# ANALYSIS OF THE EFFECT OF FINANCIAL INCLUSION AND LITERATURE INTENSITY ON FINANCIAL TECHNOLOGY (STUDY ON STUDENTS IN MALANG CITY)

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#### **ABSTRACT**

In today's modern era, technology is not foreign to the people of Indonesia. Almost all Indonesian people use information technology, especially in internet services. Fintech is one method of service in the financial sector that is popular in the digital era. This sector is a factor that the government and the community highly expect to increase access to financial services. This study uses a partial least square (SEM-PLS) structure equation analysis with a tool like SmartPls software. Data from questionnaires distributed to students who use fintech services in Malang city are the supporting data in this study. The results of this study show that financial literacy has a positive and significant effect on financial technology in Malang City Students. The original sample value is 0.028, and the t-statistic value is 13.613, indicating that financial literacy has a positive and significant effect on financial technology. At the same time, The statistical t value is greater than the t table value, which is 1.96. then the original sample value is 0.832, and the t-statistic value is 0.454 in this study, indicating that financial inclusion has a positive and insignificant effect on financial technology for Malang City Students. In addition, are knew that the t-statistic value is smaller than the t-table value of 1.96.

Keywords: Financial Literacy, Financial Inclusion, Financial Technology, Sharia banking.

#### INTRODUCTION

The introduction explains the main points discussed as the background of the research/problem, which contains the research problem, objectives, and a summary of relevant theoretical studies.

In today's modern era, technology is not foreign to the people of Indonesia. Almost all Indonesian people use information technology, especially in internet services. According to Bank Indonesia regulation No., 19/12/PBI/2017 concerning financial technology, developments, and information systems continue to issue innovations, especially in the field of technology, to fulfill all public needs for financial services. Various kinds of digital applications as payment instruments show the financial sector's development in this digital economy era (Puslitbang Aptika and IKP 2019).

Fintech is one method of service in the financial sector that is popular in the digital era. Digital payments are one of the most developed fintech sectors in Indonesia. This sector is a factor that the government and the community highly expect to increase access to financial services. The beginning emergence of Fintech was from credit card innovation, credit cards, and terminals that provide cash, such as automated teller machines (ATMs) (Arner et al., 2015; FSB, 2017b). After that, following the

emergence of phone banking with various financial products, the deregulation of the capital market and bonds can increase access to financial services. Then, internet banking emerged, encouraging branchless banking and remote banking activities carried out by banks. In addition, cellular device technology (mobile) has emerged that can make financial transactions easier. These changes have led to direct financing and intermediation, predicted to replace expensive and inefficient indirect financing and financial intermediation (FSB, 2017b) (Dewi, 2020).

Increasing financial inclusion in Indonesia with satisfactory results cannot ensure the welfare of the people equally. For example, of the 34 provinces in Indonesia, 18 have a level of financial inclusion below the national average. In this case, it means more than half of Indonesia's provinces still need a good level of financial inclusion (Sari & Kautsar, 2020). Furthermore, based on data from the Financial Services Authority in 2017 shows that the preferences for financial products and services owned by the Indonesian people, which spread across 34 provinces, are different. Therefore, developing countries such as Indonesia include countries that have yet to evenly distribute information technology infrastructure in all regions, such as telecommunication and internet access. However, urban communities can only feel most of this access (Puslitbang Aptika and IKP, 2019).

Penetration in banking services is relatively low, and people cannot identify financial products and obtain financial facilities (Warez, 2019). According to the Financial Services Authority (2017) that one of the influencing factors in economic development is the quality of human resources. The context referred to in this economic development is the quality of human resources that must be continuously improved, including strengthening their competencies related to financial literacy. Therefore, it has become a necessity in people's daily lives to have financial literacy knowledge.

Financial literacy is an essential requirement for behavior related to money. A prosperous life can be seen based on someone with financial literacy, and with proper financial management, everyone can avoid financial problems. Chen and Volpe (1998) there are four aspects of financial literacy. The first is general knowledge related to personal finance, which includes understanding basic personal finance, savings, and loans. Besides that, this section contains how to use a credit card related to savings and loans. There are three basic knowledge about insurance and insurance products such as vehicle insurance and life insurance, and finally, an investment which includes several sections, namely knowledge about market interest rates, mutual funds, and investment risk

Hamdani (2018), in his journal, stated the low level of financial literacy among the community, including students. There is empirical evidence, as stated by Chen and Vilpe (1998), that the low financial literacy of students occurs due to the lack of personal finance education at the University, where students are one of the groups that are very vulnerable to consumptive behavior. This study happens because of the patterns someone has consumed forming at the age of students. It is also often the case that advertisements easily seduce students, are unrealistic, follow friends, and tend to waste money (Jumiati, 2009).

