

# The Influence of Digital Financial Literacy, Digital Financial Inclusion, and Financial Technology Mediated by Locus of Control on the Performance of Medan City MSMEs Through Financial Behavior

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## ABSTRACT

This study aims to look at the personality of MSMEs in managing a business called locus of control and connecting it to financial behavior that should be done by MSMEs after being affected by the Covid-19 pandemic to improve the performance of MSMEs by utilizing increasingly sophisticated technology as an effort to improve digital financial literacy, digital financial inclusion, and financial technology. This research uses Structural Equation Model (SEM) based on Partial Least Square (PLS) approach. PLS is a structural equation modeling (SEM) based on components or variants. This study used quantitative methods. The method of data collection is done by distributing questionnaires. Source data obtained using primary data. The population in this study is the number of MSMEs registered as assisted by the Medan City Cooperative and SME Office 2020-2023 as many as 1,888 MSMEs, with a sample of 100 respondents processed using the slovin formula. This research was conducted in several districts in Medan, namely Medan Denai, Medan sandpaper, Medan Area, Medan word, Medan City, Medan Petisah, Medan

Maimun, and Medan Perjuangan. The results of this study indicate that digital financial inclusion variables directly have a significant effect on the performance of MSMEs. However, the variables of digital financial literacy, financial technology, and financial behavior directly have no significant effect on the performance of MSMEs. Furthermore, digital financial literacy variables indirectly affect financial behavior, while the variables of digital financial inclusion and financial technology indirectly have no significant effect on financial behavior. Then, financial behavior does not mediate between digital financial literacy, digital financial inclusion, and financial technology on MSME performance. Then, locus of control does not moderate digital financial literacy, digital financial inclusion, and financial technology on MSME performance.

**Keywords:** *Digital Financial Literacy, Digital Financial Inclusion, Financial Technology, Financial Behavior, Locus of Control*

## INTRODUCTION

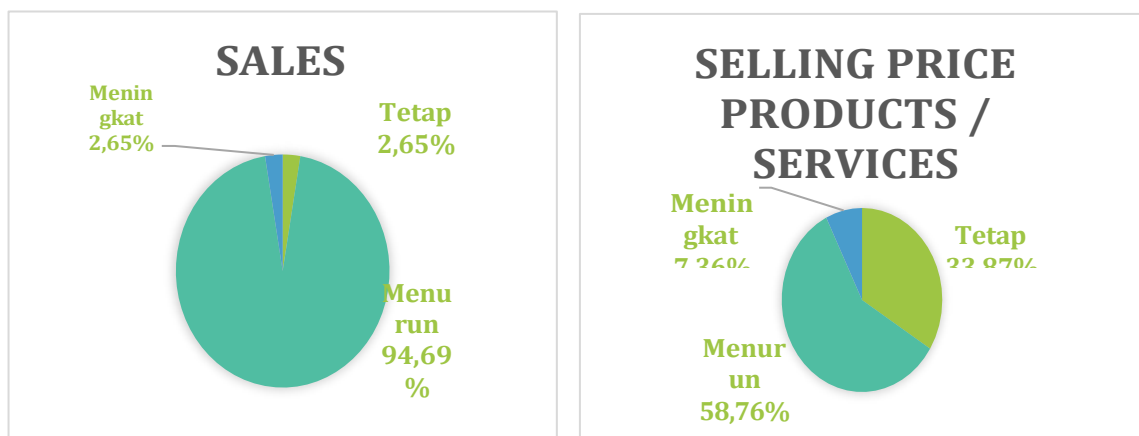
The role of MSMEs is very large for Indonesia's economic growth, with the number reaching 99% of all business units.

All can be optimized if this sector continues to receive attention and support from policy makers in this country. As one of the largest cities in North Sumatra, Medan has become a center of economic, cultural, and educational activities. In this context, MSMEs in Medan City are not only small businesses but also players who play an important role in local economic development (Aditi & Hermansyur, 2017). The proportion of Micro, Small and medium entrepreneurs reach 99.8% of the total economic enterprises in Medan City. That is, the number of MSMEs reaches almost 500 times the number of large businesses. However, MSMEs contributed 29.46% of Medan City'S total GRDP in 2021. This shows that the contribution of MSMEs to

Medan city is still limited (Sundari and Butary 2020).

MSME performance is a level of success in achieving what has been done by business actors that reflects sales, capital, number of employees, market share, and profits that continue to grow. (Musran Minuzu, 2010). In the study (Joko Susilo, et al., 2022) according to (Bastian, 2010) said that the measure of performance is often seen from how much profit is obtained.

The decline in MSME sales occurred starting in 2020 which moved down significantly, the following are MSME sales data during the Covid-19 pandemic obtained from the results of a survey of the impact of the Covid-19 pandemic on the performance of Indonesian MSMEs conducted by the National Research and Innovation Agency.

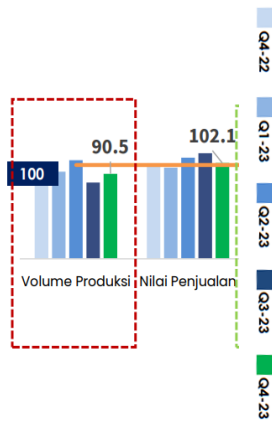


Source: data processed by National Research and Innovation Agency, 2024  
Figure 1 MSME sales information during the Covid-19 pandemic

Based on Figure 1, it is known that during 2020 there were 94.69% of businesses that experienced a decrease in sales, there were 2.65% of businesses that experienced an increase in sales, and there were 2.65% of business sales that did not increase. In addition, MSMEs experienced a decrease in selling prices of about 58.76%, and as much as 7.36% of MSME selling prices increased, and as much as 33.87% of MSME selling prices remained. BRIN (2020) also outlined that MSME business costs tend to remain and even increase, consisting of increased raw material costs, transportation costs, labor costs, and other costs. This shows that

the Covid-19 pandemic has caused MSME performance to decline due to a significant decrease in business profits due to declining sales, while production costs remain or even increase.

Furthermore, based on the MSME Business Index conducted by the BRI Research Institute (2023), it shows that the performance of MSMEs after entering the post-COVID-19 pandemic period is starting to improve. The MSME business index is an indicator that measures MSME activity in Indonesia conducted every quarter by the BRI Research Institute.

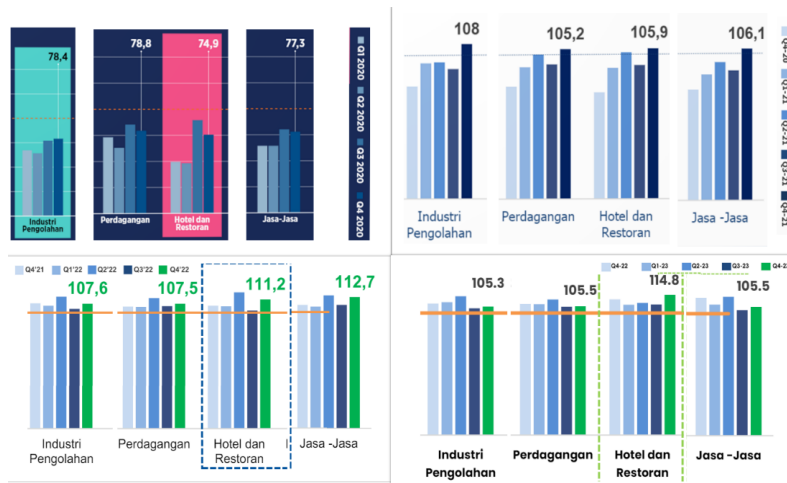


Source: BRI Research Institute Forecast 2024  
 Figure 2 Components of the MSME business index

Based on Figure 2, it shows that in Quarter 1 of 2023 the indicator of production volume and sales value was still below the business index number of 100 and was still unstable from the previous quarter, in Quarter 2 of 2023 the indicator of production volume and sales value increased by more than 100, which means

that many MSMEs are operating again and in line with the increase in demand during religious holidays, the harvest of foodstuff crops, and followed by good weather, this makes business turnover also increase.

A different thing happened in the 3rd and 4th quarters of 2023, namely the production volume decreased far from the business index figures due to the declining purchasing power of the community, but the average selling price indicator for the 1st, 2nd, 3rd and 4th quarters of 2023 was above the business index figures due to rising global commodity prices so that MSMEs also increased their selling prices. Based on the data contained in Figure 1.2 shows that MSME sales increased but decreased profits due to the increase in global commodities. The MSME business index by business sector conducted by the BRI Research Institute (2023) shows the movement of each business sector in Indonesia from 2020-2023.



