

THE INFLUENCE OF *FINANCIAL TECHNOLOGY, E-COMMERCE, ENVIRONMENTAL SECURITY, CAPITAL, AND LABOR* ON THE DEVELOPMENT OF MSMES IN MEDAN CITY

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ABSTRACT

This study aims to analyze the influence of Financial Technology, E-Commerce, Environmental Security, Capital, and Labor on the Development of Micro, Small, and Medium Enterprises (MSMEs) in Medan City. The research method used was a quantitative approach with regression analysis to examine the relationships between variables. The results show that Financial Technology, Environmental Security, and Labor have a positive and significant influence on MSME Development in Medan City. This indicates that the use of financial technology, a safe environment, and the availability of an adequate workforce can encourage MSME growth. Conversely, the variables E-Commerce and Capital did not significantly influence MSME Development, indicating that the use of online platforms and the availability of capital are not yet fully determining factors in improving MSME performance in Medan City. These findings are expected to be considered by MSME actors and policymakers in optimizing factors that support the development of the MSME sector in the region.

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INTRODUCTIONS

In the recent development of business entities, there have been many business sectors, one of which is Micro, Small and Medium Enterprises. The development of MSME businesses has a positive impact on the economic growth of a region. This growth indicates that business activities carried out by the community have a positive impact on people's lives (Arnetta, 2022). MSMEs are business people who have a strategic role in the economic development of a country in eliminating poverty by creating jobs so that the unemployment rate can be reduced. From year to year, the number of MSMEs in Indonesia continues to survive and grow. The position of MSMEs is very important for

Indonesia's economic growth. Therefore, it is necessary to make efforts to increase MSMEs in Indonesia by optimizing economic potentials.(Kusuma & Lutfiany, 2018)(Hendra, 2017)

Since 2015, Indonesia has been faced with *Asean Economic Community (AEC)*, Where in this era the competition in the market will be higher. Therefore, MSME actors must think more creatively and innovatively so that their businesses can survive and grow. In developing their businesses, MSMEs often experience problems or obstacles to funding. To be able to obtain additional funds, MSME actors should involve third parties such as banks or the like. In order to access banks easily, MSMEs must meet the requirements for income or business turnover standards determined by banks (Hasani & Ainy, 2017).(Hendra, 2017)

MSMEs in Medan city are one of the business sectors that support the economic growth of the North Sumatra region. Based on data from the Medan City Government (2024), in 2024 MSME fostered actors will continue to experience a significant increase, where by the end of 2024 the number of fostered MSMEs registered with the Medan City Government will be 25,301 business units in various sectors. The detailed list of the number of SMEs registered with the Medan City Government is as follows:

Table 4.1
List of MSME Fostered in Medan City Semester I of 2025

Type of Category	Remarks	Quantity	Percentage (%)
Type of Business	Food & Beverage	12.055	44,40
	Trade	6.254	18,46
	Creative Industries	1.958	7,27
	Services	2.551	11,91
	Agriculture/Plantations and Livestock	344	1,11
	Small-Scale Properties and Structures		
	Technology and Digital	1.532	10,41
		607	2,44
	Quantity	25.301	100

Source : List of MSME Fostered by Medan City Government Semester I (2025).

Based on this data, it is known that the number of MSME actors in the first semester of 2025 is the largest in the city of Medan, namely the food and beverage sector as many as 12,055 MSME actors (44.40%), the trade sector as many as 6,254 (18.46%), the service sector as many as 2,551 (7.27%) and continued by the creative industry sector, property sector and others. According to BPS (2024), it is stated that during 2024, the economic growth of MSME actors in that year fell to 4.21% from 5.04% in 2023, in 2022 it was 4.62% and in 2019-2020, the economic growth of the city of Medan decreased by -5.93% in 2019 and in 2020 experienced a significant decrease of -1.98%. On the other hand, Medan City MSMEs continue to experience a significant increase every year but this growth is not accompanied by stable economic growth, the growth chart (decline) of Medan City MSMEs from 2020-2025 (Semester I) is as follows.

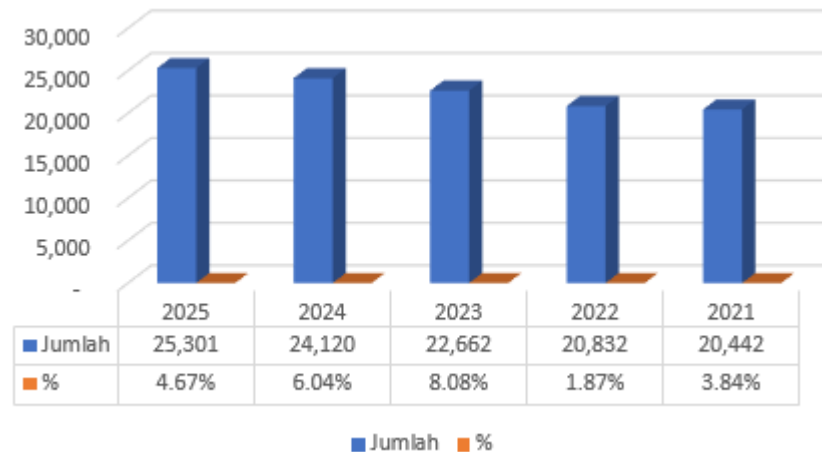


Figure 1.1
Increase (Decrease) of MSMEs in Medan City

Based on the data in Table and Figure 1.1, the decline in the economic growth rate of the city of Medan is partly due to the Micro, Small and Medium Enterprises (MSMEs) of Medan City even though the growth of MSMEs every year from 20,441 MSMEs in 2021 to 25,301 MSMEs in 2025 (Semester I) is caused by the unproductivity of business actors in running their businesses. According to news quoted from Tempo.com (2021), many MSME businesses have closed due to internal impacts such as many business actors who lack in utilizing technology such as *financial technology*, where many business actors do not know *Qrize* as an efficient payment medium, then the lack of ability of business actors to utilize *e-commerce* in marketing their products. The external impact itself is in the form of unstrategic business environment conditions and conditions, the rampant crime around the business environment that causes people to be uninterested in buying the products offered. In addition, according to Aulia (2021), many MSME actors start businesses with modest capital, so the businesses run are less effective and productive. Then, the workforce used has limitations in accessing business networks in marketing products.

