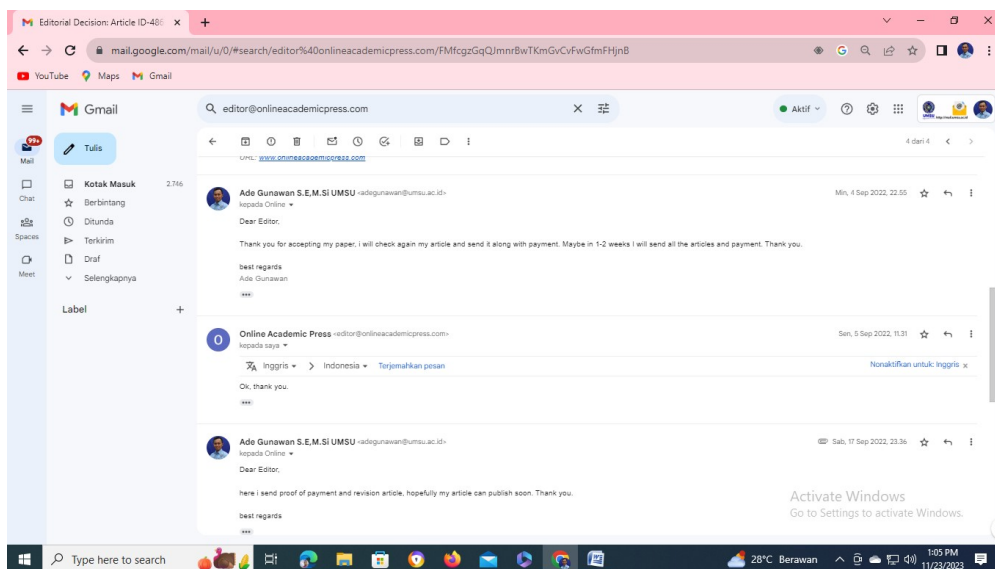
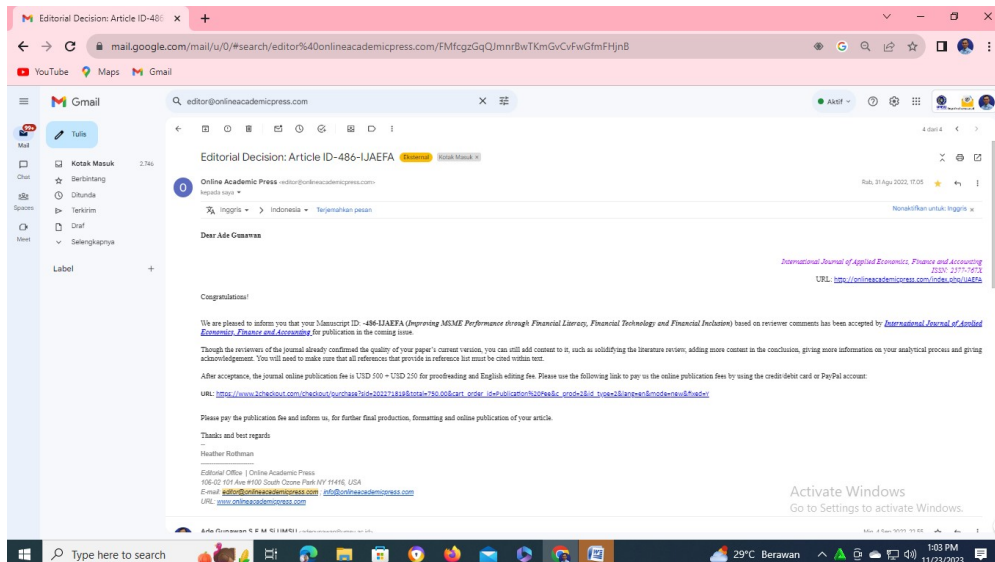
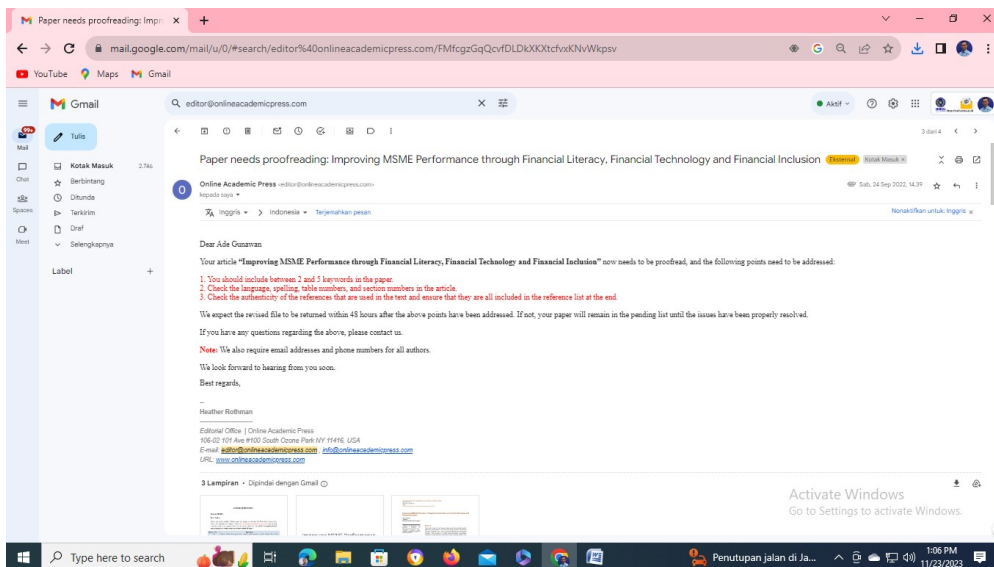
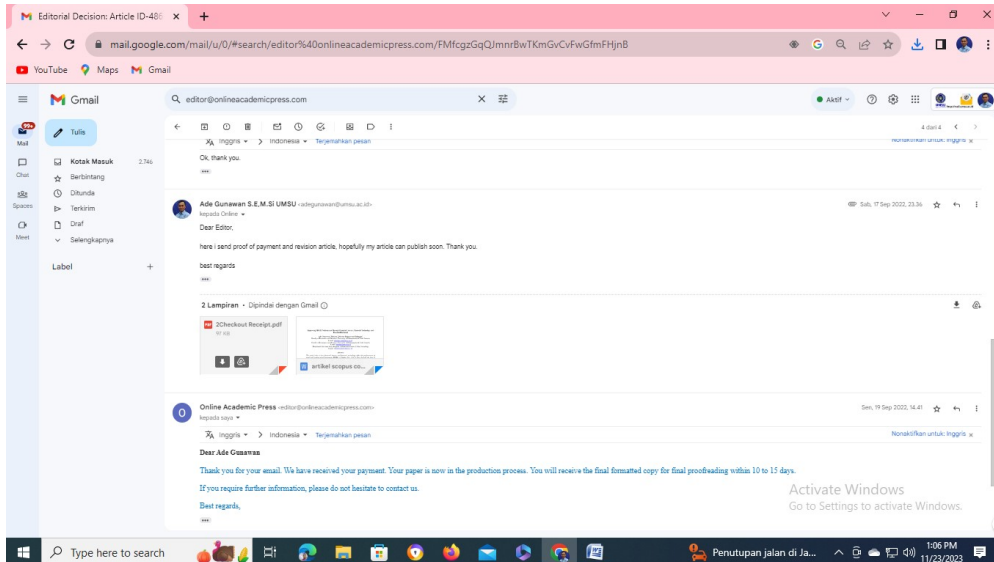






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Improving MSME Performance Through Financial Literacy, Financial Technology and Financial Inclusion

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1. Introduction

Micro, Small, and Medium Businesses (MSMEs) play a significant role in the national economy. MSMEs are the pillars of a country's economy in facing an economic crisis. When the global economic crisis occurred, it automatically deteriorated Indonesia's economic conditions. During the period from 1997 to 1998, only the SME sector was able to withstand the crisis conditions (Abidin, 2015; Mujanah et al., 2022). According to data released by the Central Statistics Agency following the economic crisis, the number of MSMEs did not drop; rather, their development increased, allowing them to absorb 65 million to 114 million workers by 2013. This phenomenon

Abstract

This study looks at how financial literacy and financial technology affect the performance of small and medium-sized businesses (MSME) in Medan City. This is done through the lens of financial inclusion. This research is mostly about descriptive quantitative research and what kind of research is used to explain things. One part of this research is based on 100 Medan City MSMEs. sampling method was the method used to pick out samples. PLS (Partial Least Square) analysis is used to look at the data. 1) Financial literacy and financial technology have a small but positive effect on Medan City's small and medium-sized businesses. 2) Financial literacy and financial technology have a big and positive effect on how well MSMEs in Medan City do. 3) Financial inclusion has a small but positive effect on the way MSMEs in Medan City do business. 4) Financial inclusion does not play a role in how well MSMEs in Medan City do in terms of financial literacy and financial technology.

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explains why MSMEs are productive businesses that contribute to macroeconomic development in Indonesia and affect other sectors. In addition to the number of business units and entrepreneurs, as well as their contribution to the national income and employment development, the development of the significant role of MSMEs is shown by their significant contribution to the national income and employment provision (Suci, 2017).

MSMEs also play a significant role in labor absorption and the distribution of development outcomes. The contribution of MSMEs to the Gross Domestic Product (GDP) is also encouraging. According to the Ministry of Cooperatives and MSMEs, it was 5,440,007.9 billion Rp in 2014. At the same period, 114,144,082 persons are absorbed into the labor force (Depkop, 2017).

Table 1. The development of MSMEs in Indonesia.

Indicator	Year				
	2014	2015	2016	2017	2018
Total MSMEs (unit)	57.895.721	59.262.772	61.651.177	62.922.617	64.194.057

Source: Ministry of cooperatives and SMEs.

Table 1 shows that MSMEs contribute positively to the national economy. This is also integral to the government's role. From 2014 to 2017, it is anticipated that the number of MSMEs would exceed 57,800,000 units, and in 2018, it is estimated that the number of MSMEs will surpass 64,000,000 units (Depkop, 2017). The development of MSMEs has increased throughout the year in all Indonesian cities and regions. One of them is Medan City, which also plays a significant role in North Sumatra's economic growth (Hutagaol, 2019).

In terms of physical, economic, social, and cultural development, Medan is experiencing rapid growth. The city of Medan is one of Indonesia's metropolitan cities and the country's economic driving force. One kind of development in the city of Medan is the development of entrepreneurial programs in the economic sector (Simamora, 2017). The crisis has not hindered the activities of Medan's MSMEs, which continue to operate. It is impossible to separate the development of small and medium-sized firms from the entrepreneurial role of MSME actors. Experience in developed nations has shown that MSMEs are a source of production and technological innovation, rise in the number of creative and inventive entrepreneurs, and the creation of a competent and adaptable workforce in the production process to meet the continuously changing market demand (Sari, 2014; Syafar., Du, & Gao, 2015).

Table 2. Development of MSMEs in North Sumatra.

Indicator	Year				
	2014	2015	2016	2017	2018
Total MSMEs (unit)	2.855.399	2.855.549	2.855.847	2.857.124	2.857.134

Source: North Sumatra Cooperatives and SMEs Office.

In Table 2, the Department of Cooperatives and SMEs of Medan City has raised the number of MSMEs to over 33,000 units between 2014 and 2018. This shows that the existence of MSMEs has a significant impact on the national economy. Based on the data provided by the Department of Cooperatives and SMEs, it is possible to conclude that MSMEs can contribute significantly to the economic growth of Medancity (Depkop., 2018).

For MSMEs to develop in Indonesia, their actors must be able to survive and compete with other MSMEs. This encourages micro, small, and medium-sized enterprise (MSME) actors to establish new and different businesses, with a focus on performance. Most owners of MSMEs lack wide perspectives and knowledge, hence they are less long-term focused. Due to a lack of knowledge in the subject of management, efforts to increase its effectiveness are typically conventional. Consequently, they frequently mismeasure business productivity, which eventually impacts business performance (Wirastuti, A. E. M.S, & Kurniasari, 2009). However, the development of MSMEs is still hampered by a variety of challenges, which can be viewed from two factors. First, internal factors, including capital, production, marketing, and human resources, are inadequate. Second, external variables in the form of difficulties generated by SME developers and managers. Some of these issues will influence the performance of MSMEs if they are not addressed. To address these issues, particularly in terms of capital and marketing, there is a Financial Inclusion model (Irmawati, Damelia, & Puspita, 2013).

Research by Agyei (2018) Small business actors in Ghana must be provided with financial education enhancement programs to improve their financial literacy. The given financial education program must align with their business development needs. There is a substantial correlation between their financial literacy and the growth of their business. Saeed (2009) states that business growth is impacted by the development of financial sources and is proportional to business owners' financial access. The difficulty encountered is that many small business owners still do not have adequate financial literacy.

Research by Nunoo dan Andoh (2012) also stated that developing countries are always faced with low access

to financial products and services. Business actors are among those who find it difficult to acquire access and are regarded as posing significant risks. Therefore, the condition is related to the amount of education that impacts the financial literacy of business actors, which in turn influences the development of their businesses.

Financial inclusion is an endeavour to make the financial system accessible to all levels of society to promote quality economic growth and eradicate poverty. Financial inclusion seeks to eliminate all barriers to the public's use of existing financial services and infrastructure. This program is anticipated to foster an increasingly inclusive and sustainable economic growth, as well as deliver community welfare benefits (Nurjannah, 2017).

Due to the high level of unbanked (not meeting bank loan requirements) caused by the poverty gap, low MSME funding, high micro-credit interest rates, lack of MSME management capabilities, and limited distribution channels for financial services, the adoption of inclusion finance is crucial (Yanti, 2019).

According to the findings of a Financial Services Authority survey done in 2019, the financial inclusion index was 76.19 percent. This percentage has increased compared to the 2016 survey results of 67.8 percent. Thus, there has been an 8.39 percent growth in access to financial products and services or financial inclusion during the past three years. This increase is the result of the cooperative efforts of the Government, the Financial Services Authority, allied ministries or institutions, the Financial Services Industry, and a number of other parties, which continue to develop financial literacy and social inclusion (Financial Services Authority., 2019).

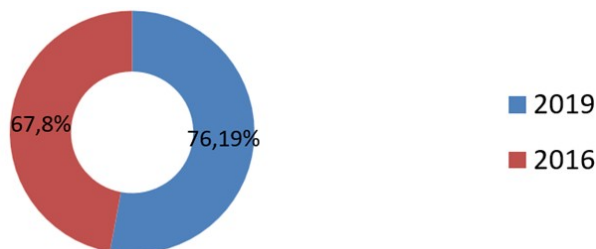


Figure 1. Financial inclusion index 2016 and 2019.

Source: Financial services authority.

The financial inclusion index in North Sumatra is 93.98 percent. This number is the best national index of financial inclusion, ranking second behind DKI Jakarta. This demonstrates that a more prosperous North Sumatra may open 1,246 new customer accounts with a trivial transaction or fundraising amount of IDR 2,61 billion. The growth of micro, small, and medium-sized enterprises (MSMEs) in Medan has an impact on the economic growth of the city's residents because MSMEs can provide expansive business opportunities in a variety of economic sectors. However, MSME entrepreneurs in Medan continue to face difficulties in developing their businesses due to a lack of capital. Financial troubles are not only caused by a low income, but also by poor financial management, such as the misuse of credit, the lack of financial planning, and not having savings (Yanti, 2019).

The socialization of the Financial Services Authority of North Sumatra to expand financial inclusion was one of them through the Laku Pandai program with Non-Cash Food Assistance (BPNT) and the development of the Regional Financial Access Acceleration Team (TPAKD). The Laku Pandai initiative with BNPT and TPAKD is regarded an alternative and a solution for the Medan area so that MSME actors in remote, innermost, and outermost locations can be served, as well as supporting banks in reaching consumers without having to construct new branch offices. Therefore, the North Sumatra Financial Services Authority needs to establish an integrated system to prepare financial inclusion materials that follow the conditions and needs of MSME actors in Medan. Financial inclusion can analyze numerous financial products and services in order to make wise financial decisions. These challenges suggest that financial inclusion will not develop by itself. This is because financial inclusion supports the effective use of products and helps business actors build skills and the finest financial products according to their needs. Financial inclusion is possible to make changes in the perspective of economic actors in seeing money and profits (Sanistasya, Rahardjo, & Iqbal, 2019).

Financial inclusion can improve the capacity of micro, small, and medium-sized enterprise actors to use financial services and receive direct impact from financial institutions. This is because the higher the increase in financial inclusion among MSMEs, the greater the overall improvement in a nation's financial stability. This is significant because it can optimize funding sources in the region, so enabling MSMEs to become more productive and develop. Financial management plays a role in deciding the amount to which the performance of SMEs is improved (Sanistasya et al., 2019).

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DKI
SME
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POJK

In general, MSMEs frequently endure developmental delays. This is due to a variety of unresolved conventional problems (closed loop problems), such as challenges with human resource capacity, ownership, financing, marketing, and other issues connected to business management, which make it difficult for MSMEs to compete with major corporations. This is evident by the absence of the concept of continuous innovation and the inconsistency of the company's main business operations. Finally, the development of MSMEs' long-term performance in the creative industry is typically not well-directed. Consequently, strategic initiatives are required to enhance the performance and sustainability of MSMEs. One method to achieve this is to increase MSME actors' financial knowledge, so that their management and responsibility are more commensurate with a large company (Aribawa, 2016).

In terms of productivity, export contribution, global and regional production participation, and contribution to added value, the performance of MSMEs in Indonesia remains considerably lower to that of other ASEAN countries. Low levels of education and expertise, difficulty in acquiring permits for MSMEs, lack of access to financing, and lack of infrastructural support contribute to the low competitiveness of MSMEs in Indonesia. Lack of access to financing is a contributing factor to the poor performance of MSMEs. This may be due to the lack of knowledge and understanding of the existence of financial institutions among MSMEs. This is referred to as financial literacy (Djuwita & Yusuf, 2018).

Financial literacy for MSMEs is the ability of managers to record financial statements, manage debt, and prepare budgets. Recording of Financial Statements, namely the capacity of MSME management to record business activities, business income and costs, business profitability, and other performance-related topics. Because MSMEs are still unable to create their own financial reports for a certain period, the majority of commercial banks do not grant capital credit. The provision of financial reports for MSMEs is crucial so that MSMEs may determine their business's success. Small and medium-sized enterprises can fund their working capital and investments in two ways, according to Debt Management Literacy. There are two primary funding sources for SMEs. Initially, SMBs can utilize savings. Second, by obligations to third parties. When a business decides to borrow, the percentage of personal capital to external capital/debt decreases. Budget Planning Proficiency, which can be used to plan future business activities (Amri & Iramani, 2018).

Everyone needs a high level of financial literacy to prevent financial difficulties. Financial difficulties are not caused solely by income (low income), but also by mistakes in financial management, such as the misuse of credit, lack of financial planning, and lack of savings. Therefore, financial literacy is important for a prosperous life (Akmal & Saputra, 2016).

Financial literacy affects a person's way of thinking about financial conditions and influences business owners' strategic financial decision-making and better management. The ability of business owners to manage their finances is important for business performance and continuity. It is important for business owners to acquire financial knowledge to improve their companies' performance. This empowers MSMEs to expand their businesses (Kasendah & Wijayangka, 2019).

According to the findings of a Financial Services Authority survey done in 2019, the financial literacy index was 38.03 %. Although it is still deemed low, this percentage has increased since the 2016 survey results of 29.7 %. Thus, there has been an 8.33 % growth in public financial understanding (financial literacy) over the past 3 years (Financial Services Authority., 2019).

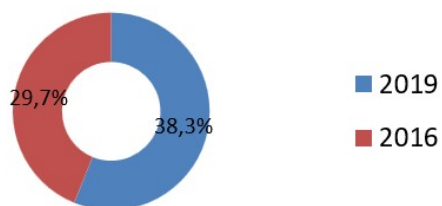


Figure 2. Financial literacy index 2016 and 2019.
Source: Financial Services Authority. (2019).

The level of financial literacy in North Sumatra is 39%. This amount has exceeded the national target. This demonstrates that North Sumatra has an excellent financial understanding. The Government of North Sumatra also expects that the increase in financial literacy in North Sumatra will continue to increase each year, so that

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MSME actors in North Sumatra, particularly in the city of Medan, will be able to effectively manage their finances (Editorial, 2019).

Financial literacy is important for business actors, particularly MSMEs, so that they may choose and utilize financial products and services that meet their needs, engage in more effective financial planning, and avoid engaging in activities involving unclear financial instruments (Djuwita & Yusuf, 2018).