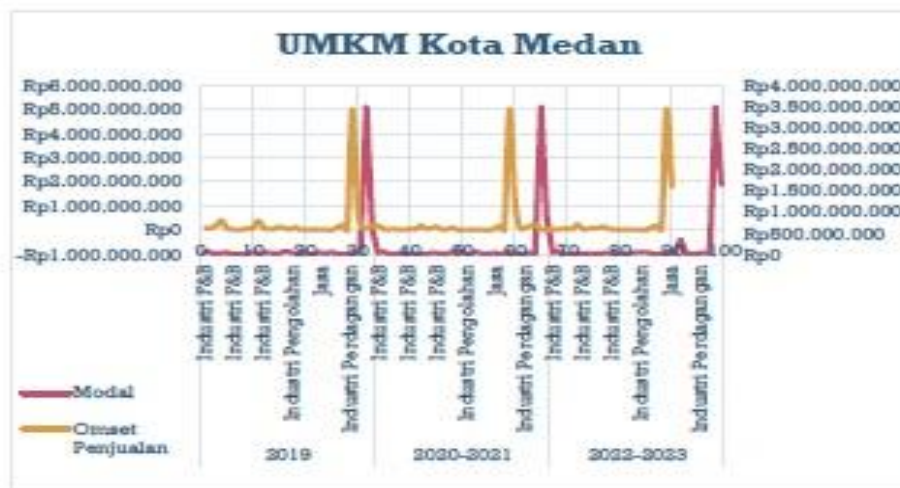
Source: data processed from BRI Research Institute, 2024  
 Figure 3 Business Index By Business Sector

Based on the business index by business sector, it can be seen that the condition of MSME business activity in Indonesia after the impact of the Covid-19 pandemic according to BRI Research Institute is getting better seen from the MSME business index from 2020 to 2022 moving up above the business index number, which is most prominent seen in the fourth quarter of 2023

in the processing, trade and services sectors decreased, in contrast to the hotel and restaurant sector in the fourth quarter of 2023 which increased.

Different things happen to MSMEs in Medan City, researchers have conducted a survey on 30 respondents in Medan city to see sales turnover and capital of MSMEs in Medan City. The following data from sales

turnover and capital of MSMEs Medan City.



Source: processed Data, 2024  
 Figure 4 MSME performance Diagram of Medan City

Based on interviews with 30 MSMEs, a diagram was produced showing that the trading industry sector from 2019-2023 continues to increase due to commodity prices increasing so that many MSMEs in the trading industry sector increase sales prices, this causes the sales turnover of MSMEs in the trading industry sector to also increase and get more profits. Sales turnover in the F&B industry and processing industry sectors from 2019-2023 was volatile, in 2019 the sales turnover of MSMEs entered Rp 1,551,550,000 and Rp 479,970,000, respectively, in 2020-2021 the sales turnover of MSMEs decreased at Rp 964,500,000 and Rp 403,470,000 due to the global pandemic, namely COVID-19, in 2022-2023, the sales turnover of MSMEs in the F&B and processing industry sectors has not returned to normal as in 2019, namely at Rp 1,081,000,000 and Rp 416,970,000 due to commodity prices during 2023 rising drastically but MSMEs in the processing and F&B industry sectors cannot increase their sales prices, so many MSMEs in the F&B and processing industry sectors have difficulty processing business capital due to the reduced profits they get. The service industry experienced a decline in 2020-2021 due to the Covid-19 pandemic, but in 2022-2023 after the new normal, the sales

turnover of MSMEs in the service industry increased and began to improve.

As a result of interviews with several MSME actors, the impact of the Covid-19 pandemic, namely MSME actors, felt that the purchasing power of the community had decreased and raw material prices had increased, causing the sales volume of MSMEs to also decrease, which made the economic condition of MSMEs more difficult and many MSME actors had difficulty managing their businesses, which decreased the performance of MSMEs, especially in the F&B industry sector.

To deal with the economic impact, one way is to increase the business resilience of Micro, Small and Medium Enterprises (MSMEs). In responding to the global crisis due to Covid-19, MSME actors must have a strategy in crisis management, strategy is very important or essential because it can help MSMEs understand how businesses respond to drastic changes. Theoretically, this adaptation strategy manifests the level of resilience of MSMEs to be able to overcome various obstacles in a situation of uncertainty. In the business context, resilience is the capacity and capability of entrepreneurs to survive and adapt so that they are able to grow and develop in turbulent times (Suardi & Nugroho, 2021). In research (NF, Silalahi, 2021) according to

(Baron and Markman, 2003) or (Enwick, 2005) resilience is a major factor underlying success in entrepreneurial settings. In research (BR, Maulana & Nur laila, 2023) according to (Kartono, 2004) business resilience will survive if the performance is right.

According to Mitroff, organizational resilience is the movement of targets on an ongoing basis and requires adjustment and high reliability. By strengthening resilience, the ability to manage various disruption challenges is formed so that it can contribute to the performance of the organization during running a business in normal conditions, as well as in crisis conditions (Musrichah, et al., 2021). Based on several previous explanations, it can be concluded that the business resilience component can be used as an indicator in improving the performance of MSMEs.

Factors that can affect the performance of MSMEs are demographic factors, locus of control, financial literacy, financial technology, and financial inclusion (Akhmad et al., 2021). In this study, the

performance factors of MSMEs that will be studied are digital financial literacy, digital financial inclusion, financial technology, financial behavior, and locus of control.

Financial literacy is the competence of the personal self in managing finances, both in obtaining and evaluating information that is often used to make business decisions based on the consequences received (Atkinson & Messy, 2012). An understanding of financial literacy is very useful and helps MSMEs in the process of financial management, utilizing financial services, making financial planning, and making decisions related to their business (Ardila et al., 2020).

The next factor is financial inclusion, the World Bank (2016) defines financial inclusion as access related to financial products and services to meet people's needs, including activities such as payments, savings, transactions, credit, as well as the use of insurance. Here are the results of a survey conducted by (Faticia 2024) of 95 MSMEs in Medan City.

Survey Results Of MSME Actors In Medan City			
Statement	Answers	Number of MSMEs	Percent
		Trade Sector	%
Importance Of Planning	Very Important	95	100%
	Important	-	
Stages Of Financial Planning	Understand	68	72%
	Do Not Understand	27	28%
Knowledge of entry and exit	Know	62	65%
	Don't Know	33	35%
Separation Of Financial Records	Do	21	22%
	Not Doing	74	78%
Credit Information	Know	67	71%
	Don't Know	28	29%
Investment Knowledge	Understand	38	40%
	Do Not Understand	57	60%
Source of funds	Credit Funds	36	38%
	Credit Loans	63	62%

Source: processed data, (2023)

Figure 5 Financial Literacy Rate Of Medan City

Based on Table 5 above, it shows that Medan City MSMEs have financial literacy or understanding and awareness of MSMEs about the importance of recording or bookkeeping activities in managing their business finances. Many MSME actors who

run businesses but do not manage finances properly which results in losses to their businesses. In fact, there are several times changing the type of business each year, this is because there is an error in running a

business, more precisely in managing its business.

The percentage of internet users in Medan city reaches 82.5% of the population (APJII, 2020). According to the New York Times, 70% of U.S. residents live in New York

City (sumatra.bisnis.com, 2019). The penetration of internet users shows an increase in financial inclusion in the city of Medan, following the percentage of surveys to 30 research respondents.

**Table 1 Digital Financial Inclusion Survey Results Medan City**

Statement	Yes	No
I have an account or business account connected to ShopeePay, DANA, etc.	64,67%	16%
I often use mobile banking and e-wallets (Gopay, OVO, ShopeePay, DANA, LinkAja, etc.)	57,33%	18%
I have experienced financial access evenly through smartphone	86,67%	37,5%

**Source: primary data processed, 2024**

Based on Table 1, it is concluded that the level of access to digital finance that is more affordable for MSMEs in Medan city is 86.67%, and the level of MSMEs who already have an account connected to an e-wallet is 64.67%, but still the low level of use of digital finance in Medan City MSMEs is 57.33%. The Medan City Government continues to strive to increase the use of digital finance for MSME actors, one of which is through cooperation with the Medan City Trade Office and PD pasar Kota Medan to hold the QRIS innovative safe use (SIAP) program.

In a study conducted by (Inne Fadilah, et al., 2022) research results show that financial literacy, financial inclusion and financial technology have a positive and significant effect on the performance of MSMEs in the city of Bandung.

A different study from (Purba 2020) concluded that: 1) Financial Literacy and Financial Technology have a positive and insignificant effect on the performance of MSMEs in Medan City. 2) financial literacy and Financial Technology have a positive and significant effect on financial inclusion in the performance of MSMEs in Medan. 3) Financial Inclusion has a positive and insignificant effect on the performance of MSMEs in Medan. 4) financial inclusion does not mediate between financial literacy and Financial Technology on the performance of MSMEs in Medan City.

