

THE ROLE OF FINANCIAL LITERATURE THROUGH DIGITAL FINANCIAL INNOVATION ON FINANCIAL INCLUSION (CASE STUDY OF MSMES IN SALATIGA CITY)

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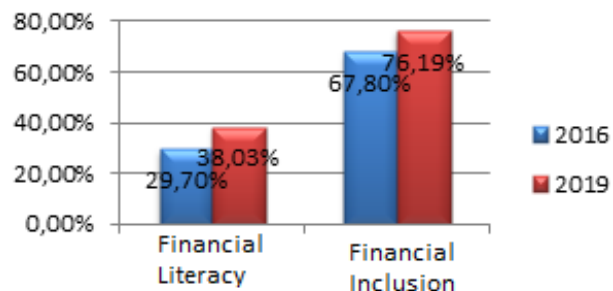
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Abstract: The research conducted analyzes the effect of the relationship between financial literacy and the accessibility of digital financial innovation on financial inclusion, financial literacy on digital financial innovation and moderating the relationship between financial literacy and financial inclusion through digital financial innovation. The study used a non-random sampling technique that was taken as many as 40 MSME actors and the technique of distributing questionnaires was convenience sampling. Completion of the multiple linear regression model and the Moderated Regression Analysis (MRA) interaction test. The results obtained that financial literacy and accessibility of digital financial innovations have a significant effect on financial inclusion, financial literacy has a significant effect on digital financial innovation. The research findings show the high level of financial literacy of the community and MSME actors as well as digital and financial technology literacy behaviors and attitudes, making it easier to promote the use of digital financial innovation products so that they can expand financial inclusion. Meanwhile, digital financial innovation information does not have a direct role in mediating the relationship between financial literacy and financial inclusion.

Keywords: *financial literacy, digital financial innovation, financial inclusion, SMEs*

1. Introduction

The government's policy to increase financial inclusion during the COVID-19 pandemic crisis with the role of financial institutions to provide greater access to services for individuals and businesses is important for their survival. According to OJK, the level of public financial inclusion is still relatively low, which is around 49% of the Indonesian adult population who have an account with a financial services institution and 51% do not have an account. The results of the OJK (Financial Services Authority) survey in 2019 the financial literacy and financial inclusion index in Indonesia increased from 2016 to 2019, which is shown in the following graph:



Sources : OJK, 2019

Based on the financial literacy index data, it reflects that less than 50% of the adult population in Indonesia has knowledge in managing personal finances well. The low level of financial literacy and knowledge of using digital financial services can be a factor that hinders the achievement of optimal financial inclusion. This is in line with the lack of access by the public and business actors to financial sources (lending, saving, payments and insurance) through formal financial institutions.

Business actors, both startups and MSMEs, are the target group for the Indonesian Financial Literacy National Strategy, because they have a strategic role in improving the economy. According to data from the SME cooperative ministry, the growth of digital financial literacy in the MSME sector is currently still very low at 16%, this is due to the main problem related to MSME financial reports. The Ministry of SME Cooperatives explained that business actors, namely startups and MSMEs, need digital financial services to optimize the effectiveness and efficiency of their business operations and facilitate access to working capital financing.

The amount of motivation and enthusiasm of business actors to access financial service products is sometimes not comparable to the implementation in the field. The problems they often face are related to the complexity and difficulty of accessing credit, high transaction costs, infrastructure, product marketing, business and technology competitors. Thus, the role of the government is crucial in making policies to achieve financial inclusion, through the OJK (Financial Services Authority) and financial institutions, especially in terms of flexibility, convenience and reliability of access to financing as a form of motivating business startups for individuals and encouraging equitable distribution of financial literacy to generate enthusiasm for entrepreneurship in local area.

Financial inclusion is defined as a condition where the community and business actors have effective access to various financial products and services that are affordable and can meet their needs (Change, 2013). Financial inclusion is a financial literacy program as a form of increasing the ability of SMEs to access financial services. Increasing the level of public financial literacy can increase financial inclusion that can encourage public welfare, reduce inequality and the rigidity of low income traps, sustain economic growth and support financial system stability. (OJK, 2016). (Atkinson & Messy, 2012) in the research conducted noted that good financial literacy will improve the ability and attitude of individuals in making informed decisions, foster individual confidence, thereby increasing the ability and behavior of individuals to effectively access and use formal financial services.

