The Impact Of Financial Literacy, Financial Inclusion And Technology On Increasing Msme Profits (Depok City Case Study)

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ABSTRACT

The rapid growth of MSMEs in Indonesia provides great opportunities for the national economy. However, to increase the competitiveness and sustainability of MSMEs, a deeper understanding of the factors that influence their performance is needed. This research specifically focuses on the role of financial literacy, financial inclusion and financial technology in driving MSME profit growth in Depok City. Apart from that, this research also considers gender roles as a differentiating factor. This research uses a quantitative approach by collecting data through questionnaires distributed to 100 MSMEs in Depok City who have utilized financial technology. The data obtained was then analyzed using the Structural Equation Modeling-Partial Least Squares (SEM-PLS) method. The results of the analysis show that financial literacy, financial inclusion and financial technology have a positive and significant influence on MSME profit growth. These findings indicate that increasing financial literacy, expanding access to financial services, and utilizing financial technology are strategic steps to improve the performance of MSMEs. Although gender is not proven to moderate the relationship between independent variables and profit growth, this research provides an important contribution in developing policies to support the growth of MSMEs in Indonesia. The results of this research can be a basis for governments, financial institutions, and other stakeholders to design more effective programs in increasing financial literacy, expanding financial inclusion, and encouraging the adoption of financial technology among MSMEs.

INTRODUCTION

The financial inclusion index for Micro, Small, and Medium Enterprises (MSMEs) plays an important role in encouraging inclusive economic growth. MSMEs are the backbone of the economy in many countries, including in encouraging socio-cultural development (SOSBUD). However, limited access to finance is often the main obstacle for MSMEs to grow and make maximum contributions. Therefore, it is necessary to measure the MSME financial inclusion index. This activity has specific objectives, namely: 1. Assessing the dimensions of the financial

inclusion index that are relevant to MSMEs. 2 Analyze the main barriers to financial access for MSMEs. 3. Developing strategies and innovations to increase the financial inclusion of MSMEs.

The Depok City Government (Pemkot) was awarded the second-best award in the Digital Economy Champion Appreciation (AJEG) by the Provincial Government of West Java (West Java) and Bank Indonesia (BI) West Java Region. This award was given as a form of recognition of the efforts of the Depok City Government in adopting and encouraging digital transactions in its area. Wahid Suryono, Head of the Regional Finance Agency (BKD) of Depok City, stated that AJEG 2023 is a recognition from Bank Indonesia for local governments that have succeeded in accelerating and expanding digitalization in 2023.

The AJEG 2023 award sets assessment criteria that include various aspects such as the electronification of local government transactions, electronic-based government systems, information security, digitalization infrastructure, and support and regulations from the Regional Digitalization Acceleration and Expansion Team (TP2DD). In addition, the business world and society are also assessed based on non-cash transactions, financial inclusion, and human resources in the context of digitalization. The Depok City Government has implemented digitalization in various aspects of finance, such as tax revenue, regional levies, and regional spending, and continues to encourage the use of digital payment channels such as Qris and Virtual Account and the active role of the community in utilizing digital transactions is also an important factor in winning this award. The city of Depok recorded a significant achievement with 22 million Qris transactions, which makes it the fourth highest ranking in West Java. This is supported by the existence of 419,044 units of Qris merchants in the city, the majority of which are operated by Micro, Small and Medium Enterprises (MSMEs).

The urgency of strengthening MSME financial inclusion lies in the potential of MSMEs in supporting sustainable and inclusive economic growth. With adequate access to finance, MSMEs can increase production, create jobs, and support socio-cultural initiatives that enrich local and national identities. The approach taken is a combination of qualitative and quantitative analysis. Through surveys, interviews, and secondary data analysis, we can deeply understand the challenges and opportunities in MSME financial inclusion. In addition, cooperation between the government, the private sector, and financial institutions will be key in formulating holistic solutions. Targeted innovations include the development of financial products tailored to the needs of MSMEs, the application of financial technology (fintech) to facilitate access, and financial education programs for MSME actors. Thus, MSMEs can be more efficient in managing finances, expanding market reach, and reducing risks.