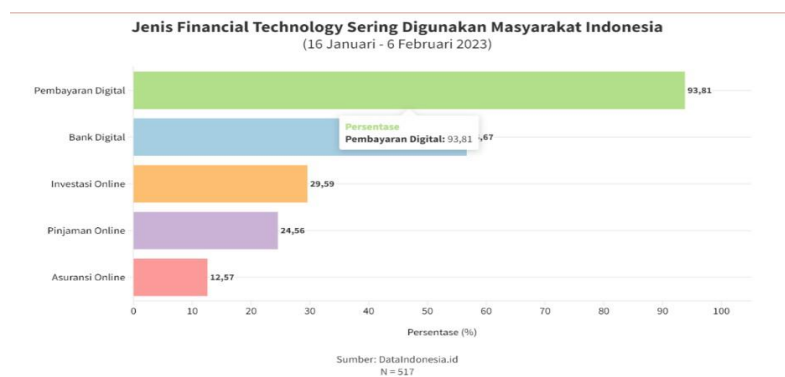
The application of digital technology to the financial industry provides a different

dynamic. By using digital means, the financial industry can provide financial services without going through physical contact like traditional financial services. Digital financial services can reduce barriers to accessing traditional financial services such as cost, geography, and information asymmetry. Because this condition has important implications for financial inclusion, the measurements used must be dynamic in the sense of being able to adjust to the development of banking access when digital technology changes. Therefore, incorporating digital aspects of technology into financial inclusion measurement can provide a more comprehensive understanding of the condition and development of digital aspects in promoting financial inclusion. For this reason, digital financial inclusion is an important tool in improving the performance of MSMEs.

Along with the development of digital financial inclusion, it is not only financial literacy that is needed by individuals, but also digital financial literacy. Digital financial literacy is an essential condition for creating effective digital financial inclusion, and has become a policy agenda in various countries. Digital financial literacy encompasses the concepts of digital literacy and financial literacy, but has unique aspects due to the nature of the product and the risks encountered. For this reason, new breakthroughs and innovations are needed so that MSMEs can survive and rise again, due to the influence of the Covid-

19 pandemic. This phenomenon makes the ability of digital financial literacy not just a necessity, but has become a lifestyle in the era of the Industrial Revolution 4.0. In the long run, it is estimated that all financial transactions will move to digital technology and towards cashless transactions. Therefore, we need to prepare ourselves with qualified digital literacy skills. Especially for MSMEs, the government also continues to encourage the digitization of MSMEs to increase productivity so that it will improve the performance of MSMEs with more effective and efficient access. The next variable that affects the performance of MSMEs is financial

technology or fintech is a service that is specialized in the field of finance by utilizing digital technology in the form of software. In general, financial technology can be interpreted as a technological innovation in financial transaction services (Alifah, 2022). In practice, the entry of fintech in Indonesia can provide opportunities for MSMEs to develop such as the provision of digital payment services, financing, to financial arrangements (Muzdalifa et al., 2018). Here is a diagram of the types of fintech that are often used in Indonesia.



Source: DataIndonesia.id  
Figure 6 Types of fintech that are often used by Indonesian people

Based on a survey conducted by Data Indonesia, digital payments become the most fintech users in Indonesia, namely 93.81% of respondents are digital payment users. This means that almost all survey respondents use digital payments as their transaction tool. Furthermore, followed by digital banks, which are 57.67% of

respondents, 29.59% of respondents use online investments, there are 24.56% of respondents who often use online loans, and the last is online insurance, which is 12.57% of respondents. Here are the results of a survey of 30 MSME fintech users in Medan City.

Table 2 Fintech user survey results by Medan City MSMEs

Statement	Yes	No
Fintech / technology innovation can increase business income	70,67%	10%
Fintech (OVO, DANA, Shopeepay, etc.) makes it easy to manage finances and practical	70,67%	10%
The presence of fintech provides security in transactions	67,33%	12%
I am more interested in using gold and property investment for my business	62,67%	15,33%

Source: primary data processed, 2024

Based on Table 2, it can be concluded that the level of confidence of MSMEs in Medan in using fintech, based on the survey it can be seen that the level of confidence of

MSMEs in fintech is 67.33%, the level of MSMEs who invest is 62.67%, and based on the survey as many as 70.67% of

MSMEs who know the convenience and benefits of fintech on business income.

Efforts can be made by MSMEs to develop digital financial technology in the hope of achieving business sustainability, business resilience, and increased revenue. MSMEs need accounting information that can serve as a fundamental basis for business decision making and the use of digital finance. This has extensively paved the way for the efficiency and effectiveness of the accounting function in modifying information pertaining to the function.

With the emergence of fintech, it can also increase the expansion of affordable areas for financial services, providing funding more efficiently and easily so that potential benefits can be obtained for business people (Ansori, 2019). The use of mobile phones can also increase business by facilitating relationships between suppliers, business partners, and customers as well as the use of the internet which can strengthen new networks. Access to financial services is an important condition of public involvement in the economic system. With the lack of access to financial services, the community can cause economic growth to slow down.

Financial behavior is also a factor that can affect the performance of MSMEs. Financial behavior is the ability of individuals in terms of managing their finances. (Suryanto, 2017) said that financial behavior is a pattern of habits and behavior of a person when managing his personal finances. Entrepreneurs with good financial behavior tend to be wiser and smarter in using the funds or resources they have, such as controlling spending, recording expenses, and investing. In uncertain circumstances such as the previous Covid-19 pandemic, a good financial behavior is needed to determine good decisions for companies, especially for MSMEs so that their businesses remain running and do not go out of business.

Based on the results of initial observations using an online questionnaire distributed by (Wahyuni, Radiman, and Lestari 2023) to productive Generation Y in Medan City, it

was found that only 35% of Generation Y manage their spending and spending budgets, and the problem is that the more income earned, the more goods consumed so that as many as 85% of Generation Y find it difficult to manage their finances. Then it can be indicated that the productive Generation Y in Medan city has poor financial behavior. Personal financial behavior is necessary in the implementation of education in order to improve public finances. It also encourages the Financial Services Authority (OJK) to educate the public with efforts so that financial literacy can improve people's knowledge of investment products and personal financial management.

Research conducted by (Nuraeni, Dai, and Thirafi 2024) research results prove that financial behavior has a positive and significant influence on the performance of MSMEs.

Personality with its several dimensions determine a person's success in career success, good performance, achievement of achievement and positive behavior (Sumantri & Gemina, 2015). Entrepreneurs in building a business will always face many challenges so that the business run remains stable, entrepreneurs with positive personalities such as enterprising, like to work together, innovative, able to control emotions, regular and disciplined will achieve the maximum expected performance and can maintain their business in any condition. This shows that the personality possessed by business actors will affect the performance of MSMEs that are run. If a person is confident and has the confidence to control or manage the business they have in order to further improve business performance, the confidence of the individual concerned is called the locus of control. With this locus of control has a very important role in fostering self-control attitude in MSME actors. So that MSME actors in running their businesses can be more organized and will not rush into making decisions. The following are the results of an Internal



Locus of Control survey of 30 MSME actors in Medan City

**Table 3 Results of internal Locus of Control Survey in Medan City**

Statement	Yes	No
I believe what happens in the future depends on myself	83,33%	2%
In the long run, people who take good care of their finances can maintain their well-being	88,67%	0
I can control myself to the business problems that I face in my daily life	86%	2%
I am optimistic to be able to solve financial problems	72%	8,67%

Source: primary data processed, 2024

Based on Table 3, based on the survey results, it shows that the personality level of Medan MSME actors who have character as a businessman and are confident that they can maintain their businesses amid unstable economic turmoil such as during the Covid-19 pandemic so that they can improve their business performance, the average MSME actor in Medan city has an internal locus of control level above 80%.

Research results (Prastiwi and Ningsih 2021) show that Internal Locus of Control has a significant positive effect on the performance of MSMEs.

Research on the influence of digital financial literacy, digital financial inclusion, Financial technology on the performance of MSMEs has been discussed by several previous researchers, but there are still few researchers who look at the personality of MSMEs in managing a business called locus of control and connecting it to financial behavior that MSMEs should do after being affected by the Covid-19 pandemic to improve, financial inclusion and financial technology.

