

Analysis of the Use of Financial Technology and Financial Literacy Among MSMEs

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Abstract

The massive effects of the Covid-19 pandemic and continuous technological innovations are not the only ones that change people's lives; the world is now experiencing the emergence of FinTech. FinTech is a technology-based financial service that allows financial transactions to be made quickly, anywhere, and anytime. FinTech has given MSMEs advantages, from capital financing to easy transaction processes to boost MSMEs' growth. This research aims to see how the adoption of FinTech and financial literacy affect the development of Indonesia's MSMEs. Data were used online questionnaires while samples were selected using a convenience sampling technique with 125 business owners participating in this research. Data were then analyzed using the OLS regression method. Results suggest that FinTech and financial literacy positively and significantly influence the development of MSMEs.

Keywords: Financial Technology, Financial Literacy, MSME

Abstrak

Efek terjadinya pandemi Covid19 dan inovasi teknologi yang tidak terbatas pada era digital saat ini, semakin dilengkapi dengan hadirnya FinTech. FinTech adalah layanan keuangan dengan berbasis teknologi yang memberikan kemudahan dalam bertransaksi keuangan dimanapun dan kapanpun. FinTech menjadi keunggulan tersendiri bagi UMKM, baik dari segi pembiayaan permodalan maupun kemudahan bertransaksi untuk meningkatkan perkembangan UMKM. Penelitian ini bertujuan untuk mengetahui pemanfaatan Fintech dan literasi keuangan terhadap perkembangan UMKM di Indonesia. Data dalam penelitian ini diperoleh melalui kuesioner secara online dan pengambilan sampel menggunakan teknik convenience sampling. Dengan menggunakan 125 responden pemilik usaha dan metode regresi OLS, penulis menemukan bahwa Fintech dan literasi keuangan memiliki pengaruh positif signifikan terhadap perkembangan UMKM.

Kata kunci: Financial Technology, Literasi Keuangan, UMKM

1. Introduction

In early 2020, the Covid-19 pandemic loomed and hit the world's economy, including Indonesia. The government of Indonesia made considerable efforts to slow the spread of the virus, including the imposition of a lockdown (Yuesti et al., 2020). During the lockdown, people were forced to stay at and do everything from home, including working, studying, and shopping online (Venkatesh et al., 2021). People began adjusting and adapting to the new conditions and developing habits of doing everything from home; some of these habits, particularly online shopping, never leave.

The digital trend contributes to the development of online shopping habits. This trend has been in several sectors, including finance. Technology and the advancement of the internet have transformed conventional financial services, making them more modern and accessible to the community (Abbasi et al., 2021). Financial technology has eliminated the need to shop at physical stores, making the transaction process faster and effortless. This shift has allowed micro, small, and medium enterprises (MSMEs) to adopt technology and change their business strategies.

MSMEs, the pillar of Indonesia's economy, has also been affected by the Covid-19 pandemic. With lockdown being imposed and people limiting their offline shopping, businesses were forced to shut

down stores. However, many businesses survived after moving their brick-and-mortar business online. MSMEs have begun adopting online financial transaction systems made possible by the help of financial technology. FinTech and digitization continue to advance and grow significantly, as embodied by numerous innovations such as payment gateway, digital wallets, peer-to-peer lending, and FinTech-based investment. Such financial services surely help MSMEs and allow people to make transactions and do shopping more easily.

According to data collected by the Indonesia FinTech Association (Aftech), (2021), 62% of FinTech companies had targeted and worked with MSMEs. Meanwhile, 42% of FinTech service providers stated that MSMEs' transactions alone had reached 80 billion rupiahs. FinTech services allow technology-based financial management, including a digitalized financial report, payment technology, and online-based loan for MSMEs, to be done quickly and efficiently. Moreover, people can also enjoy more straightforward and faster transactions with a better user experience. Karim et al., (2022) found that three-fourths of consumers in their research used FinTech to transfer money and make payments. The covid-19 pandemic has accelerated the adoption of FinTech, which helps businesses and the community make digital payments and other technology-based transactions (Caballero-Morales, 2021). FinTech could give businesses in Indonesia a greater chance to grow (Putri & Christiana, 2021).

The development of FinTech in Indonesia is regulated by Bank Indonesia under the Regulation of Bank Indonesia (BI) Number 19/PBI/2017 and the Regulation of Indonesian Financial Service Authority (OJK) Number 13/POJK.02/2018. Currently, four FinTech services have been registered in Indonesia, including Crowdfunding and Peer-to-Peer Lending, Market Aggregator, Risk and Investment Management, as well as Payment, Clearing, and Settlement. These services aim to promote an equitable economy and ease of transactions and help fulfill MSMEs' need for financing or capital (Winarto, 2020).