Financial literacy, which includes an understanding of financial management, planning, and investment, has a central role in business decision-making among MSME actors. Good knowledge of financial management can help MSMEs manage cash flow, reduce financial risk, and maximize profits. However, many MSME actors in Depok City still have a low level of financial literacy, so their ability to manage their business is often hampered by mistakes in financial management.

In addition, financial inclusion, which refers to wider access to formal financial services such as banking, insurance, and microfinance, is also an important factor influencing the growth of MSMEs. With increased access to financial services, MSMEs can take advantage of banking products such as business loans, savings, and insurance to support their business expansion and risk management. Unfortunately, even though the government has encouraged financial inclusion programs, many MSMEs in Depok City still face obstacles in accessing formal financial services, especially due to lack of information and administrative constraints.

The development of digital technology is also an important catalyst in the transformation of MSME businesses. The use of technology, both in marketing, management, and business operations, can increase efficiency and expand market reach. The adoption of technologies such as e-commerce, digital financial applications, and social media platforms allows MSMEs to compete more effectively in an increasingly competitive market. However, the challenges of

technology adoption among MSMEs cannot be ignored. Many MSME players do not fully understand how to utilize technology to support their businesses, and this is an obstacle to increasing profits.

This study focuses on MSMEs in Depok City with the aim of analyzing the extent to which financial literacy, financial inclusion, and technology adoption contribute to increasing their profits. Through this study, it is hoped that the right strategy can be found to encourage the growth of MSMEs through increasing financial literacy, wider access to financial services, and more optimal use of technology.

This study also aims to identify the main obstacles faced by MSMEs in improving financial literacy, accessing formal financial services, and adopting technology. The results of this study are expected to be the basis for the Depok City government and related parties in formulating policies that support the growth of MSMEs in a more holistic and sustainable manner.

By linking financial literacy, financial inclusion, and technology in one analytical framework, this study tries to provide a comprehensive understanding of the factors that affect the profitability of MSMEs in Depok City. Given the importance of the role of MSMEs in the local economy, the results of this study are expected to make a significant contribution in formulating more targeted MSME development policies.

LITERATURE REVIEW

Financial literacy theory refers to the ability of an individual or business entity to understand basic financial concepts, including personal financial management, financial planning, and investment. In the context of MSMEs, financial literacy is very important because it is directly related to the ability of entrepreneurs to manage cash flow, assess risks, and make the right financial decisions. According to (Lusardi & Mitchell, 2014), adequate financial literacy contributes to improving financial well-being through more efficient resource management. On the other hand, low financial literacy can lead to suboptimal decision-making, which will ultimately affect the profitability of MSMEs (Atkinson & Messy, 2012).

Financial inclusion, as described by (Allen et al., 2016), refers to an individual's or business's access to financial services that suit their needs. Wider financial inclusion allows MSMEs to gain access to capital, banking services, and risk protection through insurance. When MSMEs can access credit more easily, they can use the capital for business expansion, which leads to increased profits (Beck et al., 2008). However, barriers to access to formal financial services, such as a lack of understanding of financial products or complex bureaucracy, often prevent MSMEs from taking full advantage of financial inclusion.

The adoption of technology in the business world, especially digital technology, is also very important for the development of MSMEs. According to Rogers (2003) in innovation diffusion theory, technology adoption follows a pattern that is influenced by innovation characteristics, social conditions, and user capabilities. Technology can improve operational efficiency, expand market reach through digital platforms, and reduce transaction costs. Research by Gatautis (2015) found that digital technologies, such as e-commerce and fintech, significantly increase the competitiveness and profitability of MSMEs, especially in urban areas that have good access to technological infrastructure.