MSMEs also play a role as a sector that absorbs a lot of Labor, MSMEs absorb about 117 million workers (97%) of the total workforce. According to the Central Bureau of Statistics, micro businesses are businesses with a workforce of 1 to 4 people, small businesses are businesses with a workforce of 5 to 10 people, and medium businesses are businesses with a workforce of 20 to 100 people. The following is a list of workers in North Sumatra micro and small scale industries

**Table 4 Number Of Micro And Small Scale Industrial Workers In North Sumatra Province**

Scale/ Year	2020	2021	2022	2023
Micro	200.851	233.331	214.261	211.161
Small	51.535	47.200	25.571	53.998

Source: processed data bps.go.id, 2024

Based on Table 4, it shows that the workforce in micro-scale industries from 2020 to 2023 decreased in the range of 3100 to 19070 workers, and for the workforce in small-scale industries there was a decrease in labor from 2021 to 2022, namely in the range of 21,629 to 4,335 workers.

This shows that during the Covid-19 pandemic, the micro and small scale business industry decreased the number of workers the most in 2021 to 2022, because in 2021 to 2022 the economic conditions in Indonesia were still not improving. Then, again increasing for small-scale businesses and decreasing for micro-scale businesses.

For micro and small scale businesses, most MSME actors do not have professional employees or employees, business owners only hire family members or those closest to them and even some MSME actors only run their own businesses, so MSME owners always assume they do not need to Pay Wages/Salaries.

## LITERATURE REVIEW

### Performance

Performance is the result or level of success of a person as a whole during a certain period in carrying out a task compared with various possibilities, such as the standard of target work results or goals and criteria that have been determined in advance have been agreed upon (Rivai & Basri, 2017).

### Behavioral Finance

Behavioral Finance is a discipline in which the inherent interaction of various disciplines (interdisciplinary) and continuously integrated so that the discussion can not be done in isolation. Behavioral finance is built on a variety of assumptions and ideas from behavioral economics. the involvement of emotions, traits, preferences and various kinds of things inherent in humans as intellectual and social beings will interact underlying the emergence of decisions to perform an action (Ricciardi, 2000).

### Locus of Control

Locus of control was first proposed by Rotter (1966), where this theory is a development of Social Learning Theory. Rotter states that one of the individual factors that control the events of a person's life is the locus of control that exists in him. Locus of control also gives an idea of a person's beliefs regarding the source of determining his behavior. Robbins (2008) Locus of Control is defined as a person's perception of the causes of success or failure in carrying out their work.

### Digital Financial Literacy

Digital financial literacy is a multi-dimensional concept. In some earlier literature, there is still no standard definition of digital financial literacy (Morgan, et al., 2019),. There are four dimensions that reflect digital financial literacy: knowledge of digital financial products and services, awareness of digital financial risks,

knowledge of control over digital financial risks, knowledge of consumer rights and compensation procedures.

### Digital Financial Inclusion

Digital financial inclusion can be defined as the digital access and use of formal financial services by marginalized and underserved groups of society. Such services must be tailored to customer needs and provided responsibly, at a cost that is affordable for the customer and sustainable for the service provider (Lauer and Lyman 2015).

### Financial Technology

Fintech provides convenience in service. The public can access Fintech only through smartphones and PC media. Fintech utilizes media applications and websites in its service. Because of this system, people can make transactions or apply for capital loans more effectively and efficiently. Today FinTech deals with companies that use modern innovative technologies to shape the provision of financial services. FinTech is seen as a new market integrating finance and technology (Arner et al., 2015). According to Accenture and CB Insight defines a FinTech company is a company that offers technology for banking, corporate finance, capital markets, financial data analysis, payments, and personal financial management (Skan et.al., 2014). The development of FinTech can not be separated from the influence of mobile devices, virtual cloud software, personalization of online services and Communication Technology (Dapp, 2014).

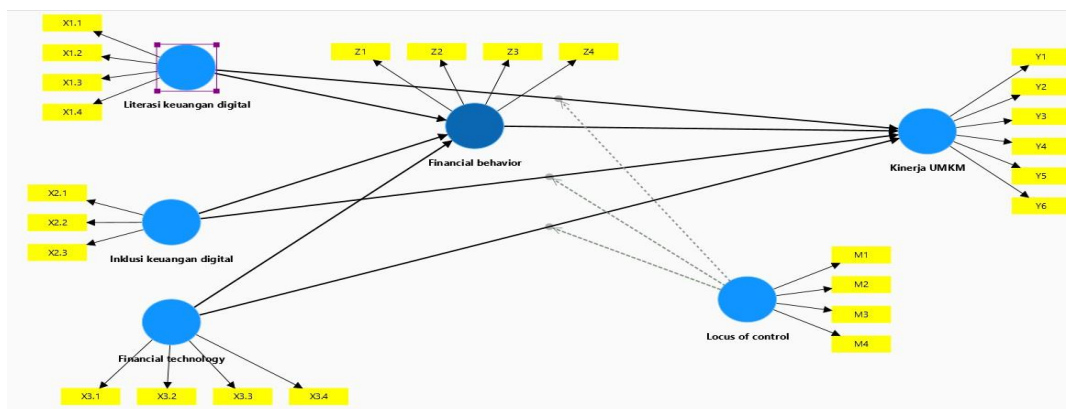


Figure 7 Conceptual Framework

## **Hypothesis**

Based on the background of research and the relationship between variables, the research hypothesis:

1. Digital financial literacy affects the performance of Medan City MSMEs.
2. Digital financial inclusion affects the performance of Medan City MSMEs.
3. Financial technology affects the performance of MSMEs Medan City.
4. Financial behavior affect the performance of SMEs Medan.
5. Digital financial literacy affects the performance of MSMEs in Medan city through Financial Behavior.
6. Digital financial inclusion affects the performance of MSMEs in Medan city through Financial Behavior.
7. Financial technology affects the performance of MSMEs in Medan city through Financial Behavior.
8. Digital financial literacy affects financial behavior through internal locus of control.
9. Digital financial inclusion affects financial behavior through internal locus of control.
10. Financial technology influences financial behavior through internal locus of control.

## **MATERIAL AND METHODS**

In this study, the researcher wanted to know the effect of digital financial literacy, digital financial inclusion, and financial technology moderated by locus of control on the performance of MSMEs in Medan city through financial behavior. This study uses quantitative methods to test and prove hypotheses that have been made through various tests and data processing. According to Ahmadi Bi Rahmani quantitative research is research that determines the theory first, then collects data to test and test the theory with the results of the study. Researchers test the theory by making a hypothesis that contains variables that are measured using the elements of the instrument. The location of this study will be conducted in several districts of Medan City which has the

highest number of Food & Beverage sector business actors in Medan City. The number of MSME actors is obtained from the report on the number of MSMEs at the Medan City Cooperative and UMKM office in 2023. The period of this study was conducted from October 2023 to December 2024. This study refers to the relationship between digital financial literacy, digital financial inclusion, and financial technology to the performance of MSMEs in Medan City and examines how the relationship between the behavior of MSMEs and the self-control of MSMEs to be able to survive and improve their business performance due to the impact of the Covid-19 pandemic. And examine how the level of understanding of MSME actors Medan city to financial technology.

The types and sources of data used in this study are primary data, which is the source of data obtained in this study directly from the respondents and in the form of opinions of subjects individually or in groups, the results of observations of an object, activity, or event. Primary Data in this study in the form of answers obtained from respondents who have filled out questionnaires distributed.

The population or universe is the sum total of the units of analysis whose characteristics are to be estimated. Population is a generalization area consisting of objects / subjects that have a certain quantity and characteristics set by the researcher to be studied and then drawn conclusions. The population in this study is the number of MSMEs registered as assisted by the Medan City Cooperative and SME office from 2020 – 2023 which is 1,888 MSMEs. A sample is a small part of a certain number or characteristic selected from a population, or a small part of a population taken according to certain procedures or conditions that can represent the character of the population. Sampling technique in this study is to use non-probability sampling techniques, namely Purposive Sampling. According to Sugiyono (2018: 136) non-probability sampling is a sampling technique that does

not provide equal opportunities for each element or member of the population to be selected as a sample. Meanwhile, according to Jogiyanto (2007) purposive sampling technique is a sampling technique performed by taking samples from the population based on a certain criterion. Purposive sampling technique is sampling with a specific purpose and not based on strata, random, or geography. The sample in the study is the food and beverage industry SMEs in the city of Medan. Determination of the number of samples used in this study was determined using the Slovin formula. According to Aloysius Ranga Aditya Nalendra, et al (2021:27-28), the slovin formula is a formula for calculating the minimum number of samples if the behavior of a population is not known for sure. The amount of research sample with Slovin formula is determined by the value of the error rate so that the number of samples in this study as many as 100 respondents. Data collection techniques used in this study is the study of literature and the dissemination of questionnaires, literature study is an activity to find and collect the necessary data related to the variables in the study both from books, scientific journals, newspapers, magazines and the internet. the data used is data processed from LIPI, BRI Institute Research, Department of Cooperatives and SMEs Medan, and journals. Distribution of questionnaires, which are a series of lists of statements that have previously been systematically compiled by the author which are then distributed to be filled in by the respondents. As for this study, the questionnaire

## RESULTS AND DISCUSSION

### RESULTS

#### Research Results

#### Descriptive Analysis

In this section, researchers will describe the data obtained from respondents. Descriptive Data provide an overview of the state or condition of the respondents who need attention.

