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# The Effect of Financial Literacy on Financial Inclusion in Sustaining Indonesia SMEs Growth

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**Abstract:** As stated in UN Sustainable Development Goals (SDGs), financial inclusion is one strategy to reduce poverty in one country, including Indonesia. The Indonesian government was facing a problem in experiencing a relatively low financial inclusion index. Many Indonesians are reluctant to have business with the financial institution. Increasing the financial literacy rate among Indonesians was expected to get a higher financial inclusion index. Therefore, the main objective of this research was to analyze the effect of financial literacy with all its dimensions included: knowledge, skill, attitude, and behavior on financial inclusion. The Indonesian government had a serious commitment to accelerating economic growth by supporting the role of SMEs as the backbone of the country's economic development. In fact, many SMEs had some difficulties in getting access to formal financial institutions to support their business growth. As quantitative research, the study distributed questionnaires to 150 SMEs in culinary businesses located in South Tangerang. All data were statistically analyzed. The data collection was further processed statistically using the Structural Equation Method (SEM). The study showed that all variables of financial literacy, including knowledge, skill, attitude, and behavior had a significant effect on financial inclusion. Knowledge had the highest effect on financial inclusion. Therefore, it was an urgency to educate people and provide necessary information related to the financial products and services.

**Keywords:** financial literacy, knowledge, skill, attitude, behavior, financial inclusion.

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## INTRODUCTION

According to the official report of Bappenas, the trend of Indonesia's economic growth has strengthened the welfare of its society positively (Badan Perencanaan Pembangunan Nasional, 2019). The Indonesian government had a commitment to achieving the national goal to become one of the most prosperous countries in the world by accelerating economic growth, reducing the poverty, achieving income equalization, and creating financial system stability. These programs are aligned with the Sustainable Development Goals (SDG) initiated by the United Nations (UNCDF, 2017). It aims to support the achievement of SDG in Indonesia by making finance works for literacy and inclusion that are seen from various aspects, such as economic conditions, demographic conditions, geographical conditions, and cultural conditions (Soetiono & Setiawan, 2018). The Indonesian government will pursue innovative finance solutions through a financial inclusion strategy that expands the opportunities, especially for the Small Medium Enterprises (SMEs) to participate in the local economy, with a focus on the maximum utilization of the digital financial services.

As the fourth most populated country, the population number in Indonesia reached 268 million people at the end of the year 2018 (BPS, 2019). The projection that had been done by BPS also showed that the dependency ratio will decrease significantly to 1.35% in the year 2035. Meanwhile, there will be 0.62% increasing number related to the population at a productive age (the age of 15–64 years old) in 2035. The demographic bonus will give an incentive for Indonesia only if supported by adequate human resources quality.

Considering the dynamic development across the country and globally, the Indonesian government started to handle one of the economic problems by enlarging the financial access to the people. Financial inclusion is defined as a condition that all productive adults had access to credit, savings, payments, and insurance from a financial service provider (World Bank, 2019) in convenient, responsible service delivery, and at an affordable cost (OJK, 2017). With financial inclusion, the impact of reducing poverty levels and community inequality can occur in terms of investment opportunities, better financial risk management, and thus smooth consumption (Demirgüç-Kunt et al., 2017). Policies in introducing inclusion are very important but need to be adapted to individual characteristics considering that financial inclusion can improve better when the environment has the possibility of accessing financial services, for example with low banking fees or locations close to the surrounding area (Allen et al., 2016).

SMEs act as the backbone of the Indonesian economy to reduce poverty. It is believed that the financial ecosystem plays an important role in supporting their success (World Bank, 2018). On the other hand, the literacy rate for MSMEs is still low at 23.8%. SMEs have limited information related to the financial services provided by these financial institutions (World Bank, 2019). SMEs have difficulty accessing formal financial institutions such as banks to obtain loans to support their businesses. Therefore, many of them choose to borrow money from informal financial institutions, including their friends and family (DEFINIT, 2014). This phenomenon shows that the financial inclusion of SMEs is still low which needs to be improved. Several factors influence financial inclusion, one of which is financial literacy. Financial literacy is an activity to acquire skills and abilities in understanding the various types of financial services available to be further utilized for the benefit of deposits, loans, and interest rate calculations (Rashdan & Eissa, 2019).

