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The Influence of Financial Literacy and Financial Technology on Financial Inclusion Among Muhammadiyah Palopo University Students

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Abstract

Low financial knowledge and ability to manage finances will have an impact on low levels of demand for financial products and services. This research aims to determine the influence of financial literacy and financial technology on financial inclusion among Muhammadiyah Palopo University students. The data used in this research is primary data which was distributed to 242 Muhammadiyah Palopo University students via Google form. Data analysis used multiple linear regression analysis with the help of the SPSS program. The research results show that financial literacy has a positive and significant effect on financial inclusion and financial technology has a positive and significant effect on financial inclusion. Financial literacy and financial technology simultaneously or together influence financial inclusion.

Keywords: Financial Literacy; Financial Technology; Financial Inclusion.

1. Introduction

In the current global economic era, it is important for every individual to know how to manage their finances very well. With the SNKI (National Strategy for Inclusive Finance) program, it is hoped that the public and especially student can easily find out about various services from financial institutions [1]. Low understanding of financial products can lead to low demand for financial products and services which can prevent the growth of financial inclusion [2]. Several factors that can influence financial inclusion are financial literacy, demographics, financial technology and social capital [3].

The results of the National Survey of Financial Literacy and Inclusion (SNLIK) conducted by the Financial Services Authority (OJK) in 2022 show that the financial literacy index of Indonesian society is 49.68 percent, an increase compared to 2019 which was only 38.03 percent. Meanwhile, the financial inclusion index in 2022 reached 85.10 percent, an increase compared to the SNLIK period from the previous year in 2019, namely 76.19 percent. This shows that the gap between the level of financial literacy and the level of financial inclusion is decreasing from 38.16 percent in 2019 to 35.42 percent in 2022 [4].

Financial inclusion is something that is very important to do in all countries except in Indonesia. Financial inclusion is an effort to provide easy access and eliminate obstacles in using and utilizing services at formal financial institutions for all groups of society, especially groups of society who have limited access to formal financial services [5]. Every individual has the right to be able to access all quality formal financial services anytime and anywhere by utilizing available facilities and financial inclusion, a situation where people have access to a variety of quality financial services, provided on time and at affordable costs according to their needs and needs. the abilities of each individual [6]. To be able to achieve good financial inclusion, individuals need to go through a process of making decisions to be able to use existing resources [2]

Currently, the Indonesian government continues to encourage increased financial literacy and financial inclusion in order to achieve the financial inclusion index target of 90 percent by 2024. Thus, the role of financial services is urgently needed to be maximized in order to increase access for people who have not had access to financial literacy [1].

Financial literacy is an individual's ability to make decisions in arranging their personal finances [7]. Financial literacy can provide financial understanding that is fulfilling and adequate for society and can be useful for getting to know various types of financial service institutions and how to utilize various financial products and services that suit the needs of individuals who use financial services [8].

With the current rapid development of technology, everything has become easier. The effects of technological developments create new innovations for the financial services industry, especially the banking sector [1]. Along with the development of people's lifestyles, financial technology or what is called fintech emerged, which is currently dominated by information technology users and makes life's demands very fast. In this way, fintech can help transactions related to loans, buying and selling transactions and payments become more effective [9]. One of the benefits of using financial technology is that it can optimize banking services to consumers and simplify payment transaction methods [10]. The use of financial technology is considered easier because just by using a gadget you can access and pay attention to finances both in terms of use and information, this is in accordance with the principles of financial literacy when making financial decisions [11]. In Indonesia, various types of fintech payments have developed rapidly, whether issued by financial institutions or issued by fintech startups [12].

Several studies have examined the influence of financial literacy on financial inclusion. According to research [13], [14] shows that financial literacy has a positive and significant effect on financial inclusion. And previous research on financial technology on financial inclusion, according to [15], [16] shows that financial technology has a significant positive effect on financial inclusion.

