

THE INFLUENCE OF FINANCIAL LITERACY, FINANCIAL TECHNOLOGY AND GENDER TO FINANCIAL INCLUSION ON KEDIRI CITY, EAST JAVA SOCIETY

Subagyo^{1*}, Gesty Ernestivita², Adisty Riska Hardianti³

¹ Faculty of Economic and Business, Universitas Nusantara PGRI, Kediri, Indonesia

² Faculty of Economic and Business, Universitas Janabadra, Yogyakarta, Indonesia

³ Faculty of Economic and Business, Universitas Nusantara PGRI, Kediri, Indonesia

*Corresponding Author: subagyo@unpkediri.ac.id

Abstract: Financial inclusion is one of the interesting discussions in global economic development. Indonesia is a country in ASEAN that has had the most rapid increase in financial inclusion in recent years. In the era of the Industrial Revolution 4.0, everyone is required to be able to follow the development of existing technology and information. This study aims to determine the influence of independent variables (financial literacy, financial technology, gender) on the dependent variable (financial inclusion) in the City of Kediri, East Java society.. This study is a causality study with quota sampling. The data of this study is quantitative by collecting data by questionnaire. The data analysis technique used is multiple linear regression. The result of this study based on t statistical tests shows that financial literacy has a positive effect on financial inclusion. While the variables of financial technology, and gender did not affect financial inclusion. Based on the statistical test F, all of the independent variables simultaneously influence the dependent variable (financial inclusion).

Keywords: Gender, Financial Inclusion; Financial Literacy; Financial Technology

1. Introduction

Financial inclusion has become a global concern since the economic crisis occurred in the United States in 2008. Indonesia felt the impact of the crisis by experiencing a decline in economic growth of 1.38% from 2008-2009 (Hertati et al., 2020). Data from the Global Financial Inclusion Database in 2011 shows that one of the developing countries in the world, including Indonesia, has a fairly low level of financial inclusion, namely 19.6% (Tambunan, 2019). Several efforts were made by the government in 2012 through the National Strategy for Financial Inclusion (SNKI). To improve the welfare of its people, Indonesia's financial inclusion level managed to increase to reach 67.8%.

The satisfactory increase in financial inclusion in Indonesia does not guarantee that the welfare of its people is equal. This is shown by survey data conducted by OJK, as many as 18 provinces out of 34 provinces in Indonesia have a level of financial inclusion below the national average. This means that more than half of the provinces in Indonesia do not have a good level of financial inclusion (Shrestha & Nursamsu, 2021).

East Java Province is one of the provinces with a level of financial inclusion that exceeds the national average of 73.2%. East Java Province also has a high economic growth rate of 5.52% and this figure even exceeds the national growth rate in 2019 which only reached 5.02% (Wulandari, 2019). However, this condition is inversely proportional to BPS data which shows that the province that occupies the first position with the highest number of people in the poor

category in Indonesia is East Java Province, with a total of 4.11 million people. (Hilmawati & Kusumaningtias, 2021). These differences in conditions show that people in East Java Province are still unequal in terms of financial welfare.

The city of Surabaya, which is the capital of East Java Province, is an area that serves as the main trade gateway in the Eastern Indonesia region. Acting as the second largest Metropolitan City in Indonesia, the City of Surabaya positions itself as the center of trade, services, and industry with the fastest economic growth in East Java. This is supported by data from BPS, that the city of Surabaya experienced economic growth of 6.13% so this achievement exceeded provincial and national economic growth. (Mauliddah, 2020). However, despite its infrastructure progress and economic growth, the city of Surabaya has the lowest level of financial inclusion in East Java. The average financial inclusion in East Java Province reaches 0.8, but the city of Surabaya only has a financial inclusion rate of 0.6 and the highest is the city of Mojokerto, namely 0.9 (Ningrum et al., 2018). Financial inclusion is defined as a condition when financial products and services can be accessed, used, and utilized at affordable prices, good quality, and availability and can be provided to everyone to improve their welfare. (Yanti, 2019). With optimal financial inclusion, it is hoped that it will be able to realize accelerated economic growth, and sustainable development, and improve community welfare evenly (Lukonga, 2018).