A survey conducted by OJK showed that the financial literacy index in Indonesia increased from 21.8% in the year 2013 to 29.7% in 2016. This figure means that in every 100 inhabitants in Indonesia are only about 30 people who enter the well-literate category or have good financial literacy and most of them resided on Java Island. The index also showed that less than 50% of the total population in Indonesia had adequate knowledge to manage their financing activities (OJK, 2019). This condition is something that needs attention, which shows that the financial literacy of the community is still low and needs to be improved considering that literacy is a provision to be able to achieve an increase in financial inclusion. People who have information can make better decisions related to decisions for themselves and their businesses, which supports the effectiveness of the financial system through their desire to use sophisticated financial services to end in financial inclusion (Grohmann et al., 2018). Based on the latest survey, the growth rate of financial inclusion in Indonesia only reached 8.1% in 2016. It is also expected that the growth of ICT will increase the usage of smartphones for financial activities, both from formal and non-formal financial institutions (Soetiono & Setiawan, 2018).

Table 1 is a depiction of smartphone ownership in 2017 which in Indonesia reached 66.31% (Ministry of Communication and Information of the Republic of Indonesia, 2017). This value indicates a great opportunity for Indonesia to increase financial inclusion through technological developments. Utilization can be done because, with easy access, technology can be done. Moreover, there are already many platforms that provide onlinebased financial institution services. Based on Table 1, it can be seen that Java Island is the area with the highest smartphone ownership at 86.60%. Based on this, the research was conducted in one of the cities on Java Island. An increase in ownership of financial literacy can lead to financial inclusion (Khan et al., 2021).

**Table 1 Smartphone Ownership by Region in Indonesia**

| No. | **Region** | **Percentage** |
|---|---|---|
| 1. | Java | 86.60 |
| 2. | Sumatera | 84.14 |
| 3. | Bali and Nusa Tenggara | 45.24 |
| 4. | Kalimantan | 52.12 |
| 5. | Sulawesi | 43.82 |
| 6. | Maluku and Papua | 27.68 |

Source: Ministry of Communication and Information of the Republic of Indonesia (2017)

Financial literacy is defined as the process by which financial customers or investors enrich their understanding of financial products and services through available information that can be used in their financial decision-making (World Bank, 2019). With the ownership of financial literacy, it is possible to understand the nature and behavior related to various financial and economic problems (Kadoya & Khan, 2020). OJK states that financial literacy is knowledge, skills and beliefs that will influence people's decisions in managing their financial performance (OJK, 2016). Furthermore, financial literacy is a combination of several aspects, including awareness, attitudes, knowledge, skills and behaviors needed to achieve financial well-being (Rodrigues et al., 2019).

Financially literate people will have a basic knowledge of key financial concepts (Atkinson & Messy, 2012). Financial literacy creates a statistically significant increase in the awareness of individuals in choosing the financial products and services available to them (Bongomin et al., 2017). The dimension of knowledge, especially in the financial know-how will increase individuals' level of consciousness in making their financial decisions (Cordero et al., 2019). Possession of financial knowledge is the basis for developing skills that in turn have an impact on a person's financial behavior and attitudes (Kadoya & Khan, 2020).

Financial literacy is related to the skill of making financial decision-making that is combined with the ability to manage the financial risk portfolio. Financial literacy can also be regarded as an understanding of fundamental economic and monetary concepts along with skills to handle financial resources effectively and efficiently (Lusardi & Mitchell, 2014). Cordero et al. (2019) revealed that there is a financial literacy program in Indonesia that is designed to educate people who do not have a bank account or never had interaction with banks. Possession of financial skills has a role in shaping knowledge and attitudes that lead to responsibility for personal financial considerations (Potrich et al., 2016).

Attitude is considered an important element of financial literacy. People who only prioritize to fulfill their needs in the short term would have a resistant attitude toward saving their money in the bank (Atkinson & Messy, 2012). The financial attitude was formed by both economic and non-economical individual beliefs (Garg & Singh, 2018). Attitude towards finances can also be a view of financial problems so that future profits can be obtained (Kadoya & Khan, 2020). With a more positive attitude toward personal finances, it will be more likely to save in financial institutions (Amagir et al., 2020).

The way someone behaves would have a significant impact on their financial well-being (Atkinson & Messy, 2012). Garg & Singh (2018) said the way one behaved would significantly affect its financial welfare. Therefore, it is important to capture the dimensional evidence of behavior in financial literacy. Lu & Peng (2019) mentioned that effective financial behavior or financial behavior among poor households in developing countries is demonstrated by their ability to develop budgets, plan, and save for old days and promote the use of financial services. The implementation of policies and educational programs is important in improving financial behavior (Jorgensen & Savla, 2010).