Based on the background described above, this research aims to determine the influence of financial literacy and financial technology on financial inclusion among Muhammadiyah University Palopo students

2. Methodology

The type of research used in this research is quantitative research that uses primary data, namely data obtained directly. This research consists of the independent variables Financial Literacy (X_1), Financial Technology (X_2) which influence the dependent variable Financial Inclusion (Y). The population in this study were 612 semester 5 Muhammadiyah Palopo University students consisting of four faculties. The sampling technique in this research was proportional stratified sampling. In this study the sample size was determined using the Slovin formula:

$$n = \frac{N}{1 + Ne^2}$$
$$= \frac{612}{1 + 612\,(0.05)^2}$$
$$= 241.89 \text{ rounded to } 242$$

Based on these calculations, the number of samples in this study was 242 respondents.

Table 1. Number of Samples for each faculty

No.	Name of Faculty	Population	Proportional Stratified Sampling	Amount
1.	Faculty of Economics and Business	336	336/612*242	133
2.	Faculty of Teacher Training and Education	190	190/612*242	75
3.	Faculty of Health Sciences	74	74/612*242	29
4.	Faculty of Computer, Engineering, Agriculture and Maritime Affairs	12	12/612*242	5
	Number of Samples			242

Source: Processed Data (2023)

Data collection was carried out using a questionnaire distributed using Google Form to students at the Muhammadiyah University of Palopo semester 5 with a Likert scale of 1-5, consisting of strongly agree = 5, agree = 4, neutral = 3, disagree = 2, and strongly disagree = 1. The collected data was then analyzed using the help of the SPSS program. Data analysis in this research uses Validity Test, Reliability Test, Multiple Linear Regression Analysis T Test, F Test, and Coefficient of Determination Test. The following is the multiple linear regression equation:

$$\boldsymbol{Y = a + b1\,X_1 + b2X_2 + e}$$

Information:

Y = Financial Inclusion (Dependent variable)

a = Constant

b1, b2 = Regression coefficient of each independent variable

X_1 = Financial Literacy Variable

X_2 = Financial Technology Variable

e = Standard error

3. Result and Discussion

3.1. Result

Validity Test

Validity test is a test used to measure whether the questionnaire used is valid or not. If r count > r table then the questionnaire is declared valid. Following are the results of the validity test:

Table 2. Validity Test

No.	Variable	Item	r count	r table	Description
1.	Financial Literacy	X1.1	0.592	0.126	Valid
		X1.2	0.590	0.126	Valid
		X1.3	0.658	0.126	Valid
		X1.4	0.549	0.126	Valid
		X1.5	0.631	0.126	Valid
		X1.6	0.534	0.126	Valid
		X1.7	0.676	0.126	Valid
		X1.8	0.631	0.126	Valid
2.	Financial Technology	X2.1	0.631	0.126	Valid
		X2.2	0.622	0.126	Valid
		X2.3	0.590	0.126	Valid
		X2.4	0.589	0.126	Valid
		X2.5	0.484	0.126	Valid
		X2.6	0.611	0.126	Valid
		X2.7	0.603	0.126	Valid
		X2.8	0.617	0.126	Valid
3.	Financial Inclusion	Y.1	0.614	0.126	Valid
		Y.2	0.618	0.126	Valid
		Y.3	0.602	0.126	Valid
		Y.4	0.461	0.126	Valid
		Y.5	0.523	0.126	Valid
		Y.6	0.637	0.126	Valid
		Y.7	0.692	0.126	Valid
		Y.8	0.657	0.126	Valid

Source: Data processed by SPSS (2023)

Based on the results of table 2 above, it shows that all statement items for the variables Financial Literacy, Financial Technology, and Financial Inclusion are declared valid because r calculated > r table 0.126.