Financial inclusion is incorporated into the financial literacy program to strengthen the ability of MSME players to utilize financial services and obtain a direct effect from financial institutions. The greater the increase in financial inclusion among MSMEs, the greater the country's long-term financial stability. This is significant since optimizing local sources of funding assists MSMEs in being more productive and growing. The extent of SME performance is partially determined by the management of financial management. With financial literacy and inclusion, business actors can utilize their competencies in the financial sector to make a variety of decisions. Financially literacy MSMEs will be able to implement strategic plans to detect opportunities and threats, have enough access to finance, and respond to changes in the unstable economic climate, so that decisions will provide innovative and focused solutions to improve MSME performance (Sanistasya et al., 2019).

Not just in Indonesia, but the world, is presently experiencing the rapid development of technology, which varies significantly across time (Syafar, Gao, & Du, 2014). This is possible because technology is evolving rapidly every day and has invaded numerous industries, including the financial sector. Financial Technology is an example of a technology that supports financial services. Many application improvements in financial services, such as payment instruments, loan instruments, and others, have grown popular in this digital age as a result of the development of financial technology (Muzdalifa, Rahma, & Novalia, 2018).

The term financial technology is a financial service using a technology base which will certainly make it easier for us to do transactions anywhere and anytime (Syafar, Gao, & Du, 2014). This new financial model, financial technology was first started in 2004 by Zopa, a financial institution in the UK that runs money lending services. As a form of application of information technology in the financial sector. Financial technology has various functions, which are believed to be able to quickly develop rapidly. Currently, financial technology is able to serve electronic money, virtual accounts, aggregators, lending, crowdfunding and other online financial transactions. As for financial technology that has been operating, some of them were founded by conventional-based companies, but not a few are start-ups or startups (Rizal, Mualina, & Kostini, 2018).

Financial technology allows transactions without a bank account. Even though it's not a bank, Bank Indonesia regulates financial technology to protect consumers and the public. Financial technology enterprises must register with Bank Indonesia or the Financial Services Authority. Bank Indonesia said fintech can replace banks. Financial technology helps 1) establish a market for business actors, 2) become a tool for payment, settlement, and clearing, 3) implement more efficient investments, 4) mitigate risks from conventional payment systems, and 5) help parties save, borrow cash, and participate in equity.

Financial technology disrupts Indonesians who aren't ready to accept economic developments. Financial technology allows the economy to boost its efficiency and effectiveness. Fintech has assisted MSMEs without bank access. It promotes MSMEs to grow by making easy transaction loans through financial technology (Rahardjo, Ikhwan, & Siharis, 2019).

Financial technology with financial services such as Crowdfunding, mobile payments, and money transfer services that revolutionizes the startup business and alters consumer behavior and expectations necessitates regulations to protect them, including consumer protection, protection of user funds, and potential loss or decline in financial capacity. Whether caused by misuse, fraud, or force majeure, financial technology activities that are prone to data misuse, whether purposeful or inadvertent, pose a risk to consumers (Wibowo, 2016).

Regulation and supervision are important to the long-term sustainability of financial technology in Indonesia. This pertains to the legality of the business being conducted, as the adoption of financial technology development poses possible hazards to consumer protection, the integrity of the financial system, payment systems, and economic stability. The Financial Services Authority regulates and supervises to mitigate these risks and promote sustainable and stable economic growth (Wijayanti, 2018).

The Financial Services Authority ensures that it will oversee the business run by financial technology with several strict rules which were issued at the end of 2016. One thing that will later be made clear is related to determining the minimum capital limit for the financial technology industry. One of the reasons for this regulation is to protect consumers of Information Technology-Based Lending and Borrowing Services (LPMUBTI) / financial technology Peer-to-Peer (P2P) Lending, which is officially regulated by the Financial Services Authority (OJK) in the Regulation of the Financial Services Authority (POJK) Number 77/POJK.01/2016 (Financial Services Authority, 2016).

As a result of modern society's need for everything to operate quickly and easily, devoid of constraints and rules, an increasing number of people are utilizing financial technology today. This demonstrates that comfort, security, transaction suitability, and simplicity of transaction are elements that encourage MSME actors to use

financial technology, as well as matters pertaining to supporting factors, such as ease of recording, ease of transaction processing, and sales growth (Sugiarti, Diana, & Mawardi, 2019).

The emergence of financial technology innovation presents businesses with a refreshing change. Financial technology can facilitate businesspeople's access to financial products. Financial technology can be utilized by business actors to finance their firms. The role of financial technology is not restricted to funding corporate capital; it has also expanded to include digital payment services and financial regulators, among others. In conjunction with the advancement of information and communication technology, the existence of technology-based financial technology services in Indonesia has become important (Sugiarti et al., 2019).

Collaboration between financial technology companies and financial institutions can increase financial inclusion for MSMEs in Indonesia. This is possible because to the current rapid development of technology, which has permeated all sectors, including the financial sector. Therefore, the introduction of technology into the financial business will transform it into the digital era. The implementation of financial technology in the banking industry will make it simpler and more convenient for businesspeople, particularly MSMEs, to access financial service products and apply for financing without having to visit the office in person (Muzdalifa et al., 2018).

2. Literature Study

2.1. Financial Literacy

Financial literacy is an individual's awareness and knowledge of basic financial concepts, including knowledge of financial instruments and their application in business and daily life, such as financial management, savings and loans, insurance, and investment. The greater an individual's financial literacy, the greater his or her financial conduct and financial sagacity in managing effective finances (Gunawan, Pulungan, & Koto, 2019; Pulungan, 2017).

The public is required to have confidence in financial service institutions and their products and services after acquiring the necessary knowledge and abilities. Everyone must have confidence in their own abilities, not only in the financial services industry. This confidence includes the ability to record investment and expenditure plans, create budgets, and other financial tasks (Tustin, 2010).

According to the Financial Services Authority (2016), the level of financial literacy is influenced by gender, education level, and income. Age, financial and numerical knowledge of financial attitudes, household income, as well as education and position also influence financial literacy (Suryanto & Rasmini, 2018).

According to Widayati (2012) developed 15 financial literacy indicators adapted to conditions in Indonesia, namely: 1) looking for choices in a career, 2) understanding the factors that affect net income, 3) knowing sources of income, 4) knowing how to achieve prosperity and financial goals, 5) understanding the budget savings, 6) analyze risk, return, and liquidity, 8) evaluate investment alternatives, 9) analyze the effect of taxes and inflation on investment returns, 10) analyze the advantages and disadvantages of debt, 11) know the purpose of credit and debtor rights, 12) explain ways to avoid or fix debt problems, 13) know the basic laws of consumer protection in debt, 14) ability to make financial records, 15) understand financial statements such as balance sheets, income and cash flows.

2.2. Financial Technology

Financial Technology refers to new solutions that demonstrate innovation in the development of applications, products, or business models in the financial services industry that employ technology (Chuen & Low, 2018). Bank Indonesia defines financial technology as the use of technology in the financial system to create new products, services, technologies, and/or business models, which can influence monetary stability, financial system stability, and/or the efficiency, smoothness, security, and dependability of the payment system. **On the one hand, the growth of financial technology has proven to be beneficial to consumers, business actors, and the national economy. On the other hand,** the financial system can be disrupted if potential risks are not adequately addressed.

According to Word Bank in Nizar (2017) The Financial Technology industry comprises enterprises that use technology to improve the efficiency of financial systems and financial service delivery.

The rise of financial technology produces creative disruption among the Indonesian population, which is unprepared to accept economic activity changes. On the other side, financial technology offers the economy new opportunities to increase economic activity in a more efficient and effective manner (Afifah, 2018). With mature rules, it fosters the growth of MSMEs by facilitating loan transactions via financial technology (Rahardjo et al., 2019).

2.3. Financial Inclusion

Financial inclusion is a comprehensive activity that aims to eliminate all price and non-price obstacles to the public's access to and utilization of financial services (Yanti, 2019) Financial inclusion is also defined as the proportion of individuals and businesses that use financial products and services through the promotion of

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affordable, timely, and adequate access so as to expand the range of their use by the community, which reflects public financial awareness for the economic welfare of the community (Pulungan & Ndururu, 2019). Bank Indonesia also considers financial inclusion to be the right of all individuals to get complete access to and services from financial institutions in a timely, convenient, informative, and cost-effective manner (Bank Indonesia, 2014).

The public, particularly those with low incomes, must comprehend the significance of financial inclusion. Without access to established financial institutions, they lack customer records, cannot qualify for loans, and cannot obtain insurance. Consequently, these community groups rely more on non-formal institutions, which are fraught with risks.

Research by Beck, Demirgüç-Kunt, and Levine (2007) in 99 countries in 2003-2004 shows that the factors that determine the reach of the financial sector are the same as those that determine the depth of the financial sector. These factors are the level of development as proxied by GDP per capita, the quality of institutions as proxied by the governance index, and credit information as proxied by the credit information index.

In Ummah (2015) related to the factors that influence financial inclusion in Indonesia, using the size of the economy, the income distribution as indicated by the Gini index coefficient, the number of internet users, and the number of mobile phone users. While the ratio of road length to unemployment has no effect on the level of financial inclusion, there is no correlation between road length and financial inclusion.

2.4. MSMEs Performance

The World Bank classifies MSMEs into three types, namely: 1. Micro Enterprises (having 10 employees); 2. Small Business (having 30 employees); 3. Medium Enterprises (number of employees up to 300 people) (Bank Indonesia, 2015).

Performance is the work accomplished by a person or organization in completing the responsibilities allocated to them, considering their skills, experience, sincerity, and time (Hasibuan, 2002). Another definition of performance is the result or level of success of a person as a whole within a certain period in carrying out activities relative to possibilities, such as work results, predetermined and mutually agreed-upon goals, goals, or criteria (Rivai, 2005). While the company's performance is a representation of the company's overall condition within a specific time period, it is a result or achievement that is influenced by the company's operational actions in employing its own resources (Srimindarti, 2004).

From the definitions of performance and MSMEs, it can be concluded that the performance of SMEs is the result of work achieved as a whole and compared to the work results, targets, or criteria that have been predetermined and mutually agreed upon in a business entity with assets and criteria revenue specified by the law.

3. Methods

3.1. Research Type

This is a descriptive quantitative study. Investigate the impact of financial literacy and financial technology on the performance of Medan's MSMEs mediated by financial inclusion. In addition, a survey approach was used in this study to identify the status, symptoms, and similarity of status by comparing them to the standards that were selected or established (Arikunto, 2010).

Descriptive quantitative aims to describe or describe the properties (characteristics) of a situation or object of research that has been mentioned. The results are then presented in the form of a research report (Arikunto, 2010).

3.2. Place and Time of Research

This research was conducted in Medan City. The implementation time of this research starts from April 2020 to August 2020.

3.3. Sampling Technique

a. Population

The population in this study were all MSMEs in Medan City.

Table 3.

Business Sector	Total MSMEs	Percentage (%)
Production	301 businesses	38.94
Culinary	438 businesses	56.66
Service	31 businesses	4.02
Livestock and Fisheries	3 businesses	0.38
Amount	773 businesses	100

Source: Medan City Cooperatives and MSMEs Office, 2018.

Comment [AF9]: Please provide us table 3 heading.

Comment [AF10]: Please explain each tables in the text followed by a suitable verb in the present tense: e.g. Table 1 presents; Table 2 exhibits, etc.

b. Sample

A good sample size and it is recommended to use the Maximum Likelihood estimate on the Structural Equation Model (SEM) is 100-200 (Ghozali & Fuad, 2008). Considering the necessity for researchers to use data analysis techniques using SEM (Structural Equation Model) and the maximum likelihood estimate approach, which requires a sample size of 100-200 samples, the researcher will take a sample of 100-200 business types. To fulfill one of the requirements of the SEM-based data analysis method.

To obtain the sample, the sampling technique used by the researcher is the purposive sampling method, which will select the sample based on several criteria that suit the needs of this research, namely, 1) Using financial technology in business transactions, 2) Being a micro business actor and medium-sized enterprises who have capital or assets of 50-500 million and, 3) Are MSME actors $\leq$ 1 year.

3.4. Data Collection Techniques

Researchers collect data using several methods to obtain data and information related and relevant to the topics to be addressed. The data collection technique utilized is to make a list of questions (questionnaire) (questionnaire). Through a list of questions, the researcher made various questions to the respondents, in this case the MSME actors who became the study sample to be replied by the respondents. The measurement of the variables in this study itself uses a Likert scale. Through the Likert scale, it will be easier to present questions that can be comprehended by responders and easy to score from the highest to the lowest. In addition, this Likert scale will also have high reliability in delivering a sequence based on the intensity of a given set of attitudes.

3.5. Data Analysis Techniques

a. Descriptive Statistic

Descriptive statistics is a method for describing and interpreting objects as they are (Sangadji & Sopiah, 2010). The objective is to systematically describe the facts, objects, or subjects as they are with the objective of systematically and accurately documenting the facts and qualities of the item under study. Included in descriptive statistics are the presentation of data through tables, graphs, data distribution, calculation of the percentage distribution of respondents' answers (frequency distribution), average, mean, and mode values, which will be tested using the SmartPLS analysis software.

b. Structural Equation Model (SEM) Analysis

This study utilized a model of causality or influence relationship. To evaluate the hypothesis that will be provided in this study, SEM (Structural Equation Modeling) will be implemented through the Smart-PLS application and used as the analytic technique. (Ferdinand, 2006), stated several reasons for using the SEM program as an analytical tool is that SEM is suitable to be used to confirm the unidimensionalization of various indicators for a construct, test the suitability or consistency of a model based on the empirical data studied, test the suitability of the model as well as the causality relationship between the factors built or observed in the model. study. The following are the models and steps to analyze the data for this research.

The stages of data analysis for the model using the intervening variables above are 1) analysis of the measurement model (outer models): (1) Construct reliability and validity; (2) discriminant validity; 2) Analysis of measurement models (inner models): (1) R-Square; (2) F-Square; (3) Hypothesis testing, namely direct effect; (c) Indirect effect; (d) Total effect (Juliandi, 2018).

4. Result and Discussion

4.1. Measurement Model Analysis (Outer Model)

The validity test results will be presented in Table 3.1, and the reliability test results will be presented in Table 3.2. The measurement of the validity test results can be seen from the Heretroit-Monotrait Ratio (HTMT) value in Table 3.1, which indicates that the validity value of each indicator is less than 0.9, indicating that the respondent understands all of the answer options used in the list of questions.

Table 4. Heretroit-monotrait ratio (HTMT)

???	Heretroit-Monotrait Ratio (HTMT)			
	X1	X2	Y	Z
X1				
X2	0.84			
Y	0.65	0.87		
Z	0.48	0.79	0.53	

Source: Data processing with PLS, 2020.

Comment [AF11]: Please rewrite following sentence in order to fix the issue of text overlap.

Comment [AF12]: Please provide us table 3.1, table 3.2, table 4.2

In [Table 4.2](#) composite reliability value shows that all variables utilized in this study are reliable, since the reliability value is more than 0.70, allowing for the measurement of reliability test findings. This indicates that the questionnaire results can be used in this study.

Table 5. Composite reliability.

Variable	Composite Reliability
Financial Literacy	0.90
Financial Technology	0.79
Financial Inclusion	0.91
MSME Performance	0.84

Source: Data processing with PLS, 2020.

4.2. Measurement Model Analysis (Outer Model)

a. R-Square

R-Square is useful for predicting whether the model is good/bad ([Juliandi, 2018](#)). The criteria for the R-Square are if the R^2 (adjusted) value is 0.75 then the model is substantial (strong), if the R^2 (adjusted) value is 0.50 then the model is moderate (moderate) and if the R^2 (adjusted) value is 0.75 then the model is weak (poor).

Table 6. R-square.

Variable	R-Square	R-Square Adjusted
MSMEs performance	0.59	0.58
Financial Inclusion	0.38	0.37

Source: Data processing with PLS, 2020.

b. F-Square

F-Square for assessing the relative impact of an influencing variable (exogenous) on the affected variable (endogenous) ([Juliandi, 2018](#)). The criteria of the F-Square are if the value of F^2 is 0.02 then it has a small effect, if the value of F^2 is 0.15 then it has a moderate or moderate effect and if the value of F^2 is 0.35 then it has a large effect.

Table 7. F-square.

???	X1	X2	Y	Z
X1	???	???	0.04	0.01
X2	???	???	0.30	0.22
Y	???	???		
Z	???	???	0.03	

Source: Data processing with PLS, 2020.

c. Direct Effect

The purpose of direct effect analysis is to test the hypothesis of the direct effect of an exogenous variable on an endogenous variable (endogenous). The criteria for evaluating the direct effect hypothesis are the presence of a positive route coefficient and a probability/significance value (P-Value) <0.05 ([Juliandi, 2018](#)).

Table 8. Direct effect.

Variable	Original Sample	Sample Mean (M)	Standart Deviation	T-Statistics (/O/STDEV)	P-Values
Financial literacy on MSME performance	0.17	0.16	0.10	1.67	0.10
Financial literacy on financial inclusion	0.13	0.14	0.18	0.71	0.48
Financial technology on MSME performance	0.54	0.58	0.13	4.10	0.00
Financial technology on financial inclusion	0.52	0.52	0.16	3.21	0.00
Financial inclusion on MSME performance	0.15	0.12	0.12	1.23	0.22

Source: Data processing with PLS, 2020.

Graphically, a summary of the results of the direct effect shown in [Figure 3.1](#).

Comment [AF13]: Please provide us figure 3.1.

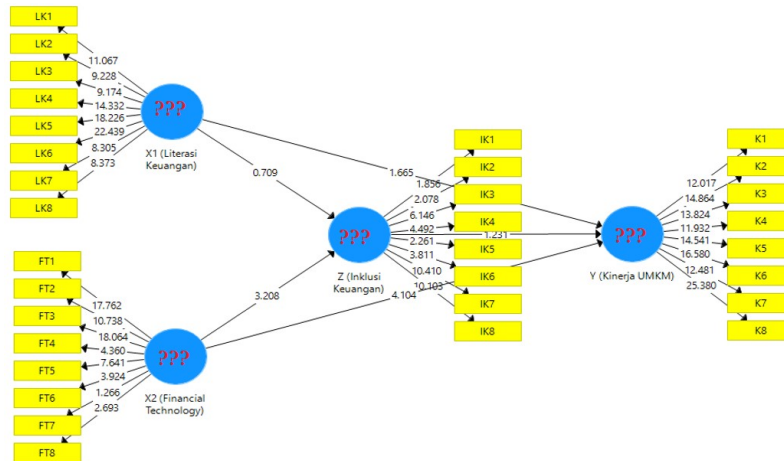


Figure 3.1. Direct effect.

Comment [AF14]: Please provide the missing value of red question marked circle.

Table 9. Indirect effect.

???	Original Sample	P-Values
Financial literacy -> financial inclusion -> MSME performance	0.02	0.62
Financial technology -> financial inclusion -> MSME performance	0.08	0.20

Source: Data processing with PLS, 2020.

d. Indirect Effect

The objective of the indirect effect analysis is to test the hypothesis of the indirect effect of an exogenous variable on an endogenous variable, which is mediated by an intervening variable (mediator variable). The criterion for determining the indirect effect is that its P-Value < 0.05 (Juliandi, 2018).

4.3. Discussion

a. Effect of Financial Literacy on MSME Performance

Financial literacy for MSMEs is the ability of managers to record financial statements, manage debt, and prepare budgets. Recording of Financial Statements, namely the capacity of MSME managers to record business activities, business income and expenses, business profitability, and other performance-related topics. Because MSMEs are still unable to create their own financial reports for a certain period, the majority of commercial banks do not grant capital credit. The provision of financial reports for MSMEs is important so that MSMEs may determine their business's success. MSMEs can fund their working capital and investments in two ways, according to Debt Management Literacy. There are two primary funding sources for SMEs. Initially, MSMEs can utilize savings. Second, by debts to third parties. When a business decides to borrow, the proportion of personal capital to external capital/debt decreases. Budget Preparation Literacy, which can be utilized to plan future business activities (Amri & Iramani, 2018).

Therefore, financial literacy is the ability for entrepreneurs and managers of companies/MSMEs to organize and create financial reports for business activities beginning with income and expenses, debt, and future budgets.

Financial literacy affects a person's style of thinking about financial conditions and influences business owners' strategic financial decision-making and better management. The ability of business owners to handle their funds is important for business performance and continuation. It is essential for business owners to acquire financial knowledge to improve their businesses' performance. This empowers MSMEs to grow their businesses (Kasendah & Wijayangka, 2019).