Financial inclusion is the availability of access to various financial institutions, financial products and services in accordance with the needs and capabilities of the community to improve the welfare of the community (OJK, 2016). Financial inclusion is known as a process to increase the quantity, quality, and efficiency of financial institutions and, at the same time, it can improve lives, grow opportunities and strengthen economies in a country, as well as increased productive investments in local businesses (Babajide et al., 2015). Financial inclusion describes how adult and productive people are given access to a range of appropriate financial services, designed based on their needs and provided at an affordable cost (Le et al., 2019). There are four main elements of financial inclusions, such as access (availability of the infrastructure); the availability of financial products and services; the benefit of financial products and services and the quality value of the financial services.

Chung & Park (2014) mentioned that people would get financial knowledge based on the information shared by their relatives and friends on social networking. Their financial knowledge related to money management, financial problems, customer rights and the risk of each financial instrument played an important role in making a financial decision. Changing knowledge can affect financial inclusion as evidenced by the ability to make decisions and choices related to financial products that are used more wisely (Bongomin et al., 2017).

Financial skills include the knowledge necessary to understand financial concepts and regulations. Having strong financial skills will assist the customers in making financial decisions (Lusardi & Mitchell, 2014). Possession of good skills can also improve understanding of various financial products to the selection of financial products to be used. Having good financial skills can help in evaluating the financial products offered (Bongomin et al., 2017).

The financial attitude was the individual characteristics that take the form of tendencies toward a financial practice or action. A person who has a positive financial attitude to undertake a specific behavior would have no resistance to formal financial institutions (Herdjiono & Damanik, 2016).

Financial behavior is the capability to understand the overall impacts of financial decisions and make the right decisions related to financial management. Positive financial behavior would encourage positive decision-making in using financial institutions' products and services (Xiao, 2018). With a high level of financial literacy and inclusion, it can make MSMEs managerially have good financial resilience seen with better financial attitudes and behavior (Adam et al., 2021).

Mindra & Moya (2017) in their research found that financial literacy had a positive effect on financial inclusion, since the positive changes in the level of skills, knowledge and understanding of financial concepts would automatically increase the financial inclusion in terms of accessibility. The higher literacy rate within the population would follow the increasing number of account ownership in the financial institution (Lu & Peng, 2019). Sharing knowledge and skills can change behavior and understanding in solving problems, one of which is the problem of lack of access to financial services (Bongomin et al., 2016).

There are several previous studies related to the two variables. Research conducted by Koomson et al. (2020) found that providing financial literacy training gave the possibility of having a temporary account by 7.2 points, saving by 8.2 points, until receiving assistance in receiving financial aid was 9.5 points higher. Financial literacy has a significant and direct influence on financial inclusion at 32% (Bire et al., 2019). In other studies, there is a significant positive effect between financial literacy and financial inclusion and financial inclusion on financial literacy is directly significant (Bongomin et al., 2015). Financial literacy has a significant and positive influence on financial inclusion (Bongomin et al., 2020; Kasozi & Makina, 2021). In contrast to the research conducted by Fanta & Mutsonziwa (2021), an increase in the number of products and services does not have an impact on expanding financial inclusion unless it is accompanied by an increase in financial literacy.

Based on these considerations, the development of SMEs becomes a key-driven factor in a country's economy so the ownership of financial literacy for SMEs is something that needs to be known. Therefore, this study aims to find out an in-depth understanding of the effect of financial literacy and related variables which include knowledge, skills, attitudes, and behavior on financial inclusion.

## METHODS

This research is descriptive research with a single cross-sectional data collection design (Maholtra, 2010). The purposive sampling method is used to determine the sample that can be used as research targets. Purposive sampling is sampling to have the best information starting by focusing on a small number of deliberately selected parts (Denscombe, 2014). Hair et al. (2014) stated that the minimum sample that can be tested statistically is 30. The population of this study includes 7,497 culinary and food business SMEs in South Tangerang Regency. The minimum sample is 150 respondents because there are 30 indicators used in this study. The stratified random sampling method was used to represent and obtain generalizations from the population which was proportionally distributed among 7 sub-districts. As a quantitative study, respondents were asked to answer closed questions on a Likert scale of 1-5. The Likert scale is a scale for measuring opinions, attitudes, and perceptions of a group of people, phenomena, and social phenomena in the field (Amruddin et al., 2022). The first part of the questionnaire consists of demographic questions and the second part contains research questions. All primary data were then tested statistically using the Structural Equation Model with Lisrel 8.80 software.