As a business entity, the MSME sector plays both essential and strategic roles and contributes significantly to Indonesia's economy. Most MSMEs are family-owned businesses, which is why they face significant financial risks and obstacles. During the Covid-19 pandemic, the government introduced financial support and capital loan schemes to MSMEs to ensure they could survive. Nevertheless, with an increasing need for cash flow, more than these efforts were needed. Developing MSMEs is challenging and often depends on traditional business models, including banking access (Naeem & Karim, 2021). Securing loans from banks or other financial institutions remains a problem for many MSMEs due to either technical problems, such as insufficient or absence of collateral, or non-technical issues, such as the lack of access to information about banking services.

The emergence of FinTech is like a breath of fresh air to the development of MSMEs. Digital technology has changed MSMEs' performance and significantly contributed to the digital economy. Digital integration, including FinTech integration, was proposed as a solution during the pandemic and the new normal era to help MSMEs obtain capital funding and manage digital payment, allowing them to enter a more extensive market (Ahlstrom et al., 2020). For MSMEs, expanding their businesses online is a must considering the shift in the way customers shop. According to Pollari (2016), FinTech and digital platforms offer business models and alternative solutions that could help the government and other financial institutions provide good financial services and expand their reach.

Financial literacy is more than just knowledge about, skills of, and trust in the providers, products, and services. It also includes the attitude and behavior that can help increase financial literacy to improve well-being. People's or business owners' ability to determine their financial goals, make financial plans, manage their finances, and make financial decisions when using financial products and services embodies their positive financial attitude and behavior (Lema et al., 2021). As the key

person determining business success, MSME owners need to be financially literate to make the right financial decisions after considering the risks (Liu et al., 2021). Moreover, when lacking financial literacy, the rising number of unscrupulous FinTech startups due to technological advancement may put MSMEs at risk.

2. Literature Review

2.1 Financial Technology

Financial technology, or FinTech, is used to describe technological innovation in financial services whose presence could generate business models, applications, processes, or products that can have a material effect on financial markets and institutions as well as financial service providers (Financial Stability Board, 2017). FinTech offers financial solutions that help the community access financial products and financial literacy more easily (Lee & Low, 2018). In addition, many authors take an approach that emphasizes the ability of FinTechs to generate added value (Siddiqui & Rivera, 2022). In such cases, FinTech is seen as a technology provider that provides a better user experience and enhances competitiveness in finance. An example of such a definition of FinTech is illustrated in the following description (Aysan & Nanaeva, 2022):

- FinTech refers to using new information technologies, including Big Data, cloud computing, and mobile technology, to improve service quality, administrative efficiency, and expansion of the financial services industry.
- Technology-based innovation in the field of financial services that can create new businesses involving the material impact of the provision of financial services.
- Technological developments that can change the supply financial services that enable the development of new application-based business models.
- Technological innovation and disruption in non-financial services related to various services for the mobile environment - for example, online payments, money transfers, loan applications, buying insurance, and investing in stocks.

Loan and payment services are the most developed sector in the FinTech industry in Indonesia. According to OJK's updates in August 2022, 102 legal P2P lending platforms had been registered, providing easy access to financing services for MSMEs. Furthermore, by August 2022, 290 payment service platforms had been registered in Bank Indonesia under categories 1 and 2 (Bank Indonesia, 2022).

The Financial Service Authority (OJK) stated that the emergence of FinTech has made financial literacy programs essential. It will help people in the community, particularly businesspeople in Indonesia, manage their finances more wisely. FinTech can help startups grow, allowing them to create more job opportunities and raise the community's standard of living. FinTech can connect with a community that conventional financial institutions have never served. With its convenience, this technology can also increase e-commerce sales and offer competitive interest rates.