MSMEs face a number of challenges that affect the sustainability of their business. In the *aspect of financial technology*, MSME actors are still constrained by low digital literacy, data security concerns, and dependence on internet networks, so the use of fintech is not optimal. In the use of e-commerce, MSMEs experience obstacles in the form of limited ability to manage online stores, high competition with big brands, and platform commission fees and shipping that suppress profits.

In terms of business environment security, vulnerability to theft, asset destruction, and nighttime disturbances add to operational costs because MSMEs must provide additional security systems. Capital constraints are still a major challenge, where it is difficult for MSME actors to access formal financing due to administrative requirements and collateral that are not met. Meanwhile, from the labor aspect, MSMEs have difficulty getting skilled workers, face high turnover, and limited training, which has an impact on the quality of products and services. Overall, these challenges show that the sustainability of MSMEs is highly dependent on technological adaptability, access to capital, environmental security, and the quality of human resources.

Based on this data, it can be concluded that the development of micro, small, and medium enterprises can be influenced by several supporting factors. In improving the development of MSMEs in Medan City, there are several variables that can affect it, namely *Financial Technology*, *E-Commerce*, safety of the business environment, capital and labor. (Ahmed, Jibir, & Bella, 2018) *Financial technology* refers to innovation and the use of technology in the financial sector to improve or replace traditional financial services. (Fajri, 2022) *FinTech* It covers a wide range of services and applications that allow financial transactions to be carried out more efficiently, quickly, and easily. *FinTech (Financial Technology)* has a great influence on the development of MSMEs (Micro, Small, and Medium Enterprises) in various countries, including Indonesia, where the positive impact is that access to financing becomes

easier, efficient, and increases transaction security. Based on the results of observation and pre-survey of 10 MSME actors, it is known that 4 of them (40%) have used online payment systems. This shows that the adoption of digital payments among MSMEs is still limited. Based on the results of interviews with several MSME actors in Medan City, a number of obstacles were found related to the implementation (Siburian & Ompusunggu, 2023) *Financial Technology*, utilization *E-commerce*, aspects of business environment security, limited capital, and labor availability. On the variable *Financial Technology*, most MSME actors revealed that although digital financial services such as mobile banking, QRIS, and e-wallets are very helpful in speeding up transactions, they still experience obstacles due to a lack of understanding of the use of certain features and unstable internet network limitations in some business locations. In addition, some small business actors are still hesitant to take advantage of *Fintech* because they are worried about transaction errors and the security of financial data.

E-commerce is the activity of buying and selling goods or services that are carried out through the internet. (Sian & Arifin, 2024) *E-commerce* allows business transactions between buyers and sellers without having to meet in person, utilizing digital technology as the main means in the process. This includes different types of transactions, from physical goods, to digital products, to services, that are carried out using the platform *online*. *E-commerce* has revolutionized the way we shop and do business, enabling faster, easier, and more affordable transactions. With the rapid development of technology, *E-commerce* continue to grow and open up new opportunities for consumers and MSME actors to interact globally. Based on the results of observation and pre-survey, although (Susilo, Snisma, & Syofyan, 2022) *E-commerce* provides great opportunities for MSME players to expand the market and increase sales, the implementation of which still faces a number of obstacles. Based on the results of observations and findings of various studies, there are several main problems experienced by Medan City MSMEs in their utilization *E-commerce*. Namely, low digital literacy in business actors is also a serious obstacle. Most MSME actors do not have adequate skills in managing online stores, creating attractive promotional content, and utilizing digital marketing strategies. This has an impact on the limited reach and competitiveness of products on the platform *E-commerce*.

Environmental safety is a condition or situation in which an object, individual, system, or environment is protected from threats, hazards, or damage. Business security refers to various efforts and actions taken to protect a company or organization from various threats that can damage business continuity, both physical, financial, and operational. Business security includes protection of various aspects that support the continuity and development of the company. Based on the results of a pre-survey conducted on several business actors in Medan City, it is known that the safety condition of the business environment is still classified (Parhusip & Herawati, 2020) (Wulandari, 2024) worrisome or serious. The majority of respondents stated that potential security disturbances, such as theft, and other criminal acts, still often occur around business locations. This situation causes a sense of anxiety for MSME actors in carrying out their daily business activities.

This is supported by the statement of Kompas.com (2025) which states that the city of Medan is one of the cities with the highest crime rate in Indonesia such as the rampant begal, illegal levies and thugs who control an area. Based on this, the people of Medan City are very *aware* of building businesses in strategic locations, because in some parts of Medan City that are strategic, there are still many business actors who experience discrimination such as being exposed to illegal levies or thuggery.