Research (Change, 2013), that increasing digital financial inclusion requires the penetration of the adult community to offer and use digital services with opportunities to take advantage of smartphones and the internet. Research (Shen, Hu, & Hueng, 2018), the use of digital financial service products combines the use of the internet to play a role in mediating between financial literacy and financial inclusion. This means that increasing public financial literacy and popularizing the use of the internet can be an opportunity to promote the use of digital financial products to achieve the goal of increasing financial inclusion.

Research (Servon & Kaestner, 2008), has implications for the role of banks in increasing consumer financial literacy and has the potential to influence financial behavior, expanding their access to financial freedom. The case studies respond to both the low incentives of financial institutions to provide financial education and the difficulties of implementation of providing education and motivation to adults to pursue financial literacy. The problem of society's digital divide becomes an opportunity for loan predators, without financial literacy and training in digital financial service technology such as e-banking and the internet will only be used for people who are only financially literate, have education and high incomes.

Research result (Naumenkova, Mishchenko, & Dorofiev, 2019), Noting that financial service inclusion has a negative trend, it hampers public access to financial resources due to low trust in financial institutions, expensive service fees, religious reasons, lack of required documents, no need for an account, lack of funds to open an account. Adult access to the internet as a necessary prerequisite for the transition to innovative financial services is moderate, the use of the internet for payments and shopping is low, policies are inadequate for certain innovative tools, low awareness of the public to use innovative products and services.

Based on the problems and the results of several studies, there is a negative trend in financial literacy and digital financial services for the public and business actors and it is necessary to increase the capacity for integration with the digital ecosystem to increase financial inclusion. Access to finance enables MSME actors to develop an economic system and apply investment productively in developing business processes, as well as obtain new technologies that can encourage business competitiveness and increase innovation. The purpose of the research is to develop previous research and determine the effect of financial literacy, financial digital innovation on financial inclusion.

2. Literature Review

2.1. Financial Literacy and Financial Inclusion

Financial inclusion aims to attract the “unbanked” community into formal financial service providers so that they have the opportunity to have effective access to financial services. Reserve Bank of India (RBI), the main focus of implementing financial inclusion is the process of ensuring all levels of society have easy access to banking products and services without discrimination (Pareek, 2012).

Financial inclusion can be measured through the lens of complexity systematically as follows (Hannig & Jansen, 2011) :

1. Access,

- Ability to use financial services and products available by formal financial institutions.
- 2. Quality
Relevance of financial services or products according to consumers' lifestyle needs.
- 3. User
Focusing on the provision and intensity of financial services and product use.
- 4. Impact
Measuring changes in consumers' lives that can be attributed to the use of financial devices or services.

Financial literacy is a series of processes or activities to increase the knowledge, beliefs and skills of the wider community so that they can manage finances better (Sine, Kellen, & Amtiran, 2020). Based on the OECD (Organization for Economic Cooperation and Development), there are five main components or elements of financial literacy (Sine et al., 2020), namely :

- 1. Financial awareness, (individual belief in financial institution's products and services)
- 2. Financial knowledge (individual ability about the benefits and risks in applying financial products and services)
- 3. Behavioral Finance (individual's ability to set financial goals)
- 4. Financial skills (a person's ability to calculate interest on financial institution products and services)
- 5. Financial attitude (is an individual's attitude in making financial plans)

Research (Cohen & Nelson, 2011) noted the results that increased access to financial resources did not automatically translate into effective use. Where effective use is hindered by the asymmetry of information and authority between financial institutions and low-income people. The imbalance increases because people lack experience and the financial products they choose are more numerous and complex.

2.2. Financial Literacy and Digital Financial Innovation

The presence of financial technology (fintech) in the Covid-19 pandemic era as a step for the rapid expansion of access to digital financial services, utilizing transfers and payments through digital channels such as smartphones. Digital financial services are highlighted as measures to improve the financial health and well-being of individuals and communities. Digital and financial technology literacy is more transformative if users have the awareness, knowledge, and skills on how to use and implement these technologies. The transformative way is expanded with financial literacy. In addition, low knowledge and trust in financial institutions hinders the absorption and use of digital financial services. These vulnerable people are not ready to take advantage of increased access to finance and digital innovation and even risk not keeping up with the rapid changes in digitalization (Lyons, Kass-Hanna, Montoya Castano, & Greenlee, 2021).