The knowledge variable (KL) was measured with four dimensions, including: knowledge of financial risks (KL1); loan interest rate (KL2); other competitors' financial products (KL3) and financial instrument benefits (KL4). Skill variable (SK) was indicated with four dimensions, including: skill to make a budgeting (SK1); to make a decision in choosing appropriate financial instruments (SK2); to evaluate the performance of each financial instrument (SK3) and to manage well the budget (SK4). The attitude variable (AT) is further measured by three dimensions, which consist of attitude to saving the money (AT1); to be more responsible in spending (AT2); to be wise in facing financial problems (AT3). Meanwhile, the behavior variable (BH) was indicated by three dimensions, including: the behavior to analyze the information availability (BH1); to think about the future life (BH2); and to choose the appropriate financial instruments based on its profile (BH3). And finally, the financial inclusion variable (FI) was measured with five dimensions, including: the availability of a variety of financial instruments (FI1); branches of formal Banks (FI2); loan products (FI3); the proof to increase the standard of living (FI4) and excellent customer services (FI5) (Bongomin et al., 2018).

## RESULTS & DISCUSSION

Demographic data explained the profile of the respondents; 48% of respondents were SMEs with more than five years established; 46% of them are the owners who were involved in daily operating businesses, and 27% of the SMEs located in the Serpong area which becomes a metropolitan district. It showed that the owners of the SMEs were the person who had the responsibility for financial decisions to ensure that the businesses were running well. Using the Pearson correlation method and pre-test, it found that the critical value of $t > 0.631$, showed that all indicators had a strong correlation and were valid. The reliability test using Cronbach's Alpha coefficient showed the number of 0.787 (greater than 0.50; Maholtra, 2010), which meant that this research is valid.

**Tabel 2 Structural Testing Model**

| No | Variable | Indicator | Direct Effect | Conclusion |
|---|---|---|---|---|
| 1 | Knowledge | KL1 | 0.998 | Positive Effect |
| | | KL2 | 1.106 | Positive Effect |
| | | KL3 | 1.064 | Positive Effect |
| | | KL4 | 0.876 | Positive Effect |
| 2 | Skill | SK1 | 1.006 | Positive Effect |
| | | SK2 | 0.987 | Positive Effect |
| | | SK3 | 1.017 | Positive Effect |
| | | SK4 | 1.000 | Positive Effect |
| 3 | Attitude | AT1 | 0.973 | Positive Effect |
| | | AT2 | 1.023 | Positive Effect |
| | | AT3 | 1.083 | Positive Effect |
| 4 | Behavior | BH1 | 0.921 | Positive Effect |
| | | BH2 | 1.020 | Positive Effect |
| | | BH3 | 0.987 | Positive Effect |
| 5 | Financial Inclusion | FI1 | 0.816 | Positive Effect |
| | | FI2 | 0.974 | Positive Effect |
| | | FI3 | 1.014 | Positive Effect |
| | | FI4 | 0.997 | Positive Effect |
| | | FI5 | 1.000 | Positive Effect |

Source: Data Analysis using LISREL 8.80

Table 2 shows the direct effect of each indicator used in this study. In the knowledge variable, knowledge to understand the benefits of financial instruments has the lowest direct effect. Knowledge of loan interest rates has the highest direct effect on financial inclusion. Decision-making skills in choosing financial instruments have the lowest level compared to skills in evaluating the performance of each instrument which has the highest direct influence. A wise attitude in dealing with or solving financial problems has the highest direct effect compared to the attitude of being able to control spending money. For behavioral variables, consideration for the next life occupies the highest position. Meanwhile, the behavior of seeking detailed information has the lowest direct effect. And lastly, for the financial inclusion variable, the characteristics of the loan product itself have the highest direct influence on the customer's decision to access financial institutions. On the other hand, the availability of various financial instruments has the least direct effect. Evaluation and analysis of the structured model are used to see the correlation of the latent variables. Table 3 shows that the values of NNFI, CFI, PGFI, IFI, and RMSEA meet the requirements of the good fit model so that they meet the perfect theoretical requirements.