Capital is a source of funding for MSMEs in running a business and can be used as business operational activities. The greater the capital owned by business actors, the greater the capacity of MSMEs to generate profits and can increase the development of MSMEs. The development of MSMEs also has growth potential in providing huge job opportunities, and the growth of MSMEs can also be a major factor in national policies to increase employment opportunities and create income, especially for the underprivileged. . (Ahmed, Jibir, & Bella, 2018) (Arnetta, 2022) (Sudjono, 2011)

Based on various field findings, most business actors experience limited capital to support operations, expand production capacity, and innovate products. This condition often makes MSME actors only able to operate on a small scale and limited to the local market. This limited capital also has an impact on the ability of business actors to conduct digital-based marketing, improve product quality, and develop distribution networks. Thus, it can be concluded that capital problems are one of the crucial factors that hinder the development and competitiveness of businesses in the city of Medan.

Labor has a very significant influence on the growth of MSMEs (Micro, Small, and Medium Enterprises) because a skilled workforce that has good knowledge in certain fields will improve the quality of products and services offered by MSMEs. This can help MSMEs to compete in a wider market, increase productivity, and increase attractiveness to customers. Based on the results of observations, many business actors have difficulties in obtaining a workforce that has skills according to business needs. This is especially noticeable in the use of (Wulandari, 2024) *Financial Technology* and *E-commerce* which requires technical skills and digital literacy. Where, based on the results of an interview with one of the SMEs, it was stated that small MSME actors do not have an adequate understanding or receive a training program on the use of social media by the government in supporting the productivity of MSME businesses (Gayatri, 2024). Another problem that arises is the relatively high level of labor turnover. Many workers tend to change workplaces due to wage factors, working conditions, and the desire to find better opportunities. This causes instability in business operations and forces business owners to continue to recruit and retrain.

Therefore, related to Micro, Small, and Medium Enterprises, the Government of Indonesia as a regulator has issued Law No. 20 of 2008 concerning Micro, Small and Medium Enterprises as a legal basis in the business world, because the purpose of the regulation is to protect business actors. The focus of the research place related to MSMEs is the city of Medan. One of the reasons why the city of Medan is the object of research is the level of MSME business income which is still on a small to medium scale. This is also suspected to be due to the global economic conditions that have not improved triggered by international commodity prices that are still stagnant at low levels. Seeing the very large role of MSMEs can be an attraction for the government to increase the GDP of Medan City. (Kusuma & Lutfiany, 2018)

There is a *research gap* in this study, according to Hilal (2023) and Vanca & Prasetyo (2024), stating that *financial technology* and *e-commerce* have a positive and significant effect on the development of MSMEs. However, according to Susilo, Snisma & Syofyan (2022) stated that *financial technology* and *e-commerce* have a negative effect on the development of MSMEs. According to Aulia (2021), it is stated that labor has no effect on the development of MSMEs in Ponorogo for the 2013-2017 period, but according to Panatagama (2024), it states that labor has a significant positive effect on the development of MSMEs.

According to Fajri (2022) stated that security has a significant positive effect on the development of MSMEs, but according to Surya (2021) it states that security does not have a significant effect on the development of MSMEs. According to Fajri (2022) states that capital has a negative impact on the development of MSMEs, but according to Sudjono (2011) states that capital has a significant positive effect on the development of MSMEs and according to Akbar & Irawan (2024) states that the income of MSME actors affects the development of MSMEs and according to Supriatna et al (2023) states that the income of MSME actors has an effect on the development of MSMEs.

Based on the background that has been described by the researcher, the formulation of the problem is as follows:

1. Does *financial technology* affect the development of MSMEs in Medan City?
2. Does *e-commerce* affect the development of MSMEs in the city of Medan?
3. Does the safety of the business environment affect the development of MSMEs in the city of Medan?
4. Does capital affect the development of MSMEs in the city of Medan?
5. Does labor affect the development of MSMEs in Medan City?

METHOD

The type of research used in this study is quantitative research. The quantitative research method is a type of research whose specifications are systematic, planned and clearly structured from the beginning to the creation of the research design. Quantitative research methods, as stated by Ghazali (2018), are research methods based on the philosophy of *positivism*, used to research on certain populations or samples, data collection using research instruments, quantitative/statistical data analysis, with the aim of testing the hypotheses that have been determined.

The type of data used in this study is quantitative data. Quantitative data is data in the form of numbers or numbers, both incomplete and incomplete. The quantitative data in this study was in the form of questionnaire results

that were distributed to research respondents who were MSME actors fostered by the Medan City Government and employees of the Medan City Cooperatives and Small and Medium Enterprises Office. (Ghozali, 2018)

The data sources contained in this study include:

1. Primary Data is data from the results of the questionnaire distributed to respondents who are MSME actors in the city of Medan.
2. Secondary Data is data obtained indirectly from the source but through intermediaries. The secondary data used in this study are from reading materials in the form of books, magazines, literature, newspapers and information related to the problem being studied.

The data collection technique used in this study is field research (*field research*) namely collecting data from the field by distributing questionnaires (questionnaires). Questionnaire is a list of questions or written statements given to respondents to be answered, The purpose of distributing questionnaires is to find complete information about the variables or problems being researched. From the development of the research instrument, several questionnaire question items were then prepared. The measurement of respondents' attitudes, opinions and perceptions was measured using Likert With the Likert scale, the variables to be measured are described as variable indicators that are used as a starting point for compiling question items. (Ghozali, 2018)

The data analysis method used in this study is by using descriptive methods and narrative methods. This study uses a quantitative method because the data used as a research source is in the form of the number of MSME actors in Medan City.