2.2 Financial Literacy

The success of the MSME sector depends heavily on the level of financial literacy of the businesspeople. Financial literacy is managers' capacity to understand and analyze financial data before making financial decisions (Irikefe & Isaac, 2021). According to Lusardi & Mitchell, (2014), financial literacy is the knowledge of the basic concept of finance and the ability to make simple calculations. Financial literacy is a basic need for knowledge and the ability to manage one's finances to make the right financial decisions to avoid financial problems (Lajuni et al., 2022). Financial literacy becomes essential given the emergence of new financial products/services, the complexity of the financial market, and a rapidly changing economic environment. A good attitude financially starts with a good attitude towards the environment. It can be interpreted that good financial behavior

results from the goodness that someone owns. This exemplary attitude is interpreted as analyzing every action not based on desire and pleasure but rather on upholding the principle of self-worth towards everything in the life. Therefore, workers in the MSME sector who live by this principle tend to avoid a consumptive lifestyle (Irikefe & Isaac, 2021). Consumerism in Indonesia has led to various irresponsible financial actions. It becomes essential for MSME workers to have basic intelligence in managing financial resources (Carvalho et al., 2021)

According to Bongomin et al., (2016), four financial literacy indicators exist. Behavior reflects one's efforts and purposes of maintaining a budget. Skills are related to one's ability to understand the benefits of and make simple financial calculations. Knowledge, on the other hand, represents one's level of understanding of financial products and instruments. Finally, attitude is one's ability to make effective decisions and take action. Financial literacy is an important subject to understand, because without good literacy it can lead someone to make financial mistakes (Lusardi & Mitchell, 2017). Financial literacy also plays an active role in helping people avoid unsafe service providers and products.

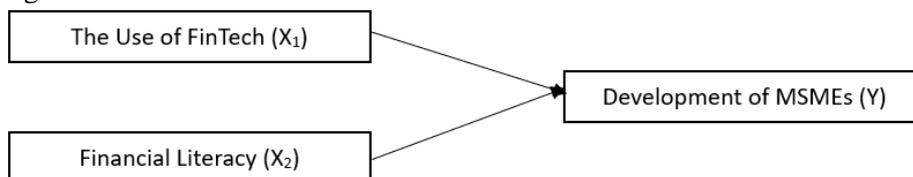
2.3 Micro, Small, and Medium Enterprises (MSMEs)

Indonesia's micro, small, and medium enterprises have become the front line for economic growth. From 2010 to 2023, there has been a significant increase in the total number of MSMEs spread throughout Indonesia, and the highest number is in the West Java region, with a total of 1,500,000 MSMEs (Ministry of Cooperatives, UMKM). Based on these facts, MSME entrepreneurs compete to innovate so their business sector can continue to grow. The Law of the Republic of Indonesia Number 20 of 2008 concerning Micro, Small, and Medium Enterprises defines MSMEs as business entities owned by individuals with maximum net assets of Rp10,000,000,000.00 (exclusive of land and building). MSMEs' roles in Indonesia's economic development, economic growth, and job creation are vital (Temelkov & Samonikov, 2018). Indonesia's total number of MSMEs continues to grow, and various sectors now develop. The growth and development of MSMEs are expected to increase the country's Gross Domestic Product and create new job opportunities that will reduce unemployment and alleviate poverty. Although the rising number of MSMEs has made the competition more intense, FinTech innovations have brought fresh air to people in the industry.

2.4 Research Framework

Research conducted by Ningsih, (2020) and Winarto, (2020) revealed FinTech's significant influences on the development of MSMEs. FinTech provides MSMEs with services, from fulfilling their needs for capital to giving them an easy transaction process. Furthermore, research conducted by Singla & Mallik, (2021) and Liu et al., (2021) proved financial literacy's positive influences on the development of MSMEs. Considering the results of the previous studies, the model of this research can be illustrated as follows:

Figure 1. Research Framework



3. Methodology

This research investigated whether FinTech and financial literacy can help MSMEs in Indonesia grow. A quantitative research method and convenience sampling were adopted given the accessibility,

time, and cost of conducting research, particularly when involving a vast population in which random sampling may be difficult to use. This study involved all MSME entrepreneurs as a population. Because the population in this study was huge, the researchers used a convenience sampling technique to obtain results following the research objectives. In the process, this research surveyed MSME entrepreneurs who are in Java and outside Java. Data were collected by distributing online questionnaires using Google Forms and then processed in several stages. The factors that influence and are used as indicators in this study are (1) Financial Technology which includes: dummy 0 or 1. (2) Financial Literacy which includes: knowledge, attitude, and behavior. The validity and reliability of the questionnaire were tested using SPSS. A validity test was conducted to measure the instrument's accuracy (questionnaire) measurement of research variables. On the other hand, the reliability test measured the reliability of the questionnaire to produce consistent results despite repeating the same test at different points. Moreover, a descriptive statistics analysis was performed to study the characteristics of the respondents.

