-square value of 0.006 and the impact of financial education on financial literacy does not statistically proven. It could be concluded that financial education could not explain financial literacy. It is also supported by the Q-square which assess predictive relevance of the structural model. It has to be higher than zero, but it does not accordance to the requirement.

Table 4
Structural Model Assessment

	R- square	f-square	Q-square	q-square
Financial Literacy	0.006	0.020	-0.001	0.354
Financial Behaviour	0.259	0.317	0.138	0.543

While, the second inner model explains financial behaviour. The contribution of endogenous variables in explaining financial behaviour is 0.259, there is about 0.741 of remaining factors which might be contributed in explaining financial behaviour. The Q-square of the second structural model is larger than zero, therefore it indicates that the exogenous variables could predict the endogenous variable as well. This study proves that financial literacy has a significant positive impact on financial behaviour. Financial literacy was measured based on teacher's perception about inflation, diversification, risk, return, and stock that reflects subjective financial knowledge. Previous studies, including Fernandes, Lynch Jr, and Netemeyer (2014), Kumar et al. (2017), Nicolini et al. (2013) supported this finding, although these studies observed financial literacy with a different measurement. The surprising result are reported from the first and third hypothesis testing which indicates that financial education does not impact on both financial literacy and financial behaviour. Although people have high level of financial education, it is not a guarantee that he/she also has high financial literacy. Financial education does not support to enhance financial literacy. This result is not consistent with the model which is developed by Wagner (2015). Furthermore, financial education does not lead an individual to take an effective financial behaviour. This finding is accordance to some prior scholars which stated that financial education did not effectively affect financial behaviour such as short term behaviour

(Wagner, 2015) and handling debt (Kaiser & Menkhoff, 2017). Therefore, Fernandes et al. (2014) suggested “just in time” financial education which is matched based on the type of behaviour that will be improved. These findings emphasize that financial literacy is a solely factor which contribute in explaining financial behaviour. Refers to the findings above, we have to be focus on financial education. This study is failed to prove that financial education is an important factor which have to be consider in improving people financial literacy and financial behaviour.

5. Conclusion

This study has concluded that there was a positive influence between financial literacy on financial behaviour. Meanwhile, financial education has insignificant effect on financial behaviour and financial literacy. We have also noted that financial education was defined as a process to improve people’s understanding about financial concept and products or even develop skill through information they got. Subsequently, they will have an awareness to act in a wise financial decision to achieve financial welfare. As we know, every process will involve inputs so financial education should be considering the input which is ignored in this model. This study suggests to explore the contribution of financial education in further research. The different measurement of financial education enables to give a different evidence.

Acknowledgment

The authors appreciate the excellent comments made by the editor and anonymous reviewers, resulting in a significant improvement in the quality of this paper. The authors say thanks to the Faculty of Economics, Universitas Negeri Jakarta for the funding in publishing this article.

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