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The Effect of Financial Literacy, Income and Years of Service on Investment Decision Behavior

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Abstract

The purpose of this study was to explain the effect of financial literacy, income and years of service on investment decision behavior in employees. Research respondents were employees of PT Bank Pembangunan Daerah Bali Renon Branch with a sample of 76 people. The sampling technique in this study used random sampling. The data were analyzed using the PLS (Partial Least Squares) technique. The results of this study indicate that financial literacy and income have a positive effect on investment decision behavior, but tenure has no positive effect on investment decision behavior. This is because in the banking industry, all employees, both those who have just entered the workforce or those who have worked together for a long time, receive training and obtain information regarding financial developments and current financial conditions. In other words, the understanding of financial literacy and employee behavior is almost the same.

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1 Introduction

Basic financial knowledge and skills to manage financial resources effectively for the welfare of their lives are needed by every individual. Individual needs and increasingly complex financial products require people to have adequate financial literacy. Having mastery of knowledge and skills in the field of finance encourages individuals to understand and be involved in national issues in the financial sector such as health care costs, taxes, investment and have access to the financial system. Lack of financial literacy can result in low access to financial institutions and hinder prosperity because according to the prospective member of the Commissioner for the Financial Services Authority, Soetiono, broad access to the financial system or financial system that includes micro-enterprises, the poor, and women, as well as productive households, it can reduce income differences between communities (Kompas, 2012).

As a result of the lack of financial literacy in Indonesia, the community suffers losses, either due to a decline in economic conditions and inflation or due to the development of an economic system that tends to be extravagant because people are increasingly consumptive. Many people use home loans and credit cards, but due to minimal knowledge, not a few suffer losses or there are often differences in calculations between consumers and banks. Many people do not invest or cannot access the capital market and money market because they do not have sufficient knowledge about it. Meanwhile, financial education is still a big challenge in Indonesia. Financial education is a long process that spurs individuals to have financial plans in the future in order to obtain prosperity in accordance with the pattern and lifestyle they live (Bank Indonesia, 2014) (Chen & Volpe, 2002; Chen & Volpe, 1998; Chinen & Endo, 2012; Idris et al., 2013).

Financial difficulties are not only caused by low levels of income but also due to errors in financial management, for that, adequate financial literacy is needed. Financial literacy in the form of all aspects of personal finance is not intended to complicate or restrain people from enjoying life and using the money they have, but rather with financial literacy, individuals or families can enjoy life by using their financial resources appropriately in order to achieve their personal financial goals (Warsono, 2010). There are many things that cause people to become more consumptive and make impulsive purchases without future consideration, such as the increasing number of online shopping, shopping centers everywhere, the ease of the process of having a credit card, lifestyle, competition between employees, and level of education (Aren & Aydemir, 2015; Arora& Chakraborty, 2021; Mouna& Anis,2017; Tang & Baker, 2016). Without having knowledge and skills in the field of finance, the possibility of making mistakes in managing financial resources will be even greater and prosperity will be difficult to achieve. This condition is very complex because most employees face problems such as making monthly debit payments, household needs, unexpected needs or due to wrong personal financial management (absence of budgeting), as well as lifestyles accustomed to consumptive patterns so that they become very wasteful coupled with a lack of knowledge about finance itself (Sadalia, 2012).

Having financial literacy is vital to get a prosperous life. With proper financial management which is certainly supported by good financial literacy, it is hoped that their standard of living can increase, this applies to every income, because no matter how high a person's income level is, without proper management, finances will be difficult to achieve (Awais et al., 2016). Financial knowledge for every employee, especially those who are directly related to the financial sector, should have the ability to manage their finances to produce better investment decisions, for example an employee who works in the banking business.

One of the banking businesses that is centered and growing rapidly in the province of Bali is PT Bank Pembangunan Daerah Bali. At the bank, every employee certainly has the opportunity to get a loan, especially to get a credit facility as an employee. Facility loans are meant here are employee loans with very light interest rates, different from the interest rates given to the public in general. On this occasion, employees flocked to borrow funds in the maximum amount in accordance with existing provisions, it can be said that almost all employees who meet the requirements borrow funds through the credit facilities provided. Of course this is one of the things that affects the financial condition of employees, where in this case if the funds obtained are not managed properly and with careful calculations, it is not uncommon for the funds that have been borrowed to not provide income or results in excess of the costs that have been paid. issued (Tomášková et al., 2011; Grohmann et al., 2018; Jappelli & Padula, 2013; Calcagno & Monticone, 2015).