MSME performance can be analyzed using a simple measurement method; through perception, it is anticipated that the actual condition of these MSMEs will be revealed. Furthermore, future education is required to calculate company performance using simple indicators such as sales growth, capital growth, annual workforce growth, market and marketing growth, and profit or operating profit growth (Aribawa, 2016).

Therefore, it can be concluded that the performance of MSMEs is the result of work accomplished as a whole and compared to work results, targets, targets, or criteria that have been predetermined and mutually agreed upon in a business entity with asset and turnover criteria determined by law.

Previous research has also examined the relationship between financial literacy and the performance of MSMEs. According to the study's conclusion, financial literacy has a significant impact on the performance of MSMEs (Aribawa, 2016).

However, the author found that financial literacy has a positive and insignificant effect on the performance of MSMEs. This happens because the majority of the answers to the questionnaire from respondents are in the category of not agreeing with the independent variable (financial literacy) and the dependent variable (SME performance).

The research conducted by Naqvi (2011) It is stated that what causes the failure of small business continuity is a business that lacks capital and low financial management competence. Also Drexler et al (2010) According to his research, a common error committed by MSMEs players is making inappropriate financial decisions for their business. Otherwise, Cole and Fernando (2008) mentions that there is a significant relationship if financial literacy is good then you are able to make the right financial decisions for the long-term sustainability of your business. In line with Freiling and Laudien (2013) believes that good financial competence significantly determines the success of the business being run.

b. Effect of Financial Technology on MSME Performance

Financial technology is one of the developments in the financial sector that refers to current technology. The innovation intends to introduce practicality, ease of access, convenience, and inexpensive cost. With financial technology, even remote communities can use technology-based financial services, without having to drive large distances to acquire financial services. Financial technology has helped finance small and medium firms that lack access to banking. With mature rules, it promotes MSMEs to build their businesses by making easy loan transactions using financial technology.

Online loan application is one of the ways in which financial technology facilitates access for borrowers in the MSMEs sector. According to the hypothesis or prior research, financial technology has an impact on the activities of MSMEs. According to Rizal et al. (2018) and Rahardjo et al. (2019) financial technology can provide easy access for borrowers from the MSME sector.

And the results shows that financial technology has a positive and insignificant effect on the performance of MSMEs. This happened because most of the the respondents' answers to the questionnaire were in the less agreeable category from the independent variable (financial technology) and the dependent variable (SME performance).

Therefore, Information and Communication Technology (ICT) including smartphones and broadband internet is very important to develop access to safe and affordable financial services such as payments, domestic and international transfers, insurance, credit, and savings. (Alliance for Financial Inclusion [AFI], 2018; Patwardhan, Singleton, & Schmitz, 2018). Digital financial inclusion can be beneficial for underserved low-income people and small and medium-sized businesses (SMEs). Digital financial services can simplify people's lives by allowing them to conduct minor transactions and better manage their income and expenses. The provision of financial services, such as payments, transfers, savings, and credit, enables providers to tailor additional financial services to the needs of customers. Additionally, digital financial inclusion can lower the risk of cash-related loss, fees, theft, and other financial crimes (GSMA, 2017).

c. Effect of Financial Literacy on Financial Inclusion on MSME Performance

Financial literacy is important in gaining access to funding for MSMEs. If debtors have a good financial education, banks will be prepared to offer financial facilities (credit) (Remund, 2010). The growth of MSMEs has an impact on the economic growth of a community because they offer a variety of business opportunities, but MSME entrepreneurs continue to struggle to develop their businesses due to capital difficulties. Financial inclusion is one method for addressing the capital problem.

Financial inclusion is possible to effect changes in the thinking of economic actors in seeing money and profits. So that the greater the level of awareness of financial goods, company hazards, loan risks, etc., it will make it simpler for debtors to get loans. Research conducted by Sohilaaw (2018); Biswas and Gupta (2013); Bhushan and Medury (2013); Mahdzan and Tabiani (2013) which states that financial literacy greatly affects the level of financial inclusion. This is because the public knows the benefits of financing and other financial products, so that access to financial institutions is increasingly needed.

The results here show the same as the studies above, namely financial literacy has a positive and significant effect on financial inclusion. This happened because the majority of the questionnaire answers from respondents

were in the category of strongly agree and agree from the independent variable (financial literacy) and the intervening variable (financial inclusion).

d. Effect of Financial Technology on Financial Inclusion on MSME Performance

In the current digital era, financial technology is one of the methods of financial services that is growing popularity. In Indonesia, digital payments are one of the most developed sectors of the financial technology industry. This sector is the government and public's greatest hope for increasing the number of individuals with access to financial services. Banking is an intermediary financial entity that serves the needs of business actors and must be present. These needs include not just the provision of capital, but also assistance with the payment system. In the current digital era, banks cannot conduct their operational activities exclusively in the traditional manner, i.e., by depending exclusively on branch offices. However, banks must innovate their business practices, and one way to do so is through collaborating with financial technology companies.

Research by [Hutabarat \(2018\)](#) claimed that financial technology impacts financial inclusion. The results of the study indicate that the government will support the accomplishment of inclusive financial implementation in proportion to the number of individuals who use digital financial services. Changes in the form of financial services and products, from conventional to technological, reduce the community's time and operational expenses.

The significance of credit to the growth of small businesses and its influence on people's saving behavior. Nevertheless, even though the specific impact of mobile and internet on financial inclusion is negative in the static model, the interaction variable of mobile and internet is quite favorable to financial inclusion. This has a positive impact on the financial inclusion dynamics rate of 10% ([Senou et al. 2019](#)).

This study reaches the same conclusion as the previous one, namely that financial technology has a positive and significant impact on financial inclusion. This occurred because the majority of questionnaire responses (strongly agree and agree) with the independent variables (financial technology) and intervening variables (financial inclusion).

e. Effect of Financial Inclusion on MSME Performance

The growth of MSMEs has an impact on the economic growth of a community since they offer a variety of business opportunities; yet, MSME entrepreneurs continue to suffer to build their businesses due to capital difficulties. Financial inclusion is one method for addressing the problem of capital problems.

Financial inclusion is defined as access to appropriate financial products including credit, savings, insurance and payments, the occurrence of quality access including convenience, affordability, suitability and with attention to consumer protection, and the availability is also given to everyone. Research conducted by [Sanistasya et al. \(2019\)](#); [Yanti \(2019\)](#) states that financial inclusion has a positive effect on financial performance. Research conducted by [Nunoo and Andoh \(2012\)](#) It also notes that entrepreneurs who have access to financial products and services are financially literate so that they can apply for loans and earn the trust of banks to develop their businesses in a sustainable manner. Even the condition of the company or business owned, the location of the business, the size of the business, and the level of risk assumed demonstrate that the owner has a high level of financial literacy. The maximum level of financial inclusion is attained by business owners who are unafraid to take financial risks in developing a business that manages credit well and who describe their financial access as such ([Lusardi and Mitchell, 2006](#); [Stango and Zinman, 2007](#), [Bernheim & Garrett, 2003](#)).

The results of the research that the author has done are different from the results of the research above, namely financial inclusion has a positive and insignificant effect on the performance of MSMEs. This happened because the majority of the answers to the questionnaire from respondents were in the category of disagreeing and disagreeing with the intervening variable (financial inclusion) and the dependent variable (SME performance).

[Park and Mercado \(2015\)](#), Financial inclusion is emerging as an important element that drives inclusive growth because access to finance enables economic actors both consumption and entrepreneurs to make long-term consumption and investment decisions, participate in productive activities and deal with shock. Also, [Patwardhan et al. \(2018\)](#) shows that financial inclusion is more than just a goal; it is a means to an end. However, the conventional financing system that is expected to serve this function has a variety of limitations that result in unsatisfactory financial service delivery to underprivileged communities ([Sapovadia, 2018](#)).

f. Effect of Financial Literacy on MSME Performance through Financial Inclusion

The development of MSMEs is frequently hampered by unresolved conventional problems, such as those pertaining to human resource capability, ownership, financing, marketing, and other issues associated with business management. Therefore, there is a need for strategic actions to enhance the performance of MSMEs. One approach to do this is to increase the financial expertise of MSME actors so that their management and accountability may be appropriately accounted for [Aribawa \(2016\)](#).

According to a 2015 survey conducted by the World Bank, the number of people in Indonesia who do not have access to financial services can be viewed from two perspectives, namely supply and demand. The financial sector is overly selective in its customer selection, the creation of expensive branch offices, and the assumption that housewives with low salaries cannot obtain financial services. This is because financial literacy facilitates the effective use of products and aids business actors in developing the best skills and financial products based on their needs, so becoming a precondition for increasing financial inclusion. Financial inclusion can change the way economic actors view money and profits.

Thus, financial literacy has a direct impact on the performance of MSMEs, and financial inclusion is unnecessary. In other words, financial literacy can shape or influence the MSMEs performance. However, because statistical tests yielded insignificant results, the conclusion of this study can only be applied to the investigated sample and cannot be extrapolated to the total population (SME business actors). If the study were conducted on the complete population, the author hypothesizes that the results would be different. It is possible that financial inclusion mediates the relationship between financial literacy and MSME performance.

g. Effect of Financial Technology on MSME Performance through Financial Inclusion

MSMEs play a significant role in the attempt to boost economic development in Indonesia, economic expansion, and job creation. It is anticipated that the expansion and development of MSMEs will enhance the Gross Domestic Product (GDP) and absorb more new workers, hence reducing unemployment and poverty. Especially with the adoption of the ASEAN Economic Community (AEC), which requires MSME actors to generate new innovations in order to meet market demands and establish Indonesia as a market leader in their own country and in ASEAN (Aribawa, 2016). Increasing innovation requires capital, hence banking as one of the operating financial institutions must be available to serve the needs of business actors. These needs include the provision of capital as well as assistance with the payment system. In the current digital era, banks should not simply conduct their operational activities conventionally, that is, by depending solely on branch offices, which are typically exclusive. However, banks must reinvent their business activities, and one way to do so is through collaborating with financial technology companies.

The emergence of financial technology innovation presents entrepreneurs with a new opportunities. Financial technology facilitates businesspeople's access to financial products and improves their financial literacy. Financial technology can be utilized by businesspeople to finance their firms. Based on research on the impact of financial technology on MSMEs, the findings of a study conducted by Muzdalifa et al. (2018); Dermawan (2019); Hutabarat (2018); Rahardjo et al. (2019) The presence of a variety of financial technologies was highlighted as a factor in the development of MSMEs. The function of financial technology extends beyond financing corporate capital to include digital payment services and financial regulators, among other aspects.

Thus, financial technology directly influences the performance of MSMEs, and financial inclusion is unnecessary. In other words, financial literacy can shape or influence the MSMEs performance. However, because statistical tests yielded insignificant results, the conclusion of this study can only be applied to the investigated sample and cannot be generalized to the total population (SME business actors). If the study were conducted on the complete population, the author hypothesizes that the results would be different. It is possible that financial inclusion mediates the relationship between financial literacy and MSME performance.

5. Conclusion

Since the analysis and discussion, it can be stated that (1) Financial literacy has a positive and insignificant effect on the performance of MSMEs in Medan City, and (2) Financial Technology also has a positive and insignificant effect on the performance of MSMEs in Medan. Medan, Turkey (3) Financial literacy has a positive and significant impact on the performance of Medan City's micro, small, and medium-sized enterprises (MSMEs). (4) Financial technology has a positive and significant impact on MSME performance in Medan. (5) Financial inclusion has a positive and insignificant impact on the performance of MSMEs in Medan. (6) In Medan, financial inclusion does not mitigate the relationship between financial literacy and MSME performance. (7) Financial inclusion does not mediate the relationship between financial technology and MSME performance in Medan.

6. Suggestion

The researcher conveys recommendations that may be advantageous to the stakeholders involved in this research. (1) The Financial Services Authority, Bank Indonesia, and companies providing financial products and services should conduct activities to improve financial literacy, such as education about financial terms, the benefits of each financial product or service, and training in good financial management, as required. Those between the ages of 17 and 25 who are employed in the tertiary sector are advised to implement education. (2) The use of digital financial services is rising rapidly in Indonesia. In order for the public to have more faith in this service and

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to prevent financial technology corporations from committing crimes via the internet, it is proposed that consumer protection regulations for financial technology services be implemented immediately. This study is expected to serve as a reference for additional academic research on the effects of financial literacy and financial technology on the performance of MSMEs. Additional research can add new variables, allowing this study to expand. It is hoped that academics will also play a role in encouraging MSME groups to improve financial literacy and financial inclusion, which are still low, and assist in the practice of financial governance so as to increase the knowledge of small business owners to be more organized in their financial reports so as to increase the turnover of business actors. (4) With this research, the author hopes to make the government aware of the low level of literacy among Medan's MSME actors. This task requires that the government play a significant role in the sustainability and development of financial literacy, so that the public is not only aware of various financial services, but also understands, is skilled, and has confidence in making financial management decisions for the purpose of improving financial welfare.

7. Limitation

Based on the current experience of author, there are a number of limitations and factors that can be given greater consideration by future researchers as they continue to refine their own research, as this study itself undoubtedly contains shortcomings that must be addressed in future research. According to the researcher's observations, there are still inconsistent responses to the questionnaire, which is one of the study's limitations. Because respondents tend to be less cautious with established statements, resulting in inconsistent questionnaire responses. Researchers might anticipate this by accompanying and overseeing respondents as they select responses, allowing respondents to concentrate on addressing existing statements. However, due to pandemic.

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Comment [AF16]: References highlighted are incomplete. Please provide complete details.

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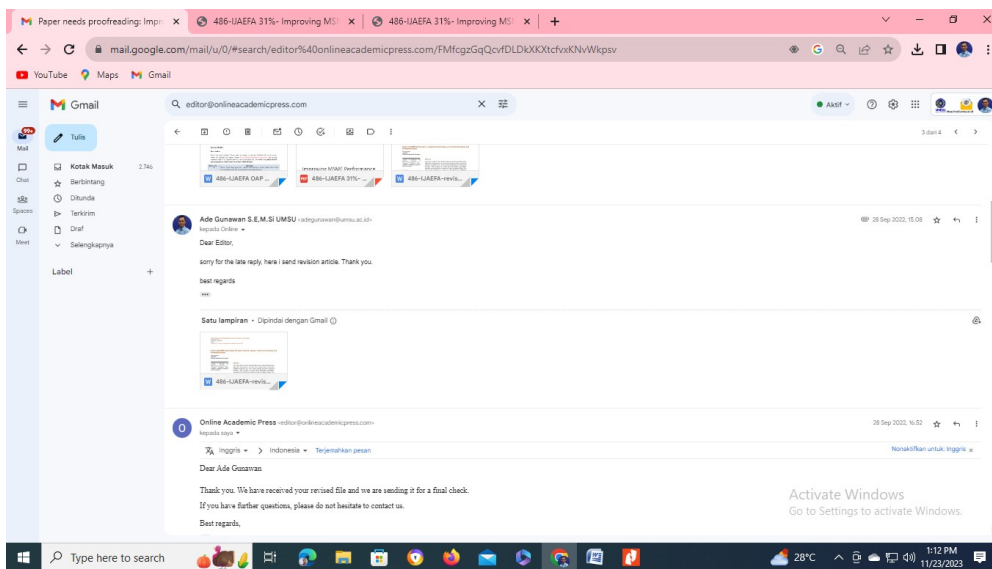
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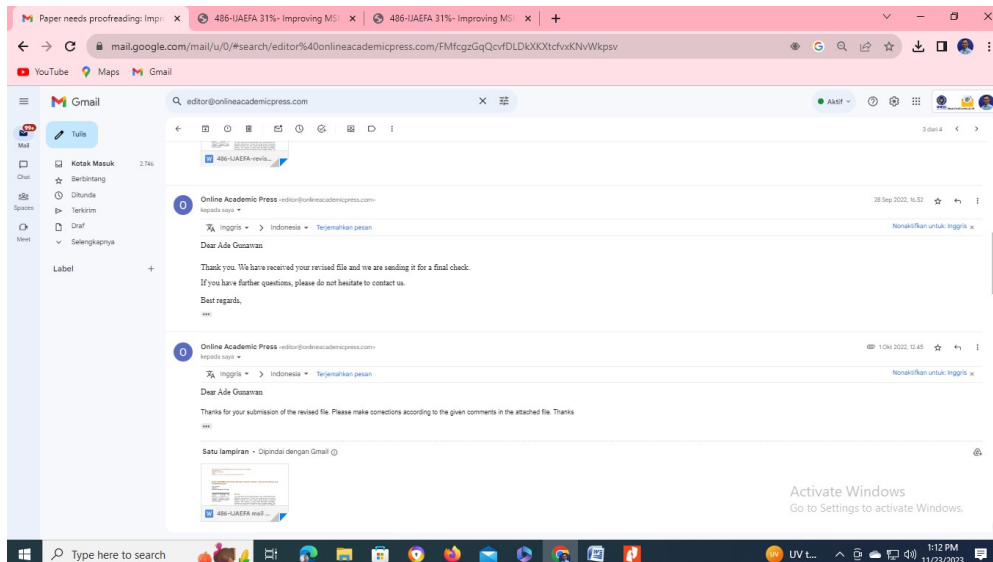
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Improving MSME Performance Through Financial Literacy, Financial Technology and Financial Inclusion

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Abstract

This study looks at how financial literacy and financial technology affect the performance of small and medium-sized businesses (MSME) in Medan City. This is done through the lens of financial inclusion. This research is mostly about descriptive quantitative research and what kind of research is used to explain things. One part of this research is based on 100 Medan City MSMBs. sampling method was the method used to pick out samples. PLS (Partial Least Square) analysis is used to look at the data. Small and medium-sized enterprises (MSMBs) in Medan City benefit somewhat from increased financial literacy and use of financial technology, and large MSMBs benefit greatly from these same factors. Medan City's small and medium-sized enterprises (SMEs) are not affected by their lack of financial inclusion in terms of their level of financial literacy or use of financial technology.

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1. Introduction

Micro, Small, and Medium Businesses (MSMBs), play a significant role in the national economy. MSMBs are the pillars of a country's economy in facing an economic crisis. When the global economic crisis occurred, it automatically deteriorated Indonesia's economic conditions. During the period from 1997 to 1998, only the SME sector was able to withstand the crisis conditions (Abidin, 2015; Mujanah et al., 2022). According to data released by the Central Statistics Agency following the economic crisis, the number of MSMBs did not drop; rather, their development increased, allowing them to absorb 65 million to 114 million workers by 2013. This phenomenon explains why MSMBs are productive businesses that contribute to macroeconomic development in Indonesia and affect other sectors. In addition to the number of business units and entrepreneurs, as well as their contribution to the national income and employment development, the development of the significant role of MSMBs is shown by their significant contribution to the national income and employment provision (Suci, 2017).

MSMBs also play a significant role in labor absorption and the distribution of development outcomes. The contribution of MSMBs to the Gross Domestic Product (GDP) is also encouraging. According to the Ministry of Cooperatives and MSMBs, it was 5,440,007.9 billion Rp in 2014. At the same period, 114,144,082 persons are absorbed into the labor force (Depkop, 2017).

Table 1. The development of MSMBs in Indonesia.

Indicator	Year				
	2014	2015	2016	2017	2018
Total MSMBs (unit)	57.895.721	59.262.772	61.651.177	62.922.617	64.194.057

Source: Ministry of cooperatives and SMEs.

Table 1 shows that MSMBs contribute positively to the national economy. This is also integral to the government's role. From 2014 to 2017, it is anticipated that the number of MSMBs would exceed 57,800,000 units, and in 2018, it is estimated that the number of MSMBs will surpass 64,000,000 units (Depkop, 2017). The development of MSMBs has increased throughout the year in all Indonesian cities and regions. One of them is Medan City, which also plays a significant role in North Sumatra's economic growth (Hutagaol, 2019).

In terms of physical, economic, social, and cultural development, Medan is experiencing rapid growth. The city of Medan is one of Indonesia's metropolitan cities and the country's economic driving force. One kind of development in the city of Medan is the development of entrepreneurial programs in the economic sector (Simamora, 2017). The crisis has not hindered the activities of Medan's MSMBs, which continue to operate. It is impossible to separate the development of small and medium-sized firms from the entrepreneurial role of MSME actors. Experience in developed nations has shown that MSMBs are a source of production and technological innovation, rise in the number of creative and inventive entrepreneurs, and the creation of a competent and adaptable workforce in the production process to meet the continuously changing market demand (Sari, 2014; Syafar., Du, & Gao, 2015).