Previous research relevant to this topic also highlights the close relationship between financial literacy, financial inclusion, and technology adoption on MSME performance. For example, research by (Demirguc-Kunt et al., 2018) shows that MSMEs that have greater access to formal financial services tend to be better able to survive and thrive in the long term. In addition, research from (Fatoki, 2014) found that high financial literacy increases the business survival rate of MSMEs, especially in the face of market uncertainty. On the other hand, the adoption of higher technology has been proven to increase market efficiency and accessibility for MSMEs (Rahayu & Day, 2017).

METHODS

Population

According to Sekaran & Bougie (2017), a population is a group of people, events, or interesting things that researchers want to make an opinion about (based on sample statistics). Another meaning according to Arikunto (2019), population is the entire object of research. The population used in this study is MSME actors in the city of Depok based on open data. West Java Province has a total of 247,206 MSME actors.

Sample

According to Sekaran & Bougie (2017) the sample is part of the population. The sample consisted of a number of selected members from the population. In other words, some, but not all, elements of the population make up the sample. Samples taken from the population must be truly representative or representative of the population being studied (Arfati, 2021). Researchers use the *Non probability Sampling* whose sampling does not provide an equal opportunity for members of the population to be selected as a sample.

Data Collection Methods

This study adopts a quantitative approach to explore data that can be measured and analyzed statistically. This method allows researchers to obtain new findings that are objective. In order to collect quantitative data, researchers have conducted interviews and distributed questionnaires to MSME actors. The use of questionnaires is considered effective because it allows respondents to provide answers directly and avoid confusion, especially when faced with a number of questions. This is in line with the opinion of (Sekaran & Bougie, 2017) who emphasized the importance of a clear and easy-to-understand questionnaire design.

In designing this research questionnaire, the researcher used a Likert scale consisting of five answer choices. The Likert Scale, according to Sugiyono, is a commonly used tool to measure respondents' attitudes, opinions, or perceptions of a phenomenon. With this scale, respondents can express their level of approval or disagreement with each statement by selecting one of the five available options, namely strongly agree, agree, neutral, disagree, and strongly disagree. The use of the Likert scale allows researchers to obtain more measurable and easy-to-analyze data. (Sugiyono, 2019)

Research Variables:

The variables to be studied include:

1. Financial Literacy is knowledge, skills, and beliefs that influence attitudes and behaviors to improve the quality of taking   Results and financial management for achieve prosperity.
2. Financial Inclusion is access to various financial institutions, products and services in accordance with the needs and capabilities of the community to improve people's welfare.
3. *Financial Technology* is an innovation in the financial sector with a touch of modern technology that can bring a more practical and safe financial transaction process.
4. MSME Profit Growth Indicators, Profit growth is the percentage increase in profits obtained by the company, besides that good profit growth is a signal and good company performance.

Data Analysis:

1. Descriptive Analysis: Quantitative data will be analyzed descriptively to identify the distribution, frequency, and general patterns related to the research variables.
2. Inferential Analysis: Using statistical techniques such as regression to identify relationships between independent variables (e.g., accessibility, sustainability) and dependent variables (MSME financial inclusion index).

3. Qualitative Analysis: Qualitative data from the interviews will be analyzed using a thematic approach, where the main themes and sub-themes will be identified to understand the factors affecting the financial inclusion of MSMEs.
4. Validity and Reliability
   To ensure the validity and reliability of the data, questionnaires will be carefully prepared, pre-testing will be carried out before the main data collection, and statistical analysis will use valid and reliable techniques.
5. Evaluation and Interpretation:
   The results of the data analysis will be evaluated to interpret the findings, make conclusions, and provide recommendations. Interpretation will be based on quantitative and qualitative analysis, as well as relevant literature and relevant theoretical frameworks.

RESULTS

Overview Of Depok City

Micro, Small, and Medium Enterprises (MSMEs) have a very strategic role in the national economy. The contribution of MSMEs to the Gross Domestic Product (GDP) reaches 61.1% and absorbs up to 97% of the total national workforce. The rapid growth of MSMEs shows the vitality of this sector in boosting the Indonesian economy.