Literature review and hypotheses development

Financial literacy for individuals is not just a science or theory but is expected to make individuals wiser and smarter in managing their assets so that they can provide useful feedback in supporting individual finances both in the short and long term. (Hisashi & Ratna, 2016), conducted tests on customers of an insurance company in Palembang and found that general knowledge of personal finance affects a person's investment decisions. In line with Hisashi and

Ratna (Sandy, 2016), conducting tests on the people of Greater Malang found that general knowledge of personal finance affects investment decisions. Then Robb & Woodyard (2011), theoretically financial literacy is part of financial knowledge about how financial markets operate and should produce individuals who make decisions more effectively. Janor et al. (2016), found that most of the respondents did not understand basic financial concepts, especially those related to stocks, bonds, mutual funds, and the concept of compound finance. So people often fail to conclude and make decisions. However, it is different from those (Atkinson & Messy, 2013; Tsalitsa & Rachmansyah, 2016; Al Kholilah & Iramani, 2013), who found that general knowledge of personal finance does not partially affect investment decisions.

H1: Financial literacy has a significant positive effect on investment decision behavior.

John et al. (2009), there is a positive relationship between income (income) with responsible financial management behavior. This means that the higher the income, the better and more responsible financial behavior. The results of this study are supported by the behavioral finance perspective theory in financial decision-makers that adaptive means that the nature of the decision and the environment in which it makes an influence the type of process used. The better the sociodemographic condition of a person will affect the type of investment decision-making process that is used in a good direction. Shefrin (2002), found that income had a significant effect on investment needs and decisions.

H2: Income has a significant positive effect on investment decision behavior.

Potrich et al. (2015), tenure is defined as the ability possessed by employees in carrying out banking tasks assigned to them. Having enough long experience, it is hoped that they will have greater abilities than people without experience. People who are experienced in work have better abilities than people who have just entered the world of work because that person has learned from the activities and problems that arise in their work. With work experience, there has been a process of adding knowledge and skills and attitudes to someone, so that they can support themselves in developing themselves with existing changes. Research (2008), says that someone who does not work has a lower level of financial literacy because he has never been involved with financial issues. The same thing was also expressed by Calamato (2010), that working conditions can affect a person's performance, so that they can increase their income and manage their salary well for their interests, as well as Krishna et al., (2010), who found that a person's tenure has a positive effect. and significant to financial behavior.

H3: Years of service have a significant positive effect on investment decision behavior.

2 Materials and Methods

This research was conducted at PT Bank Pembangunan Daerah Bali Renon Branch, with the object of employees being PT Bank Pembangunan Daerah Bali Renon Branch. The consideration of choosing employees at PT Bank Pembangunan Daerah Bali there are several factors 1). PT Bank Pembangunan Daerah Bali is a bank owned by the Bali region where most of the employees are sons and daughters of the Bali region itself, 2) Banking employees should have good financial literacy from non-banking employees, 3) There are credit facilities provided to employees with low interest on condition that which makes it easy for almost all employees to borrow funds 4) The existence of e-Banking facilities so that it is very easy to carry out financial transactions such as making purchases, payments, and transfers of funds in accounts owned online and in real-time (Rita & Kusumawati, 2011; Sugiyono, 2013; Volpe et al., 2006; Tarora & Juwita, 2017).

The population in this study were all employees who were actively working until March 2017 PT Bank Pembangunan Daerah Bali Renon Branch as many as 95 people. The sampling technique used random sampling, all respondents had the same opportunity depending on who they met at the time the research was conducted. By calculating the sample, using the slovin sample calculation, the number of respondents in this study was 76 respondents. The research data were analyzed using the Partial Least Square (PLS) approach with the calculation process assisted by the Smart PLS software application program.

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3 Results and Discussions

Partial least square (PLS) analysis

To analyze the research model, the PLS (Partial Least Square) method is used with the Smart PLS 3.2.3 program as a tool. There are two basic model evaluations in this test, namely the outer model and the inner model. Inner model testing in PLS is done through bootstrap resampling using 79 samples.

Evaluation of measurement model or outer model

1) Discriminant Validity
   Another method to assess discriminant validity is to compare the square root of the average variance extracted ($\sqrt{AVE}$) for each variable with the correlation between the construct and other constructs in the model. The model has sufficient discriminant validity if the square root of the AVE for each variable is greater than the correlation between the construct and other constructs in the model.