RESULT AND DISCUSSIONS

Results

The Influence of *Financial Technology* on the Development of MSMEs

Based on the results of the t-test that has been carried out, it is known that the t-value of the table t_{α} is 5.396 > 2.807 and the significant value is $0.004 < 0.05$. It can therefore be concluded that *Financial Technology* have a positive and significant effect on the development of MSMEs. Based on the results of the tests and hypotheses that have been carried out, it can be concluded that H_1 accepted and H_0 was rejected. According to the theory of Amhed, Jibir & Bella (2018), *Fintech* It includes a wide range of innovations that enable financial services providers to deliver faster, cheaper, and more accessible products and services. It involves the use of advanced software, applications, algorithms, and technologies to replace or improve traditional methods in banking, investment, payments, and other financial services. According to Rozan (2023), *Fintech* (*Financial Technology*) have a positive and significant influence on the development of MSMEs (Micro, Small, and Medium Enterprises), both in terms of access to finance, operational efficiency, and innovation in marketing strategies. With the use of technology in various aspects, *Fintech* can improve the ability of MSMEs to compete, manage cash flow, and access a wider market. (Sari, 2019)

Based on the results of the distribution of the questionnaire on statements 1-7, the average respondent stated that they agreed and strongly agreed with the benefits in using *Fintech*. MSME business actors in Medan City feel the direct impact of the use of *Fintech*. This is because it can facilitate and efficient the time and costs spent, so that the results of the observations that have been carried out are in line with the results of the research obtained. Based on observation data, as many as 277 MSMEs use *Financial Technology* in its business activities. However, only 209 or 74.5% of MSMEs whose income growth showed an increase in MSMEs' ability to generate income from operational activities. This increase is the main indicator of significant business development.

Based on the results of the analysis of nine indicators of MSME development in Medan City, it was found that all aspects showed a positive and significant influence on the growth of the small and medium business sector in the area. The results can be seen in the graph as follows.

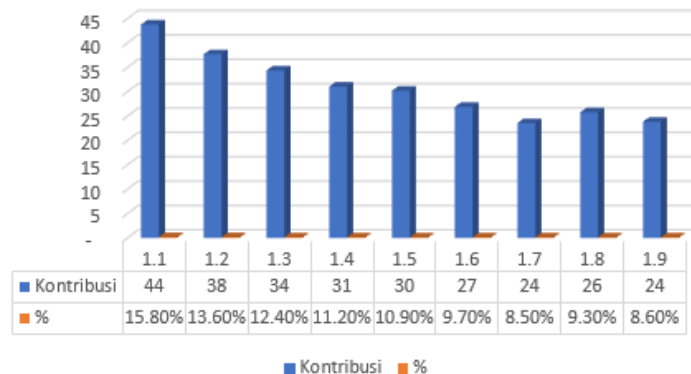


Figure 5.1
Contribution Distribution Chart by Indicator

Based on the results of the research and the distribution of the questionnaire, the indicators with the greatest contribution are Revenue Growth (15.8%) and Profit and Profitability (13.6%), which reflects the improvement of MSMEs' ability to manage operational activities efficiently and generate sustainable profits. Financial Performance (12.4%) and Access to Financing (11.2%) is also an important factor because it shows the increasing number of MSME actors who take advantage of digital banking and financing services, such as *Financial Technology* and the KUR program, which in the city of Medan in 2024 has reached more than 65% of MSME actors are active. Meanwhile, Business Scale (10.9%) and Product Diversification (9.7%) shows an increase in production capacity and product variety, especially in the local culinary, fashion, and handicraft sectors.

On the other hand, Market Share (8.5%), Innovation and Technology (9.3%), and Quality of Products and Services (8.6%) demonstrate a positive contribution to competitiveness, where more than 58% of MSMEs in Medan has now taken advantage of digital platforms such as *Tokopedia* and *Shopee* to expand market reach. This finding confirms that the development of MSMEs in Medan City does not only depend on financial factors, but also on innovation, product quality, and marketing strategies that are adaptive to technological changes and consumer needs. The theory and results of the research are supported by the results of research according to Hilal (2023) and Sari (2019) which state that *Financial Technology* have a positive and significant effect on the development of MSMEs.

The Influence of E-Commerce on the Development of MSMEs

Based on the results of the t-test that has been carried out, it is known that the t-value is calculated as -0.111 after the absolute becomes $0.111 < 2.807$ and the significant value is $0.912 > 0.05$. So it can be concluded that E-Commerce has no effect on the development of MSMEs. Based on the results of the tests and hypotheses that have been carried out, it can be concluded that H_2 was rejected and H_0 was accepted.

In the digital age, *E-commerce* is believed to be one of the strategic means to encourage the growth and development of entrepreneurship programs run by Micro, Small, and Medium Enterprises (Ahmed, Jibir, & Bella, 2018). Through e-commerce, MSMEs are expected to be able to expand the market, increase sales volume, reduce operational costs, and increase efficiency in business processes. However, the reality in the field shows that not all MSMEs in Medan City have taken advantage of (Aulia, 2021)*E-commerce* experienced significant business development. This shows that there is a gap between ideal potentials *E-commerce* with the real impact felt by MSME actors. Ineffectiveness *E-commerce* in encouraging the development of MSMEs in Medan City can be explained through the main factor, namely the low digital literacy of business actors making it difficult for them to make the most of e-commerce features.