#### Descriptive Characteristics Of Respondents

#### a. Characteristics by Age

The results of data grouping of respondents grouped by age are listed in the following table:

Table 5 Characteristics Of Respondents By Age

No	Age	Frequency	Percentage
1	18 - 30 year	20	0,20
2	31 - 45 year	59	0,59
3	> 45 year	21	0,21
Total		100	100,00%

Source: primary data processed, 2024

Based on Table 5, it can be seen that in this study the majority of MSMEs who are still active in running their businesses from before the Covid-19 pandemic to still survive after the Covid-19 pandemic are in the age range of 30-45 years.

#### b. Characteristics Of Respondents By Gender

The results of data grouping respondents grouped by gender are listed in the following table:

Table 6 Characteristics By Sex

No	Gender	Frequency	Percentage
1	L	24	0,24
2	P	76	0,76

Source: Primary Data Processed, 2024

Based on Table 6, it can be concluded that in this study more MSME actors are female. Because there are more research respondents mothers who have one income is to open a culinary business.

#### c. Characteristics Based On Length Of Business

The results of the data grouping of respondents are grouped based on the length of business listed in the following table:

Table 7 Characteristics Based On Length Of Business

No	Long-Time Effort	Frequency	Percentage
1	3 - 10 year	66	0,66
2	11 - 20 year	31	0,31
3	> 20 year	3	0,03

Source: Primary Data Processed, 2024

Based on Table 7, it can be concluded that the research respondents are in accordance with the criteria set forth in this study that is

already running more than 3 years, namely as many as 66 people.

#### d. Characteristics By Number Of Employees

The results of the grouping of respondent data are grouped based on the number of employees listed in the following table:

**Table 8 Characteristics By Number Of Employees**

No	Number Of Employees	Frequency	Percentage
1	0 - 10 Employees	80	0,8
2	11 - 20 Employees	17	0,17
3	> 20 Employees	3	0,03

Source: processed Data, 2024

Based on Table 8, it can be concluded that the number of employees of MSMEs in the study are small business actors, this is seen from business actors who have employees

of 0-10 employees as many as 80 business actors.

#### Evaluation Of Measurement Results (Outer Model)

Measurement Model (measurement model) is part of a structural equation model that describes the relationship of latent variables with their indicators. The following are the results of research from the measurement model:

##### 1. Convergent Validity

Convergent Validity a model of measuring items that have a value based on the correlation between the item score and the value of the construct. The Covergent Validity index is measured by the factors AVE, composite reliability, and cronbach's Alpha. Here are the results of validity with Outer Loadings:

**Table 9 Test Result Of Outer Loadings Value**

Indicator	Outer loadings	Result
M1 <- Locus of Control	0.863	Valid
M2 <- Locus of Control	0.851	Valid
M3 <- Locus of Control	0.892	Valid
M4 <- Locus of Control	0.831	Valid
X1. 1 <- Digital Financial Literacy	0.637	Invalid
X1. 2 <- Digital Financial Literacy	0.911	Valid
X1. 3 <- Digital Financial Literacy	0.928	Valid
X1. 4 <- Digital Financial Literacy	0.738	Invalid
X2. 1 <- Digital Financial Inclusion	0.830	Valid
X2. 2 <- Digital Financial Inclusion	0.819	Valid
X2. 3 <- Digital Financial Inclusion	0.818	Valid
X3. 1 <- Financial Technology	0.501	Invalid
X3. 2 <- Financial Technology	0.892	Valid
X3. 3 <- Financial Technology	0.900	Valid
X3. 4 <- Financial Technology	0.822	Valid
Y1 <- MSME performance	0.765	Valid
Y2 <- MSME performance	0.824	Valid
Y3 <- MSME performance	0.796	Valid
Y4 <- MSME performance	0.786	Valid
Y5 <- MSME performance	0.685	Invalid
Y6 <- MSME performance	0.660	Invalid
Z1 <- Financial Behavior	0.576	Invalid
Z2 <- Financial Behavior	0.641	Invalid
Z3 <- Financial Behavior	0.906	Valid
Z4 <- Financial Behavior	0.908	Valid
Locus of Control x Financial Technology -> Locus of Control x Financial Technology	1.000	Valid
Locus of Control x Digital Financial Inclusion -> Locus of Control x Digital Financial Inclusion	1.000	Valid
Locus of Control x Digital Financial Literacy -> Locus of Control x Digital Financial Literacy	1.000	Valid

Source: primary data processed, 2024

Based on Table 4.5, it can be seen that there are 6 (six) items of outer loading values, namely X1.1, X3.1, Y5, Y6, Z1, and Z2, which are invalid, namely less than 0.7. Furthermore, apart from the 6 (six) items, the result of outer loadings is greater than

0.7 which means that each measurement variable is valid, meaning that these items reflect the measurement of each variable. The following are the results of the outer loading test that has eliminated 6 (six) items that were declared invalid in the study:

**Table 10 Outer Loading Test Results (After Elimination)**

Indicator	Outer loadings
M1 <- Locus of Control	0.849
M2 <- Locus of Control	0.852
M3 <- Locus of Control	0.901
M4 <- Locus of Control	0.835
X1. 2 <- Digital Financial Literacy	0.933
X1. 3 <- Digital Financial Literacy	0.911
X2. 1 <- Digital Financial Inclusion	0.767
X2. 2 <- Digital Financial Inclusion	0.833
X2. 3 <- Digital Financial Inclusion	0.816
X3. 2 <- Financial Technology	0.816
X3. 3 <- Financial Technology	0.899
X3. 4 <- Financial Technology	0.927
Y1 <- MSME performance	0.819
Y2 <- MSME performance	0.851
Y3 <- MSME performance	0.890
Y4 <- MSME performance	0.831
Z3 <- Financial Behavior	0.734
Z4 <- Financial Behavior	0.956
Locus of Control x Digital Financial Inclusion - > Locus of Control x Digital Financial Inclusion	0.942
Locus of Control x Financial Technology -> Locus of Control x Financial Technology	1.000
Locus of Control x Digital Financial Literacy - > Locus of Control x Digital Financial Literacy	1.000

Source: primary Data, processed, 2024

Furthermore, determine the validity and reliability by looking at the results of the Ave index, composite reliability and cronbach's alpha in Table 11 below:

**Table 11 AVE, Composite Reliability, and Cronbach's Alpha Index results**

Variable	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
Financial Behavior	0.889	0.901	0.947	0.900
Financial Technology	0.860	0.909	0.914	0.780
Digital Financial Inclusion	0.768	0.794	0.862	0.675
MSME performance	0.848	0.861	0.897	0.686
Digital Financial Literacy	0.843	0.876	0.906	0.763
Locus of Control	0.882	0.887	0.919	0.739

Source: primary data processed, 2024

Validity and reliability criteria can also be seen from the value of the reliability of a variable and the value of the average Variance Extracted (AVE) of each variable.

Variables are said to have high reliability if the value of cronbach's alpha and composite reliability above 0.7. Then, the variable is said to be valid if the Ave value is above

0.5. Based on Table 11 above, it can be stated that all variables meet the good convergent validity requirements because all variable values obtained are above the recommended number because they meet the criteria.