The first variable to be studied is financial literacy. Financial literacy is defined as a form of an individual's ability to know and understand financial perceptions and risks, skills, and self-confidence to be able to make the right decisions to advance their financial well-being (Ali et al., 2018). If someone understands financial knowledge, they will be interested in utilizing the various types of financial products and services available more effectively (Handayani et al., 2022).

The second variable to be studied is financial technology. Financial Technology is defined as a form of combining all technology sectors in the financial sector which is used to facilitate buying and selling activities and business activities in the form of services for its users. (Al-Mudimigh & Anshari, 2020). The availability of sophisticated financial features and services makes it easy for the public to utilize them (Leong & Sung, 2018).

The third variable to be studied is gender. Gender is defined as biological differences, universally applicable and unchangeable, which are divided into two types, namely men and women. The fourth variable to be studied is age. Age is defined as a measure that describes the length of a person's life span which is calculated from the time of birth until the birthday. As a person gets older, they will have a level of maturity to think well in managing their finances.

The fifth variable to be studied is income. Income is the amount of income or salary received by someone for their work or business. If a person's income is high, it will encourage a person to manage their finances effectively with the available financial products and services. The sixth variable to be studied is education level. Education level is defined as a stage of continuous education that a person has taken. The higher a person's level of education, the better their ability to manage their finances to be able to use existing financial products and services.

This research is still feasible because it combines behavioral variables with individual characteristic variables to measure their influence on financial inclusion variables, which is not done by many other studies. Apart from that, there are still gaps in the results of previous research. This research was conducted to analyze the influence of financial literacy, financial technology, gender, age, income, and a person's education level on financial inclusion. So, if this research was carried out at a different time and a group of people in a different area, it would be possible to get different results.

2. Literature Review

Financial Inclusion

Financial inclusion is a condition where all people can access financial products and services (Sanderson et al., 2018). Financial inclusion is a process of ensuring access to adequate financial and credit services at affordable costs. Financial inclusion is measured using the Guttman scale for formal account and formal credit indicators and the Likert scale for formal savings indicators (Sanderson et al., 2018). The Guttman scale used has a score of 1 for the answer "Yes", and a score of 0 for the answer "No". The Likert scale used has a score range of 1 to 4 with an answer range of "never" to "very often". Statements related to financial inclusion include account ownership and the intensity of account use in daily activities.

Financial Literacy

Financial literacy is a combination of knowledge, skills, and attitudes regarding financial management (Goyal & Kumar, 2021). Financial literacy is defined as financial skills and self-confidence to be able to make the right decisions. Measurement of financial literacy uses indicators from Chen & Volpe (1998) which are measured using the Likert scale and Guttman scale. The Guttman scale was used to determine the level of financial literacy of the people in the city of Surabaya, and the Likert scale was used to test its effect on the financial inclusion variable. The Guttman scale used is true or false questions. The Likert scale used has a score range of 1 to 4 with an answer range of "never" to "very often". Questions related to financial literacy include understanding investment risks, borrowers' rights and obligations, interest rates, currency values, and insurance.

Financial Technology

Financial technology is a combination of systems in the financial sector with technology that allows buying and selling products or services at different times and in different market spaces (Al-Ajlouni, 2018). The measurement of financial technology uses indicators from Davis (1989) which are measured using a Likert scale. The Likert scale used has a score range of 1 to 4 with an answer range of "never" to "very often". Statements related to financial technology include ease, use, and benefits felt by respondents (Purnamasari et al., 2020).

Gender

Gender is a difference in biological functions, traits and roles that are differentiated into men and women (Momsen, 2019). The measurement of the gender variable is included in the dummy variable, so men will get a score of 1, and women will get a score of 0.