According to Ansong (2012), economics and business students have better finance knowledge than other majors. Then Robb and Share (2009), in their research, also suggested that 6520 students at Midwestern University found that financial knowledge had a significant relationship with behavior in using a credit card.

Research conducted by Fitriana et al. (2019) suggested the importance of financial education for women entrepreneurs in rural areas and the expansion of the internet and digital finance. In addition, Lasmini and Zulvia (2021) research states that financial inclusion has a positive and significant relationship with financial technology.

#### **METHOD**

Sources and types of data in this study using primary data and secondary data. Primary data is data obtained from students using financial technology services. Secondary data is data obtained from research related to the scope of the material, namely books, journals, articles, and so on.

The measuring instrument used in this research is using a Likert scale. The purpose is to determine the respondents' level of agreement on statements related to the research object. The population of this study is students who use financial technology services. Then the characteristics used in sampling are 1) Students with fintech services as a transaction tool, 2) Domiciled in Malang City 3) Minimum age of 18-25 years.

This study used a partial least square (SEM-PLS) structure equation analysis using a SmartPls software tool (Misissaifi & Sriyana, 2021).

### **RESULTS AND DISCUSSION**

This study uses a questionnaire filled out by students in Malang City with the characteristics of the respondents, including gender and age, to strengthen and complete the research.

Respondents in this study are students who have internet banking and at least have become customers of a bank. The general description of the respondents in this study is as follows:

1. Characteristics of respondents by gender

This study uses gender as one of the characteristics of the respondents in this study. The following are the results of gender characteristics in the following table:

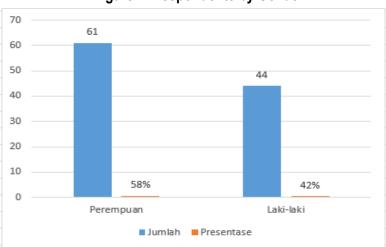


Figure 1. Respondents by Gender

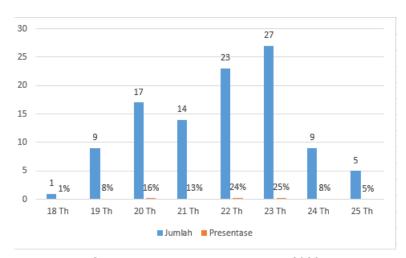
Source: Data processed by excel, 2022

Based on Figure 1, there are more female respondents than male respondents. This result can be seen from the number of respondents, amounting to 61 respondents from a total of 105 respondents or 58%. In contrast, male respondents comprised 44 of 105 respondents or 42%.

2. Characteristics of Respondents by Age

This study uses age as one of the characteristics of the respondents in this study. The following are the results of age characteristics in the following table:

Figure 2. Respondents by Age

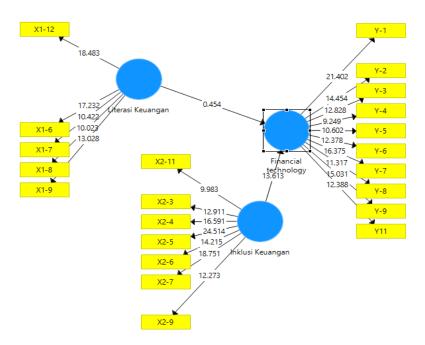


Source: Data processed by excel, 2022

Based on diagram 4.2 showing that the most significant number of respondents, namely those aged 23 years, was 27 respondents or 25%. Then respondents aged 22 years were 23 respondents or 24%, while respondents aged 20 years were 17 respondents or 16%.

### **Measurement Model (Outher Model)**

This study's measurement model (outher louding) shows that several variables do not meet the requirements for a loading factor of more than 0.7. Latent variables that do not meet the conditions, then some of the existing data is deleted. So researchers do data processing for the second, as follows:



#### 1. Convergent Validity

Convergent validity is one of the tests used to determine whether the measured questionnaire is genuinely valid. It is valid if an indicator has a loading factor value > 0.7. The value listed on the loading factor shows the statement value of each indicator. The following is the value of Convergent Validity that has been deleted on variables that do not meet the requirements by using SmartPLS 3.0.