Table 2. Development of MSMBs in North Sumatra.

Indicator	Year				
	2014	2015	2016	2017	2018
Total MSMBs (unit)	2.855.399	2.855.549	2.855.847	2.857.124	2.857.134

Source: North Sumatra Cooperatives and SMBs Office.

In Table 2, the Department of Cooperatives and SMEs of Medan City has raised the number of MSMBs to over 33,000 units between 2014 and 2018. This shows that the existence of MSMBs has a significant impact on the national economy. Based on the data provided by the Department of Cooperatives and SMEs, it is possible to conclude that MSMBs can contribute significantly to the economic growth of Medancity (Depkop, 2018).

For MSMBs to develop in Indonesia, their actors must be able to survive and compete with other MSMBs. This encourages micro, small, and medium-sized enterprise (MSME) actors to establish new and different businesses, with a focus on performance. Most owners of MSMBs lack wide perspectives and knowledge, hence they are less long-term focused. Due to a lack of knowledge in the subject of management, efforts to increase its effectiveness are typically conventional. Consequently, they frequently mismeasure business productivity, which eventually impacts business performance (Wirastuti, A. E. M.S, & Kurniasari, 2009). However, the development of MSMBs is still hampered by a variety of challenges, which can be viewed from two factors. First, internal factors, including capital, production, marketing, and human resources, are inadequate. Second, external variables in the form of difficulties generated by SME developers and managers. Some of these issues will influence the performance of MSMBs if they are not addressed. To address these issues, particularly in terms of capital and marketing, there is a Financial Inclusion model (Irmawati, Damelia, & Puspita, 2013).

Financial inclusion is an endeavour to make the financial system accessible to all levels of society to promote quality economic growth and eradicate poverty. Financial inclusion seeks to eliminate all barriers to the public's use of existing financial services and infrastructure. This program is anticipated to foster an increasingly inclusive and sustainable economic growth, as well as deliver community welfare benefits (Nurjannah, 2017).

Due to the high level of unbanked (not meeting bank loan requirements) caused by the poverty gap, low MSME funding, high micro-credit interest rates, lack of MSME management capabilities, and limited distribution channels for financial services, the adoption of inclusion finance is crucial (Yanti, 2019).

According to the findings of a Financial Services Authority survey done in 2019, the financial inclusion index was 76.19 percent. This percentage has increased compared to the 2016 survey results of 67.8 percent. Thus, there has been an 8.39 percent growth in access to financial products and services or financial inclusion during the past three years. This increase is the result of the cooperative efforts of the Government, the Financial Services Authority, allied ministries or institutions, the Financial Services Industry, and a number of other parties, which continue to develop financial literacy and social inclusion (Financial Services Authority., 2019).

Financial Inclusion Index 2016 and 2019

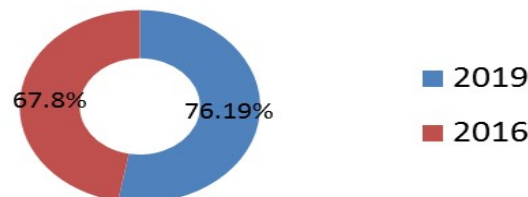


Figure 1. Display financial inclusion index 2016 and 2019.
Source: Financial services authority.

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The financial inclusion index in North Sumatra is 93.98 percent. This number is the best national index of financial inclusion, ranking second behind *Daerah Khusus Ibukota* (DKI) Jakarta. This demonstrates that a more prosperous North Sumatra may open 1,246 new customer accounts with a trivial transaction or fundraising amount of Indonesia Rupiah (IDR) 2,61 billion. The growth of micro, small, and medium-sized enterprises (MSMBs) in Medan has an impact on the economic growth of the city's residents because MSMBs can provide expansive business opportunities in a variety of economic sectors. However, MSME entrepreneurs in Medan continue to face difficulties in developing their businesses due to a lack of capital. Financial troubles are not only caused by a low income, but also by poor financial management, such as the misuse of credit, the lack of financial planning, and not having savings (Yanti, 2019).

The socialization of the Financial Services Authority of North Sumatra to expand financial inclusion was one of them through the Laku Pandai program with Non-Cash Food Assistance (BPNT) and the development of the Regional Financial Access Acceleration Team (TPAKD). The Laku Pandai initiative with BNPT and TPAKD is regarded an alternative and a solution for the Medan area so that MSME actors in remote, innermost, and outermost locations can be served, as well as supporting banks in reaching consumers without having to construct new branch offices. Therefore, the North Sumatra Financial Services Authority needs to establish an integrated system to prepare financial inclusion materials that follow the conditions and needs of MSME actors in Medan. Financial inclusion can analyze numerous financial products and services in order to make wise financial decisions. These challenges suggest that financial inclusion will not develop by itself. This is because financial inclusion supports the effective use of products and helps business actors build skills and the finest financial products according to their needs. Financial inclusion is possible to make changes in the perspective of economic actors in seeing money and profits (Sanistasya, Rahardjo, & Iqbal, 2019).

Financial inclusion can improve the capacity of micro, small, and medium-sized enterprise actors to use financial services and receive direct impact from financial institutions. This is because the higher the increase in financial inclusion among MSMBs, the greater the overall improvement in a nation's financial stability. This is significant because it can optimize funding sources in the region, so enabling MSMBs to become more productive and develop. Financial management plays a role in deciding the amount to which the performance of SMEs is improved (Sanistasya et al., 2019).

In general, MSMBs frequently endure developmental delays. This is due to a variety of unresolved conventional problems (closed loop problems), such as challenges with human resource capacity, MSMBs have a hard time competing with larger businesses due to ownership, financing, marketing, and other challenges related to business management major corporations. This is evident by the absence of the concept of continuous innovation and the inconsistency of the company's main business operations. Finally, the development of MSMBs' long-term performance in the creative industry is typically not well-directed. Consequently, strategic initiatives are required to enhance the performance and sustainability of MSMBs. One method to achieve this is to increase MSME actors' financial knowledge, so that their management and responsibility are more commensurate with a large company (Aribawa, 2016).

In terms of productivity, export contribution, global and regional production participation, and contribution to added value, the performance of MSMBs in Indonesia remains considerably lower to that of other Association of Southeast Asian Nations (ASEAN) countries. Low levels of education and expertise, difficulty in acquiring permits for MSMBs, lack of access to financing, and lack of infrastructural support contribute to the low competitiveness of MSMBs in Indonesia. Lack of access to financing is a contributing factor to the poor performance of MSMBs. This may be due to the lack of knowledge and understanding of the existence of financial institutions among MSMBs. This is referred to as financial literacy (Djuwita & Yusuf, 2018).

Financial literacy for MSMBs is the ability of managers to record financial statements, manage debt, and prepare budgets. Recording of Financial Statements, namely the capacity of MSME management to record business activities, business income and costs, business profitability, and other performance-related topics. Because MSMBs are still unable to create their own financial reports for a certain period, the majority of commercial banks do not grant capital credit. The provision of financial reports for MSMBs is crucial so that MSMBs may determine their business's success. Small and medium-sized enterprises can fund their working capital and investments in two ways, according to Debt Management Literacy. There are two primary funding sources for SMEs. Initially, SMBs can utilize savings. Second, by obligations to third parties. When a business decides to borrow, the percentage of personal capital to external capital/debt decreases. Budget Planning Proficiency, which can be used to plan future business activities (Amri & Iramani, 2018).

Everyone needs a high level of financial literacy to prevent financial difficulties. Financial difficulties are not caused solely by income (low income), but also by mistakes in financial management, such as the misuse of credit, lack of financial planning, and lack of savings. Therefore, financial literacy is important for a prosperous life (Akmal & Saputra, 2016).

Financial literacy affects a person's way of thinking about financial conditions and influences business owners' strategic financial decision-making and better management. The ability of business owners to manage their finances is important for business performance and continuity. It is important for business owners to acquire financial knowledge to improve their companies' performance. This empowers MSMBs to expand their businesses (Kasendah & Wijayangka, 2019).

According to the findings of a Financial Services Authority survey done in 2019, the financial literacy index was 38.03 %. Although it is still deemed low, this percentage has increased since the 2016 survey results of 29.7 %. Thus, there has been an 8.33 % growth in public financial understanding (financial literacy) over the past 3 years (Financial Services Authority., 2019).

Financial Literacy Index 2016 and 2019

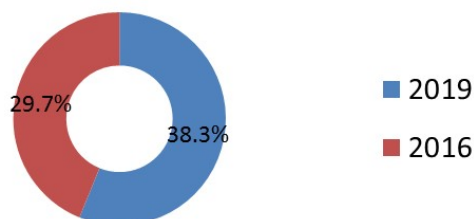


Figure 2. Financial literacy index 2016 and 2019.
Source: Financial Services Authority. (2019).

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The level of financial literacy in North Sumatra is 39%. This amount has exceeded the national target. This demonstrates that North Sumatra has an excellent financial understanding. The Government of North Sumatra also expects that the increase in financial literacy in North Sumatra will continue to increase each year, so that MSME actors in North Sumatra, particularly in the city of Medan, will be able to effectively manage their finances (Editorial, 2019).

Financial literacy is important for business actors, particularly MSMBs, so that they may choose and utilize financial products and services that meet their needs, engage in more effective financial planning, and avoid engaging in activities involving unclear financial instruments (Djuwita & Yusuf, 2018).

Financial inclusion is incorporated into the financial literacy program to strengthen the ability of MSME players to utilize financial services and obtain a direct effect from financial institutions. The greater the increase in financial inclusion among MSMBs, the greater the country's long-term financial stability. This is significant since optimizing local sources of funding assists MSMBs in being more productive and growing. The extent of SME performance is partially determined by the management of financial management. With financial literacy and inclusion, business actors can utilize their competencies in the financial sector to make a variety of decisions. Financially literacy MSMBs will be able to implement strategic plans to detect opportunities and threats, have enough access to finance, and respond to changes in the unstable economic climate, so that decisions will provide innovative and focused solutions to improve MSME performance (Sanistasya et al., 2019).

Not just in Indonesia, but the world, is presently experiencing the rapid development of technology, which varies significantly across time (Syafar, Gao, & Du, 2014). This is possible because technology is evolving rapidly every day and has invaded numerous industries, including the financial sector. Financial Technology is an example of a technology that supports financial services. Many application improvements in financial services, such as payment instruments, loan instruments, and others, have grown popular in this digital age as a result of the development of financial technology (Muzdalifa, Rahma, & Novalia, 2018).

The term financial technology is a financial service using a technology base which will certainly make it easier for us to do transactions anywhere and anytime (Syafar, Gao, & Du, 2014). This new financial model, financial technology was first started in 2004 by Zopa, a financial institution in the UK that runs money lending services. As a form of application of information technology in the financial sector. Financial technology has various functions, which are believed to be able to quickly develop rapidly. Currently, financial technology is able to serve electronic money, virtual accounts, aggregators, lending, crowdfunding and other online financial transactions. As for financial technology that has been operating, some of them were founded by conventional-based companies, but not a few are start-ups or startups (Rizal, Mualina, & Kostini, 2018).

Financial technology allows transactions without a bank account. Even though it's not a bank, Bank Indonesia regulates financial technology to protect consumers and the public. Financial technology enterprises must register with Bank Indonesia or the Financial Services Authority. Bank Indonesia said fintech can replace banks. Financial technology helps 1) establish a market for business actors, 2) become a tool for payment, settlement, and clearing, 3) implement more efficient investments, 4) mitigate risks from conventional payment systems, and 5) help parties save, borrow cash, and participate in equity.

Financial technology disrupts Indonesians who aren't ready to accept economic developments. Financial technology allows the economy to boost its efficiency and effectiveness. Fintech has assisted MSMBs without bank access. It promotes MSMBs to grow by making easy transaction loans through financial technology (Rahardjo, Ikhwan, & Siharis, 2019).

Financial technology with financial services such as Crowdfunding, mobile payments, and money transfer services that revolutionizes the startup business and alters consumer behavior and expectations necessitates regulations to protect them, including consumer protection, protection of user funds, and potential loss or decline in financial capacity. Whether caused by misuse, fraud, or force majeure, financial technology activities that are prone to data misuse, whether purposeful or inadvertent, pose a risk to consumers (Wibowo, 2016).

Regulation and supervision are important to the long-term sustainability of financial technology in Indonesia. This pertains to the legality of the business being conducted, as the adoption of financial technology development poses possible hazards to consumer protection, the integrity of the financial system, payment systems, and economic stability. The Financial Services Authority regulates and supervises to mitigate these risks and promote sustainable and stable economic growth (Wijayanti, 2018).

The Financial Services Authority ensures that it will oversee the business run by financial technology with several strict rules which were issued at the end of 2016. One thing that will later be made clear is related to determining the minimum capital limit for the financial technology industry. One of the reasons for this regulation is to protect consumers of Information Technology-Based Lending and Borrowing Services (LPMUBTI) / financial technology Peer-to-Peer (P2P) Lending, which is officially regulated by the Financial Services Authority (OJK), in the Regulation of the Financial Services Authority (POJK) Number 77/POJK.01/2016 (Financial Services Authority, 2016).

As a result of modern society's need for everything to operate quickly and easily, devoid of constraints and rules, an increasing number of people are utilizing financial technology today. This demonstrates that comfort, security, transaction suitability, and simplicity of transaction are elements that encourage MSME actors to use financial technology, as well as matters pertaining to supporting factors, such as ease of recording, ease of transaction processing, and sales growth (Sugiarti, Diana, & Mawardi, 2019).

The emergence of financial technology innovation presents businesses with a refreshing change. Financial technology can facilitate business people's access to financial products. Financial technology can be utilized by business actors to finance their firms. The role of financial technology is not restricted to funding corporate capital; it has also expanded to include digital payment services and financial regulators, among others. In conjunction with the advancement of information and communication technology, the existence of technology-based financial technology services in Indonesia has become important (Sugiarti et al., 2019).

Collaboration between financial technology companies and financial institutions can increase financial inclusion for MSMBs in Indonesia. This is possible because to the current rapid development of technology, which has permeated all sectors, including the financial sector. Therefore, the introduction of technology into the financial business will transform it into the digital era. The implementation of financial technology in the banking industry will make it simpler and more convenient for businesspeople, particularly MSMBs, to access financial service products and apply for financing without having to visit the office in person (Muzdalifa et al., 2018).

2. Literature Study

2.1. Financial Literacy

Financial literacy is an individual's awareness and knowledge of basic financial concepts, including knowledge of financial instruments and their application in business and daily life, such as financial management, savings and loans, insurance, and investment. The greater an individual's financial literacy, the greater his or her financial conduct and financial sagacity in managing effective finances (Gunawan, Pulungan, & Koto, 2019; Pulungan, 2017).

The public is required to have confidence in financial service institutions and their products and services after acquiring the necessary knowledge and abilities. Everyone must have confidence in their own abilities, not only in the financial services industry. This confidence includes the ability to record investment and expenditure plans, create budgets, and other financial tasks (Tustin, 2010).

According to the Financial Services Authority (2016), the level of financial literacy is influenced by gender, education level, and income. Age, financial and numerical knowledge of financial attitudes, household income, as well as education and position also influence financial literacy (Suryanto & Rasmini, 2018).

According to Widayati (2012) developed 15 financial literacy indicators adapted to conditions in Indonesia, namely: 1) looking for choices in a career, 2) understanding the factors that affect net income, 3) knowing sources of income, 4) knowing how to achieve prosperity and financial goals, 5) understanding the budget savings, 6) analyze risk, return, and liquidity, 8) evaluate investment alternatives, 9) analyze the effect of taxes and inflation on investment returns, 10) analyze the advantages and disadvantages of debt, 11) know the purpose of credit and debtor rights, 12) explain ways to avoid or fix debt problems, 13) know the basic laws of consumer protection in debt, 14) ability to make financial records, 15) understand financial statements such as balance sheets, income and cash flows.

2.2. Financial Technology

Financial Technology refers to new solutions that demonstrate innovation in the development of applications, products, or business models in the financial services industry that employ technology (Chuen & Low, 2018). Bank Indonesia defines financial technology as the use of technology in the financial system to create new products, services, technologies, and/or business models, which can influence monetary stability, financial system stability, and/or the efficiency, smoothness, security, and dependability of the payment system. Consumers, businesses, and the economy as a whole have all benefited from the development of financial technology. But if risks aren't properly addressed, the financial system might be disrupted.

According to Word Bank in Nizar (2017) The Financial Technology industry comprises enterprises that use technology to improve the efficiency of financial systems and financial service delivery.

The rise of financial technology produces creative disruption among the Indonesian population, which is unprepared to accept economic activity changes. On the other side, financial technology offers the economy new opportunities to increase economic activity in a more efficient and effective manner (Afifah, 2018). With mature rules, it fosters the growth of MSMBs by facilitating loan transactions via financial technology (Rahardjo et al., 2019).

2.3. Financial Inclusion

Financial inclusion is a comprehensive activity that aims to eliminate all price and non-price obstacles to the public's access to and utilization of financial services (Yanti, 2019). Financial inclusion is also defined as the proportion of individuals and businesses that use financial products and services through the promotion of affordable, timely, and adequate access so as to expand the range of their use by the community, which reflects public financial awareness for the economic welfare of the community. Bank Indonesia also considers financial inclusion to be the right of all individuals to get complete access to and services from financial institutions in a timely, convenient, informative, and cost-effective manner.

The public, particularly those with low incomes, must comprehend the significance of financial inclusion. Without access to established financial institutions, they lack customer records, cannot qualify for loans, and cannot obtain insurance. Consequently, these community groups rely more on non-formal institutions, which are fraught with risks.

Research by Beck, Demirgüç-Kunt, and Levine (2007) in 99 countries in 2003-2004 shows that the factors that determine the reach of the financial sector are the same as those that determine the depth of the financial sector. These factors are the level of development as proxied by GDP per capita, the quality of institutions as proxied by the governance index, and credit information as proxied by the credit information index.

In Ummah (2015) related to the factors that influence financial inclusion in Indonesia, using the size of the economy, the income distribution as indicated by the Gini index coefficient, the number of internet users, and the number of mobile phone users. While the ratio of road length to unemployment has no effect on the level of financial inclusion, there is no correlation between road length and financial inclusion.

2.4. MSMBs Performance

The World Bank classifies MSMBs into three types, namely: 1. Micro Enterprises (having 10 employees); 2. Small Business (having 30 employees); 3. Medium Enterprises (number of employees up to 300 people) (Bank Indonesia, 2015).

Performance is the work accomplished by a person or organization in completing the responsibilities allocated to them, considering their skills, experience, sincerity, and time (Hasibuan, 2002). Another definition of performance is the result or level of success of a person as a whole within a certain period in carrying out activities relative to possibilities, such as work results, predetermined and mutually agreed-upon goals, goals, or criteria (Rivai, 2005). While the company's performance is a representation of the company's overall condition within a specific time period, it is a result or achievement that is influenced by the company's operational actions in employing its own resources (Srimindarti, 2004).

From the definitions of performance and MSMBs, it can be concluded that the performance of SMEs is the result of work achieved as a whole and compared to the work results, targets, or criteria that have been predetermined and mutually agreed upon in a business entity with assets and criteria revenue specified by the law.

3. Methods

3.1. Research Type

This is a descriptive quantitative study. Investigate the impact of financial literacy and financial technology on the performance of Medan's MSMBs mediated by financial inclusion. In addition, a survey approach was used in this study to identify the status, symptoms, and similarity of status by comparing them to the standards that were selected or established (Arikunto, 2010).

Descriptive quantitative aims to describe or describe the properties (characteristics) of a situation or object of research that has been mentioned. The results are then presented in the form of a research report (Arikunto, 2010).

3.2. Place and Time of Research

This research was conducted in Medan city. The implementation time of this research starts from April 2020 to August 2020.

3.3. Sampling Technique

c. Population

The population in this study were all MSMBs in Medan City.

Table 3. MSMBs population in Medan city.

Business Sector	Total MSMBs	Percentage (%)
Production	301 businesses	38.94
Culinary	438 businesses	56.66
Service	31 businesses	4.02
Livestock and Fisheries	3 businesses	0.38

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Amount	773 businesses	100
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Source: Medan City Cooperatives and MSMBs Office, 2018.

d. Sample

In order to get a reliable Maximum Likelihood estimate from a Structural Equation Model (SEM), a sample size of 100–200 is suggested. The researcher will select a sample size of 100–200 businesses because doing so is necessary to conduct statistical analyses utilizing SEM (Structural Equation Model) and the highest likelihood estimate approach. To meet a prerequisite for the SEM-based data analysis method. To obtain the sample, the sampling technique used by the researcher is the purposive sampling method, which will select the sample based on several criteria that suit the needs of this research, namely, 1) Using financial technology in business transactions, 2) Being a micro business actor and medium-sized enterprises who have capital or assets of 50–500 million and, 3) Are MSME actors ≤ 1 year.