**Table 3 Design Summary for Goodness for Fit Testing Model**

| GOF Indicator | EstimatedValue | Testing Result | Conclusion |
|---|---|---|---|
| **Absolute Fit Value** | | | |
| Statistic Chi-Square ($X^2$) | Small Value | 632.37 | Good Fit |
| RMSEA | RMSEA < 0.08 | 0.074 | Good Fit |
| **Incremental Fit Value** | | | |
| NNFI | NNFI > 0.90 | 0.921 | Good Fit |
| CFI | NFI > 0.90 | 0.927 | Good Fit |
| PGFI | AGFI > 0.50 | 0.659 | Good Fit |
| Normed Chi Square ($X^2$) | CMIN/DF □ 2 | 1.817 | Good Fit |
| IFI | IFI > 0.90 | 0.928 | Good Fit |

Source: Data Analysis using LISREL 8.80

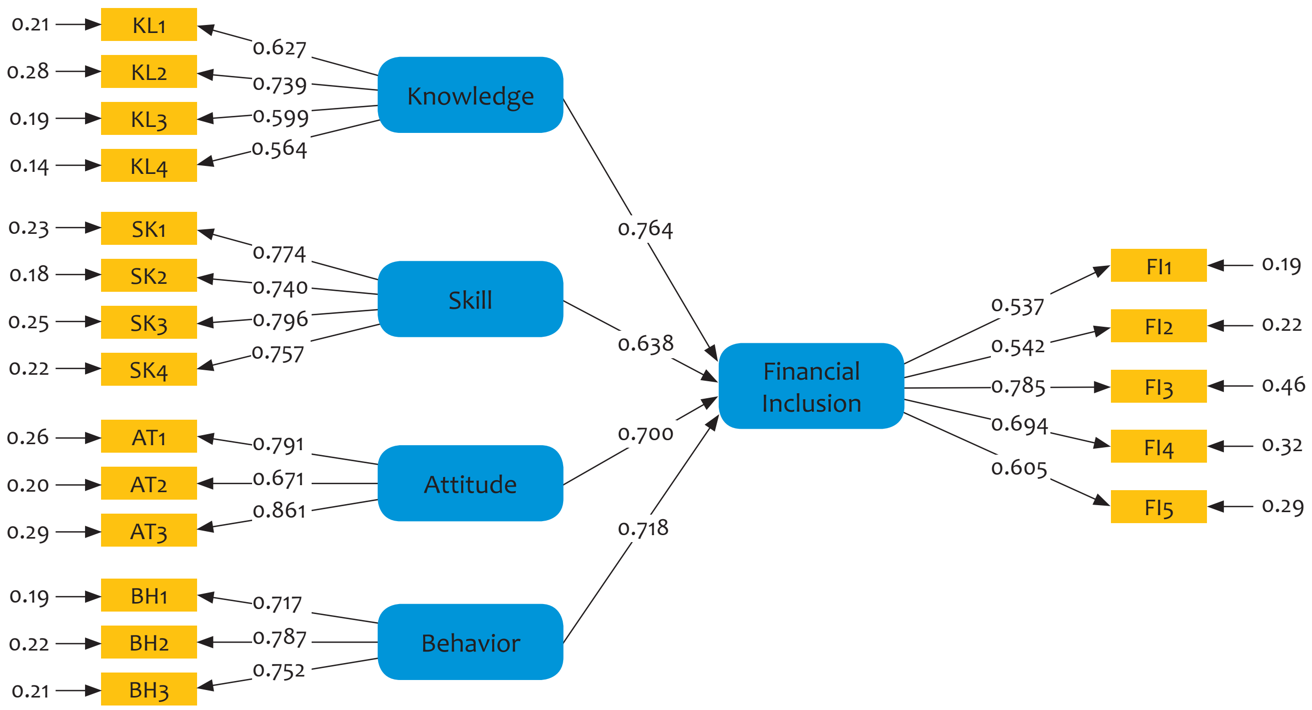
In Table 4, it can be seen that the R-square value indicates the ability of each variable in explaining the financial inclusion variable. The knowledge variable has the highest value of 86.2%, which shows that the knowledge variable can explain financial inclusion by 86.2%, the behavioral variable can explain financial inclusion by 36.1%, while the skills and attitude variables can explain financial inclusion respectively by 4% and 5%.