### Value of Convergent Validity Average Variance Extracted (AVE)

Table 1.
Convergent Validity Value (Loading Factor)

Variable	Items	Loading factor	Information
Financial Literacy	X1-6	0.797	Valid
	X1-7	0.762	Valid
	X1-8	0.738	Valid
	X1-9	0.776	Valid
	X1-12	0.748	Valid
	X2-3	0.786	Valid
	X2-4	0.819	Valid
	X2-5	0.884	Valid
Financial Inclusion	X2-6	0.749	Valid
inclusion	X2-7	0.858	Valid
	X2-9	0.782	Valid
	X2-11	0.770	Valid
	Y-1	0.854	Valid
	Y-2	0.816	Valid
	Y-3	0.797	Valid
Financial Technology	Y-4	0.726	Valid
	Y-5	0.703	Valid
	Y-6	0.785	Valid
	Y-7	0.805	Valid
	Y-8	0.725	Valid
	Y-9	0.801	Valid
	Y-11	0.742	Valid

Source: Data processed with SmartPLS, 2022

The results of the AVE value of each variable, namely financial literacy, financial inclusion, and financial technology, show that the AVE value is more significant than 0.5. Hence, these results conclude that these variables have good discriminant validity.

### 2. Reliability

Testing the reliability of a variable construct can be seen by looking at the composite reliability and Cronbach alpha values. A variable is said to be reliable when the composite reliability and Cronbach alpha values are > 0.7. The following is the value of composite reliability and Cronbach alpha

Table 2. Croanbach's Alpha Value

Variable	AVE	Information	
Financial Literacy	0.584	Valid	
Financial Inclusion	0.653	Valid	
Financial Technology	0.603	Valid	

Source: Data processed with SmartPLS, 2022

Table 3. Composite Reliability

	Cronbach's Alpha Composite Reliability		Information		
Financial Literacy	0.826	0.875	Reliable		
Financial Inclusion 0.911		0.929	Reliable		
Financial technology	0.927	0.938	Reliable		

The test results show that the composite reliability and Cronbach alpha values are above 0.70, so the variables in this study have good composite reliability.

#### Structural Model (Inner Model)

To see the relationship between constructs simultaneously, the researcher conducted a statistical test of the research model. Then to see this relationship by testing the R-square on the dependent variable. For example, the following results from R - square using PLS.

Tabel 4.
R Square Test Result

	R Square
Financial Technology	0.724

Source: Data processed with SmartPLS, 2022

Based on the test results, the R- square value on the financial technology variable is 0.724. This result means that the financial technology variable can simultaneously explain financial literacy and the intensity of financial inclusion as an independent variable by 72%, and the remaining variables not examined in this research model are equal to 28%.

### **Hypothesis Testing Results**

Hypothesis	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics ( O/STDEV )	P Values
Financial Literacy -> Financial technology	0.028	0.032	0.062	13.613	0.000
Financial Inclusion -> Financial technology	0.832	0.825	0.061	0.454	0.650

Source: Data processed with SmartPLS, 2022

## 1. Financial Literacy Affects Financial Technology

In this hypothesis, the original sample value is 0.028, and the t-statistic value is 13.613. The value of the t statistic is greater than the value of the t table, which is 1.96. The results of this study indicate that financial literacy has a positive and significant effect on financial technology. So the first hypothesis (H1) states that financial literacy has a significant influence on financial technology is accepted.

Financial literacy is a financial skill and the overall insight that a person has in order to be able to manage his finances (Asandimitra & Kautsar, 2020). Several theories support it. Based on research conducted by Wilman et al. (2021), fintech activities, namely transactions and information, are insignificant to the financial literacy of business owners. However, the research of Pulungan & Ndruru (2019), Hutarabat (2018), and Bongomin et al. (2016) found positive and significant results where financial literacy influences financial inclusion, so that with good financial literacy, the application of financial products and services can be better as well.

#### 2. Financial Inclusion Affects Customer Satisfaction

In this hypothesis, the original sample value is 0.832, and the t statistic is 0.454. The statistical t value is smaller than the t table value, 1.96. This result shows that financial inclusion has a positive and insignificant effect on financial technology. So the second hypothesis (H2) states that the intensity of financial inclusion influences financial technology, is rejected.

The expectation is that with the availability of fintech, people who cannot reach financial services effectively to encourage inclusive financial growth can take advantage of it (Hutabarat, 2018). The results of this study explain that a higher number of students using financial services, which are digital-based, can support the achievement of financial inclusion implementation in Indonesia. Furthermore, several research results show that the development of the financial sector can encourage economic growth in two ways (Tiwari et al., 2013).

### **CONCLUSION**

The results of this study indicate that financial literacy has a positive and significant effect on financial technology. This result means that if a person can manage finances well, it will affect his behavior in utilizing financial technology.

Then This result shows that financial inclusion has a positive and insignificant effect on financial technology. Meaning that if a person can access and utilize financial products or services properly, it will influence his behavior in utilizing financial technology

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