## 2. Discriminant Validity

Discriminant validity of reflective model is evaluated through Fornell-Larcker Criterion, then compare AVE value with square of correlation value between constructs (or compare Ave Root with correlation between constructs). The Fornell-Larcker Criterion:

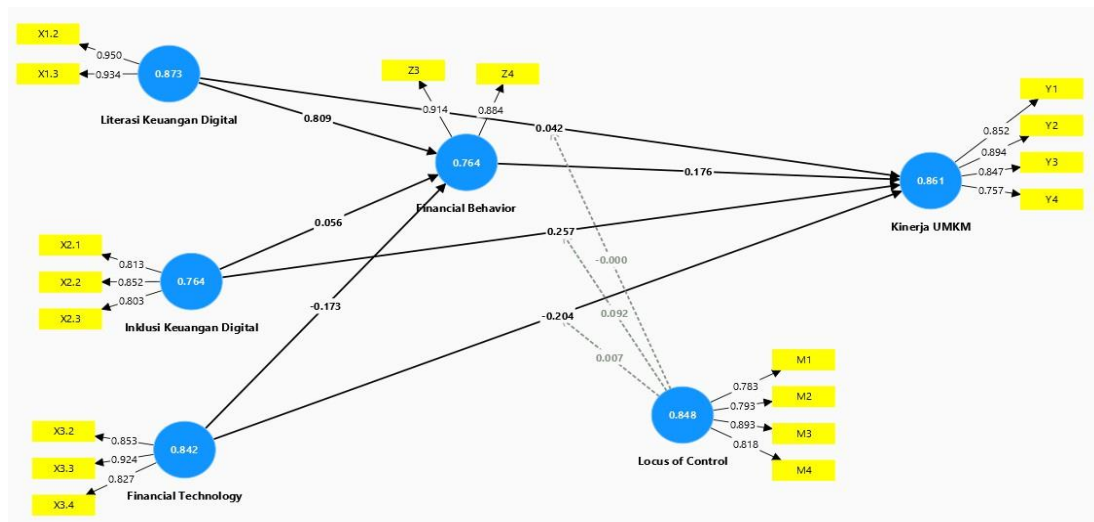
**Table 12 Fornell-Larcker Criterion Test Results**

Variable	Financial Behavior	Financial Technology	Inklusi Keuangan Digital	Kinerja UMKM	Literasi Keuangan Digital	Locus of Control
Financial Behavior	0.949					
Financial Technology	0.453	0.883				
Digital Financial Inclusion	0.329	0.573	0.822			
MSME performance	0.554	0.547	0.579	0.828		
Digital Financial Literacy	0.682	0.807	0.541	0.613	0.874	
Locus of Control	0.495	0.678	0.476	0.750	0.672	0.860

Source: primary data processed, 2024

Based on Table 12, it can be seen that Fornell-Larcker Criterion for each indicator of each latent variable has a relatively larger

value when compared with the value of indicators of other latent variables.



**Figure 8 Outer Model Test Results**

## Evaluation Of Structural Results (Inner Model)

Inner model is a structural model, based on the path coefficient value, see how much influence between latent variables with bootstrapping calculation. The following steps are performed in testing the structural model (inner model):

### 1. R Square

**Table 13 R Square Test Result**

Variable	R-square
Financial Behavior	0.492
MSME performance	0.680

Source: primary data processed, 2024

Based on Table 13, the magnitude of R Square of the financial Behavior variable is 0.492, meaning that the ability of digital financial literacy, digital financial inclusion, and financial technology variables in explaining financial behavior is 49%. The ability level of digital financial literacy variables, digital financial inclusion, and financial technology in explaining financial behavior variables is a moderate influence. Based on Table 13, the magnitude of R Square to the MSME performance variable

is 0.680, meaning that the ability of digital financial literacy, digital financial inclusion, and financial technology variables in explaining MSME performance is 68%. The ability level of digital financial literacy variables, digital financial inclusion, and financial technology in explaining MSME performance variables is a major influence.

## 2. F Square

**Table 14 F Square Test Result**

Variable	f-square
Financial Behavior - > MSME performance	0.062
Financial Technology - > MSME performance	0.002
Digital Financial Inclusion - > MSME performance	0.120
Digital Financial Literacy - > MSME performance	0.000

Source: primary data processed, 2024

Based on Table 14, it can be seen that the ability of Financial Behavior in improving the performance of MSMEs has a low level, namely with F Square 0.062. The ability of Financial Technology to improve the performance of MSMEs has a level that has no effect, namely with F Square 0.002. The ability of Digital Financial Inclusion in improving the performance of MSMEs has a level towards medium, namely with F Square 0.120. Furthermore, the ability of Digital Financial Literacy in improving the

performance of MSMEs has a level that has no influence, namely with F Square 0.000.

## Hypothesis Test

Direct effect analysis is carried out in order to test the hypothesis of the direct influence of a variable that affects (exogenous) to a variable that is influenced (endogenous) (Julianato, 2018). The criteria in testing the hypothesis of direct influence (direct effect) are as follows:

**Table 15 Direct Effect Test Results**

Variable	Path Coefficient	T statistics	P values
Financial Behavior - > MSME performance	0.251	1.378	0.168
Financial Technology - > MSME performance	-0.126	0.496	0.620
Digital Financial Inclusion - > MSME performance	0.265	2.105	0.035
Digital Financial Literacy - > MSME performance	0.206	0.689	0.491

Source: primary data processed, 2024

Based on Table 15, the estimated results show the following:

a. The first hypothesis was rejected, namely the insignificant effect of financial behavior on improving the performance of MSMEs, it was shown from t statistics  $< 1.65$  (1.378) and p-value ( $0.168 > 0.05$ ) with a positive

direction seen from the path coefficient of 0.251.

b. The second hypothesis was rejected, namely the insignificant effect of financial technology on improving the performance of MSMEs, it was shown from T statistics  $< 1.65$  (0.496) and p-value ( $0.620 > 0.05$ ) with a negative



- direction seen from the path coefficient of 0.126.
- c. The third hypothesis is that digital financial inclusion has a significant effect on improving the performance of MSMEs, it is shown from T statistics  $>1.65$  (2.105) and p-value ( $0.035 < 0.05$ ) with a positive direction seen from the path coefficient of 0.265.
  - d. The fourth hypothesis was rejected, namely the insignificant effect of digital financial literacy on improving the performance of MSMEs, it was shown from T statistics  $< 1.65$  (0.689) and p-

value ( $0.491 > 0.05$ ) with a positive direction seen from the path coefficient of 0.206.

**Test The Effect Of Mediation**

In Lachowicz et al. (2018), the effect of mediation is calculated by upsilon ( $\nu$ ) statistics, which is calculated from the square of the path coefficient. Interpretation of statistical values upsilon ( $\nu$ ) refers recommended by Ogbeibu et al. (2021), namely 0.01 (low mediation effect), 0.075 (medium mediation effect), 0.175 (high mediation effect).

**Table 16 Indirect Effect Test Results**

Variable	Path coefficient	T statistics	P values	Upsilon V
Financial Technology - > Financial Behavior - > MSME performance	-0.070	0.916	0.360	0.004
Digital financial inclusion - > Financial Behavior - > MSME performance	-0.000	0.013	0.990	0.000
Digital financial literacy - > Financial Behavior - > MSME performance	0.228	1.341	0.180	0.052

Source: primary data processed, 2024

Based on Table 16, it is concluded that:

- a. Financial technology indirectly does not significantly affect the performance of MSMEs through financial Behavior mediation variable with T statistic value  $< 1.65$  (0.916) and P-Values  $> 0.05$  ( $0.360 > 0.05$ ) with negative direction seen from path coefficient of 0.070. The role of financial behavior in mediating financial technology variables to MSME performance at a structural level is relatively low.
- b. Digital financial inclusion indirectly does not significantly affect the performance of MSMEs through financial Behavior mediation variables with T statistical values  $< 1.65$  (0.013) and P-Values  $> 0.05$  ( $0.990 > 0.05$ ) with a positive direction seen from the path coefficient of 0.000. The role of digital financial inclusion in mediating financial technology variables to MSME

performance at the structural level is classified as influential.

- c. Digital financial literacy indirectly does not significantly affect the performance of MSMEs through financial Behavior mediation variables with T statistic values  $< 1.65$  (1.341) and P-Values  $> 0.05$  ( $0.180 > 0.05$ ) with a positive direction seen from the path coefficient of 0.228. The role of digital financial literacy in mediating financial technology variables to MSME performance at the structural level is classified as medium.

**Test The Moderation Effect**

To measure the moderation test other than seen from the level of significance is to use f square. According to Cohen (1988) in Hair et al. (2014), based on Cohen's value ( $f^2$ ) the effect size can be determined that 0.02, 0.15, and 0.35 represent small, medium, and large effects.