2.3. Digital Finance Innovation and Financial Inclusion

Digital technology as an ideal medium to reach a customer base with a wider area. Voorhies in (Shen et al., 2018) notes that the ease of digital reach as a transaction (payment) option to increase financial inclusion. The data is used to find out technological innovations touching new customers (mobile phone users without bank accounts) and new service providers to the

market. Gabor and Brooks note that the digital revolution is expanding a new layer of financial inclusion culture, offering new methods for expanding the financial inclusion of low-income people.

Research (Boshkov, 2019), the effect of digital finance on financial inclusion has different results. (1) negative effects, when viewed from the complexity of the digital financial system, when applied to low-income people, they refuse on the grounds that they are not ready to keep up with technological advances and innovations, high costs, low financial literacy so as to encourage mobility of access to conventional financial services. (2) positive effect, ease of use of digital financial platforms encourages individuals to inform and influence others and leads to more people utilizing digital finance, so as to expand digital financial inclusion.

2.4. Financial Literacy on Financial Inclusion through Digital Financial Innovation

Research (Patra Kusuma, 2020) noting that good financial literacy possessed by individual MSME actors is influential in making the right decisions for finance and management as an improvement in sustainable business performance. As well as supporting the use of financial technology products, it is under the supervision of OJK in business activities.

Research Hypothesis :

- H1 : There is an influence of Financial Literacy on Financial Inclusion
- H2 : There is an influence of Financial Literacy on Digital Financial Innovation
- H3 : There is an effect of Digital Financial Innovation on Financial Inclusion
- H4 : There is an influence of Financial Literacy on Financial Inclusion through Digital Financial Innovation

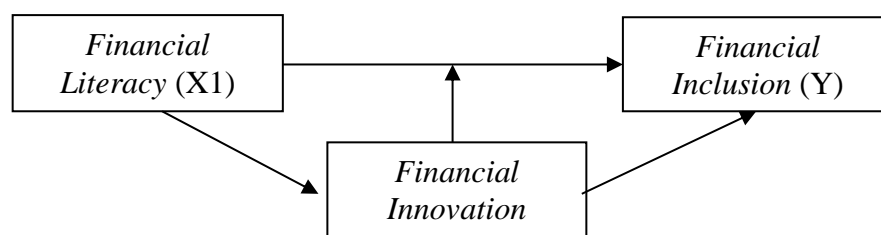


Figure 1. Conceptual Framework Diagram

3. Research Method

Descriptive research is a type of research that is clearly structured where the type of data needed and how large the sample is needed has been compiled before data collection is carried out (Suhartono, 2014). This study also uses quantitative methods that are used to examine certain populations and samples, where the sampling technique is non-random sampling, where all populations have the same opportunity to be selected as samples and data collection uses research instruments (Subana & Sudrajat, 2011). As a consideration of the ease of sample collection, as many as 40 SMEs were taken.

Primary data is used as a data collection method by distributing questionnaires to respondents, namely SMEs in Salatiga. The researcher used the technique of distributing

questionnaires by means of convenience sampling. (Asra, A., Irawan, P. B., & Purwoto, 2015) Convenience sampling is a sampling method that is carried out in a simple way by taking the units of observation that are found or improvised.

Distribution of data by questionnaire using a Likert scale. The Likert scale is used as a measuring tool for attitudes, opinions and perceptions of a group of individuals towards social phenomena (Sugiyono, 2017). The answers to each instrument item are weighted: [1] strongly disagree, [2] disagree, [3] disagree, [4] agree and [5] strongly agree.

Table 1. Instrument Grid

No	Variable	Indicator	Reference
1	Financial Inclusion	a. Financial Access b. Service Quality	(Hannig & Jansen, 2011)
2	Financial Literacy	a. Financial knowledge b. Behavior and self-protection c. Attitude	(Sine et al., 2020)
3	Digital Finance Innovation	a. Knowledge b. Perception of Ease c. Decision perception	(Lyons et al., 2021)

Secondary data obtained in data collection indirectly through documents (Sugiyono, 2017). Secondary data is needed to support primary data obtained from journals, articles and books related to the research topic. The data analysis technique used multiple linear regression as a statistical test and analysis of moderating variables with the Moderated Regression Analysis (MRA) interaction test method and the data was processed using SPSS tools.