3. Method

This research is included in the type of conclusive causality research. The financial inclusion variable is the dependent variable in this research, while the variables financial literacy, financial technology, gender, age, income, and education are the independent variables. The data source uses primary data with media in the form of a questionnaire. Distribution of the questionnaire was carried out online using a Google form which was distributed via social media such as Instagram, Line, and WhatsApp. The data collection that will be presented uses a type of quantitative research, where the data is analyzed and explained in the form of numerical data. The data obtained was then analyzed using validity and reliability tests, multiple linear regression analysis including normality test, multicollinearity test, and heteroscedasticity test as well as hypothesis testing using the SPSS version 23 program. The population used included all people living in Kediri City, whether domiciled. (not having an ID card) or having a Kediri ID card. The number of indicators in this research is 13, where

when determining the sample size, this is multiplied by 10, the result is 130 respondents. Then 10% of the results were added to this number so that the total number was rounded up to 155 respondents. Samples were taken using a quota sampling technique with the criteria that the respondent was 15 years old or older and had an income.

4. Result and Discussion

The results of the answers from 155 respondents showed that the respondents were dominated by women, amounting to 54.2%, totaling 84 respondents, while the smallest percentage was men, namely 45.8%, amounting to 71 respondents. The largest percentage of individual characteristics based on age was shown by individuals with an age range of 18 - 25 years, namely 48.4% with 75 respondents, while the smallest percentage was shown by individuals with an age range of > 50 years, namely 11% with a total of 17 respondents.

Individual characteristics based on income level, the largest percentage is in the income range < Rp. 1,000,000, namely 27.1% with a total of 42 respondents, while the smallest percentage is in the income range of Rp. 2,500,001-Rp. 4,000,000, namely 10.3% with a total of 16 respondents. Characteristics of respondents based on their level of education, the largest percentage was at the high school/equivalent education level, namely 42.6%, a total of 66 respondents, while the smallest percentage was at the master's level, namely 5.1%, a total of 8 respondents. The Likert scale used on respondents produced several characteristic answers related to the variables financial inclusion, financial literacy, and financial technology.

For the financial literacy variable, the score item with the highest value, namely IK7, has an average value of 2.87 with the statement "intensity of withdrawing money from the account" which indicates that people actively use their accounts to withdraw cash. The results of respondents' answers regarding the financial literacy variable, the score item with the highest value, namely LK1, has an average value of 3.56 with the question "understanding the importance of financial knowledge in the present and the future" which indicates that the public has good awareness of financial knowledge. The results of respondents' answers regarding the financial technology variable, the score item that has the highest value, namely FT1, has an average value of 3.51 with the statement "feel easy to use technology in the financial sector" which indicates that people can easily use technology in the financial sector that is currently available.

The results of respondents' answers using the Guttman scale related to financial inclusion and financial literacy variables produced several answer characteristics. For the financial inclusion variable, question item IK2 has the highest percentage, namely 100%, with the question "having a debit card or ATM" which indicates that each respondent already has a debit card type financial service product. The results of respondents' answers regarding the financial literacy variable, and question items regarding financial literacy, the average respondent answered correctly at 94.3%, while the average respondent answered incorrectly at 5.7%. Based on the categories proposed by Chen & Volpe (1998), the results of measuring the level of financial literacy in this study were 94.5%, where this percentage is included in the high category, namely higher financial literacy.

Validity test

The results of the validity test for the Guttman scale on the financial inclusion and financial literacy variables show that these variables can be said to be valid because the coefficient values have exceeded the criteria, namely the Reproducibility Coefficient > 0.90 and the Scalability Coefficient > 0.60. For the financial inclusion variable, the Reproducibility Coefficient has a value of 0.969, and the Reproducibility Coefficient Scalability is 0.938. Meanwhile, the financial literacy variable produces a Reproducibility Coefficient of 0.953 and a Scalability

Coefficient of 0.905. The measurement results show that the coefficient value meets the validity requirements. The validity test results for the Likert scale variables of financial inclusion, financial literacy, financial technology and gender were tested using the SPSS application. The validity test results for all items produce a value of $\text{count} > \text{table}$. The table value for 30 respondents is 0.3610 and the table value for 155 respondents is 0.157. So that respondents' answers and question items can be declared valid so that they can be relied on as measuring tools for this research.