The COVID-19 pandemic that has hit the world since the beginning of 2020 has had a significant impact on the global economy, including Indonesia. The MSME sector, which is the backbone of the economy, was also affected by the pandemic. Large-scale social restrictions (PSBB) imposed in various regions, including Depok City, have caused many MSMEs to experience difficulties and be forced to close their businesses.

Despite facing challenges due to the pandemic, MSMEs in Depok City have shown quite good resilience. The number of MSMEs in Depok City has continued to increase during the pandemic period. This shows that MSME actors in Depok City are able to adapt to difficult situations by shifting their business strategies to the digital realm. By utilizing e-commerce platforms, MSMEs can reach a wider range of consumers and continue to operate amid social restrictions.

Realizing the importance of MSMEs in economic recovery, the government, especially the Depok City government, has made various efforts to support the growth and development of MSMEs. In addition to providing access to business capital, the government also pays special attention to improving financial literacy, financial inclusion, and the use of financial technology (fintech) among MSME actors. These efforts are expected to equip MSME actors with the knowledge and skills needed to develop their businesses sustainably.

Model Test Results

The results of the validity test showed that all statement items in the variables Financial Literacy, Financial Inclusion, Financial Technology, Profit Growth, and Gender had a significance level below 0.05. This means that each question item in that variable significantly contributes to the construct of the variable being measured. Thus, it can be concluded that all question items used in this study are declared valid.

The results of the reliability allowance using Cronbach's alpha coefficient showed that all research variables had adequate reliability values. Cronbach's alpha value for all variables exceeded the threshold of 0.50, which indicates that the measurement instrument used is quite reliable. Furthermore, the variables Financial Literacy, Financial Inclusion, Financial Technology, and Profit Growth even have Cronbach's alpha value above 0.70, which indicates an excellent level of reliability. This shows that the measurement instruments for these variables are consistent and reliable in measuring the concept in question.

Inner Model Testing is one of the evaluation methods used in the analysis of Partial Least Square. This method aims to predict whether there is a relationship between latent variables. The following is the inner model path diagram used in this study:

Figure 1 Inner Model
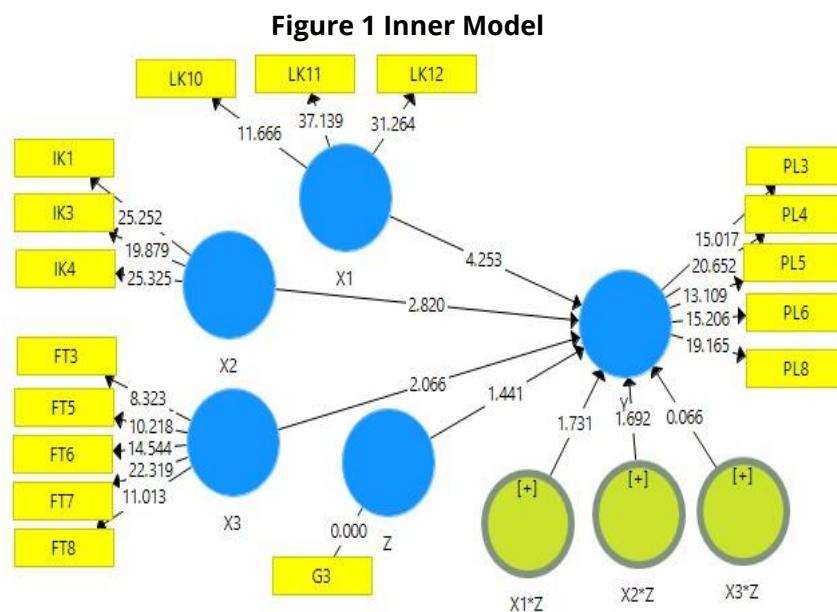
Source: Primary data processed (2024)

Descriptive Analysis

The subjects of this study are Micro, Small, and Medium Enterprises (MSMEs) who are domiciled in Depok City. The demographic characteristics of the respondents included gender, age group, last education level, business sector, business ownership status, length of business run, and the amount of monthly turnover. These demographic data will be used to provide a more comprehensive picture of the profiles of MSME actors who are respondents in this study.