Reliability Test

The aim of the reliability test is to find out whether the instrument can be used to collect data. If Cronbach' Alpha > 0.60 then the instrument is considered reliable. Following are the results of the reliability test:

Table 3. Reliability Test Results

No.	Variable	Number of Items	Cronbach's Alpha	Description
1.	Financial Literacy	8	0.755	Reliabel
2.	Financial Technology	8	0.738	Reliabel
3.	Financial Inclusion	8	0.749	Reliabel

Source: Primary Data processed by SPSS (2023)

Based on table 3 above, it shows that the Cronbach's alpha of the Financial Literacy variable is 0.755, the Financial Technology variable is 0.738, and the Financial Inclusion variable is 0.749. So, it can be concluded that all variables in this study are declared reliable because the Cronbach's Alpha value is > 0.60.

Multiple Linear Regression Analysis

Multiple linear regression analysis aims to determine the influence of the independent variables, namely financial literacy and financial technology, on the dependent variable, namely financial inclusion. The following are the results of multiple linear regression analysis:

Table 4. Results of Multiple Linear Regression Analysis

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	T	Sig.
1	(Constant)	8.652	1.676		5.163	.000
	Financial Literacy	.131	.063	.138	2.066	.040
	Financial Technology	.597	.069	.583	8.709	.000

Source: SPSS processed results (2023)

Based on the results of table 4 above, the multiple linear regression equation can be written as follows:

$Y = 8.652 + 0.131X_1 + 0.597X_2$

Based on the multiple regression equation above, it can be stated as follows:

1. A constant value of 8.652 means that the value of the financial inclusion variable will be 8.652 with the assumption that the financial literacy and financial technology variables are zero.
2. The value of the financial literacy variable (X_1) is 0.131 which is positive, meaning that every time the financial literacy variable (X_1) experiences an increase of one unit, the financial inclusion variable will experience an increase of 0.131 units, assuming that the other independent variables remain constant.
3. The value of the financial technology variable (X_2) is 0.597 which has a positive value, meaning that every financial technology variable experiences an increase of one unit, the financial inclusion variable will experience an increase of 0.597 units assuming that the other independent variables remain constant.

T Test

The t test or partial test is used to determine the effect of independent variables partially or individually on the dependent variable. The basis for decision making is that if the calculated t value > t table or the significance value < 0.05 then the independent variable has an effect on the dependent variable. Following are the results of the t test:

Table. 5 T Test Results

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	T	Sig.
1	(Constant)	8.652	1.676		5.163	.000
	Financial Literacy	.131	.063	.138	2.066	.040
	Financial Technology	.597	.069	.583	8.709	.000

Source: Data processed by SPSS (2023)

Based on the results of table 5 above, it shows that the Financial Literacy variable obtained t count 2.066 > t table 1.970 and the sig value < α (0.040 < 0.05), then the Financial Literacy variable has a significant effect on Financial Inclusion. Meanwhile, the financial technology variable obtained a calculated t value of 8,709 > t table 1,970 and a sig value < α (0.000 < 0.05), so the financial technology variable has a significant effect on financial inclusion.

F Test

The F test or simultaneous test is a test used to find out whether the independent variables simultaneously influence the dependent variable. The basis for decision making is that if the calculated f value > f table or the significance value < 0.05 then the independent variable has a joint or simultaneous influence on the dependent variable. Following are the results of the f test:

Table 6. F Test Results

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1175.496	2	587.748	107.780	.000[b]
	Residual	1303.318	239	5.453		
	Total	2478.814	241			

Source: Data processed by SPSS (2023)

Based on the results of table 6 above, it is known that the calculated f value > f table is 107.780 > 3.03 or a significance value of 0.000 < 0.05. This means that the variables Financial Literacy and Financial Technology simultaneously or together have a significant effect on the Financial Inclusion variable.

Coefficient of Determination R

The coefficient of determination test is used to assess how well the independent variable explains the dependent variable. The coefficient of determination values for the two independent variables are as follows:

Table 7. Coefficient of Determination Results

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.689[a]	.474	.470	2.335

Source: Data processed by SPSS (2023)

Based on the results from table 7 above, the Adjusted R Square value is 0.470. This means that the variables Financial Literacy and Financial Technology have an influence on Financial Inclusion, namely 47%. Meanwhile, the remaining 53% is influenced by variables other than those in this research.