Hypotheses were tested using multiple regression analysis by running Ordinary Least Square (OLS) regression in SPSS. The dependent variable of the research is the development of MSMEs, with indicators namely an increase in sales and an increase in assets after the adoption of FinTech by MSMEs. The independent variable of this research is the use of FinTech applications or services—a dummy variable that takes 0 (if not using any FinTech services) or 1 (if using FinTech services). FinTech services used in this research included (according to Regulations of BI and OJK): (1) Payment Systems, such as OVO, GOPAY, ShopeePay, DOKU, and Digital Banking; (2) Capital/Loan/P2P Lending Providers, such as KreditCepet, Kredivo, JULO, and Amartha; (3) Market Aggregator, such as Cermati, CekAja, DuitPintar, and Digitalmakerter; and (4) Risks and Investment Management, such as Bibit and Bareksa. Respondents selected at least one of the aforementioned FinTech services. Another independent variable in this research is financial literacy, measured after respondents answered questions regarding financial knowledge, financial attitude, and financial behavior.

4. Results and Discussion

4.1 Descriptive Analysis

In this research, 125 respondents participated, both owners of micro, small and medium enterprises and users of FinTech services. Samples were collected from March 2022 to September 2022. Characteristics of the respondents are as follows:

Table 1. Characteristics of Respondents

Sex	Frequency	Percentage (%)
Female	49	39.20
Male	76	44.00
Total	125	100.00

Education	Frequency	Percentage (%)
Master's Degree	8	6.40
Bachelor Degree	36	28.80
Senior High School	52	41.60
Junior High School	29	23.20
Total	125	100.00

Business Fields	Frequency	Percentage (%)
Internet Technology Business	2	1.60
Culinary Business	63	50.40
Agribusiness	2	1.60
Education Business	4	3.20
Kid Stuff Business	3	2.40
Fashion Business	23	18.40
Farming Business	6	4.80
Automotive Business	7	5.60
Creative Product Business	3	2.40
Cleaning Service Business	11	8.80
Animal Feed and Agriculture Business	1	0.80
Total	125	100.00

Types of FinTech	Frequency	Percentage (%)
Payment Service	76	60.80
P2P Lending	17	13.60
Risk and Investment Management	29	23.20
Market Aggregator	3	2.40
Grand Total	125	100.00

Length of Use	Frequency	Percentage (%)
< 6 Months	34	27.20
7 Months - 12 Months	33	26.40
1 - 5 Years	58	46.40
Grand Total	125	100.00

Domicile	Frequency	Percentage (%)
Java (Jabodetabek)	57	45.60
Java (non-Jabodetabek)	45	36.00
Outside Java	23	18.40
Grand Total	125	100.00

Types of FinTech	Frequency	Percentage (%)
Legal	125	100.00
Illegal	0	0.00
Grand Total	125	100.00

Source: data processing (2022)

Referring to Table 1, 44% of the respondents are male business owners, while 39.20% are female. Most respondents (41.60%) were senior high school graduates, followed by bachelor's degree-earners

(28.80%) and master's degree-holders (16%). Business owners in this research are sufficiently educated in managing the business.

Regarding business fields, 50.40% and 18.40% of the respondents worked in the culinary and fashion businesses, respectively. It indicates that both fields are the most favorite fields to start a new business, followed by cleaning service (8.80%). As to FinTech products they used, most respondents (60.80%) used payment gateway or digital-based payment system, followed by risk and investment management services (23.30%). The use of FinTech platforms to make investments shows that business owners care about their financial conditions. In addition, the rest of the respondents used peer-to-peer lending platforms that offer capital funding to business owners (13.60%) and market aggregator FinTech service (2.40%).

It is apparent that most respondents used FinTech as a payment gateway. This may be related to the Covid-19 pandemic that hit the country between 2022 and 2021 and pushed the government to impose a lockdown to make people stay home. Struck by the spread of Covid-19, MSMEs move their businesses online to survive and earn revenue. To make the online transaction process more accessible, they needed a digital payment system to help customers pay without making physical contact. However, amidst the pandemic and the need to survive from zero offline sales, data show that the number of MSMEs accessing capital financing platforms remained low.

Furthermore, it is reported that 27.20% of respondents had used FinTech services for 1 up to 6 months, while 26.40% and 46.40% had used them for 7 to 12 months and 1 to 5 years, respectively. Most respondents had used the services for a long time. They also mentioned that they only used services offered by legal FinTech companies registered in and regulated by the government of Indonesia.

As to domicile, most MSMEs (45.60%) were located in Jabodetabek (Jakarta, Bogor, Depok, Tangerang, and Bekasi), Java outside Jabodetabek (36%), and outside Java (18.40%). Data indicate that FinTech users remained concentrated in large cities and on the island of Java.