**Table 4 R-Square and Adjusted R-Square**

| Variables | R-Square | Adjusted R-Square |
|---|---|---|
| Knowledge | 0.862 | 0.783 |
| Skill | 0.004 | -0.005 |
| Attitude | 0.005 | 0.145 |
| Behavior | 0.361 | 0.334 |

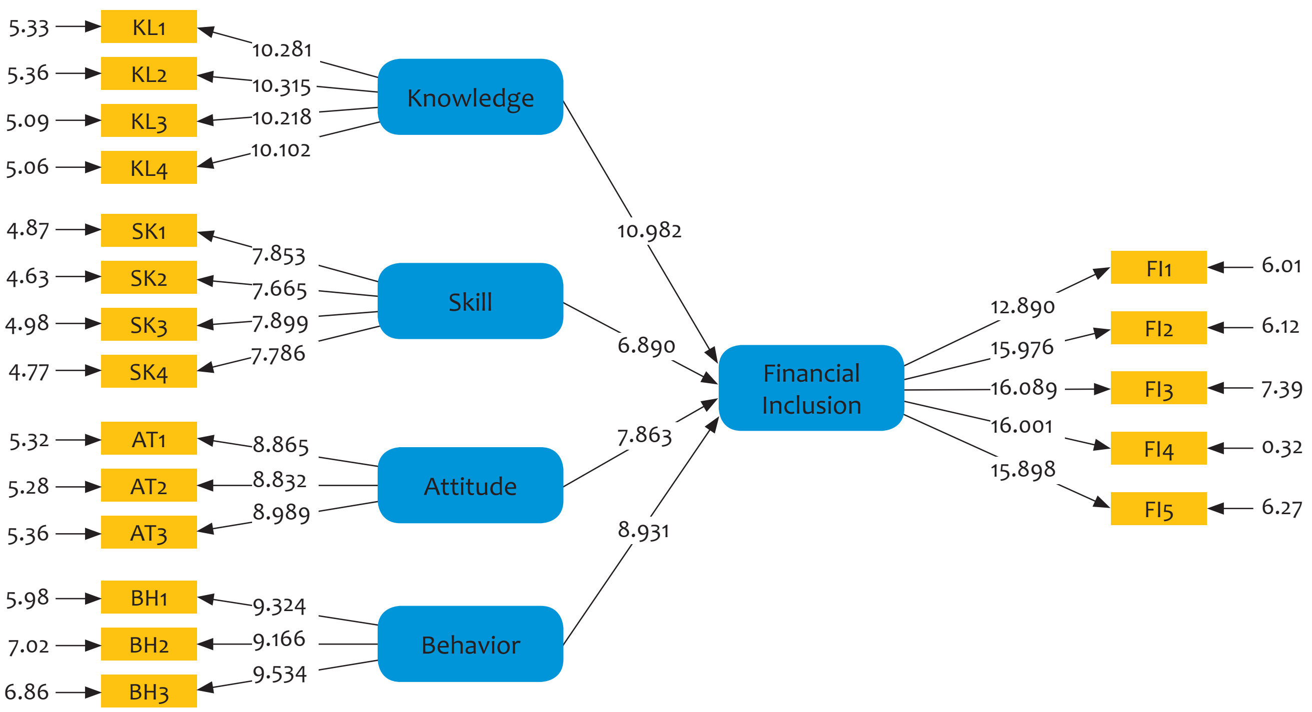
Source: Data Analysis using LISREL 8.80

Meanwhile, the result of hypothesis testing using a path diagram could be explained as follow:




Source: Data Processed by The Author

**Figure 2. Structural Diagram (Standardized)**




Source: Data Processed by The Author

**Figure 3 Structural Diagram (t-value)**

Based on the hypothesis testing used, the structural equation model can be formed as follows.

$$FI = 0.764*KL + 0.638*SK + 0.700*AT + 0.718*BH, \text{Errorvar.} = 0.43, R^2 = 0.817$$

$$\begin{array}{cccc} (0.054) & (0.043) & (0.050) & (0.052) \\ 10.982 & 6.890 & 7.863 & 8.931 \end{array}$$