Based on the results of the distribution of questionnaires related to *e-commerce* in statements 1-7, the average respondent stated that they were neutral and agreed on the benefits in using *e-commerce*, but these results were inversely proportional to the results of the research obtained where *the gap* was caused by the existence of neutral

business actors in responding to the existence of *e-commerce* in increasing the productivity of business sales. The distribution graph of respondents' answers is as follows.

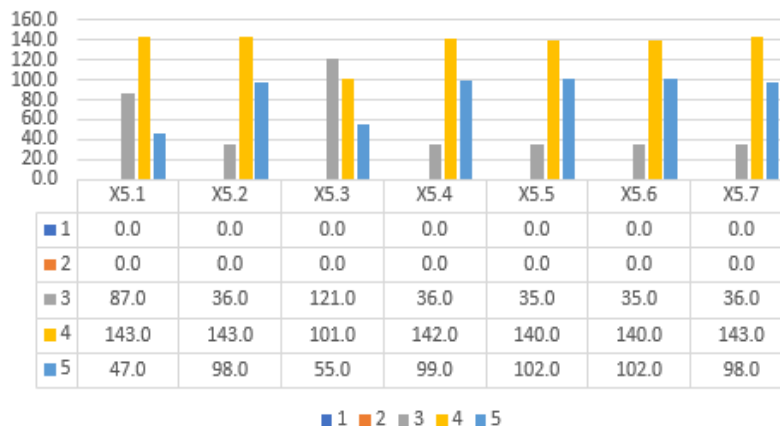


Figure 5.2
Distribution of E-Commerce Variable Questionnaire Answers

Based on the graph above, it is known that as many as 119 MSMEs still choose to answer disagree / neutral (3) with the existence of e-commerce in increasing the growth of MSMEs. The data is also supported by the results of research showing that *E-Commerce* does not have a significant effect on the development of MSMEs in Medan City, even though the trend of business digitalization is increasing. Of the total 277 MSMEs that were respondents, it is known that around 43% or 119 MSMEs have not actively utilized *E-Commerce* platforms in marketing and sales activities. This condition is caused by several factors related to the main indicators of E-Commerce. First, the number of active customers on digital platforms is still low because most MSME actors rely more on direct sales (*offline*) to local customers. Second, the conversion rate from visits to transactions is still below 10%, showing the weakness of digital promotion strategies and the limited understanding of MSME actors in managing online stores. In terms of delivery speed and customer satisfaction, many MSMEs have not collaborated with digital expedition services so that delivery times are still slow and not integrated with automatic tracking systems. Furthermore, price competitiveness is also not optimal because additional costs for delivery services and platform commissions make the price of products higher than direct sales. The diversity of products is still limited to the main categories, such as culinary and clothing, without the existence of product differentiation that attracts the interest of online consumers. In addition, customer service support is still weak because MSME actors do not have fast communication systems such as *chatbots* or 24-hour customer service. Meanwhile, the acceptance of digital payment methods is also still low, around 38% of MSMEs have not accepted payments through e-wallets or digital transfers, which has an impact on the low volume of online transactions. This condition shows that the low utilization of *E-Commerce* hinders the optimization of digital market potential for MSMEs in Medan City. Thus, training, technology support, and local government policies are needed to improve digital literacy and expand *E-Commerce* adaptation in order to contribute significantly to the development of MSMEs in the future.

Meanwhile, from the external side, challenges such as high competition with large business actors in e-commerce platforms, uneven digital infrastructure and logistics, and the lack of technical assistance from the government or related institutions are also obstacles. Not infrequently, hidden costs in using *e-commerce platforms* such as advertising costs, sales commissions, and rating systems become an additional burden for MSMEs. Thus, although *e-commerce* offers great opportunities for MSMEs, the reality is that not all business actors are able to take advantage of these opportunities optimally. This causes *e-commerce* not always to have a significant influence on the development of MSMEs. Therefore, supporting strategies such as increasing digital literacy, continuous training,

providing supporting infrastructure, and regulatory protection are needed so that e-commerce is truly able to become an effective transformation tool for MSMEs.

This theory is not supported by the results and research hypotheses according to Hilal (2023) and Sari (2019) which state that *e-commerce* has a positive and significant effect on the development of MSMEs. However, in line with research by Fajri & Rosa (2022), *e-commerce* does not have a positive and significant influence on the development of MSMEs.

The Influence of Environmental Security on the Development of MSMEs

Based on the results of the t-test that has been carried out, it is known that the t-value of the table t-> is 37.249 > 2.807 and the significant value is 0.000 < 0.05. Therefore, it can be concluded that Environmental Security has a positive and significant effect on the development of MSMEs. Based on the results of the tests and hypotheses that have been carried out, it can be concluded that H₃ accepted and H₀ was rejected.

The safety of the business environment has a significant influence on the growth of MSMEs, where good security around the business environment can provide a sense of security for MSME actors and consumers (Ahmed, Jibir & Bella, 2018). If the environment is safe, business actors feel comfortable to operate without worrying about the threat of crime or other disturbances. It also encourages consumers to come and transact more often. Maintained security ensures that business activities can run without interruptions, such as theft, property destruction, or riots (Fajri, 2022). With this stability, MSMEs in the city can focus on product development, quality improvement, and business expansion without having to worry about potential losses due to security issues. (Ahmed, Jibir, & Bella, 2018)

Based on the results of the questionnaire in statements 1-7, the average business actor stated that they agreed and strongly agreed that good environmental safety can increase the productivity of MSMEs, especially in the city of Medan. Based on observation data, there are also many MSME actors in the city of Medan who feel safe with the business environment at this time, especially in urban areas. This can be achieved because the government provides space for MSME actors to run businesses. The theory is also accompanied by the results of the respondents' answers as follows.