Table 1
Discriminant validity results

Variable	AVE	AVE Root	Correlation			
			Financial Literacy (X1)	Income (X2)	Years of Service (X3)	Investment Decision Behavior (Y)
Financial Literacy (X1)	0,638	0,798	1,000			
Income (X2)	1,000	1,000	0,582	1,000		
Years of Service (X3)	1,000	1,000	0,461	0,841	1,000	
Investment Decision Behavior (Y)	0,763	0,873	0,800	0,674	0,551	1,000

Primary Data, 2021

Based on Table 2, it can be seen that the AVE root value of the financial literacy construct (X1) is 0.798, which is greater than the correlation between latent variables and other constructs. The AVE root value of the Income variable (X2) is 1,000 which is greater than the correlation between latent variables and other constructs. The AVE root value for the variable years of service (X3) is 1,000 which is greater than the correlation between latent variables and other constructs. The AVE root value of the investment decision behavior variable (Y) is 0.873, which is greater than the correlation between latent variables and other constructs. Another discriminant validity test is a method by assessing the validity of the variable from the AVE value. The model is said to be good if the AVE of each variable is greater than 0.50. The output results show that the AVE value of all variables is greater than 0.50 so the model can be said to be good (Purwidianti & Mudjiyanti, 2016; Yoong et al., 2012; French & McKillop, 2016; Burhanudin & Tambun, 2021).

2) Convergent validity
   Convergent validity with reflexive indicators can be seen from the correlation between the indicator scores and the construct scores. Individual indicators are considered reliable if they have a correlation value above 0.7. However, at the research stage of the scale development stage, a loading of 0.50 to 0.60 is still acceptable (Ghozali, 2011). The results of the correlation between the dimensions and their constructs can be seen in Table 2.

Table 2
Convergent validity test results

Variable	Dimension	Indicators	Outer Loading
Financial Literacy (X1)	Personal finance	Basic knowledge of personal finance (X1.1)	0,914

	Money management	Money management knowledge (X1.2)	0,908
	Credit and debt management	Knowledge of credit and debt management (X1.3)	0,824
	Savings and investment	Knowledge of saving and investment (X1.4)	0,800
	Financial Risk Management	Knowledge of financial risk management (X1.5)	0,797
Income (X2)	-	-	1,000
Years of Service (X3)	-	-	1,000
Investment Decision Behavior (Y)	Security and risk	Able to take into account security and risk (security in investment means minimal loss)(Y1.1)	0,822
	Risk factors	Able to predict risk factor components (risk factor components related to specific investments change from time to time)(Y1.2)	0,911
	Investment income	Able to predict investment income (income in cash and is definite)(Y1.3)	0,844
		Can understand investment growth (increase in value) (Y1.4)	0,936
		Can analyze liquidity level (high or low) (Y1.5)	0,848

Primary Data, 2022

Based on Table 2 above, the output results have met convergent validity because the loading factor is above 0.7. However, at the research stage of the scale development stage, a loading of 0.50 to 0.60 is still acceptable (Ghozali, 2011). The results of the correlation between the dimensions and their constructs can be seen in Table 2 above. Based on Table 2 above on the construct of financial literacy (X1), the indicator of basic knowledge about personal finance has the highest outer loading value of 0.914. So it can be explained that these indicators can reflect the construct of financial literacy (X1). In the investment, decision behavior construct (Y) the indicator can understand investment growth (increase in value) has the highest outer loading value of 0.936. So it can be explained that these indicators can reflect the behavioral construct of investment decisions (Y).

3) Composite reliability
The construct reliability test was measured by two criteria, namely composite reliability and Cronbach's alpha from the indicator block that measured the construct. The construct is declared reliable if the composite reliability and Cronbach's alpha value are above 0.70. The output results can be seen in Table 3 below.

Table 3
Composite Reliability Test Results

Variable	Composite Reliability	Cronbach Alpha	Information
Financial Literacy (X1)	0,894	0,853	Reliable
Income (X2)	1,000	1,000	Reliable
Years of Service (X3)	1,000	1,000	Reliable
Investment Decision Behavior (Y)	0,941	0,922	Reliable

Primary Data, 2022

Based on Table 3, the output results of composite reliability and Cronbach's alpha on all constructs are above 0.70. Thus, it can be explained that all constructs have good reliability.