3.4. Data Collection Techniques

Researchers collect data using several methods to obtain data and information related and relevant to the topics to be addressed. The data collection technique utilized is to make a list of questions (questionnaire) (questionnaire). Through a list of questions, the researcher made various questions to the respondents, in this case the MSME actors who became the study sample to be replied by the respondents. The measurement of the variables in this study itself uses a Likert scale. Through the Likert scale, it will be easier to present questions that can be comprehended by responders and easy to score from the highest to the lowest. In addition, this Likert scale will also have high reliability in delivering a sequence based on the intensity of a given set of attitudes.

3.5. Data Analysis Techniques

c. Descriptive Statistic

Descriptive statistics is a method for describing and interpreting objects as they are (Sangadji & Sopiah, 2010). The objective is to systematically describe the facts, objects, or subjects as they are with the objective of systematically and accurately documenting the facts and qualities of the item under study. Included in descriptive statistics are the presentation of data through tables, graphs, data distribution, calculation of the percentage distribution of respondents' answers (frequency distribution), average, mean, and mode values, which will be tested using the SmartPLS analysis software.

d. Structural Equation Model (SEM) Analysis

This study utilized a model of causality or influence relationship. To evaluate the hypothesis that will be provided in this study, SEM (Structural Equation Modeling) will be implemented through the Smart-PLS application and used as the analytic technique. (Ferdinand, 2006), stated several reasons for using the SEM program as an analytical tool is that SEM is suitable to be used to confirm the nondimensionalization of various indicators for a construct, test the suitability or consistency of a model based on the empirical data studied, test the suitability of the model as well as the causality relationship between the factors built or observed in the model. study. The following are the models and steps to analyze the data for this research.

The stages of data analysis for the model using the intervening variables above are 1) analysis of the measurement model (outer models): (1) Construct reliability and validity; (2) discriminant validity; 2) Analysis of measurement models (inner models): (1) R-Square; (2) F-Square; (3) Hypothesis testing, namely direct effect; (c) Indirect effect; (d) Total effect (Juliandi, 2018).

4. Result and Discussion

4.1. Measurement Model Analysis (Outer Model)

The measurement of the validity test results can be seen from the Heretroit-Monotrait Ratio (HTMT) value in Table 4, which indicates that the validity value of each indicator is less than 0.9, indicating that the respondent understands all of the answer options used in the list of questions.

Table 4. Heretroit-monotrait ratio (HTMT)

Variable	Heretroit-Monotrait Ratio (HTMT)			
	X1	X2	Y	Z
X1				
X2	0.84			
Y	0.65	0.87		
Z	0.48	0.79	0.53	

Source: Data processing with PLS, 2020.

In [Table 5](#) composite reliability value shows that all variables utilized in this study are reliable, since the reliability value is more than 0.70, allowing for the measurement of reliability test findings. This indicates that the questionnaire results can be used in this study.

Table 5. Composite reability.

Variable	Composite Reliability
Financial Literacy	0.90
Financial Technology	0.79
Financial Inclusion	0.91
MSME Performance	0.84

Source: Data processing with PLS,2020.

4.2. Measurement Model Analysis (Outer Model)

e. *R-Square*

R-Square is useful for predicting whether the model is good/bad ([Juliandi, 2018](#)). The criteria for the R-Square are if the R^2 (adjusted) value is 0.75 then the model is substantial (strong), if the R^2 (adjusted) value is 0.50 then the model is moderate (moderate) and if the R^2 (adjusted) value is 0.75 then the model is weak (poor).

Table 6. [R-square](#)

Variable	<i>R-Square</i>	<i>R-Square Adjusted</i>
MSMBs performance	0.59	0.58
Financial Inclusion	0.38	0.37

Source: Data processing with PLS, 2020.

Comment [AF22]: Please explain table 6 in the text followed by a suitable verb in the present tense: e.g. Table 6 presents.

f. *F-Square*

F-Square for assessing the relative impact of an influencing variable (exogenous) on the affected variable (endogenous) ([Juliandi, 2018](#)). The criteria of the F-Square are if the value of F^2 is 0.02 then it has a small effect, if the value of F^2 is 0.15 then it has a moderate or moderate effect and if the value of F^2 is 0.35 then it has a large effect.

Table 7. [F-square](#).

Var	X1	X2	Y	Z
X1	-	-	0.04	0.01
X2	-	-	0.30	0.22
Y	-	-	-	-
Z	-	-	0.03	-

Source: Data processing with PLS, 2020.

Comment [AF23]: Please explain table 7 in the text followed by a suitable verb in the present tense: e.g. Table 7 presents.

g. *Direct Effect*

The purpose of direct effect analysis is to test the hypothesis of the direct effect of an exogenous variable on an endogenous variable (endogenous). The criteria for evaluating the direct effect hypothesis are the presence of a positive route coefficient and a probability/significance value (P-Value) <0.05 ([Juliandi, 2018](#)).

Table 8. [Direct effect](#).

Variable	<i>Original Sample</i>	<i>Sample Mean (M)</i>	<i>Standart Deviation</i>	<i>T-Statistics (/O/STDEV)</i>	<i>P-Values</i>
Financial literacy on MSME performance	0.17	0.16	0.10	1.67	0.10
Financial literacy on financial inclusion	0.13	0.14	0.18	0.71	0.48
Financial technology on MSME performance	0.54	0.58	0.13	4.10	0.00

Comment [AF24]: Please explain table 8 in the text followed by a suitable verb in the present tense: e.g. Table 8 presents.

Financial technology on financial inclusion	0.52	0.52	0.16	3.21	0.00
Financial inclusion on MSME performance	0.15	0.12	0.12	1.23	0.22

Source: Data processing with PLS, 2020.

Graphically, a summary of the results of the direct effect shown in [Figure 3](#).

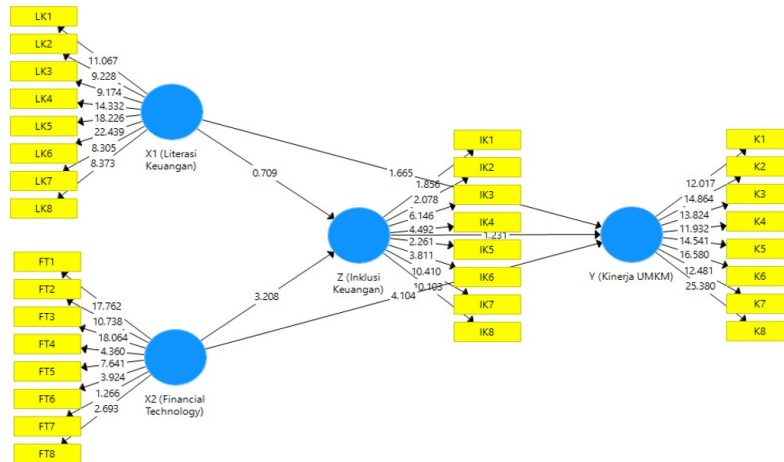


Figure 3. Direct effect.

Table 9. Indirect effect.

Effect	Original Sample	P-Values
Financial literacy -> financial inclusion -> MSME performance	0.02	0.62
Financial technology -> financial inclusion -> MSME performance	0.08	0.20

Source: Data processing with PLS, 2020.

Comment [AF25]: Please explain table 9 in the text followed by a suitable verb in the present tense: e.g. Table 9 presents.

h. Indirect Effect

The objective of the indirect effect analysis is to test the hypothesis of the indirect effect of an exogenous variable on an endogenous variable, which is mediated by an intervening variable (mediator variable). The criterion for determining the indirect effect is that its P-Value < 0.05 ([Juliandi, 2018](#)).

4.3. Discussion

a. Effect of Financial Literacy on MSME Performance

Financial literacy for MSMBs is the ability of managers to record financial statements, manage debt, and prepare budgets. Recording of Financial Statements, namely the capacity of MSME managers to record business activities, business income and expenses, business profitability, and other performance-related topics. Because MSMBs are still unable to create their own financial reports for a certain period, the majority of commercial banks do not grant capital credit. The provision of financial reports for MSMBs is important so that MSMBs may determine their business's success. MSMBs can fund their working capital and investments in two ways, according to Debt Management Literacy. There are two primary funding sources for SMEs. Initially, MSMBs can utilize savings. Second, by debts to third parties. When a business decides to borrow, the proportion of personal capital to external capital/debt decreases. Budget Preparation Literacy, which can be utilized to plan future business activities ([Amri & Iramani, 2018](#)).

Therefore, financial literacy is the ability for entrepreneurs and managers of companies/MSMBs to organize and create financial reports for business activities beginning with income and expenses, debt, and future budgets.

Financial literacy affects a person's style of thinking about financial conditions and influences business owners' strategic financial decision-making and better management. The ability of business owners to handle their funds is important for business performance and continuation. It is essential for business owners to acquire financial

knowledge to improve their businesses' performance. This empowers MSMBs to grow their businesses (Kasendah & Wijayangka, 2019).

MSME performance can be analyzed using a simple measurement method; through perception, it is anticipated that the actual condition of these MSMBs will be revealed. Furthermore, future education is required to calculate company performance using simple indicators such as sales growth, capital growth, annual workforce growth, market and marketing growth, and profit or operating profit growth (Aribawa, 2016).

Therefore, it can be concluded that the performance of MSMBs is the result of work accomplished as a whole and compared to work results, targets, targets, or criteria that have been predetermined and mutually agreed upon in a business entity with asset and turnover criteria determined by law.

Previous research has also examined the relationship between financial literacy and the performance of MSMBs. According to the study's conclusion, financial literacy has a significant impact on the performance of MSMBs (Aribawa, 2016).

However, the author found that financial literacy has a positive and insignificant effect on the performance of MSMBs. This happens because the majority of the answers to the questionnaire from respondents are in the category of not agreeing with the independent variable (financial literacy) and the dependent variable (SME performance).

b. Effect of Financial Technology on MSME Performance

Financial technology is one of the developments in the financial sector that refers to current technology. The innovation intends to introduce practicality, ease of access, convenience, and inexpensive cost. With financial technology, even remote communities can use technology-based financial services, without having to drive large distances to acquire financial services. Financial technology has helped finance small and medium firms that lack access to banking. With mature rules, it promotes MSMBs to build their businesses by making easy loan transactions using financial technology.

Online loan application is one of the ways in which financial technology facilitates access for borrowers in the MSMBs sector. According to the hypothesis or prior research, financial technology has an impact on the activities of MSMBs. According to Rizal et al. (2018) and Rahardjo et al. (2019) financial technology can provide easy access for borrowers from the MSME sector.

And the results shows that financial technology has a positive and insignificant effect on the performance of MSMBs. This happened because most of the the respondents' answers to the questionnaire were in the less agreeable category from the independent variable (financial technology) and the dependent variable (SME performance).

Therefore, Information and Communication Technology (ICT) including smartphones and broadband internet is very important to develop access to safe and affordable financial services such as payments, domestic and international transfers, insurance, credit, and savings. Digital financial inclusion can be beneficial for underserved low-income people and small and medium-sized businesses (SMEs). Digital financial services can simplify people's lives by allowing them to conduct minor transactions and better manage their income and expenses. The provision of financial services, such as payments, transfers, savings, and credit, enables providers to tailor additional financial services to the needs of customers. Additionally, digital financial inclusion can lower the risk of cash-related loss, fees, theft, and other financial crimes.

c. Effect of Financial Literacy on Financial Inclusion on MSME Performance

Financial literacy is important in gaining access to funding for MSMBs. If debtors have a good financial education, banks will be prepared to offer financial facilities (credit) (Remund, 2010). The growth of MSMBs has an impact on the economic growth of a community because they offer a variety of business opportunities, but MSME entrepreneurs continue to struggle to develop their businesses due to capital difficulties. Financial inclusion is one method for addressing the capital problem.

Financial inclusion is possible to effect changes in the thinking of economic actors in seeing money and profits. So that the greater the level of awareness of financial goods, company hazards, loan risks, etc., it will make it simpler for debtors to get loans. Research conducted by Sohilaaw (2018); Biswas and Gupta (2013); Bhushan and Medury (2013); Mahdzan and Tabiani (2013) which states that financial literacy greatly affects the level of financial inclusion. This is because the public knows the benefits of financing and other financial products, so that access to financial institutions is increasingly needed.

The results here show the same as the studies above, namely financial literacy has a positive and significant effect on financial inclusion. This happened because the majority of the questionnaire answers from respondents were in the category of strongly agree and agree from the independent variable (financial literacy) and the intervening variable (financial inclusion).

d. *Effect of Financial Technology on Financial Inclusion on MSME Performance*

In the current digital era, financial technology is one of the methods of financial services that is growing popularity. In Indonesia, digital payments are one of the most developed sectors of the financial technology industry. This sector is the government and public's greatest hope for increasing the number of individuals with access to financial services. Banking is an intermediary financial entity that serves the needs of business actors and must be present. These needs include not just the provision of capital, but also assistance with the payment system. In the current digital era, banks cannot conduct their operational activities exclusively in the traditional manner, i.e., by depending exclusively on branch offices. However, banks must innovate their business practices, and one way to do so is through collaborating with financial technology companies.

Research by [Hutabarat \(2018\)](#) claimed that financial technology impacts financial inclusion. The results of the study indicate that the government will support the accomplishment of inclusive financial implementation in proportion to the number of individuals who use digital financial services. Changes in the form of financial services and products, from conventional to technological, reduce the community's time and operational expenses.

The significance of credit to the growth of small businesses and its influence on people's saving behavior. Nevertheless, even though the specific impact of mobile and internet on financial inclusion is negative in the static model, the interaction variable of mobile and internet is quite favorable to financial inclusion. This has a positive impact on the financial Inclusion dynamics rate of 10%.

This study reaches the same conclusion as the previous one, namely that financial technology has a positive and significant impact on financial inclusion. This occurred because the majority of questionnaire responses (strongly agree and agree) with the independent variables (financial technology) and intervening variables (financial inclusion).

e. *Effect of Financial Inclusion on MSME Performance*

The growth of MSMBs has an impact on the economic growth of a community since they offer a variety of business opportunities; yet, MSME entrepreneurs continue to suffer to build their businesses due to capital difficulties. Financial inclusion is one method for addressing the problem of capital problems.

Financial inclusion is defined as access to appropriate financial products including credit, savings, insurance and payments, the occurrence of quality access including convenience, affordability, suitability and with attention to consumer protection, and the availability is also given to everyone. Research conducted by [Sanistasya et al. \(2019\)](#); [Yanti \(2019\)](#) states that financial inclusion has a positive effect on financial performance.

The results of the research that the author has done are different from the results of the research above, namely financial inclusion has a positive and insignificant effect on the performance of MSMBs. This happened because the majority of the answers to the questionnaire from respondents were in the category of disagreeing and disagreeing with the intervening variable (financial inclusion) and the dependent variable (SME performance).

f. *Effect of Financial Literacy on MSME Performance through Financial Inclusion*

The development of MSMBs is frequently hampered by unresolved conventional problems, such as those pertaining to human resource capability, ownership, financing, marketing, and other issues associated with business management. Therefore, there is a need for strategic actions to enhance the performance of MSMBs. One approach to do this is to increase the financial expertise of MSME actors so that their management and accountability may be appropriately accounted for [Aribawa \(2016\)](#).

According to a 2015 survey conducted by the World Bank, the number of people in Indonesia who do not have access to financial services can be viewed from two perspectives, namely supply and demand. The financial sector is overly selective in its customer selection, the creation of expensive branch offices, and the assumption that housewives with low salaries cannot obtain financial services. This is because financial literacy facilitates the effective use of products and aids business actors in developing the best skills and financial products based on their needs, so becoming a precondition for increasing financial inclusion. Financial inclusion can change the way economic actors view money and profits.

Thus, financial literacy has a direct impact on the performance of MSMBs, and financial inclusion is unnecessary. In other words, financial literacy can shape or influence the MSMBs performance. However, because statistical tests yielded insignificant results, the conclusion of this study can only be applied to the investigated sample and cannot be extrapolated to the total population (SME business actors). If the study were conducted on the complete population, the author hypothesizes that the results would be different. It is possible that financial inclusion mediates the relationship between financial literacy and MSME performance.

g. *Effect of Financial Technology on MSME Performance through Financial Inclusion*

MSMBs play a significant role in the attempt to boost economic development in Indonesia, economic expansion, and job creation. It is anticipated that the expansion and development of MSMBs will enhance the

Gross Domestic Product (GDP) and absorb more new workers, hence reducing unemployment and poverty. Especially with the adoption of the ASEAN Economic Community (AEC), which requires MSME actors to generate new innovations in order to meet market demands and establish Indonesia as a market leader in their own country and in ASEAN (Aribawa, 2016). Increasing innovation requires capital, hence banking as one of the operating financial institutions must be available to serve the needs of business actors. These needs include the provision of capital as well as assistance with the payment system. In the current digital era, banks should not simply conduct their operational activities conventionally, that is, by depending solely on branch offices, which are typically exclusive. However, banks must reinvent their business activities, and one way to do so is through collaborating with financial technology companies.

The emergence of financial technology innovation presents entrepreneurs with a new opportunities. Financial technology facilitates businesspeople's access to financial products and improves their financial literacy. Financial technology can be utilized by businesspeople to finance their firms. Based on research on the impact of financial technology on MSMBs, the findings of a study conducted by Muzdalifa et al. (2018); Dermawan (2019); Hutabarat (2018); Rahardjo et al. (2019) The presence of a variety of financial technologies was highlighted as a factor in the development of MSMBs. The function of financial technology extends beyond financing corporate capital to include digital payment services and financial regulators, among other aspects.

Thus, financial technology directly influences the performance of MSMBs, and financial inclusion is unnecessary. In other words, financial literacy can shape or influence the MSMBs performance. However, because statistical tests yielded insignificant results, the conclusion of this study can only be applied to the investigated sample and cannot be generalized to the total population (SME business actors). If the study were conducted on the complete population, the author hypothesizes that the results would be different. It is possible that financial inclusion mediates the relationship between financial literacy and MSME performance.

5. Conclusion

Based on the findings and discussion, it is clear that both financial literacy and financial technology have a positive and negligible impact on the success of Medan's micro, small, and medium-sized businesses (MSMBs). Medan's micro, small, and medium-sized businesses (MSMBs) benefit slightly from financial inclusion. The connection between financial literacy and MSME performance in Medan city is not tempered by financial inclusion.

6. Suggestion

The researcher conveys recommendations that may be advantageous to the stakeholders involved in this research. (1) The Financial Services Authority, Bank Indonesia, and companies providing financial products and services should conduct activities to improve financial literacy, such as education about financial terms, the benefits of each financial product or service, and training in good financial management, as required. Those between the ages of 17 and 25 who are employed in the tertiary sector are advised to implement education. (2) The use of digital financial services is rising rapidly in Indonesia. In order for the public to have more faith in this service and to prevent financial technology corporations from committing crimes via the internet, it is proposed that consumer protection regulations for financial technology services be implemented immediately. This study is expected to serve as a reference for additional academic research on the effects of financial literacy and financial technology on the performance of MSMBs. Additional research can add new variables, allowing this study to expand. It is hoped that academics will also play a role in encouraging MSME groups to improve financial literacy and financial inclusion, which are still low, and assist in the practice of financial governance so as to increase the knowledge of small business owners to be more organized in their financial reports so as to increase the turnover of business actors. (4) With this research, the author hopes to make the government aware of the low level of literacy among Medan's MSME actors. This task requires that the government play a significant role in the sustainability and development of financial literacy, so that the public is not only aware of various financial services, but also understands, is skilled, and has confidence in making financial management decisions for the purpose of improving financial welfare.