4. Results and Discussion

4.1. Data Quality Test

Measuring the significance of validity by comparing $r_{count} > r_{table}$ is positive for $df = n-2$, then the indicator item is valid (Ghozali, 2013). The results of the validity test of all the questions on the research variable questionnaire resulted in a positive value of $r_{count} > r_{table}$, where as many as 40 respondents the value of $r_{table} = 0.3120$. As for the results of the reliability test of the question item data on the research variables, the results of the questionnaire are reliable (consistent) indicated by the value of Cronbach's alpha = $0.90 > 0.60$.

Table 2. Reliability Test Results

Conbrach's Alpha	Conbrach's Alpha Based on Standardized Items	N of items
.905	.903	19

Source : SPSS Data Processing

4.2. Data Normality Test

Based on the results of the normality test using the One-sample Kolmogorov-Smirnov Test, the data obtained were normally distributed, indicated by the sig value. = 0.778 > sig.0.05.

4.3. Multicollinearity Test

Determining the correlation between the independent variables in the regression model test can be done by using the multicollinearity test (Ghozali 2013). Where the decision making by taking into account the value of VIF < 10 and tolerance > 0.10. The results found that there was no correlation between variables in the study, this can be shown in the table below :

Table 3. Multicollinearity Test Results

Variabel	Tolerance	VIF
Literasi Keuangan(X)	0,532 > 0,10	1,879 < 10
Inovasi Keuangan Digital(Z)	0,532 > 0,10	1,879 < 10

Source : SPSS Data Processing

4.4. Heteroscedasticity Test

Error (residual) in the observation model arises when there is a constant variance of an observation (Ghozali 2013). The results shown through the scatterplot pattern found that there was no heteroscedasticity problem.

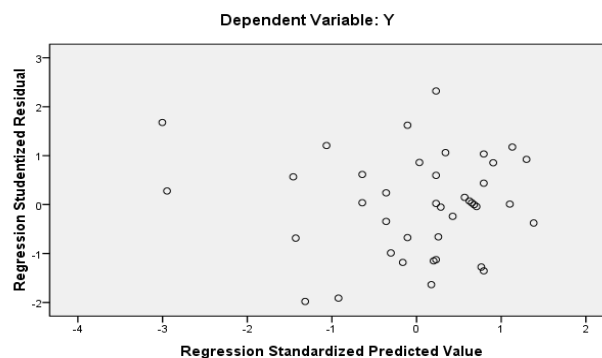


Figure 2. Scatterplot Graph

4.5. Multiple Linear Regression Test (F Test)

The value of the F statistic test explains that the independent variables simultaneously affect financial inclusion, which can be shown in the table below :

Table 4. Simultaneous Test Value (F Test)

F	Sig.
33,829 > 3,25	0,000 ^a < 0,05

Source : SPSS Data Processing

4.6. Hypothesis Test (T Test)

Tabel 5. Uji Statistik T

Hypothesis	Effect Between Variables	Coefficient	t-statistic	Sig.
H1	Financial Literacy on Financial Inclusion	0,506	3,773	0,001
H2	Digital Finance Innovation towards Financial Inclusion	0,369	2,751	0,009
H3	Financial Literacy on Digital Financial Innovation	0,684	5,780	0,000

Source : SPSS Data Processing

4.7. The Effect of Financial Literacy on Financial Inclusion

Based on the t_{count} value of the financial literacy variable, namely $3.773 > 2.026$ and $\text{Sig.}_{\text{count}} 0.001 < 0.05$, it is noted that the results of financial literacy have a significant effect on financial inclusion. These results note that the high level of financial literacy in terms of basic knowledge, behavior and privacy protection as well as the attitude of the community and MSME actors towards financial information awareness is very important to support them in making their financial decisions, to access financial services and assess the quality of financial services and the risks that affect inclusion growth. finance.

4.8. The Effect of Digital Financial Innovation on Financial Inclusion

The t_{count} value of the digital financial innovation variable is $2.751 > 2.026$ and $\text{sig.}_{\text{count}} 0.009 < 0.05$, noting that the results of digital financial innovation have a significant effect on financial inclusion. The results note that the community and MSME actors are said to be technology literate, so that by integrating digital financial innovation as a service product for formal financial institutions and increasing the types of financial products and services through new actors and tools on the financial market. Gradually, business actors and the public can take advantage of innovative product platforms, thereby increasing access to financial services (savings, credit, payments, investment and insurance), reducing transaction costs and financial service information. Thus, the deepening of digital financial technology plays a role in expanding financial inclusion. The implicit positive relationship is stronger with users of digital financial services (LKD) because LKD providers discriminatory use a more aggressive marketing strategy targeting the community and MSMEs. However, it is necessary to strengthen infrastructure and regulations as transparency and communication of digital financial innovation products through ethics, supervision to prevent cyber and increase trust.