**Tabel 5 Result of Hypothesis Testing**

| Hypotheses | Variables | Coefficient Standard | *t-Value* | Statistical Conclusion |
|---|---|---|---|---|
| $H_1$ | Knowledge → Financial Inclusion | 0.764 | 10.982 | Data Supported |
| $H_2$ | Skill → Financial Inclusion | 0.638 | 6.890 | Data Supported |
| $H_3$ | Attitude → Financial Inclusion | 0.700 | 7.863 | Data Supported |
| $H_4$ | Behavior → Financial Inclusion | 0.718 | 8.931 | Data Supported |
| $H_5$ | Financial Literacy (Knowledge, Skill, Attitude, Behaviour) → Financial Inclusion | 0.833 | 14.315 | Data Supported |

Source: Data Processed by The Author

All respondents are SME owners who are responsible for the success of their business by being actively involved in enriching their knowledge in understanding financial instruments before making decisions. With sufficient knowledge, it is easier for them to analyze the risks of each financial instrument, make comparisons and also analyze the benefits of each product. SMEs prefer to do business with financial institutions that can provide loan services at affordable interest rates. Gaining knowledge of loan services allows them to support the growth of their business and in the long run will improve their well-being. Knowledge has the highest positive effect on financial inclusion. This finding supports the previous research conducted by (Bongomin et al., 2017) which stated that individual knowledge of financial products plays an important role in developing individuals' financial literacy which helps their awareness in choosing the right financial instrument.

Skills give the lowest effect on financial inclusion. Individual skills in making financial decisions are mostly influenced by their financial knowledge. People will not have good financial skills if they do not have sufficient knowledge to budget, evaluate and analyze the performance of each financial instrument and how to manage their financial resources. Lack of financial skills will make some difficulties in making business with financial institutions. This study is in line with a study (Lusardi & Mitchell, 2014) which stated that people should gain a better understanding of financial knowledge combined with financial skills to manage financial resources efficiently.

Attitude is also one of the variables that have a significant influence on financial inclusion. Attitude is an important element of financial literacy. People who do not have a clear future plan tend to spend their money only for consumption (Atkinson & Messy, 2012). They will not be able to be wise when facing financial problems. These results support the research conducted by Garg & Singh (2018) which states that financial attitudes are pre-dispositioned behavior in certain ways created by individual beliefs, both economically and non-economically.

Behavior has a significant effect on financial inclusion. This result found that people who care enough about their future life will choose the best financial investment that suits them. People will prefer financial instruments that suit their individual characteristics and profile. People with conservative behavior will avoid high-risk investments. Conversely, people with aggressive behavior will choose high-risk investments, meaning higher returns with higher risks. Therefore, they will seek as much information as possible from various sources.

Their intensive relationship with financial institutions will show the highest financial inclusion they have. This finding is in line with research conducted by Atkinson & Messy (2012) which explained that people's behavior has a significant effect on their financial well-being. Therefore, it is important to analyze behavioral dimensions in financial literacy.

Subsequent testing for all independent variables together on financial inclusion shows that knowledge, skills, attitudes and behavior together have a significant effect on financial inclusion. This study shows that financial literacy plays an important role in customers' decisions to access financial institutions, which in turn will increase financial inclusion among Indonesians. This finding is in line with previous research conducted by (Grohmann et al., 2018) that increasing financial literacy in a country's population will increase the number of account holdings.

## CONCLUSION

All dimensions of financial literacy have a significant effect on financial inclusion. SMEs that have adequate financial knowledge, equipped with appropriate skills and attitudes, will have better behavior in dealing with financial institutions. As one of the United Nations' sustainable development goals, financial inclusion is the best strategy to reduce poverty and improve people's welfare. Therefore, the Indonesian government must have a strong commitment to increasing the financial literacy index. Some solutions can be carried out by the relevant agencies, especially for SMEs with training in collaboration with certain financial institutions to introduce financial products and provide an understanding of the importance of SMEs following the current developments. SMEs need to realize that adaptation to the environment is important for the sustainability of their business, one of which is by understanding financial products that can then be utilized. Providing good financial education to the public can also be done with the active participation of the financial ecosystem, including formal financial institutions such as banks and non-formal financial institutions such as peer-to-peer lending platforms and cooperatives. There should be a strong outreach using media campaigns to share useful information about the characteristics of financial instruments. The content of the campaign provides clear information where the public can access financial products and services with simple administrative procedures, more affordable, and in a more comfortable place. There are limitations in this study, which was the use of other variables that become phenomena that occur such as things related to digitization or other variables that are relevant to current phenomena.

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