7. Limitation

Based on the current experience of author, there are a number of limitations and factors that can be given greater consideration by future researchers as they continue to refine their own research, as this study itself undoubtedly contains shortcomings that must be addressed in future research. According to the researcher's observations, there are still inconsistent responses to the questionnaire, which is one of the study's limitations. Because respondents tend to be less cautious with established statements, resulting in inconsistent questionnaire

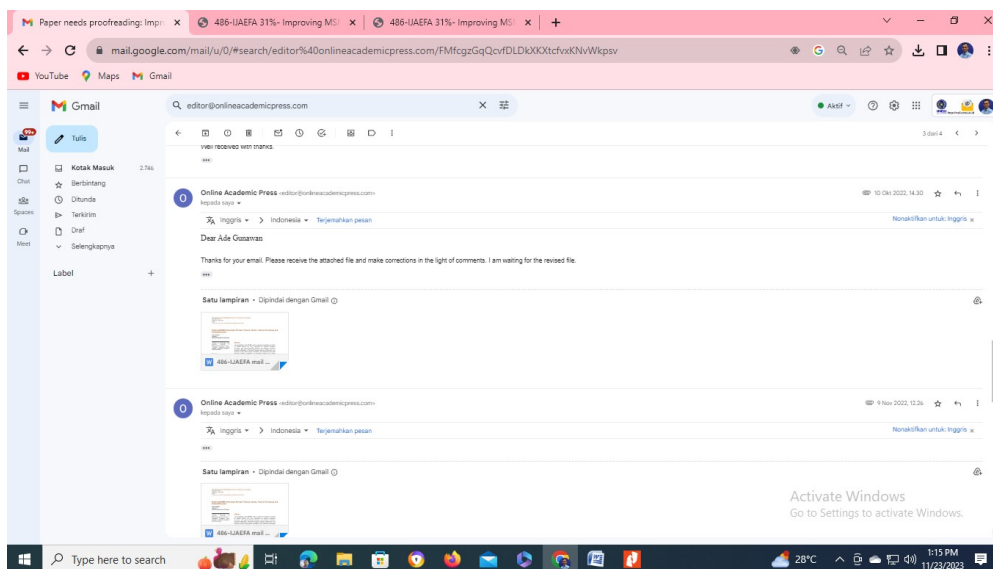
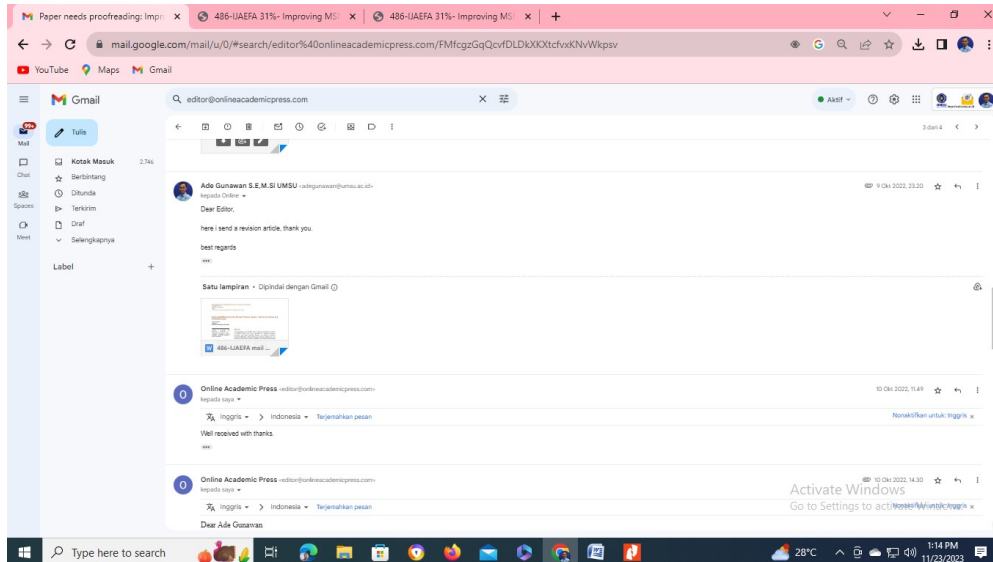
responses. Researchers might anticipate this by accompanying and overseeing respondents as they select responses, allowing respondents to concentrate on addressing existing statements. However, due to pandemic.

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Comment [AF26]: References highlighted are incomplete. Please provide complete details.

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Improving MSME Performance Through Financial Literacy, Financial Technology and Financial Inclusion

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1. Introduction

Micro, Small, and Medium Businesses (MSMBs), play a significant role in the national economy. MSMBs are the pillars of a country's economy in facing an economic crisis. When the global economic crisis occurred, it automatically deteriorated Indonesia's economic conditions. During the period from 1997 to 1998, only the SME sector was able to withstand the crisis conditions (Abidin, 2015; Mujanah et al., 2022). According to data released by the Central Statistics Agency following the economic crisis, the number of MSMBs did not drop; rather, their development increased, allowing them to absorb 65 million to 114 million workers by 2013. This phenomenon explains why MSMBs are productive businesses that contribute to macroeconomic development in Indonesia and affect other sectors. In addition to the number of business units and entrepreneurs, as well as their contribution to the national income and employment development, the development of the significant role of MSMBs is shown by their significant contribution to the national income and employment provision (Suci, 2017).

MSMBs also play a significant role in labor absorption and the distribution of development outcomes. The contribution of MSMBs to the Gross Domestic Product (GDP) is also encouraging. According to the Ministry of Cooperatives and MSMBs, it was 5,440,007.9 billion Rp in 2014. At the same period, 114,144,082 persons are absorbed into the labor force (Depkop, 2017).

Abstract

Financial literacy for MSME actors are the knowledge and skills of MSME actors are very important to support business success, with good financial literacy will prevent business financial difficulties. Financial financial literacy affects the way business actors think about conditions and influences financial decision making strategies for business owners and better management. the ability of the owner's business to manage its finances is important for business performance and business. It is important for business owners to acquire financial knowledge to improve their company performance. This study examines the impact of financial and technological literacy on improving the performance of MSMEs mediated by financial inclusion in the city of Medan. This research is a quantitative descriptive research and is explanatory research. The sample of this research is 100 SMEs in Medan City. The sampling technique used is the sampling method. The data analysis used is PLS (Partial Least Square) analysis. The results showed: 1) financial literacy and financial technology had a positive and insignificant effect on MSMEs in Medan City. 2) Financial literacy and financial technology have a positive and significant impact on inclusion on the performance of MSMEs in Medan City. 3) Financial inclusion has a positive and insignificant effect on the performance of MSMEs in Medan City. 4) Financial inclusion does not mediate between Financial Literacy and Financial Technology on the performance of MSMEs in Medan City. This research will help government to aware of the low level of MSMEs financial literacy di Medan city. The result is anticipated as a reference for extra academic study about on the effects of financial literacy and financial technology on the performance of MSMEs.

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Table 1. The development of MSMBs in Indonesia.

Indicator	Year				
	2014	2015	2016	2017	2018
Total MSMBs (unit)	57.895.721	59.262.772	61.651.177	62.922.617	64.194.057

Source: Ministry of cooperatives and SMEs.

[Table 1](#) shows that MSMBs contribute positively to the national economy. This is also integral to the government's role. From 2014 to 2017, it is anticipated that the number of MSMBs would exceed 57,800,000 units, and in 2018, it is estimated that the number of MSMBs will surpass 64,000,000 units ([Depkop, 2017](#)). The development of MSMBs has increased throughout the year in all Indonesian cities and regions. One of them is Medan City, which also plays a significant role in North Sumatra's economic growth ([Hutagaol, 2019](#)).

In terms of physical, economic, social, and cultural development, Medan is experiencing rapid growth. The city of Medan is one of Indonesia's metropolitan cities and the country's economic driving force. One kind of development in the city of Medan is the development of entrepreneurial programs in the economic sector ([Simamora, 2017](#)). The crisis has not hindered the activities of Medan's MSMBs, which continue to operate. It is impossible to separate the development of small and medium-sized firms from the entrepreneurial role of MSME actors. Experience in developed nations has shown that MSMBs are a source of production and technological innovation, rise in the number of creative and inventive entrepreneurs, and the creation of a competent and adaptable workforce in the production process to meet the continuously changing market demand ([Sari, 2014](#); [Syafar., Du, & Gao, 2015](#)).

Table 2. Development of MSMBs in North Sumatra.

Indicator	Year				
	2014	2015	2016	2017	2018
Total MSMBs (unit)	2.855.399	2.855.549	2.855.847	2.857.124	2.857.134

Source: North Sumatra Cooperatives and SMBs Office.

In [Table 2](#), the Department of Cooperatives and SMEs of Medan City has raised the number of MSMBs to over 33,000 units between 2014 and 2018. This shows that the existence of MSMBs has a significant impact on the national economy. Based on the data provided by the Department of Cooperatives and SMEs, it is possible to conclude that MSMBs can contribute significantly to the economic growth of Medancity ([Depkop, 2018](#)).

For MSMBs to develop in Indonesia, their actors must be able to survive and compete with other MSMBs. This encourages micro, small, and medium-sized enterprise (MSME) actors to establish new and different businesses, with a focus on performance. Most owners of MSMBs lack wide perspectives and knowledge, hence they are less long-term focused. Due to a lack of knowledge in the subject of management, efforts to increase its effectiveness are typically conventional. Consequently, they frequently mismeasure business productivity, which eventually impacts business performance ([Wirastuti, A. E. M.S, & Kurniasari, 2009](#)). However, the development of MSMBs is still hampered by a variety of challenges, which can be viewed from two factors. First, internal factors, including capital, production, marketing, and human resources, are inadequate. Second, external variables in the form of difficulties generated by SME developers and managers. Some of these issues will influence the performance of MSMBs if they are not addressed. To address these issues, particularly in terms of capital and marketing, there is a Financial Inclusion model ([Irmawati, Damelia, & Puspita, 2013](#)).

Financial inclusion is an endeavour to make the financial system accessible to all levels of society to promote quality economic growth and eradicate poverty. Financial inclusion seeks to eliminate all barriers to the public's use of existing financial services and infrastructure. This program is anticipated to foster an increasingly inclusive and sustainable economic growth, as well as deliver community welfare benefits ([Nurjannah, 2017](#)).

Due to the high level of unbanked (not meeting bank loan requirements) caused by the poverty gap, low MSME funding, high micro-credit interest rates, lack of MSME management capabilities, and limited distribution channels for financial services, the adoption of inclusion finance is crucial ([Yanti, 2019](#)).

According to the findings of a Financial Services Authority survey done in 2019, the financial inclusion index was 76.19 percent. This percentage has increased compared to the 2016 survey results of 67.8 percent. Thus, there has been an 8.39 percent growth in access to financial products and services or financial inclusion during the past three years. This increase is the result of the cooperative efforts of the Government, the Financial Services Authority, allied ministries or institutions, the Financial Services Industry, and a number of other parties, which continue to develop financial literacy and social inclusion ([Financial Services Authority., 2019](#)).

Financial Inclusion Index 2016 and 2019

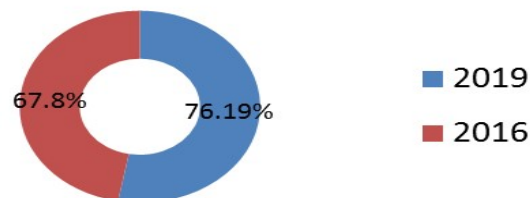


Figure 1. Display financial inclusion index 2016 and 2019.
Source: Financial services authority.

Figure 1 present about the financial inclusion index in North Sumatra is 93.98 percent. This number is the best national index of financial inclusion, ranking second behind *Daerah Khusus Ibukota*(DKI)Jakarta. This demonstrates that a more prosperous North Sumatra may open 1,246 new customer accounts with a trivial transaction or fundraising amount of Indonesia Rupiah (IDR) 2,61 billion. The growth of micro, small, and medium-sized enterprises (MSMBs) in Medan has an impact on the economic growth of the city's residents because MSMBs can provide expansive business opportunities in a variety of economic sectors. However, MSME entrepreneurs in Medan continue to face difficulties in developing their businesses due to a lack of capital. Financial troubles are not only caused by a low income, but also by poor financial management, such as the misuse of credit, the lack of financial planning, and not having savings (Yanti, 2019).

The socialization of the Financial Services Authority of North Sumatra to expand financial inclusion was one of them through the Laku Pandai program with Non-Cash Food Assistance (BPNT) and the development of the Regional Financial Access Acceleration Team (TPAKD). The Laku Pandai initiative with BNPT and TPAKD is regarded an alternative and a solution for the Medan area so that MSME actors in remote, innermost, and outermost locations can be served, as well as supporting banks in reaching consumers without having to construct new branch offices. Therefore, the North Sumatra Financial Services Authority needs to establish an integrated system to prepare financial inclusion materials that follow the conditions and needs of MSME actors in Medan. Financial inclusion can analyze numerous financial products and services in order to make wise financial decisions. These challenges suggest that financial inclusion will not develop by itself. This is because financial inclusion supports the effective use of products and helps business actors build skills and the finest financial products according to their needs. Financial inclusion is possible to make changes in the perspective of economic actors in seeing money and profits (Sanistasya, Rahardjo, & Iqbal, 2019).

Financial inclusion can improve the capacity of micro, small, and medium-sized enterprise actors to use financial services and receive direct impact from financial institutions. This is because the higher the increase in financial inclusion among MSMBs, the greater the overall improvement in a nation's financial stability. This is significant because it can optimize funding sources in the region, so enabling MSMBs to become more productive and develop. Financial management plays a role in deciding the amount to which the performance of SMEs is improved (Sanistasya et al., 2019).

In general, MSMBs frequently endure developmental delays. This is due to a variety of unresolved conventional problems (closed loop problems), such as challenges with human resource capacity, MSMBs have a hard time competing with larger businesses due to ownership, financing, marketing, and other challenges related to business management major corporations. This is evident by the absence of the concept of continuous innovation and the inconsistency of the company's main business operations. Finally, the development of MSMBs' long-term performance in the creative industry is typically not well-directed. Consequently, strategic initiatives are required to enhance the performance and sustainability of MSMBs. One method to achieve this is to increase MSME actors' financial knowledge, so that their management and responsibility are more commensurate with a large company (Aribawa, 2016).

In terms of productivity, export contribution, global and regional production participation, and contribution to added value, the performance of MSMBs in Indonesia remains considerably lower to that of other Association of Southeast Asian Nations (ASEAN) countries. Low levels of education and expertise, difficulty in acquiring permits for MSMBs, lack of access to financing, and lack of infrastructural support contribute to the low competitiveness of MSMBs in Indonesia. Lack of access to financing is a contributing factor to the poor performance of MSMBs.

This may be due to the lack of knowledge and understanding of the existence of financial institutions among MSMBs. This is referred to as financial literacy (Djuwita & Yusuf, 2018).

Financial literacy for MSMBs is the ability of managers to record financial statements, manage debt, and prepare budgets. Recording of Financial Statements, namely the capacity of MSME management to record business activities, business income and costs, business profitability, and other performance-related topics. Because MSMBs are still unable to create their own financial reports for a certain period, the majority of commercial banks do not grant capital credit. The provision of financial reports for MSMBs is crucial so that MSMBs may determine their business's success. Small and medium-sized enterprises can fund their working capital and investments in two ways, according to Debt Management Literacy. There are two primary funding sources for SMEs. Initially, SMBs can utilize savings. Second, by obligations to third parties. When a business decides to borrow, the percentage of personal capital to external capital/debt decreases. Budget Planning Proficiency, which can be used to plan future business activities (Amri & Iramani, 2018).

Everyone needs a high level of financial literacy to prevent financial difficulties. Financial difficulties are not caused solely by income (low income), but also by mistakes in financial management, such as the misuse of credit, lack of financial planning, and lack of savings. Therefore, financial literacy is important for a prosperous life (Akmal & Saputra, 2016).

Financial literacy affects a person's way of thinking about financial conditions and influences business owners' strategic financial decision-making and better management. The ability of business owners to manage their finances is important for business performance and continuity. It is important for business owners to acquire financial knowledge to improve their companies' performance. This empowers MSMBs to expand their businesses (Kasendah & Wijayangka, 2019).

According to the findings of a Financial Services Authority survey done in 2019, the financial literacy index was 38.03 %. Although it is still deemed low, this percentage has increased since the 2016 survey results of 29.7 %. Thus, there has been an 8.33 % growth in public financial understanding (financial literacy) over the past 3 years (Financial Services Authority., 2019).

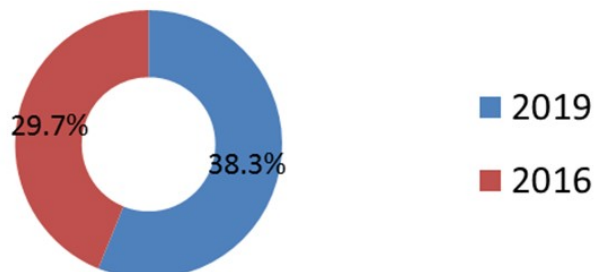


Figure 2. Financial literacy index 2016 and 2019.
Source: Financial Services Authority. (2019).

Figure 2 present about financial literacy in North Sumatra is 39%. This amount has exceeded the national target. This demonstrates that North Sumatra has an excellent financial understanding. The Government of North Sumatra also expects that the increase in financial literacy in North Sumatra will continue to increase each year, so that MSME actors in North Sumatra, particularly in the city of Medan, will be able to effectively manage their finances (Editorial, 2019).

Financial literacy is important for business actors, particularly MSMBs, so that they may choose and utilize financial products and services that meet their needs, engage in more effective financial planning, and avoid engaging in activities involving unclear financial instruments (Djuwita & Yusuf, 2018).

Financial inclusion is incorporated into the financial literacy program to strengthen the ability of MSME players to utilize financial services and obtain a direct effect from financial institutions. The greater the increase in financial inclusion among MSMBs, the greater the country's long-term financial stability. This is significant since optimizing local sources of funding assists MSMBs in being more productive and growing. The extent of SME performance is partially determined by the management of financial management. With financial literacy and inclusion, business actors can utilize their competencies in the financial sector to make a variety of decisions. Financially literacy MSMBs will be able to implement strategic plans to detect opportunities and threats, have enough access to finance, and respond to changes in the unstable economic climate, so that decisions will provide innovative and focused solutions to improve MSME performance (Sanistasya et al., 2019).

Not just in Indonesia, but the world, is presently experiencing the rapid development of technology, which varies significantly across time (Syafar, Gao, & Du, 2014). This is possible because technology is evolving rapidly every day and has invaded numerous industries, including the financial sector. Financial Technology is an example of a technology that supports financial services. Many application improvements in financial services, such as payment instruments, loan instruments, and others, have grown popular in this digital age as a result of the development of financial technology (Muzdalifa, Rahma, & Novalia, 2018).

The term financial technology is a financial service using a technology base which will certainly make it easier for us to do transactions anywhere and anytime (Syafar, Gao, & Du, 2014). This new financial model, financial technology was first started in 2004 by Zopa, a financial institution in the UK that runs money lending services. As a form of application of information technology in the financial sector. Financial technology has various functions, which are believed to be able to quickly develop rapidly. Currently, financial technology is able to serve electronic money, virtual accounts, aggregators, lending, crowdfunding and other online financial transactions. As for financial technology that has been operating, some of them were founded by conventional-based companies, but not a few are start-ups or startups (Rizal, Mualina, & Kostini, 2018).

Financial technology allows transactions without a bank account. Even though it's not a bank, Bank Indonesia regulates financial technology to protect consumers and the public. Financial technology enterprises must register with Bank Indonesia or the Financial Services Authority. Bank Indonesia said fintech can replace banks. Financial technology helps 1) establish a market for business actors, 2) become a tool for payment, settlement, and clearing, 3) implement more efficient investments, 4) mitigate risks from conventional payment systems, and 5) help parties save, borrow cash, and participate in equity.

Financial technology disrupts Indonesians who aren't ready to accept economic developments. Financial technology allows the economy to boost its efficiency and effectiveness. Fintech has assisted MSMBs without bank access. It promotes MSMBs to grow by making easy transaction loans through financial technology (Rahardjo, Ikhwan, & Siharis, 2019).

Financial technology with financial services such as Crowdfunding, mobile payments, and money transfer services that revolutionizes the startup business and alters consumer behavior and expectations necessitates regulations to protect them, including consumer protection, protection of user funds, and potential loss or decline in financial capacity. Whether caused by misuse, fraud, or force majeure, financial technology activities that are prone to data misuse, whether purposeful or inadvertent, pose a risk to consumers (Wibowo, 2016).

Regulation and supervision are important to the long-term sustainability of financial technology in Indonesia. This pertains to the legality of the business being conducted, as the adoption of financial technology development poses possible hazards to consumer protection, the integrity of the financial system, payment systems, and economic stability. The Financial Services Authority regulates and supervises to mitigate these risks and promote sustainable and stable economic growth (Wijayanti, 2018).