4.9. The Effect of Financial Literacy on Digital Financial Innovation

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4.10. Determinant Test (R-square Analysis)

The calculation of the R-square analysis of the values obtained noted that 63% of the variables of financial literacy and digital financial innovation can explain the dependent variable of financial inclusion and 37% by other variables outside the research model. Meanwhile, 45% of financial literacy can explain the dependent variable of digital financial innovation and 55% by other variables.

Tabel 6. Nilai R-square

Variable	Adjusted R Square
Financial Literacy and Digital Financial Innovation towards Financial Inclusion	0,627
Financial literacy on digital financial innovation	0,454

Source : SPSS Data Processing

4.11. Moderated Regression Analysis (MRA) Interaction Test

Table 7. Interaction Test of Financial Literacy with Digital Financial Innovation

Variabel	Koefisien Regresi	t hitung	Sig.
LK	-0,470	-0,820	0,418
IKD	-0,729	-1,136	0,263
LK*IKD	1,910	1,747	0,89
Konstanta	19,846	1,513	0,139
R	82,1 ^a		
R Square	0,647		
F	24,821		0,000 ^a

Source : SPSS Data Processing

4.12. The Effect of Financial Literacy Variables on Financial

The moderating variable to determine the interaction of the digital financial innovation variable (IKD) with the independent financial literacy (LK) variable can strengthen or weaken the dependent variable of financial inclusion (IK). Recording the test results which show the regression coefficient of the LK*IKD variable = 1.910 is positive, the tcount value is $1.513 < 2.026$ and $\text{sig}_{\text{count}} 0.89 > 0.05$, so it can be explained that digital financial innovation (IKD) has no effect or weakens the financial literacy relationship (LK) with financial inclusion (IK). Partially, the presence of the IKD variable as a moderator has a positive but not significant effect on financial inclusion (IK). The results of R_{square} show that 65% IK is influenced by the variables of LK, IKD and the interaction of LK and IKD.

4.13. Inclusion by Moderating Digital Financial Innovation Variables

The moderating variable to determine the interaction of the digital financial innovation variable (IKD) with the independent financial literacy (LK) variable can strengthen or weaken the dependent variable of financial inclusion (IK). Recording the test results which show the regression coefficient of the LK*IKD variable = 1.910 is positive, the tcount value is $1.513 < 2.026$ and $\text{sig}_{\text{count}} 0.89 > 0.05$, so it can be explained that digital financial innovation (IKD) has no effect or weakens the financial literacy relationship (LK) with financial inclusion (IK). Partially, the presence of the IKD variable as a moderator has a positive but not significant effect on financial inclusion (IK). The results of R_{square} show that 65% IK is influenced by the variables of LK, IKD and the interaction of LK and IKD.

5. Conclusion

Simultaneously financial literacy, digital financial innovation has a significant effect on financial inclusion. The financial literacy variable has a significant effect on digital financial innovation. Digital financial innovation as a moderating variable, simultaneously cannot moderate the effect of financial literacy on financial inclusion. Partially, the existence of a moderating variable for digital financial innovation can strengthen or moderate the relationship between financial literacy and financial inclusion. It can be explained that the high level of financial literacy of MSME actors affects the growth of financial inclusion. MSME players can also be said to be technology literate, so that some of them have gradually been able to take advantage of innovative product platforms to be able to access digital financial services and be able to expand financial inclusion.

6. Suggestions

A collaborative approach is needed between the government, financial institutions and other stakeholders in terms of first developing policies to improve financial literacy to be targeted at regional groups, business actors, vulnerable communities. The second enhances the inclusion strategy by promoting innovative financial services and facilitating access to financial services and internet access. Third, multiply the types of financial products and services through new actors and tools through the financial market. Ease of access for MSMEs and the public to digital financial services (business capital, crowdfunding platforms, savings, payments, investments) and others. Fourth, improve the cybersecurity of digital financial services to foster trust through transparency with a combination of ethics, regulation, supervision and communication to prevent

digital financial services businesses from focusing on selfishness and violating user confidentiality. The latter prioritizes the priority of digital financial innovation for ease of delivery or payment for the public and business people.

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