Table 1 Distribution Of Respondents By Gender And Age Group

	Category	Sum	Presented (%)
Kind	Man	45	45%
Sex	Woman	55	55%
	Total	100	100%
	18 -26 Years	40	40%
	27 – 35 years old	38	38%
Age	36 – 44 years old	10	10%
	>44 years	12	12%
	Total	100	100%

Source : Processed primary data (2024)

Based on data obtained from 100 respondents, the analysis of gender and age demographic variables shows that the majority of business actors who use fintech services are women with an age range of 18-26 years. These findings indicate that there is a positive correlation between the use of fintech services and productive age groups, especially women

Table 2 Characteristics Of Respondents Based On Business Type

	Category	Sum	Presented (%)
Jenis Possession	Individual Ownership	73	73%
	Family-Owned Business	19	19%
	Business with Associates	8	8%
	Total	100	100%
Period Activities UMKM	< 1 Year	7	7%
	1 – 3 Years	24	24%
	3 – 5 Years	33	33%
	>5 Years	36	36%
	Total	100	100%
Value Sales Monthly	< 50 million	43	43%
	50 million – 100 million	30	30%
	100 million – 300 million	19	19%
	300 million – 500 million	3	3%
	>500 million	5	5%
	Total	100	100%

Source: Processed primary data (2024)

Based on data obtained from 100 respondents, the majority of business actors run their businesses independently (73%), followed by family businesses (19%) and joint businesses with friends (9%). Regarding the length of running a business, the analysis shows that 36% of respondents have been entrepreneurs for more than 5 years, 33% between 3-5 years, 24% between 1-3 years, and the rest for less than 1 year. These results indicate that most of the business actors in this study sample have had more than 3 years of entrepreneurial experience.

Analysis of ownership status and business duration showed that the majority of respondents had been running a business independently for more than 3 years. These findings indicate that long entrepreneurial experience has become a common characteristic of business actors in this research sample.

DISCUSSION

This study aims to examine the influence of financial literacy, financial inclusion, and financial technology variables on corporate profit growth, as well as the role of gender as a moderation variable. Data analysis using Partial Least Squares Structural Equation Modeling (PLS-SEM) 4.0. The results of the analysis will be further elaborated in the discussion section.

How Does The Level Of Financial Literacy Contribute To The Growth Of MSME Profits In The Depok Area?

This study aims to examine the influence of financial literacy on the profit growth of Micro, Small, and Medium Enterprises (MSMEs) in Depok City. The results of the data analysis showed that there was a positive and significant influence between financial literacy and MSME profit growth. These findings support the research hypothesis.

The results of further research show that indicators of savings utilization, budget management, debt type selection, and debt payment management effectively contribute significantly to the financial literacy of MSME actors. This is in line with the findings of previous research by (Widianingsih et al., 2023). With more than 5 years of business experience, the majority of respondents have been able to implement financial literacy in their business practices. Thus, it can be concluded that increasing financial literacy can be one of the key factors in encouraging MSME profit growth."

The Relationship Between The Level Of Financial Inclusion And Profit Growth As An Indicator Of MSME Performance In Depok

The results of the study show that there is a positive and significant influence between financial inclusion and MSME profit growth in Depok City. These findings support the proposed research hypothesis. Wider access to financial services, such as financing and other financial products, allows MSME actors to increase production capacity and expand markets. This is in line with the findings of previous research by (Mirdiyantika et al., 2023). The profile of respondents who are dominated by the millennial generation with a fairly high level of education indicates a good understanding of the benefits of financial inclusion.

The Impact Of Financial Technology On The Increase In Micro, Small, And Medium Business Profits In The Depok City Area

The adoption of financial technology (fintech) by MSMEs in Depok City has a significant positive impact on profit growth. The results of the study show that the use of fintech, such as digital payments and peer-to-peer lending, can improve operational efficiency and expand market access. The profiles of respondents who are familiar with digital technology support these findings. This research is consistent with the findings of (Afrianti & Biduri, 2023) which highlights the important role of fintech in improving the performance of MSMEs.