The Financial Services Authority ensures that it will oversee the business run by financial technology with several strict rules which were issued at the end of 2016. One thing that will later be made clear is related to determining the minimum capital limit for the financial technology industry. One of the reasons for this regulation is to protect consumers of Information Technology-Based Lending and Borrowing Services (LPMUBTI) / financial technology Peer-to-Peer (P2P) Lending, which is officially regulated by the Financial Services Authority (OJK), in the Regulation of the Financial Services Authority (POJK) Number 77/POJK.01/2016 (Financial Services Authority, 2016).

As a result of modern society's need for everything to operate quickly and easily, devoid of constraints and rules, an increasing number of people are utilizing financial technology today. This demonstrates that comfort, security, transaction suitability, and simplicity of transaction are elements that encourage MSME actors to use financial technology, as well as matters pertaining to supporting factors, such as ease of recording, ease of transaction processing, and sales growth (Sugianti, Diana, & Mawardi, 2019).

The emergence of financial technology innovation presents businesses with a refreshing change. Financial technology can facilitate business people's access to financial products. Financial technology can be utilized by business actors to finance their firms. The role of financial technology is not restricted to funding corporate capital; it has also expanded to include digital payment services and financial regulators, among others. In conjunction with the advancement of information and communication technology, the existence of technology-based financial technology services in Indonesia has become important (Sugianti et al., 2019).

Collaboration between financial technology companies and financial institutions can increase financial inclusion for MSMBs in Indonesia. This is possible because to the current rapid development of technology, which has permeated all sectors, including the financial sector. Therefore, the introduction of technology into the financial business will transform it into the digital era. The implementation of financial technology in the banking industry will make it simpler and more convenient for businesspeople, particularly MSMBs, to access financial service products and apply for financing without having to visit the office in person (Muzdalifa et al., 2018).

2. Literature Study

2.1. Financial Literacy

Financial literacy is an individual's awareness and knowledge of basic financial concepts, including knowledge of financial instruments and their application in business and daily life, such as financial management, savings and loans, insurance, and investment. The greater an individual's financial literacy, the greater his or her financial conduct and financial sagacity in managing effective finances (Gunawan, Pulungan, & Koto, 2019; Pulungan, 2017).

The public is required to have confidence in financial service institutions and their products and services after acquiring the necessary knowledge and abilities. Everyone must have confidence in their own abilities, not only in the financial services industry. This confidence includes the ability to record investment and expenditure plans, create budgets, and other financial tasks (Tustin, 2010).

According to the Financial Services Authority (2016), the level of financial literacy is influenced by gender, education level, and income. Age, financial and numerical knowledge of financial attitudes, household income, as well as education and position also influence financial literacy (Suryanto & Rasmini, 2018).

According to Widayati (2012) developed 15 financial literacy indicators adapted to conditions in Indonesia, namely: 1) looking for choices in a career, 2) understanding the factors that affect net income, 3) knowing sources of income, 4) knowing how to achieve prosperity and financial goals, 5) understanding the budget savings, 6) analyze risk, return, and liquidity, 8) evaluate investment alternatives, 9) analyze the effect of taxes and inflation on investment returns, 10) analyze the advantages and disadvantages of debt, 11) know the purpose of credit and debtor rights, 12) explain ways to avoid or fix debt problems, 13) know the basic laws of consumer protection in debt, 14) ability to make financial records, 15) understand financial statements such as balance sheets, income and cash flows.

2.2. Financial Technology

Financial Technology refers to new solutions that demonstrate innovation in the development of applications, products, or business models in the financial services industry that employ technology (Chuen & Low, 2018). Bank Indonesia defines financial technology as the use of technology in the financial system to create new products, services, technologies, and/or business models, which can influence monetary stability, financial system stability, and/or the efficiency, smoothness, security, and dependability of the payment system. Consumers, businesses, and the economy as a whole have all benefited from the development of financial technology. But if risks aren't properly addressed, the financial system might be disrupted.

According to Word Bank in Nizar (2017) The Financial Technology industry comprises enterprises that use technology to improve the efficiency of financial systems and financial service delivery.

The rise of financial technology produces creative disruption among the Indonesian population, which is unprepared to accept economic activity changes. On the other side, financial technology offers the economy new opportunities to increase economic activity in a more efficient and effective manner (Afifah, 2018). With mature rules, it fosters the growth of MSMBs by facilitating loan transactions via financial technology (Rahardjo et al., 2019)

2.3. Financial Inclusion

Financial inclusion is a comprehensive activity that aims to eliminate all price and non-price obstacles to the public's access to and utilization of financial services (Yanti, 2019) Financial inclusion is also defined as the proportion of individuals and businesses that use financial products and services through the promotion of affordable, timely, and adequate access so as to expand the range of their use by the community, which reflects public financial awareness for the economic welfare of the community. Bank Indonesia also considers financial inclusion to be the right of all individuals to get complete access to and services from financial institutions in a timely, convenient, informative, and cost-effective manner.

The public, particularly those with low incomes, must comprehend the significance of financial inclusion. Without access to established financial institutions, they lack customer records, cannot qualify for loans, and cannot obtain insurance. Consequently, these community groups rely more on non-formal institutions, which are fraught with risks.

Research by Beck, Demirgüç-Kunt, and Levine (2007) in 99 countries in 2003-2004 shows that the factors that determine the reach of the financial sector are the same as those that determine the depth of the financial sector. These factors are the level of development as proxied by GDP per capita, the quality of institutions as proxied by the governance index, and credit information as proxied by the credit information index.

In Ummah (2015) related to the factors that influence financial inclusion in Indonesia, using the size of the economy, the income distribution as indicated by the Gini index coefficient, the number of internet users, and the

number of mobile phone users. While the ratio of road length to unemployment has no effect on the level of financial inclusion, there is no correlation between road length and financial inclusion.

2.4. MSMBs Performance

The World Bank classifies MSMBs into three types, namely: 1. Micro Enterprises (having 10 employees); 2. Small Business (having 30 employees); 3. Medium Enterprises (number of employees up to 300 people) (Bank Indonesia, 2015).

Performance is the work accomplished by a person or organization in completing the responsibilities allocated to them, considering their skills, experience, sincerity, and time (Hasibuan, 2002). Another definition of performance is the result or level of success of a person as a whole within a certain period in carrying out activities relative to possibilities, such as work results, predetermined and mutually agreed-upon goals, goals, or criteria (Rivai, 2005). While the company's performance is a representation of the company's overall condition within a specific time period, it is a result or achievement that is influenced by the company's operational actions in employing its own resources (Srimindarti, 2004).

From the definitions of performance and MSMBs, it can be concluded that the performance of SMEs is the result of work achieved as a whole and compared to the work results, targets, or criteria that have been predetermined and mutually agreed upon in a business entity with assets and criteria revenue specified by the law.

3. Methods

3.1. Research Type

This is a descriptive quantitative study. Investigate the impact of financial literacy and financial technology on the performance of Medan's MSMBs mediated by financial inclusion. In addition, a survey approach was used in this study to identify the status, symptoms, and similarity of status by comparing them to the standards that were selected or established (Arikunto, 2010).

Descriptive quantitative aims to describe or describe the properties (characteristics) of a situation or object of research that has been mentioned. The results are then presented in the form of a research report (Arikunto, 2010).

3.2. Place and Time of Research

This research was conducted in Medan city. The implementation time of this research starts from April 2020 to August 2020.

3.3. Sampling Technique

e. Population

The population in this study were all MSMBs in Medan City.

Table 3. MSMBs population in Medan city.

Business Sector	Total MSMBs	Percentage (%)
Production	301 businesses	38.94
Culinary	438 businesses	56.66
Service	31 businesses	4.02
Livestock and Fisheries	3 businesses	0.38
Amount	773 businesses	100

Source: Medan City Cooperatives and MSMBs Office, 2018.

Table 3 shows information on the condition of MSMBs in Medan City, where there are 438 culinary businesses in Medan, which are the largest sectors in Medan City, and livestock and fisheries businesses at least with only 3 businesses.

f. Sample

In order to get a reliable Maximum Likelihood estimate from a Structural Equation Model (SEM), a sample size of 100–200 is suggested. The researcher will select a sample size of 100–200 businesses because doing so is necessary to conduct statistical analyses utilizing SEM (Structural Equation Model) and the highest likelihood estimate approach. To meet a prerequisite for the SEM-based data analysis method. To obtain the sample, the sampling technique used by the researcher is the purposive sampling method, which will select the sample based on several criteria that suit the needs of this research, namely, 1) Using financial technology in business transactions, 2) Being a micro business actor and medium-sized enterprises who have capital or assets of 50–500 million and, 3) Are MSME actors ≤ 1 year.

3.4. Data Collection Techniques

Researchers collect data using several methods to obtain data and information related and relevant to the topics to be addressed. The data collection technique utilized is to make a list of questions (questionnaire) (questionnaire). Through a list of questions, the researcher made various questions to the respondents, in this case the MSME actors who became the study sample to be replied by the respondents. The measurement of the variables in this study itself uses a Likert scale. Through the Likert scale, it will be easier to present questions that can be comprehended by responders and easy to score from the highest to the lowest. In addition, this Likert scale will also have high reliability in delivering a sequence based on the intensity of a given set of attitudes.

3.5. Data Analysis Techniques

e. Descriptive Statistic

Descriptive statistics is a method for describing and interpreting objects as they are (Sangadji & Sopiah, 2010). The objective is to systematically describe the facts, objects, or subjects as they are with the objective of systematically and accurately documenting the facts and qualities of the item under study. Included in descriptive statistics are the presentation of data through tables, graphs, data distribution, calculation of the percentage distribution of respondents' answers (frequency distribution), average, mean, and mode values, which will be tested using the SmartPLS analysis software.

f. Structural Equation Model (SEM) Analysis

This study utilized a model of causality or influence relationship. To evaluate the hypothesis that will be provided in this study, SEM (Structural Equation Modeling) will be implemented through the Smart-PLS application and used as the analytic technique. (Ferdinand, 2006), stated several reasons for using the SEM program as an analytical tool is that SEM is suitable to be used to confirm the nondimensionalization of various indicators for a construct, test the suitability or consistency of a model based on the empirical data studied, test the suitability of the model as well as the causality relationship between the factors built or observed in the model. study. The following are the models and steps to analyze the data for this research.

The stages of data analysis for the model using the intervening variables above are 1) analysis of the measurement model (outer models): (1) Construct reliability and validity; (2) discriminant validity; 2) Analysis of measurement models (inner models): (1) R-Square; (2) F-Square; (3) Hypothesis testing, namely direct effect; (c) Indirect effect; (d) Total effect (Juliandi, 2018).

4. Result and Discussion

4.1. Measurement Model Analysis (Outer Model)

The measurement of the validity test results can be seen from the Heretroit-Monotrait Ratio (HTMT) value in Table 4, which indicates that the validity value of each indicator is less than 0.9, indicating that the respondent understands all of the answer options used in the list of questions.

Table 4. Heretroit-monotrait ratio (HTMT)

Variable	Heretroit-Monotrait Ratio (HTMT)			
	X1	X2	Y	Z
X1				
X2	0.84			
Y	0.65	0.87		
Z	0.48	0.79	0.53	

Source: Data processing with PLS, 2020.

In Table 5 composite reliability value shows that all variables utilized in this study are reliable, since the reliability value is more than 0.70, allowing for the measurement of reliability test findings. This indicates that the questionnaire results can be used in this study.

Table 5. Composite reability.

Variable	Composite Reliability
Financial Literacy	0.90
Financial Technology	0.79
Financial Inclusion	0.91
MSME Performance	0.84

Source: Data processing with PLS, 2020.

4.2. Measurement Model Analysis (Outer Model)

i. *R-Square*

R-Square is useful for predicting whether the model is good/bad (Juliandi, 2018). The criteria for the R-Square are if the R^2 (adjusted) value is 0.75 then the model is substantial (strong), if the R^2 (adjusted) value is 0.50 then the model is moderate (moderate) and if the R^2 (adjusted) value is 0.75 then the model is weak (poor).

Table 6. R-square.

Variable	<i>R-Square</i>	<i>R-Square Adjusted</i>
MSMBs performace	0.59	0.58
Financial Inclusion	0.38	0.37

Source: Data processing with PLS, 2020.

In Table 6. MSMBs performance R-Square is moderate and for financial inclusion have a high reliability.

j. *F-Square*

F-Square for assessing the relative impact of an influencing variable (exogenous) on the affected variable (endogenous) (Juliandi, 2018). Table 7 criteria of the F-Square are if the value of F^2 is 0.02 then it has a small effect, if the value of F^2 is 0.15 then it has a moderate or moderate effect and if the value of F^2 is 0.35 then it has a large effect.

Table 7. F-square.

Var	X1	X2	Y	Z
X1	-	-	0.04	0.01
X2	-	-	0.30	0.22
Y	-	-	-	-
Z	-	-	0.03	-

Source: Data processing with PLS, 2020.

k. *Direct Effect*

The purpose of direct effect analysis is to test the hypothesis of the direct effect of an exogenous variable on an endogenous variable (endogenous). Table 8 present the criteria for evaluating the direct effect hypothesis are the presence of a positive route coefficient and a probability/significance value (P-Value) <0.05 (Juliandi, 2018).

Table 8. Direct effect.

Variable	<i>Original Sample</i>	<i>Sample Mean (M)</i>	<i>Standart Deviation</i>	<i>T-Statistics (/O/STDEV)</i>	<i>P-Values</i>
Financial literacy on MSME performance	0.17	0.16	0.10	1.67	0.10
Financial literacy on financial inclusion	0.13	0.14	0.18	0.71	0.48
Financial technology on MSME performance	0.54	0.58	0.13	4.10	0.00
Financial technology on financial inclusion	0.52	0.52	0.16	3.21	0.00
Financial inclusion on MSME performance	0.15	0.12	0.12	1.23	0.22

Source: Data processing with PLS, 2020.

Graphically, a summary of the results of the direct effect shown in Figure 3.

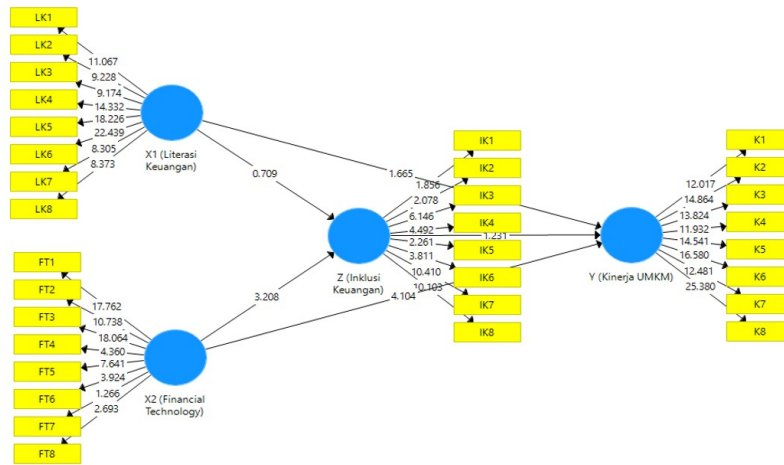


Figure 3. Direct effect.

1. Indirect Effect

The objective of the indirect effect analysis is to test the hypothesis of the indirect effect of an exogenous variable on an endogenous variable, which is mediated by an intervening variable (mediator variable). Table 9 of the criterion for determining the indirect effect is that its P-Value < 0.05 (Juliandi, 2018).

Table 9. Indirect effect.

Effect	Original Sample	P-Values
Financial literacy -> financial inclusion -> MSME performance	0.02	0.62
Financial technology -> financial inclusion -> MSME performance	0.08	0.20

Source: Data processing with PLS, 2020.

4.3. Discussion

a. Effect of Financial Literacy on MSME Performance

Financial literacy for MSMBs is the ability of managers to record financial statements, manage debt, and prepare budgets. Recording of Financial Statements, namely the capacity of MSME managers to record business activities, business income and expenses, business profitability, and other performance-related topics. Because MSMBs are still unable to create their own financial reports for a certain period, the majority of commercial banks do not grant capital credit. The provision of financial reports for MSMBs is important so that MSMBs may determine their business's success. MSMBs can fund their working capital and investments in two ways, according to Debt Management Literacy. There are two primary funding sources for SMEs. Initially, MSMBs can utilize savings. Second, by debts to third parties. When a business decides to borrow, the proportion of personal capital to external capital/debt decreases. Budget Preparation Literacy, which can be utilized to plan future business activities (Amri & Iramani, 2018).

Therefore, financial literacy is the ability for entrepreneurs and managers of companies/MSMBs to organize and create financial reports for business activities beginning with income and expenses, debt, and future budgets.

Financial literacy affects a person's style of thinking about financial conditions and influences business owners' strategic financial decision-making and better management. The ability of business owners to handle their funds is important for business performance and continuation. It is essential for business owners to acquire financial knowledge to improve their businesses' performance. This empowers MSMBs to grow their businesses (Kasendah & Wijayangka, 2019).

MSME performance can be analyzed using a simple measurement method; through perception, it is anticipated that the actual condition of these MSMBs will be revealed. Furthermore, future education is required to calculate company performance using simple indicators such as sales growth, capital growth, annual workforce growth, market and marketing growth, and profit or operating profit growth (Aribawa, 2016).

Therefore, it can be concluded that the performance of MSMBs is the result of work accomplished as a whole and compared to work results, targets, targets, or criteria that have been predetermined and mutually agreed upon in a business entity with asset and turnover criteria determined by law.

Previous research has also examined the relationship between financial literacy and the performance of MSMBs. According to the study's conclusion, financial literacy has a significant impact on the performance of MSMBs (Aribawa, 2016).

However, the author found that financial literacy has a positive and insignificant effect on the performance of MSMBs. This happens because the majority of the answers to the questionnaire from respondents are in the category of not agreeing with the independent variable (financial literacy) and the dependent variable (SME performance).

b. Effect of Financial Technology on MSME Performance

Financial technology is one of the developments in the financial sector that refers to current technology. The innovation intends to introduce practicality, ease of access, convenience, and inexpensive cost. With financial technology, even remote communities can use technology-based financial services, without having to drive large distances to acquire financial services. Financial technology has helped finance small and medium firms that lack access to banking. With mature rules, it promotes MSMBs to build their businesses by making easy loan transactions using financial technology.

Online loan application is one of the ways in which financial technology facilitates access for borrowers in the MSMBs sector. According to the hypothesis or prior research, financial technology has an impact on the activities of MSMBs. According to Rizal et al. (2018) and Rahardjo et al. (2019) financial technology can provide easy access for borrowers from the MSME sector.

And the results shows that financial technology has a positive and insignificant effect on the performance of MSMBs. This happened because most of the the respondents' answers to the questionnaire were in the less agreeable category from the independent variable (financial technology) and the dependent variable (SME performance).

Therefore, Information and Communication Technology (ICT) including smartphones and broadband internet is very important to develop access to safe and affordable financial services such as payments, domestic and international transfers, insurance, credit, and savings. Digital financial inclusion can be beneficial for underserved low-income people and small and medium-sized businesses (SMEs). Digital financial services can simplify people's lives by allowing them to conduct minor transactions and better manage their income and expenses. The provision of financial services, such as payments, transfers, savings, and credit, enables providers to tailor additional financial services to the needs of customers. Additionally, digital financial inclusion can lower the risk of cash-related loss, fees, theft, and other financial crimes.

c. Effect of Financial Literacy on Financial Inclusion on MSME Performance

Financial literacy is important in gaining access to funding for MSMBs. If debtors have a good financial education, banks will be prepared to offer financial facilities (credit) (Remund, 2010). The growth of MSMBs has an impact on the economic growth of a community because they offer a variety of business opportunities, but MSME entrepreneurs continue to struggle to develop their businesses due to capital difficulties. Financial inclusion is one method for addressing the capital problem.

Financial inclusion is possible to effect changes in the thinking of economic actors in seeing money and profits. So that the greater the level of awareness of financial goods, company hazards, loan risks, etc., it will make it simpler for debtors to get loans. Research conducted by Sohilaaw (2018); Biswas and Gupta (2013); Bhushan and Medury (2013); Mahdzan and Tabiani (2013) which states that financial literacy greatly affects the level of financial inclusion. This is because the public knows the benefits of financing and other financial products, so that access to financial institutions is increasingly needed.