Evaluation of structural model or inner model

In this structural model, there is one dependent variable, namely: Investment Decision Behavior (Y). The coefficient of determination (R^2) of the dependent variable can be presented in Table 4 below.

Table 4
Value of R-square dependent variable

Variable	R-Square
Investment Decision Behavior (Y)	0,706

Primary Data, 2022

To measure how well the observed values are generated by the model as well as its parameter estimates, it is necessary to calculate Q-square as follows:

$$Q^2 = 1 - (1 - (R)^2)$$
$$= 1 - (1 - (0{,}706)^2)$$
$$= 0{,}4984$$

Q^2 has a value with a range of $0 < Q^2 < 1$, where the closer to 1 means the better the model. The results of these calculations obtained a value of 0.4984, so it can be concluded that the model has very good predictive relevance ($Q^2 = 0.4984 > 0$).

Hypothesis testing results

This study uses a Partial Least Square (PLS) analysis approach to test and analyze the research hypotheses that have been stated previously. The results of the analysis of the empirical research model using the Partial Least Square (PLS) analysis tool can be seen in Figure 1.

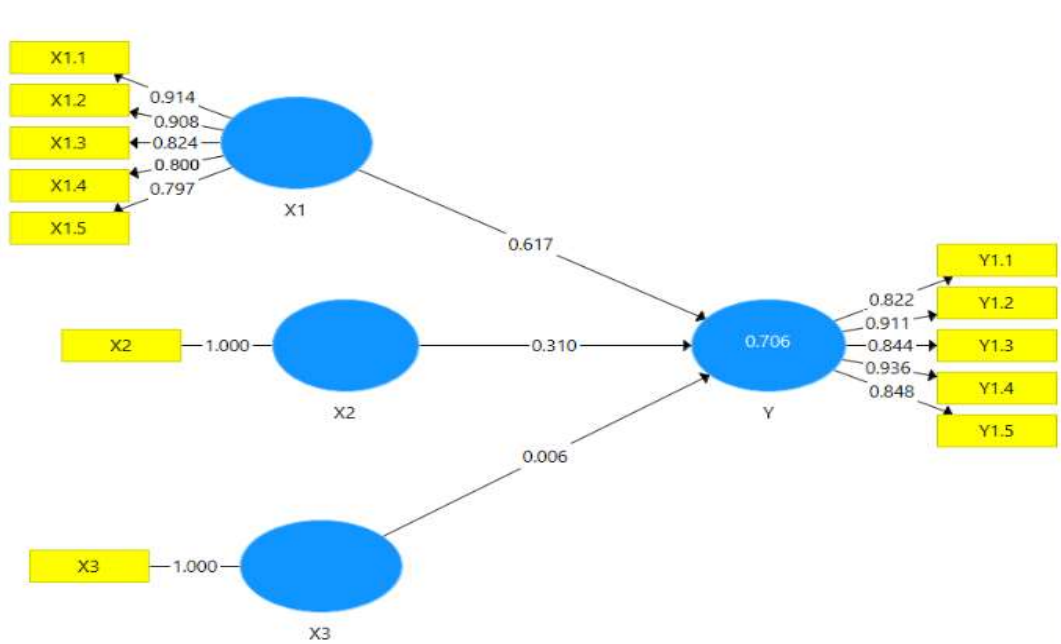

Figure 1. PLS output results

Table 5
Path Coefficients

Construct	Coefficient Correlation	t statistic	p values	Information
Financial literacy (X1) -> investment decision behavior (Y)	0,617	6,091	0,000	Significant
Income (X2) -> investment decision behavior (Y)	0,310	2,062	0,040	Significant
Years of service (X3) -> investment decision behavior (Y)	0,006	0,062	0,950	Not significant

Primary Data, 2022

The effect of financial literacy on investment decisions

The estimation results of the structural model as presented in Table 5 show that hypothesis testing on financial literacy on investment decisions produces a correlation coefficient value of 0.617 with a p-value of 0.000 (p-value < 0.050). This shows that financial literacy has a significant effect on investment decisions. Thus H1 is accepted. This means that the level of financial literacy is important because it allows individuals to make an investment. Individual understanding of the basics of personal finance, knowledge of money management, knowledge of credit and debt management, knowledge of savings and investment, and knowledge of risk management knowing the workings of interest rates, has an influence on individuals to make investments. One of the reasons why individuals do not have the intention to make an investment is the low level of financial literacy they have.