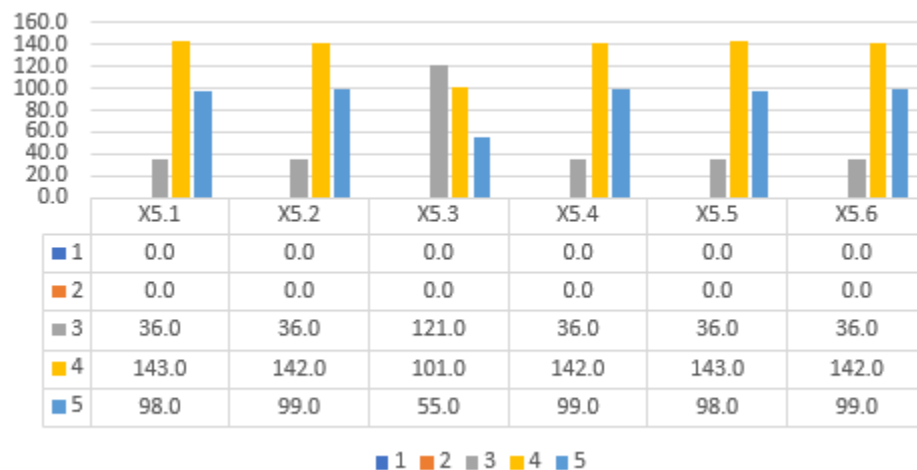


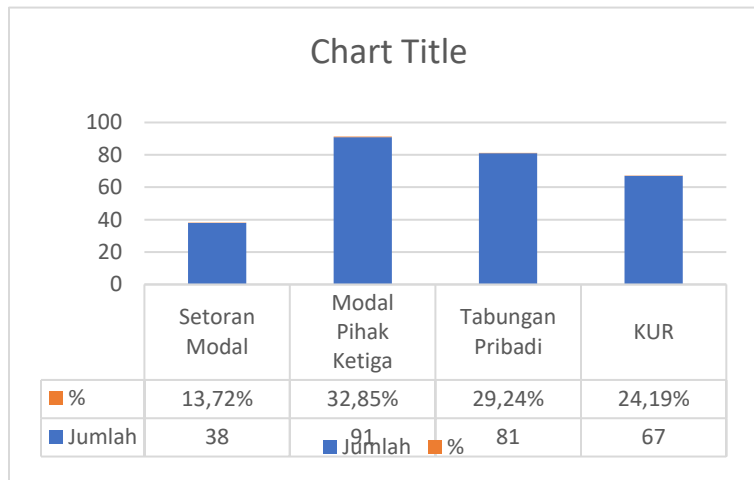
Figure 5.3

Distribution of Environmental Safety Variables Questionnaire Answers

Based on the graph data above, it is known that the average respondents' answers stated agree (58.7%), strongly agree (39.57%) and neutral (21.73%) which shows that the average MSME actor feels safe when running his business because of the assistance from the government. The Medan city government itself has an important role in creating a conducive business climate for MSME actors. One form of support provided is the provision of decent and affordable business space. Then, the government also seeks to facilitate MSME actors in Medan City through the

construction of MSME centers, modern traditional markets, culinary centers, and public spaces that can be used as selling locations.

The results of the study show that Environmental Security has a positive effect on the development of MSMEs in Medan City, although there are still challenges in the form of rampant street crimes such as begal and petty theft



that often occur in several areas. Based on data from 277 MSME respondents, around 71% or 197 business actors stated that the increase in security around their business locations in the last two years had a direct impact on smooth operations and increased revenue. The graph can be seen in the following image.

Figure 5.4

Distribution of Results of Improving the Security of MSME Locations in Medan City

The physical security factor (28.5%) is the main driver, where the existence of routine police patrols, environmental security systems (such as patrol posts and CCTV), and public awareness in protecting the environment has been proven to be able to reduce the level of disruption to business activities. In terms of financial and financial security (25.7%), the implementation of a more secure digital payment system through e-wallets or bank transfers helps MSME actors reduce the risk of losing cash, thereby providing a sense of security in transactions. Operational capacity (23.1%) also increased because MSME actors can run business activities more smoothly without external disturbances, such as theft of goods or environmental riots. In addition, the location of the neighborhood (22.7%) which is increasingly regular and has begun to be organized in the commercial areas of Medan City, such as Medan Petisah, Medan Johor, and East Medan, has also created a conducive business climate. However, there are still several areas in Medan City that are still prone to environmental insecurity in doing business, such as Medan Belawan, Medan Tembung, Martubung and other coastal areas of Medan City.

Based on the theory and results of the study, it can be concluded that there is an influence between environmental safety on the growth of MSMEs. This is also supported by the results of research according to Janah, Ulfa & Tampubolon, Frances (2024) which states that business environmental safety has a positive and significant effect on the development of MSMEs and according to Lubis & Salsabila, R (2024), states that business environmental safety has a positive and significant effect on the development of MSMEs.

The Influence of Capital on the Development of MSMEs

Based on the results of the t-test that has been carried out, it is known that the t-value of the table $t_{<}$ is $2.137 < 2.807$ and the significant value is $0.034 < 0.05$. Therefore, it can be concluded that Capital has no effect on the development of MSMEs. Based on the results of the tests and hypotheses that have been carried out, it can be concluded that H_4 was rejected and H_0 was accepted. Capital is often considered a key factor in encouraging the development of Micro, Small, and Medium Enterprises (MSMEs).