4.2 Determination Test

Table 2. Determination Test

Model	R	R Square	Adjusted Square	R Std. Error of the Estimate
1	.869 ^a	.756	.721	55384.60985

a. Predictors: (Constant), Financial Literacy, Use of Fintech

Source: data processing (2022)

The Adjusted R Square of this model is 0.721. This number indicates that the independent variables in this research explain 72.1% of the variation in the development of MSMEs, while other factors (not mentioned in this research) explain the rest (100% – 72.1% = 27.9%).

4.3 Regression Analysis

Table 3. ANOVA Test

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	132495353619	2	662476768096	21.659	.000 ^b
		3877.800		938.900		

Residual	428207640276	125	305862600197
	710.800		65.060
Total	175316117647	127	
	0588.500		

a. Dependent Variable: Development of MSMEs

b. Predictors: (Constant), Financial , the Use of FinTech

Source: data processing (2022)

At a 95% confidence level, the p-value is less than α ($0.00 < 0.05$), and therefore the null hypothesis (H_0) is rejected. It can be concluded that both independent variables simultaneously and significantly affect the development of MSMEs.

4.4 t-Test

Table 4. Coefficients

Model		Unstandardized Coefficients		Standardized		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	-72773789.393	14094882.510		-5.163	.000
	The Use of FinTech	18378939.277	4285906.735	.583	4.288	.001
	Financial Literacy	1857647.963	484869.135	.521	3.831	.002

a. Dependent Variable: Development of MSMEs

Source: data processing (2022)

a. X1 signifying the use of FinTech.

With a coefficient value of 18378939.277 and a significance level of 0.001 (less than $\alpha=0.05$), the X1 variable has a positive and significant influence on the development of MSMEs.

b. X2 signifying financial literacy.

With a coefficient value of 1857647.963 and a significance level of 0.002 (less than $\alpha=0.05$), the X2 variable has a positive and significant influence on the development of MSMEs.

4.5 Discussion

The use of FinTech influences Indonesian MSMEs' financial performance because it brings ease and efficiency to technology-based financial management that includes digitalized financial management, payment technology, and online-based loan. The emergence of FinTech has helped MSMEs by allowing customers to make an online payments, making transactions faster and more efficient. Moreover, FinTech helps MSMEs secure specific agreeable amounts of capital easily, even without collateral. They no longer need to take out bank loans and, therefore, can avoid the time-consuming loan-making process that often requires them to provide collateral. FinTech can help business owners with no access to banks to expand their market and reach new customers through practical and easy digital financial transaction services. FinTech offers an alternative financing solution to the community that demands a more democratic and transparent alternative to help people who fail to access traditional banking services due to strict banking regulations and limited services in certain regions. FinTech innovations aim to provide the community with alternative solutions and increase financial inclusivity.

The emergence of FinTech has changed all parts of the financial system, from the role of technology to customer behavior, from regulation to the production of financial instruments. The development

trend driving the current FinTech scenario is digital transformation in digital financial services and FinTech startups. Several banks are implementing FinTech solutions to handle customer data and applications to compensate for the loss of profitability for consumer loans and MSMEs due to the Covid-19 Pandemic.

The results of this study also reveal financial literacy's positive influence on the development of MSMEs. Understanding various financial products, financial institutions, regulations, and other financial industries can help MSME owners select and use the right FinTech services and avoid illicit ones. The ability to choose legal FinTech providers will increase security when making transactions, investments, or loans. In addition, knowing how to calculate interests, administrative expenses, or flotation costs will help business owners make accurate calculations using FinTech services and resist the temptation to take on more debt than they need and from illicit applications. With precise calculations, MSMEs can improve their sales, total assets, and the number of workforce. In summary, the higher the financial literacy is, the wiser the businesses will be when using FinTech services to improve the performance of their businesses.

5. Conclusion

It is expected that the results of this research can help business people see financial technology not as a threat but as a tool that makes loan making, capital financing, bill payment, payment checking, and marketing of MSME products easier. This goal is similar to that of the Financial Service Authority (OJK)'s programs to increase financial literacy and promote financial inclusivity. It is also expected that MSMEs have more excellent knowledge of financial products and financial management with the presence of financial technology as a tool that makes things easier.

Recommendations for future research include adding more variables to determine other factors affecting the development of MSMEs besides financial technology and financial literacy, as well as increasing the sample size to ensure equal data distribution.

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