This supports the results of research conducted by (Klapper & Panos, 2011; Lusardi et al., 2010; Monticone, 2010; Mandala & Wiagustini, 2017), which states that financial literacy is a person's ability to make effective decisions related to finance. Financial literacy helps individuals avoid financial problems, especially those that occur due to financial mismanagement. Financial literacy for individuals is not just a science or theory, but is expected to make individuals wiser and smarter in managing their assets so that they can provide useful feedback in supporting individual finances both in the short and long term.

(Hisashi & Ratna, 2016), conducted tests on customers of an insurance company in Palembang and found that general knowledge of personal finance affects a person's investment decisions. In line with Hisashi and Ratna (Sandy, 2016), conducting tests on the people of Greater Malang found that general knowledge of personal finance affects investment decisions. Then Robb & Woodyard (2011), theoretically financial literacy is part of financial knowledge about how financial markets operate and should produce individuals who make decisions more effectively. Janor et al. (2016), found that most of the respondents did not understand basic financial concepts, especially those related to stocks, bonds, mutual funds, and the concept of compound finance. So people often fail to conclude and make decisions.

The effect of income on investment decision behavior

The estimation results of the structural model as presented in Table 5 show that hypothesis testing on income on investment decision behavior produces a coefficient value of 0.310 with a p-value of 0.040 (p-value <0.05). This shows that income has a significant effect on investment decision behavior. Thus H1 is accepted. This means that the better the income, the higher the income, the better and responsible financial behavior. John et al. (2009), stated that there is a positive relationship between income and responsible financial management behavior. This means that the higher the income, the better and more responsible financial behavior. The results of this study are supported by the behavioral finance perspective theory in financial decision-makers that adaptive means that the nature of the decision and the environment in which it makes an affect the type of process used. The better the sociodemographic condition of a person will affect the type of investment decision-making process that is used in a good direction. Shefrin (2002), found that income had a significant effect on investment needs and decisions.

The effect of years of service on investment decision behavior

The estimation results of the structural model as presented in Table 5 show that hypothesis testing during tenure on investment decision behavior results in a coefficient of 0.006 with a p value of 0.950 (p value > 0.05). This shows that tenure has no significant effect on investment decisions. Thus H1 is rejected. This means that there is no influence of a person's years of service with his decision to make an investment. The results of this study are not in line with the results of research conducted in (2008) which said that someone who does not work has a lower level of financial literacy because they have never been involved with financial issues. The same thing was also expressed by Calamato (2010), that working conditions can affect a person's performance, so that they can increase their income and manage their salary well for their interests, as well as Krishna et al., (2010) who found that a person's tenure has a positive effect. and significant to financial behavior. This is because in the banking industry, all employees, both those who have just entered the workforce or those who have worked together for a long time, receive training and obtain information regarding financial developments and current financial conditions. In other words, new employees have almost the same understanding as employees who have worked for a long time. So that tenure does not have a significant effect on investment decision behavior (Margaretha & Pambudhi, 2014; Hilgert et al., 2003; Ida & Dwinta, 2010; Rengganis et al., 2019).

4 Conclusion

Based on PLS analysis which shows that financial literacy has the greatest effect in determining individual investment decision behavior compared to income and years of service variables. This explains that a person's knowledge about managing his personal finances is a major factor in determining an investment decision. Information and socialization are sources of financial management knowledge. The importance of is a big task for financial institutions to the community, especially people who already have a fixed income in the form of a monthly salary. High financial literacy is useful in order to avoid financial difficulties, for example, doing financial planning. Someone who has financial planning is an important thing. The funds set aside can be used as a reserve fund which can be used at any time in an emergency or to invest. Knowledge of personal financial management is important when you are of a productive age so that later you can always meet the needs of life.

Research limitations

This study only uses respondents from employees who work at the bank, so it is important for future research to complement and enrich empirical studies related to the topic by using other respondents, it is recommended such as adolescent respondents because financial literacy and investment behavior are important to have at the earliest possible age. In future research, it is also hoped that researchers will be able to provide information about differences in individual investment decision behavior based on the type of work such as civil servants or private.

Conflict of interest statement
The authors declared that they have no competing interests.

Statement of authorship
The authors have a responsibility for the conception and design of the study. The authors have approved the final article.

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