**Table 17 Moderation Test Results**

Variable	Path Coefficient	T statistics	P values	F Square
Locus of Control x Financial Technology -> MSME performance	-0.205	0.988	0.323	0.033
Locus of Control x Digital Financial Inclusion -> MSME performance	0.145	0.378	0.705	0.022
Locus of Control x Digital Financial Literacy -> MSME performance	0.014	0.034	0.973	0.000

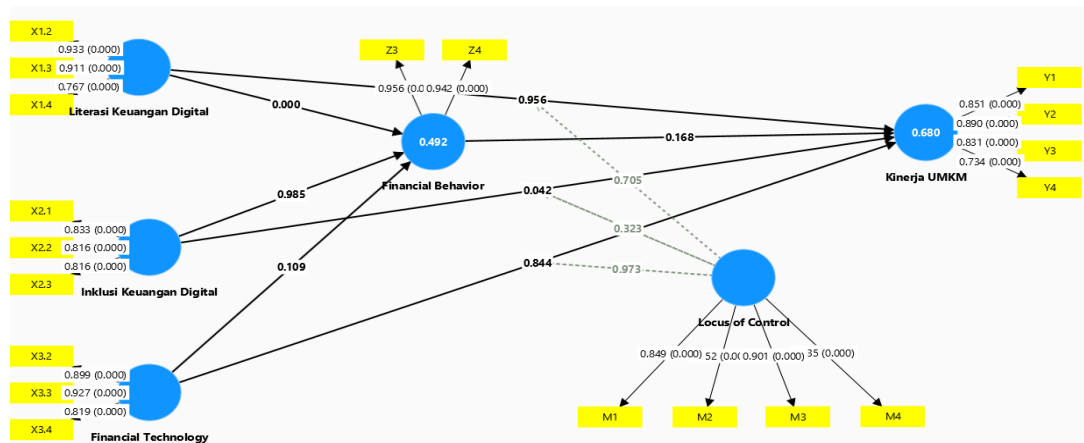
Source: primary data processed, 2024

From table 17, the estimation results can be concluded that:

- Digital financial inclusion on the performance of MSMEs has no effect and is not significant through the locus of control moderation path with T statistics ( $0.988 < 1.65$ ) and p-value ( $0.323 > 0.05$ ) with a moderation path coefficient of 0.205 indicating a negative direction. This means that the locus of control moderating the influence of digital financial inclusion on the performance of MSMEs is relatively small.
- Digital financial literacy on the performance of MSMEs has no significant effect through the locus of control moderation path with T statistics ( $0.378 < 1.65$ ) and p - value ( $0.705 > 0.05$ ) with a moderation path coefficient

- of 0.145 indicating a positive direction. This means that the locus of control moderating the influence of digital financial literacy on MSME performance is relatively small.
- Financial technology on the performance of MSMEs has no effect and is not significant through the path of moderation locus of control with T statistic ( $0.034 < 1.65$ ) and p-value ( $0.973 > 0.05$ ) with the coefficient of moderation path of 0.014 indicates a positive direction. This means that locus of control does not moderate the influence of financial technology on MSME performance.

The following are the results of the inner model test that shows the value of bootstrapping using analysis tools SmartPLS v4.



**Figure 9 Inner Model Test Results**

## DISCUSSION

### The Effect Of Digital Financial Literacy On MSME Performance

The first hypothesis was rejected, namely the insignificant effect of digital financial literacy on improving the performance of MSMEs, it was shown from T statistics  $< 1.65$  ( $0.689$ ) and p-value ( $0.491 > 0.05$ ) with

a positive direction seen from the path coefficient of 0.206.

This is because MSME actors lack the ability to have general knowledge about digital finance that sees them unable to make decisions about business or make plans digitally to improve business performance in the future. And because of

the lack of knowledge about digital financial literacy, many business actors do not understand the risks of digital products. Informal sector MSMEs run individual businesses traditionally, so they do not apply professional financial management, marketing management, and Human Resources Management. It can be said that digital financial literacy is still not considered important in the point of view of MSMEs.

This research is in line with research conducted by Nurul Laila Mayasari (2022) entitled The effect of Financial Report quality, financial inclusion, and financial literacy on the performance of MSMEs in Pati Regency that financial literacy does not have a significant positive effect on the performance of MSMEs. And also a study conducted by Iin Anggraini, et al (2023) entitled The effect of financial inclusion, financial literacy, and Financial Management on the performance of MSMEs in Dompu Regency that financial literacy does not significantly affect the performance of MSMEs.

### **Effect Of Digital Financial Inclusion On MSME Performance**

The second hypothesis was rejected, namely the significant effect of digital financial inclusion on improving the performance of MSMEs, it was shown from T statistics  $> 1.65$  (2.105) and p-value ( $0.035 < 0.05$ ) with a positive direction as seen from the path coefficient of 0.265.

This is because in the era of 4.0 changes in public transaction patterns can not be separated from technological advances, such as the presence of smart phones (smartphones). Data from the Indonesian Internet Service Providers Association (APJII) states that around 210 million of Indonesia's 272 million residents have obtained internet access in 2021. A survey conducted by APJII concluded that as many as 79% of survey respondents use the internet for online transactions, while 72% of respondents access financial services.

It can be concluded that with increasingly sophisticated technology, many Indonesian people have automatically easily accessed digital financial services. And the implementation of the PSBB in the era of the Covid-19 pandemic, requires the public to carry out all activities online. So there is a significant increase in the use of technology. Some MSME actors in the study used digital payments as their buying and selling transactions, such as DANA, OVO, m-banking, etc. and also some MSME actors in the study have used online cashiers. However, there are still few MSMEs in the study who use digital financial products as an increase in their business capital. Thus, digital payments and online cashiers become digital financial services that can facilitate the business operations of MSMEs to improve the performance of MSMEs in Medan.

Research in line with research conducted (Utami, 2020), the influence of literacy and financial inclusion on the performance of MSMEs in Makassar City shows that the influence has been positively and significantly tested through simultaneous and partial tests between literacy and financial inclusion on the performance of MSMEs in Makassar City.

### **Influence Of Financial Technology On MSME Performance**

The third hypothesis is accepted that financial technology has no significant effect on improving the performance of MSMEs, it is shown from T statistics  $< 1.65$  (0.496) and p-value ( $0.620 > 0.05$ ) with a negative direction seen from the path coefficient of 0.126.

The ability of financial technology in improving the performance of MSMEs is still low, this is due to the low knowledge of digital financial services products and the lack of using digital financial products as a whole to improve their business performance, making MSME actors in the research sample less able to feel the benefits, convenience and services of digital financial products. Many MSME players in

Medan City do not know all digital financial products in increasing business, such as peer to peer lending, risk and investment Management, crowdfunding, etc., because MSME actors in improving business performance still use personal capital or loans from the closest people and there are also many MSME actors who use estimates only in managing profit/ loss. However, the business performance of MSMEs has increased and they feel more comfortable with traditional transactions because it is easier to manage revenue.

Research in line with research conducted by Ana Zulfa Laela (2024) the effect of financial literacy and Financial Technology on the performance of millennial MSMEs in Brebes regency shows that financial technology does not have a significant influence on the performance of MSMEs

### **The Influence Of Financial Behavior On MSME Performance**

The fourth hypothesis was rejected, namely the insignificant effect of financial behavior on improving the performance of MSMEs, it was shown from t statistics  $< 1.65$  (1.378) and p-value ( $0.168 > 0.05$ ) with a positive direction seen from the path coefficient of 0.251.

This is because the behavior of MSME actors in managing businesses is the lack of planning, budgeting and financial planning in the future in detail. Lack of preparing financial planning in the future will make the performance of MSME actors have no direction and development in the future. This may make MSMEs have not experienced development in their business. Thus, the behavior of MSMEs who do not manage their business in detail has an impact on the imbalance between income and expenditure, so that without realizing it when in certain conditions their expenses are greater than the income obtained. With this, it will indirectly affect the performance of the business it is running due to the imbalance of funds that are being managed. This is in line with research conducted by Ahmad Aziz Santoso Ashari et al, (2023)

entitled The effect of financial literacy, financial attitudes, financial behavior, and personality on MSME performance (Case Study in Blitar Regency) that financial behavior does not have a significant effect on MSME performance. And also a study conducted by Irin Fitria (2024) entitled The Influence of financial literacy, financial attitudes and financial behavior on the performance of MSMEs in Palembang city that financial behavior has no influence on the performance of MSMEs.

### **The Effect Of Digital Financial Literacy On MSME Performance Mediated By Financial Behavior**

The fifth hypothesis shows that digital financial literacy indirectly does not significantly affect the performance of MSMEs through financial Behavior mediation variables with T statistical values  $< 1.65$  (1.341) and P-Values  $> 0.05$  ( $0.180 > 0.05$ ) with a positive direction seen from the path coefficient of 0.228.

The role of digital financial literacy in mediating financial technology variables to MSME performance at the structural level is classified as medium.

When individuals already have financial knowledge, they will implement good financial management behaviors such as personal financial management planning, recording all financial transactions, and saving money for retirement funds (Kumar et al., 2017). In this case, due to the lack of digital financial literacy in improving business performance, the financial behavior carried out by research respondents in improving the performance of MSMEs only traditionally without using digital financial products so that the role of financial behavior in mediating digital financial literacy on MSME performance is classified as without influence.