Reliability Test

The results of the reliability test for the Guttman scale carried out using the KR-20 method regarding the variables financial inclusion and financial literacy have a value of > 0.60 . So based on the Guilford reliability coefficient, it shows that the answers or data provided by respondents have a high level of reliability, namely in the range of 0.60 – 0.80. The KR-20 value for the financial inclusion variable is 0.634 and the financial literacy variable is 0.617. The measurement results show that the value meets the requirements. The results of the reliability test for the Likert scale on the variables financial inclusion, financial literacy, financial technology, and gender use a Cronbach's alpha value of > 0.60 . The Cronbach's alpha value for the financial inclusion variable is 0.666, the financial literacy variable is 0.806, and the financial technology variable is 0.892. So that the answers or data provided by respondents have met the criteria and can be declared reliable.

Normality test

Normality test results use graphic analysis methods and statistical tests. The normal probability plot graph is used to carry out graphic analysis, which in this research results in that the data is spread in an area not far from the diagonal line and in the same direction as the diagonal graph or histogram graph. Testing using the Kolmogorov-Smirnov (K-S) test was carried out for statistical tests which produced a value of 0.065 and a significance of $0.502 > 0.05$. So that the values produced by this research have normally distributed residual data.

Multicollinearity Test

The results of the multicollinearity test use the VIF value. All independent variables in this study produced VIF values and tolerance values of < 10 and > 0.1 . So from the resulting values, it can be concluded that the regression model in this study does not experience symptoms of multicollinearity.

Heteroscedasticity Test

The results of the heteroscedasticity test were carried out by analyzing scatterplot graphic observations and the Glajser test. The scatterplot graph shows that the points appear to be randomly distributed both below and above the number 0 on the Y axis. The Glejser test is carried out by looking at the significance value of all independent variables which results in a value > 0.05 . So from the results of the graphic analysis and the resulting values, it was concluded that in this study no symptoms of heteroscedasticity were found.

Multiple Linear Regression

The results of multiple linear regression in this study form regression equation (1). Equation (1) shows the result of a constant value of 1.813 which explains that if all variables are considered constant, the financial inclusion value for the community in the city of Surabaya is 1.813. The magnitude of the financial literacy regression coefficient of 0.293 indicates that every increase of 1000 times will increase financial inclusion by 293 times. The regression coefficient value for the age variable is 0.611, which means that every increase of 1000 times

will increase financial inclusion by 611 times. The regression coefficient value for the education level variable is 0.577, which means that every increase of 1000 times will increase financial inclusion by 577 times.

$$Y = 1,813 + 0,293 X_1 - 0,040 X_2 + 0,132 X_3 + e \dots\dots\dots(1)$$

F Statistical Test

The F test results show that the calculated F value is 10,880 with a probability of 0.000. It can be interpreted that all independent variables jointly influence financial inclusion.

T Statistical Test

Table 1 shows the results of the t statistical test which produces a t-count value for the financial literacy variable of 3,421 with a significance value of $0.001 < 0.05$. The t-count value for the age variable is 2.161 and the significance value is $0.032 < 0.05$. The t-count value of the education level variable is 2.067 and the significance value is $0.040 < 0.05$. From the results obtained, these three variables are significant for financial inclusion. So the decision is to accept H1 and reject H0. Meanwhile, the variables financial technology, and gender are not significant for financial inclusion because they have a significance value of > 0.05 so accept H0 and reject H1.

Determination Test

The coefficient of determination test in this study produced an Adjusted R Square value of 0.278 or 27.8%, where this figure can be interpreted as meaning that the independent variable explains 27.8% of the dependent variable, while as much as 72.2% is explained by independent variables other than those in this study.