Based on the theory of Ahmed, Jibril & Bella (2018), the availability of capital allows MSMEs to increase production capacity, expand marketing, improve product quality, and adopt new technologies. However, the reality is that not all MSMEs that receive additional capital show significant business development. This shows that capital, although important, is not the only determining factor for the success or development of MSMEs. This can be seen from the following graph.

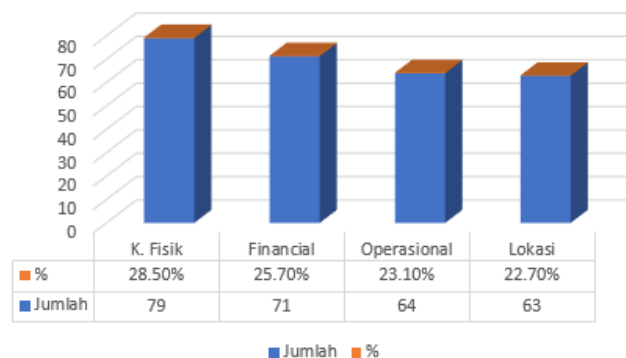


Figure 5.5

Distribution of Funding Sources for MSMEs in Medan City

Based on the results of interviews with 277 MSME actors who were respondents, an average of around 58% or 161 business actors stated that limitations in the management and utilization of capital were the main obstacle, not the amount of capital itself. For example, the deposited capital or shares (13.7%) provided by business owners are not always used for productive expansion, but are more often used to cover routine operating costs. Similarly, third-party capital (32.8%) from loans from financial institutions or investors did not all have a positive impact because some MSME actors still faced difficulties in debt management and financial planning.

Meanwhile, personal savings (29.2%) used as a source of financing tend to be limited, so they are not enough to drive significant business scale growth. Access to People's Business Credit (KUR) (24.2%) is also not fully optimal because some MSME actors still face administrative obstacles and lack of financial literacy, so they are unable to utilize loan funds effectively. This condition shows that although various sources of capital are available, the lack of managerial skills, low investment planning, and lack of business innovation cause additional capital not to automatically contribute to an increase in business income or productivity.

In general, this phenomenon illustrates that in the city of Medan, capital is not the main determining factor for the development of MSMEs, but the efficiency of capital use and the ability of business actors to manage funds strategically plays a more important role. Thus, even though capital assistance from various sources is available, without increased managerial capacity and business innovation, the influence of capital on the development of MSMEs remains insignificant.

On the other hand, external factors can also be other causes such as limited market access, tight competition, or lack of business assistance, which can hinder optimal capital utilization. In addition, if the capital provided is in the form of loans, MSMEs are also burdened by repayment obligations that can reduce financial flexibility and even pose a risk of default. Thus, it can be concluded that the availability of capital alone is not enough to encourage the development of MSMEs. Without being balanced with managerial capacity, financial literacy, and an adequate supporting ecosystem, capital is just a resource that is not optimally utilized. Therefore, interventions to strengthen business capacity and systemic support are very important so that capital can really have a significant effect on the growth of MSMEs.

The Influence of Labor on the Development of MSMEs

Based on the results of the t-test that has been carried out, it is known that the t-value of the table t-> is 6.292 > 2.807 and the significant value is 0.000 < 0.05. Therefore, it can be concluded that the Workforce has a positive and significant effect on the Development of MSMEs. Based on the results of the tests and hypotheses that have been carried out, it can be concluded that H₅ was accepted and H₀ was rejected.

Labor is a person who is classified as a work group and has worked to get services and goods in meeting personal and resident needs. The existence of labor can be the main factor in business in generating profits, so that a competent workforce can increase business productivity, and a workforce that has certain experience and expertise can increase the effectiveness and efficiency of production (Ahmed, Jibril, & Bella, 2018). Based on this theory, it can be seen that labor has a direct relationship in the production process in achieving the profit/income target. Therefore, labor has an influence in running business processes and generating profits.

Based on the results of research and observations on MSME actors in Medan City. The average business actor stated that they agreed and strongly agreed with a competent workforce. The existence of an adequate workforce, both in terms of quantity and quality, greatly determines the smooth operation, increased productivity, and business competitiveness. First, a workforce that has skills according to business needs can improve product efficiency and quality. This can be seen in the following graph.

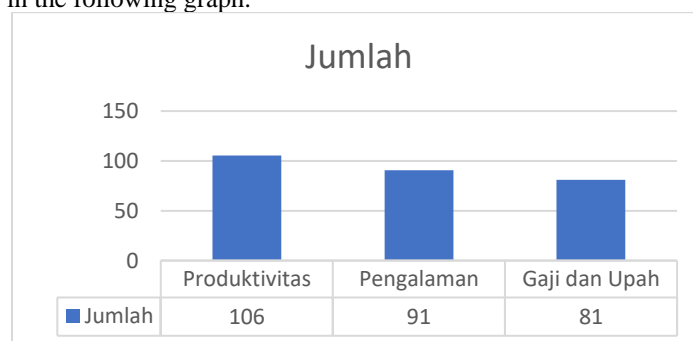


Figure 5.6

Distribution of Questionnaire Answers related to Labor

The results of the study show that the workforce has a positive and significant effect on the development of MSMEs in the city of Medan. Based on data from 277 respondents from MSME actors, as many as 73% or around 202 small and medium enterprises stated that improving the quality and productivity of the workforce directly contributes to turnover growth, operational efficiency, and market expansion. The labor productivity factor (38.1%) is the main determinant, where the number of adequate and skilled workers encourages the increase in production capacity and accelerates the service process to customers.