The results here show the same as the studies above, namely financial literacy has a positive and significant effect on financial inclusion. This happened because the majority of the questionnaire answers from respondents were in the category of strongly agree and agree from the independent variable (financial literacy) and the intervening variable (financial inclusion).

d. Effect of Financial Technology on Financial Inclusion on MSME Performance

In the current digital era, financial technology is one of the methods of financial services that is growing popularity. In Indonesia, digital payments are one of the most developed sectors of the financial technology industry. This sector is the government and public's greatest hope for increasing the number of individuals with access to financial services. Banking is an intermediary financial entity that serves the needs of business actors and must be present. These needs include not just the provision of capital, but also assistance with the payment system. In the current digital era, banks cannot conduct their operational activities exclusively in the traditional

manner, i.e., by depending exclusively on branch offices. However, banks must innovate their business practices, and one way to do so is through collaborating with financial technology companies.

Research by [Hutabarat \(2018\)](#) claimed that financial technology impacts financial inclusion. The results of the study indicate that the government will support the accomplishment of inclusive financial implementation in proportion to the number of individuals who use digital financial services. Changes in the form of financial services and products, from conventional to technological, reduce the community's time and operational expenses.

The significance of credit to the growth of small businesses and its influence on people's saving behavior. Nevertheless, even though the specific impact of mobile and internet on financial inclusion is negative in the static model, the interaction variable of mobile and internet is quite favorable to financial inclusion. This has a positive impact on the financial Inclusion dynamics rate of 10%.

This study reaches the same conclusion as the previous one, namely that financial technology has a positive and significant impact on financial inclusion. This occurred because the majority of questionnaire responses (strongly agree and agree) with the independent variables (financial technology) and intervening variables (financial inclusion).

e. Effect of Financial Inclusion on MSME Performance

The growth of MSMBs has an impact on the economic growth of a community since they offer a variety of business opportunities; yet, MSME entrepreneurs continue to suffer to build their businesses due to capital difficulties. Financial inclusion is one method for addressing the problem of capital problems.

Financial inclusion is defined as access to appropriate financial products including credit, savings, insurance and payments, the occurrence of quality access including convenience, affordability, suitability and with attention to consumer protection, and the availability is also given to everyone. Research conducted by [Sanistasya et al. \(2019\)](#); [Yanti \(2019\)](#) states that financial inclusion has a positive effect on financial performance.

The results of the research that the author has done are different from the results of the research above, namely financial inclusion has a positive and insignificant effect on the performance of MSMBs. This happened because the majority of the answers to the questionnaire from respondents were in the category of disagreeing and disagreeing with the intervening variable (financial inclusion) and the dependent variable (SME performance).

f. Effect of Financial Literacy on MSME Performance through Financial Inclusion

The development of MSMBs is frequently hampered by unresolved conventional problems, such as those pertaining to human resource capability, ownership, financing, marketing, and other issues associated with business management. Therefore, there is a need for strategic actions to enhance the performance of MSMBs. One approach to do this is to increase the financial expertise of MSME actors so that their management and accountability may be appropriately accounted for [Aribawa \(2016\)](#).

According to a 2015 survey conducted by the World Bank, the number of people in Indonesia who do not have access to financial services can be viewed from two perspectives, namely supply and demand. The financial sector is overly selective in its customer selection, the creation of expensive branch offices, and the assumption that housewives with low salaries cannot obtain financial services. This is because financial literacy facilitates the effective use of products and aids business actors in developing the best skills and financial products based on their needs, so becoming a precondition for increasing financial inclusion. Financial inclusion can change the way economic actors view money and profits.

Thus, financial literacy has a direct impact on the performance of MSMBs, and financial inclusion is unnecessary. In other words, financial literacy can shape or influence the MSMBs performance. However, because statistical tests yielded insignificant results, the conclusion of this study can only be applied to the investigated sample and cannot be extrapolated to the total population (SME business actors). If the study were conducted on the complete population, the author hypothesizes that the results would be different. It is possible that financial inclusion mediates the relationship between financial literacy and MSME performance.

g. Effect of Financial Technology on MSME Performance through Financial Inclusion

MSMBs play a significant role in the attempt to boost economic development in Indonesia, economic expansion, and job creation. It is anticipated that the expansion and development of MSMBs will enhance the Gross Domestic Product (GDP) and absorb more new workers, hence reducing unemployment and poverty. Especially with the adoption of the ASEAN Economic Community (AEC), which requires MSME actors to generate new innovations in order to meet market demands and establish Indonesia as a market leader in their own country and in ASEAN ([Aribawa, 2016](#)). Increasing innovation requires capital, hence banking as one of the operating financial institutions must be available to serve the needs of business actors. These needs include the provision of capital as well as assistance with the payment system. In the current digital era, banks should not simply conduct their operational activities conventionally, that is, by depending solely on branch offices, which are

typically exclusive. However, banks must reinvent their business activities, and one way to do so is through collaborating with financial technology companies.

The emergence of financial technology innovation presents entrepreneurs with a new opportunities. Financial technology facilitates businesspeople's access to financial products and improves their financial literacy. Financial technology can be utilized by businesspeople to finance their firms. Based on research on the impact of financial technology on MSMBs, the findings of a study conducted by Muzdalifa et al. (2018); Dermawan (2019); Hutabarat (2018); Rahardjo et al. (2019) The presence of a variety of financial technologies was highlighted as a factor in the development of MSMBs. The function of financial technology extends beyond financing corporate capital to include digital payment services and financial regulators, among other aspects.

Thus, financial technology directly influences the performance of MSMBs, and financial inclusion is unnecessary. In other words, financial literacy can shape or influence the MSMBs performance. However, because statistical tests yielded insignificant results, the conclusion of this study can only be applied to the investigated sample and cannot be generalized to the total population (SME business actors). If the study were conducted on the complete population, the author hypothesizes that the results would be different. It is possible that financial inclusion mediates the relationship between financial literacy and MSME performance.

5. Conclusion

Based on the findings and discussion, it is clear that both financial literacy and financial technology have a positive and negligible impact on the success of Medan's micro, small, and medium-sized businesses (MSMBs). Medan's micro, small, and medium-sized businesses (MSMBs) benefit slightly from financial inclusion. The connection between financial literacy and MSME performance in Medan city is not tempered by financial inclusion.

6. Suggestion

The researcher conveys recommendations that may be advantageous to the stakeholders involved in this research. (1) The Financial Services Authority, Bank Indonesia, and companies providing financial products and services should conduct activities to improve financial literacy, such as education about financial terms, the benefits of each financial product or service, and training in good financial management, as required. Those between the ages of 17 and 25 who are employed in the tertiary sector are advised to implement education. (2) The use of digital financial services is rising rapidly in Indonesia. In order for the public to have more faith in this service and to prevent financial technology corporations from committing crimes via the internet, it is proposed that consumer protection regulations for financial technology services be implemented immediately. This study is expected to serve as a reference for additional academic research on the effects of financial literacy and financial technology on the performance of MSMBs. Additional research can add new variables, allowing this study to expand. It is hoped that academics will also play a role in encouraging MSME groups to improve financial literacy and financial inclusion, which are still low, and assist in the practice of financial governance so as to increase the knowledge of small business owners to be more organized in their financial reports so as to increase the turnover of business actors. (4) With this research, the author hopes to make the government aware of the low level of literacy among Medan's MSME actors. This task requires that the government play a significant role in the sustainability and development of financial literacy, so that the public is not only aware of various financial services, but also understands, is skilled, and has confidence in making financial management decisions for the purpose of improving financial welfare.

7. Limitation

Based on the current experience of author, there are several limitations and factors that can be given greater consideration by future researchers as they continue to refine their own research, as this study itself undoubtedly contains shortcomings that must be addressed in future research. According to the researcher's observations, there are still inconsistent responses to the questionnaire, which is one of the study's limitations. Because respondents tend to be less cautious with established statements, resulting in inconsistent questionnaire responses. Researchers might anticipate this by accompanying and overseeing respondents as they select responses, allowing respondents to concentrate on addressing existing statements. However, due to pandemic.

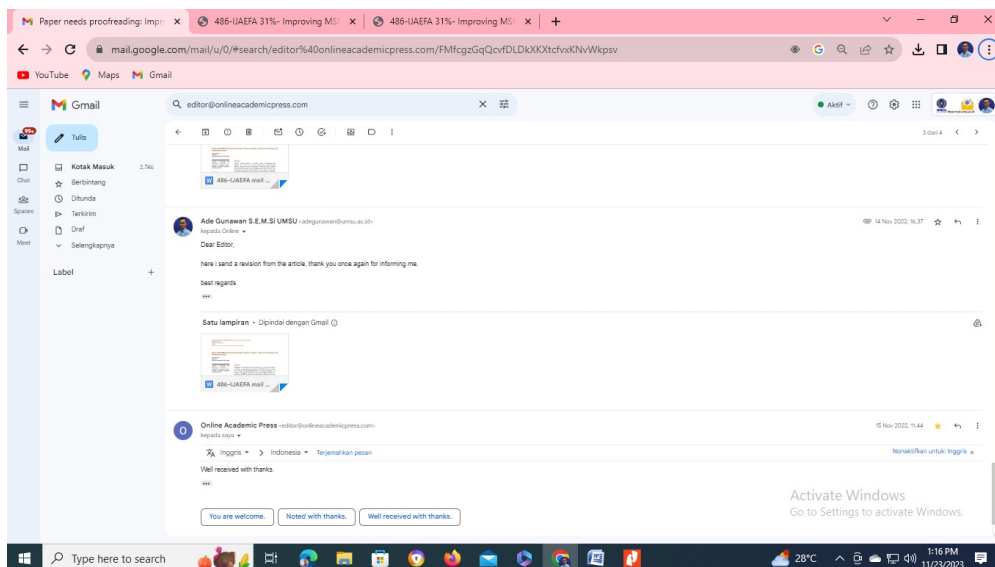
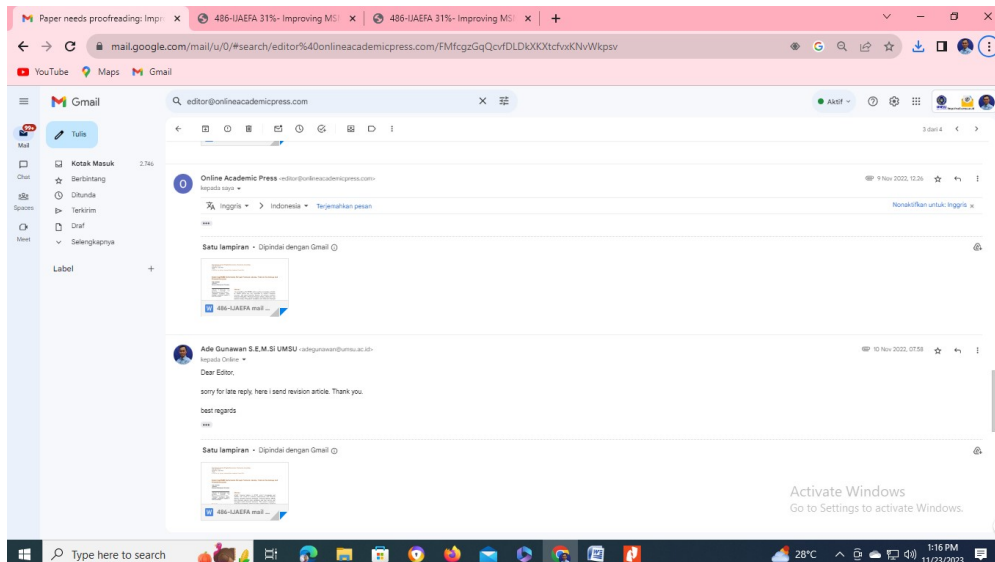
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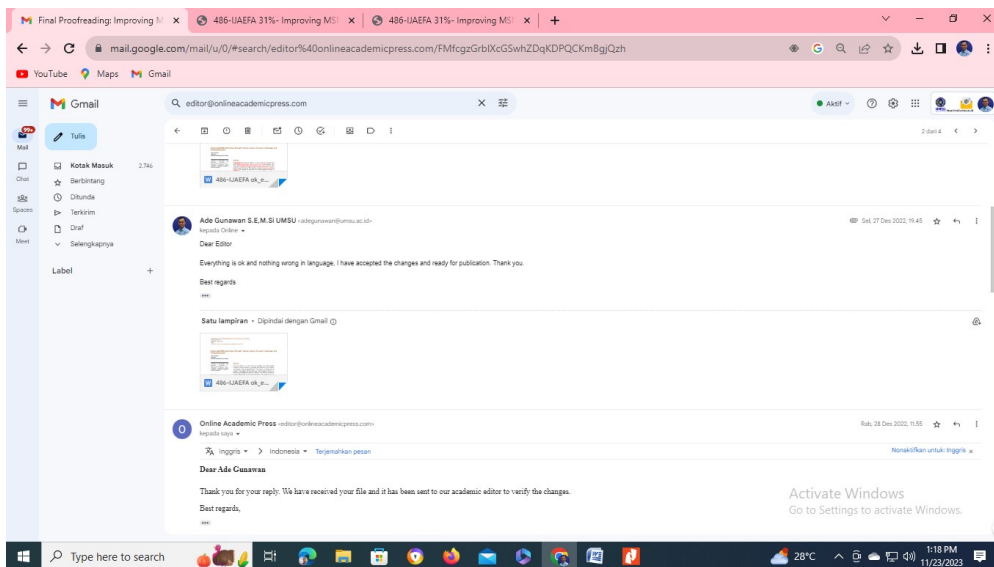
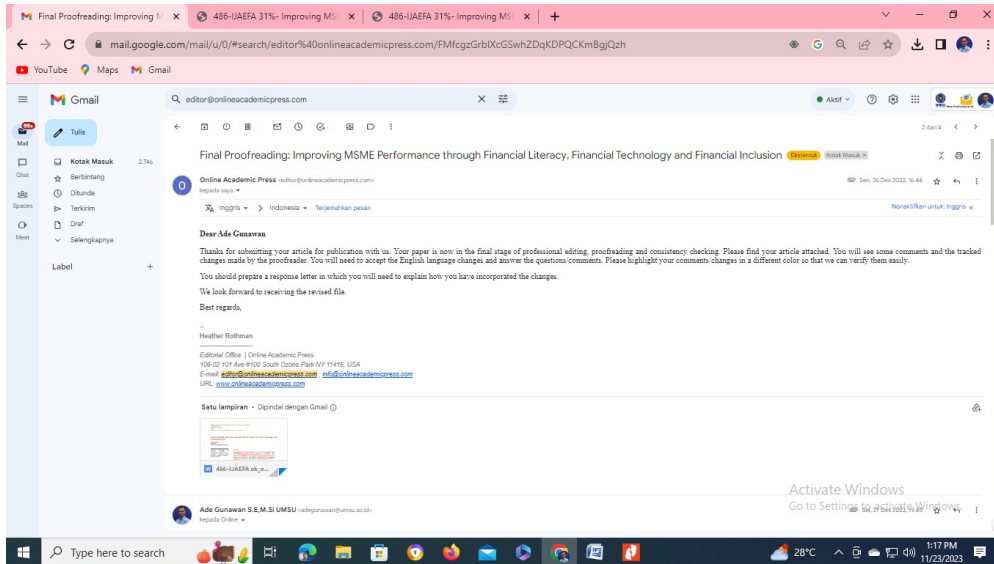
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Comment [AF28]: References highlighted are incomplete. Please provide complete details.

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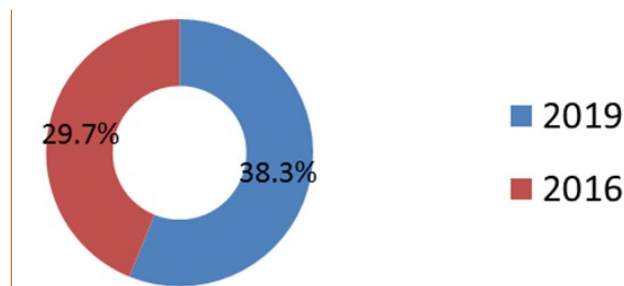
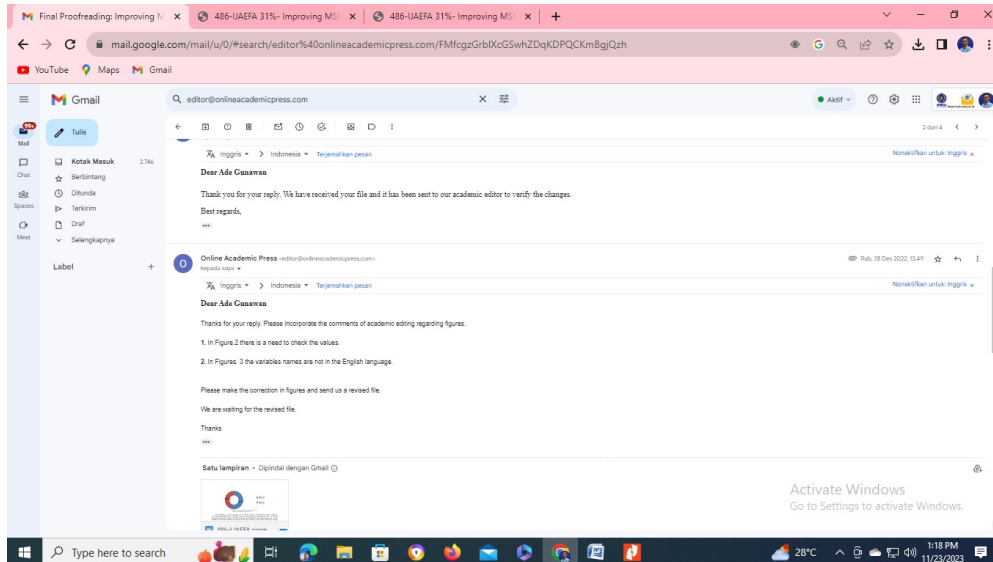


Figure 2. Financial literacy index 2016 and 2019.
Source: Financial Services Authority (2019).

Financial literacy in North Sumatra is at 39 percent, which is higher than the national average. This demonstrates that North Sumatrans have an excellent financial understanding. The Government of North Sumatra also expects that the increase in financial literacy will continue each year, so that MSME actors in North Sumatra, particularly in the city of Medan, will be able to effectively manage their finances (Editorial, 2019). Financial literacy is important for business actors, particularly in MSMEs, as it allows them to choose and utilize financial products and services that meet their needs, engage in more effective financial planning, and avoid engaging in activities involving unclear financial instruments (Djuwita & Yusuf, 2018).

Comment [E29]: Numbers in text indicate that 38.3% should be 38.03% - or is the text incorrect?

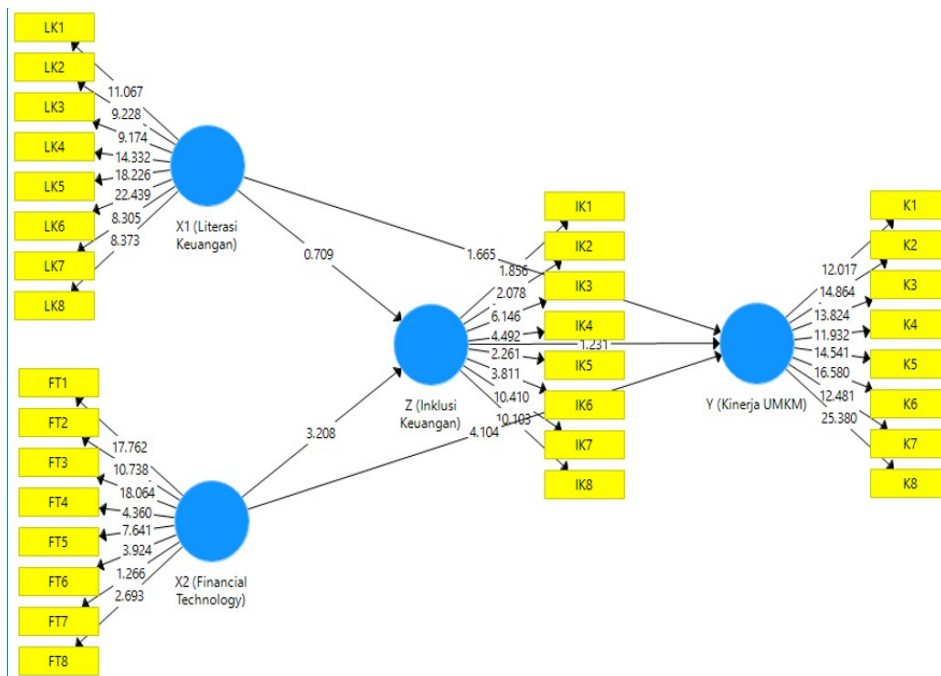


Figure 3. Direct effect.

Comment [AE30]: Please provide the figure writing in English writing. All values present in clear and readable format.