The Influence of Financial Literacy on Financial Inclusion

Financial literacy has a positive effect on financial inclusion in the community in the city of Surabaya because the community's financial literacy level is included in the higher financial literacy category and they also have a high level of awareness regarding the importance of financial knowledge and skills both now and in the future, so they can use products and financial services wisely and can make the right decisions. The government and financial institutions, in their practical implications, feel the need to pay attention to the level of public financial literacy because it can influence increasing financial inclusion. This is in line with research by Yakubu et al. (2017), Mindra & Moya (2017), Saputra & Dewi (2017), Bongomin et al. (2016), Pulungan & Ndruru (2019), and Hutabarat (2018) who found a positive influence between financial literacy and financial inclusion.

Table 1. Statistical Test Results T

Model	Unstandardized Coefficients		Standardized Coefficients		Sig.
	B	Std.Error	Beta	T	
(Constant)	1.813	1.890		0.960	0.339
Financial Literacy	0.293	0.086	0.356	3.421	0.001
Financial Technology	-0.040	0.096	-0.087	-0.422	0.674
Gender	0.132	0.426	0.022	0.310	0.757

Source: Processed data, 2023

The Influence of Financial Technology on Financial Inclusion

Financial Technology is not proven to affect financial inclusion, meaning that the second hypothesis (H2) is not supported. The Theory of Planned Behavior is not proven to be supported in this research as the theoretical basis of the financial technology variable which is

explained through one factor where information, applications, or tools in the form of technology in various types are used to understand how individuals behave. In this theory, it can be stated that the availability of easy-to-use financial technology and the benefits it offers will encourage people to use various kinds of financial products or services at financial institutions.

Financial technology does not affect financial inclusion in the community in Kediri City because people have not actively used fintech to access accounts at banking institutions for saving and borrowing, including debit cards, credit cards, m-banking, and internet banking, but instead use fintech to access other products and services that do not promote financial inclusion. In practical implications, the government and financial institutions feel the need to pay attention to factors other than financial technology to increase financial inclusion. This is in line with Michelle's (2016) research which found that financial technology did not have a significant effect on financial inclusion.

The Effect of Gender on Financial Inclusion

A person's gender is not proven to affect financial inclusion, meaning that the third hypothesis (H3) is not supported. The Theory of Planned Behavior was not proven to be supported in this research as the basis for the gender variable theory which is explained through one factor where a person's social condition, namely men and women who have different roles, is used to understand how individuals behave. In this theory, it can be shown that differences between men and women cause variations in roles in their social life, this will influence the way they think and make financial decisions.

A person's gender does not affect financial inclusion in society in Kediri City because both men and women do not have different barriers to being able to gain freedom in accessing and using financial products or services at financial institutions. To increase public financial inclusion, the government and financial institutions do not need to differentiate between men and women in providing information and facilities. This is in line with research by Nugroho & Purwanti (2017) and Akileng et al. (2018) which explains that gender does not influence a person's level of financial inclusion.

5. Conclusions

The financial literacy factor is the factor that has the most influence on community financial inclusion in the city of Surabaya, namely the achievement of financial inclusion is greatly influenced by a person's level of understanding and financial management skills so that they can access financial products and services wisely. Meanwhile, financial technology and gender factors are known to have no influence on community financial inclusion in Kediri City. This research provides results that are expected to be used for consideration, strategy development, and policy making by several related parties. It is hoped that OJK can work together with Bank Indonesia to create financial education programs, benefits and risks regarding financial products and services, as well as financial management training for students, the general public, and business actors or MSMEs in order to increase financial literacy.

Apart from that, educational institutions such as schools to tertiary level have an important role in instilling financial management understanding and skills from an early age, both academic and non-academic, by providing lessons about financial planning, income management, savings culture and risk in every financial decision making. This research still has limitations related to the lack of independent variables used. Future research can add variables of employment, marital status, trust, and number of nearby financial institutions. It is also felt that the interview process for respondents is necessary. More accurate models can be used, such as

using a mediation model, and also expanding the scope of research by taking as many samples as possible to find more concrete results.

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