In addition, labor experience (32.7%) also plays an important role because workers who have experience in their field are able to work more efficiently, understand consumer needs, and adapt to market changes. In sectors such as culinary, fashion, and services, an experienced workforce also helps create product innovations that are relevant to market trends in the city of Medan. Meanwhile, labor salaries and wages (29.2%) showed a positive correlation with worker motivation and loyalty. MSMEs that provide decent compensation tend to have a workforce with more stable and productive performance.

This condition illustrates that in the midst of economic challenges and business competition, the workforce is one of the key factors for the sustainability of MSMEs in the city of Medan. Increasing productivity and workforce welfare contributes to operational efficiency and service quality, which ultimately strengthens the position of MSMEs in the local market. Thus, it can be concluded that a competent, experienced, and prosperous workforce has a positive and significant influence on the development of MSMEs in the city of Medan.

This theory is supported by the results of research according to Janah, Ulfa & Tampubolon, Frances (2024) which states that labor has a positive and significant effect on the development of MSMEs in a country and according to Lubis & Salsabila, R (2024), states that labor has a positive and significant effect on the development of MSMEs.

5.6 Results of Multiple Linear Regression Conceptual Framework

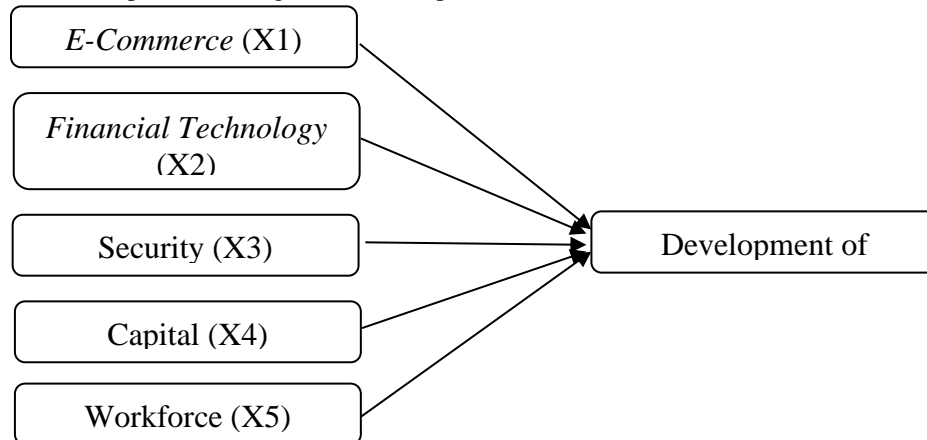


Figure 5.1
Conceptual Framework Results

Based on this discussion, the results can be concluded as follows:

- a. Financial Technology has a positive and significant effect on the development of MSMEs in Medan City.
- b. *E-commerce* does not have a positive and significant effect on the development of MSMEs in Medan City.
- c. Environmental security has a positive and significant effect on the development of MSMEs in Medan City.
- d. Capital has no positive and significant effect on the development of MSMEs in Medan City.
- e. Labor has a positive and significant effect on the development of MSMEs in Medan City.
- f. Based on the results of the study, it is known that Environmental Security has the most proportional influential value, where the coefficient value is 1.334% and the t-value is calculated at 37.294 with a significance of 0.000. This indicates that most of the determining factors for the development of MSMEs are conducive environmental conditions. Then continued with labor and *fintech* as supporting factors in the development of MSMEs. Based on this, MSME actors must improve environmental security, labor and utilize *fintech* effectively so that later the business run can develop and survive in the future so that the existence of MSMEs can continue to increase and help the regional economy.

CONCLUSION

Based on the results of the research and discussion, several conclusions can be drawn as follows:

1. *Financial Technology* has a positive and significant effect on the development of MSMEs in Medan City.
2. *E-Commerce* does not have a positive and significant effect on the development of MSMEs in Medan City.
3. Environmental Security has a positive and significant effect on the Development of MSMEs in Medan City.
4. Capital does not have a positive and significant effect on the development of MSMEs in Medan City.
5. Labor has a positive and significant influence on the development of MSMEs in Medan City.

This research has been well designed, but the results of this research still have limitations, therefore there are several suggestions that need to be put forward to improve the next research, which are as follows:

1. For Academics.

It is hoped that other independent variables, additional moderating or intervention variables with the aim of finding out other variables that affect dependent variables and data collection methods need to be added such as

product quality, promotion, marketing, with other methods to get complete data, for example by conducting direct interviews in filling out questionnaires so that respondents' answers better reflect the actual answers.

2. For business actors

For MSME actors, it is necessary to conduct a more in-depth evaluation of the aspects of these variables that have not made a real contribution to business development. MSME actors are also advised to improve their understanding and ability to make optimal use of these variables, for example through training, mentoring, or cooperation with related agencies.

3. For the Government

For local governments and MSME support institutions, it is necessary to develop programs that are more targeted to increase the effectiveness of variables that have not had a significant impact. For example, if technology variables have not had an effect, then the government can provide digitalization training facilities, internet infrastructure, or incentives for the use of technology. Intervention programs like this can help MSMEs utilize these variables more effectively so that their impact on economic growth can be felt.

4. The next researcher.

It is hoped that it can add research variables and expand the area of the researcher sample, and can conduct research in areas outside this research so that the results can be generalized for a wider scope such as promotion, product quality, *marketing mix* and other variables that affect the development of MSMEs.

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