3.2. Discussion

The Influence of Financial Literacy on Financial Inclusion

Based on the research results above, it was obtained that t count was 2.066 > t table 1.970 and the significance value was 0.040 < 0.05, so it could be concluded that the financial literacy variable had a positive and significant effect on financial inclusion or H1 was accepted.

Based on the research results, it shows that the financial literacy variable consists of several indicators, namely knowledge about finance, skills, attitudes and behavior which have a positive and significant effect on financial inclusion. Which means that the better the students' financial literacy, the better the financial inclusion of Palopo Muhammadiyah University students will be. In other words, students have a high understanding that financial knowledge and skills are very important both now and, in the future, so that they are able to utilize financial products and services wisely and are able to make the right decisions. And by understanding financial knowledge, skills, attitudes and behavior, students will be better at dealing with finances in using financial products and services, and students can choose and utilize financial services products that suit their needs and can avoid unclear investments.

According to [3] which states that the knowledge, confidence and skills of the community, especially students, in making decisions to manage their finances well regarding financial products and services from financial institutions will be able to increase if access from financial institutions is very easy to find. . People or students with good financial knowledge and skills in using it, supported by the availability of easy access, will increase the use of financial products and services from financial institutions. The results of this research are in line with several studies that have examined the influence of financial literacy on financial inclusion. According to research [13], and [14] shows that financial literacy has a positive and significant effect on financial inclusion.

The Influence of Financial Technology on Financial Inclusion

The results of the research above obtained t count 8.709 > t table 1.970 and a significance value of 0.000 < 0.05, so it can be concluded that the financial technology variable has a positive and significant effect on financial inclusion or H2 is accepted.

Based on the research results, it shows that the financial technology variable has a positive and significant effect on financial inclusion. Which means that the more students utilize financial technology, the more financial inclusion will increase among Muhammadiyah University Palopo students. With the development of innovation from financial technology, financial inclusion can increase because many students can take advantage of digital-based financial services, making financial transactions easier and making access easier to reach.

According to [17] who stated that fintech is a financial service system and technology so that fintech can facilitate access for the public or students to utilize financial products and services from financial institutions. With the presence of fintech, it will be very easy for people and students to access or use financial products and services, thus increasing users of financial products and services from financial institutions. The results of this research are in line with several studies that have examined the influence of financial technology on financial inclusion. According to [15] and [16] it shows that financial technology has a positive and significant effect on financial inclusion.

The Influence of Financial Literacy and Financial Technology on Financial Inclusion

Based on the research results above, the influence of financial literacy and financial technology on financial inclusion shows that the calculated f value > f table is 107.780 > 3.03 or a significance value of 0.000 < 0.05, so it can be concluded that financial literacy and financial technology have a significant effect on financial inclusion. or H3 is accepted.

With these results, the greater the increase in financial literacy and financial technology, the higher the level of financial inclusion for Palopo Muhammadiyah University students. This means that the development of financial technology systems and students' financial knowledge in understanding and utilizing financial products and services will further increase financial inclusion among Muhammmadiyah University Palopo students.

According to [18] who stated that knowledge of finance and fintech will make it very easy to access or utilize financial products and services and will be very useful in the future in managing finances. People or students who understand fintech and have good financial knowledge will increase their use of financial products and services because the availability of access to financial products and services is very easy to find and they are skilled in using them. This is in line with research that has examined the influence of financial literacy and financial technology on financial inclusion. According to [13], it shows that financial literacy and financial technology have a significant effect on financial inclusion.

4. Conclusion

Based on data analysis and discussion, it can be concluded that financial literacy has a positive and significant effect on financial inclusion, so that students' financial knowledge, attitudes and behavior are getting better in increasing financial inclusion. And financial technology has a positive and significant effect on financial inclusion, meaning that more students utilize financial technology, financial inclusion can increase. Based on the results of the F test, financial literacy and financial technology simultaneously have a significant effect on financial inclusion.

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