### **The Effect Of Digital Financial Inclusion On The Performance Of MSMEs Mediated By Financial Behavior**

The sixth hypothesis shows that digital financial inclusion indirectly does not

significantly affect the performance of MSMEs through financial Behavior mediation variables with T statistical values  $< 1.65$  (0.013) and P-Values  $> 0.05$  (0.990  $> 0.05$ ) with a positive direction seen from the path coefficient of 0.000.

The role of digital financial inclusion in mediating financial technology variables to MSME performance at the structural level is relatively unaffected.

In this case, access to digital financial products is very easy and can be done anywhere and anytime. However, in this study, knowledge of digital finance research respondents and understanding of digital financial risks is very low, so that MSMEs only access digital financial products in secure transactions and only for personal interests. And there are also many MSME behaviors that still use traditional finance, because of the lack of trust of MSME actors in financial technology.

Due to the low number of MSMEs in research respondents in utilizing digital financial products to increase revenue or financial management to improve business performance, the financial behavior of the respondents described does not mediate digital financial inclusion of various types with each of the conveniences that fintech offers in this era on the business performance they run.

### **The Influence Of Financial Technology On The Performance Of MSMEs Mediated By Financial Behavior**

The seventh hypothesis shows that Financial technology indirectly does not significantly affect the performance of MSMEs through financial Behavior mediation variables with T statistical values  $< 1.65$  (0.916) and P-Values  $> 0.05$  (0.360  $> 0.05$ ) with a negative direction seen from the path coefficient of 0.070.

The role of financial behavior in mediating financial technology variables to MSME performance at a structural level is relatively low.

Yoo and Fisher (2017) also stated that a person who frequently uses fintech

payments, can significantly affect the level of better financial management and make it easier for a person to manage their finances because within one of the fintech payment applications they can carry out various activities such as payment transactions, monitoring expenses and income, and saving.

In this study, the behavior carried out by the average research respondent in managing the business is by utilizing conventional finance or only based on personal savings, and also MSME actors in managing finances only in the form of manuals recorded in books or only estimating income and expenses per day without detail, so that the average research respondent does not use fintech in managing businesses to improve business performance. And the financial behavior carried out by the average research respondent in utilizing fintech only for personal needs.

### **The Effect Of Digital Financial Literacy On MSME Performance Moderated By Locus Of Control**

The eighth hypothesis shows that digital financial literacy on the performance of MSMEs has no significant effect through the locus of control moderation path with T statistics (0.378  $< 1.65$ ) and p-value (0.705  $> 0.05$ ) with a moderation path coefficient of 0.145 indicating a positive direction. This means that the locus of control moderating the influence of digital financial literacy on MSME performance is relatively small.

Business owners in building a business will always face many challenges so that the business run remains stable, entrepreneurs with positive personalities such as enterprising, like to work together, innovative, able to control emotions, regular and disciplined will achieve the maximum expected performance and can maintain their business in any condition.

In the level of confidence and confidence, MSME actors always try their best to improve the business performance of each MSME with the financial understanding they know and not with the understanding

of using digital financial products, amid difficult sales due to the impact of the covid-19 pandemic and rising prices of goods. MSME players believe and believe that by continuing to run their business well, and over time, in the end their sales will increase and be able to manage their finances better so that it has an impact on their business performance and MSME players can maintain the business they are running until now.

Therefore, with the characteristics of good MSME actors and with an understanding of manual Business Management owned by MSME actors, so that with low digital financial literacy, MSME actors can still improve MSME performance.

### **Effect Of Digital Financial Inclusion On MSME Performance Moderated By Locus Of Control**

The ninth hypothesis shows that digital financial inclusion on the performance of MSMEs has no significant effect through the locus of control moderation path with T statistics ( $0.988 < 1.65$ ) and p-value ( $0.323 > 0.05$ ) with a moderation path coefficient of 0.205 indicating a negative direction. This means that the locus of control moderating the influence of digital financial inclusion on the performance of MSMEs is relatively small.

This is because the characteristics of MSME actors such as enterprising, like to work together, innovative, able to control emotions, orderly and disciplined will achieve maximum achievements that are not expected to be followed by accessing digital financial products. Thus, digital financial inclusion does not play a role in improving the business performance of each MSME. The average MSME in the research respondents only access conventional financial products in increasing their business.

It can be noted that in the era of increasingly sophisticated technology, it is possible that almost all Indonesian people can access the internet, but the lack of MSME behavior in accessing digital products in their efforts to

increase digital financial inclusion does not affect the business performance of MSME actors so that locus of control cannot moderate the increase in digital financial inclusion to MSME performance.

### **The Influence Of Financial Technology On The Performance Of MSMEs Moderated By Locus Of Control**

The tenth hypothesis shows that financial technology has no significant effect on the performance of MSMEs through the locus of control moderation path with T statistics ( $0.034 < 1.65$ ) and p-value ( $0.973 > 0.05$ ) with a moderation path coefficient of 0.014 indicating a positive direction. This means that locus of control does not moderate the influence of financial technology on MSME performance.

With the characteristics and self-control of an MSME actor does not encourage them to take advantage of financial technology, because most MSME actors in research respondents focus more on management in improving business performance still traditionally. Because most of the age range of research respondents ranged from 30 to 40's that make business management is still based on traditional methods.

## **CONCLUSIONS AND RECOMMENDATIONS**

### **CONCLUSIONS**

Based on the results of the study it can be concluded as follows:

1. The results of the first hypothesis test showed that digital financial literacy had no significant effect on improving the performance of MSMEs.
2. The results of the second hypothesis test showed that digital financial inclusion significantly influenced digital financial inclusion to improve the performance of MSMEs.
3. The results of the third hypothesis test showed that financial technology does not significantly affect financial technology to improve the performance of MSMEs.

4. The results of the fourth hypothesis test showed that financial behavior does not significantly affect financial behavior to improve the performance of MSMEs.
5. The results of the fifth hypothesis test showed that digital financial literacy indirectly had no significant effect on the performance of MSMEs through financial Behavior mediation variables.
6. The results of the sixth hypothesis test showed that digital financial inclusion indirectly had no significant effect on the performance of MSMEs through financial Behavior mediation variables.
7. The results of the seventh hypothesis test showed that financial technology indirectly has no influence and is not significant to the performance of MSMEs through financial Behavior mediation variables.
8. The results of the eighth hypothesis test showed that digital financial literacy on the performance of MSMEs had no significant effect through the locus of control moderation pathway.
9. The results of the ninth hypothesis test showed that digital financial inclusion on the performance of MSMEs had no significant effect through the locus of control moderation pathway.
10. The results of the tenth hypothesis test showed that financial technology on the performance of MSMEs had no significant effect through the locus of control moderation pathway.

## RECOMMENDATIONS

Suggestions researchers from research that has been done are as follows:

### 1. For Academics

For academics, this study is expected to be a reference for future research on digital financial literacy, digital financial inclusion, and financial technology on the performance of MSMEs moderated by locus of control through financial behavior. The authors suggest that further research can add other variables so that this research will further develop and use specific types of fintech in its research. In addition, the

author expects academics to also participate in encouraging MSME groups in Medan City to improve digital financial literacy and digital financial inclusion which is still low and utilize digital technology for business development, and also help in business financial governance practices to increase the knowledge of MSME actors to be more organized in managing businesses so that they can increase business turnover and survive in turbulent times such as the Covid-19 pandemic.

### 2. For MSMEs

For MSMEs, in order to further improve their knowledge related to digital finance, access to digital finance, and utilize financial technology to develop their business and increase digitization in Medan City for MSMEs. So that MSME businesses can run optimally, the profits obtained are increased, access to capital, and can expand markets outside the city to foreign countries by using technology. MSME actors are expected to be able to manage their behavior and have self-control in managing their business in order to run their business and improve business performance improving financial literacy and financial inclusion can be done by micro-business actors by attending training, socialization, and/or community service activities conducted by banks, local governments, and the academic community related to digital financial literacy, digital financial inclusion, and financial technology.

### 3. For The Government

For the government, in the era of increasingly sophisticated digital technology, it is expected that the government will pay more attention to the level of digital financial literacy, digital financial inclusion, and the use of financial technology by MSME actors, especially micro-business actors. In addition, it provides education to the community, especially micro-business actors, regarding the use of financial technology, digital financial literacy and digital financial inclusion. This is important for micro-businesses so that businesses are able to

improve their business performance and market expansion in order to survive in an era of economic shocks such as during the covid-19 pandemic. So that it can reduce the overlap of income and poverty in Indonesia. And in terms of business performance, the government still has homework to help sales of business people who are still having difficulty in marketing their products or services. So that it can increase the sales turnover of MSMEs itself. In addition, if the sale of more products or services is not impossible to add jobs for the people around the MSME environment.

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