The Influence Of Gender In Facilitating The Relationship Between Financial Literacy And MSME Profit Growth In Depok City

Moderation analysis showed that gender variables did not have a significant influence in moderating the relationship between financial literacy and MSME profit growth. These findings indicate that both men and women have an equally important role in the financial management of MSMEs. This result is in line with the findings of Zulfiana & Hakim (2020).

The Role Of Gender As A Moderator Of Financial Inclusion In Depok MSME Profit Growth

Based on the results of the analysis, the gender variable does not play a role as a differentiating factor in testing the influence of financial inclusion on the profit growth of MSMEs in Depok City. These findings show that in the context of this study, access to financial services provides equal opportunities for business actors, regardless of gender.

Analysis of gender variables shows that there is no significant difference in access and utilization of financial services between men and women. This indicates that both men and women have the same opportunity to access various financial services that can support the growth of their businesses.

With a higher proportion of female respondents, the study also concluded that both men and women have equal rights in financial decision-making. Gender differences are not a barrier for women to take risks and take responsibility for financial decisions in their endeavors.

Analysis Of Gender Moderation On The Relationship Between Financial Technology Adoption And MSME Profit Growth In Depok City

The results of hypothesis testing show that there is no significant difference between men and women in terms of the influence of fintech use on MSME profit growth. This indicates that the use of fintech provides equal benefits for both genders.

An analysis of gender variables showed that there was no significant difference in the ability of individuals to utilize digital financial technology. Both men and women have equal access to a variety of fintech services that can support the growth of their businesses. In other words, gender is not a limiting factor in the use of digital technology to improve business performance.

These findings indicate that both men and women have equal roles and contributions in the digital era. The high proportion of female respondents in this study further strengthens the conclusion that gender is not a barrier for women to access the wider digital market and increase business profitability.

CONCLUSION

This study comprehensively examines the influence of various factors on the profit growth of Micro, Small, and Medium Enterprises (MSMEs) in Depok City. The independent variables studied include financial literacy, financial inclusion, and the use of financial technology. In addition, this study also analyzes the role of gender as a moderation variable to understand whether there is a difference in the influence of the three independent variables on MSME profit growth based on the gender of business actors. In other words, this study aims to uncover the extent to which financial literacy, access to financial services, and the use of financial technology contribute to increasing the profitability of MSMEs in Depok City, as well as whether there are differences in influence based on the gender of business actors. This study comprehensively examines the influence of various factors on the profit growth of Micro, Small, and Medium Enterprises (MSMEs) in Depok City. The independent variables studied include financial literacy, financial inclusion, and the use of financial technology. In addition, this study also analyzes the role of gender as a moderation variable to understand whether there is a difference in the influence of the three independent variables on MSME profit growth based on the gender of business actors.

The results of the data analysis showed significant findings. First, this study proves that financial literacy has a positive and significant influence on the profit growth of MSMEs in Depok City. This indicates that the higher the level of financial literacy of a business actor, the greater the opportunity for his business to grow and develop. Second, financial inclusion has also been proven to have a significant positive impact on MSME profit growth. Wider access to financial services allows businesses to obtain capital, manage finances more effectively, and develop their businesses. Third, the use of financial technology also contributes significantly to the increase in MSME profits. The increasingly widespread use of financial technology has made it easier for business actors to make transactions, manage finances, and expand market reach.

The results of this study also examine the role of gender as a moderation variable. However, the data analysis did not show a significant interaction between gender and independent variables (financial literacy, financial inclusion, and financial technology) in influencing MSME profit growth. This means that the influence of these three variables on MSME profit growth is not significantly different between male and female business actors in Depok City. These findings indicate that other factors outside of gender, such as business characteristics, entrepreneurial experience, and business environment, may be more dominant in influencing MSME performance.

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