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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 technology-based financial services that allow financial transactions to be made easily, 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 adoption of FinTech and financial literacy affect the development of Indonesia's MSMEs. Data were using online questionnaires while samples were selected using convenience sampling technique with 125 business owners participating in this research. Data were then analyzed using OLS regression method. Results suggest that FinTech and financial literacy have a positive and significant influence on the development of MSMEs.

Keywords: Financial Technology, Financial Literacy, MSME

1. Introduction

In early 2020, the Covid-19 pandemic loomed and hit the economy of the world, including Indonesia. The government of Indonesia made considerable efforts to slow the spread of the virus, and they included imposition of lockdown. During the lockdown, people were forced to stay at and do everything from home, including working, studying, and shopping online. 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.

Digital trend is a contributing factor to the development of online shopping habit. This trend has been in a number of sectors including finance. Technology and advancement of the internet have transformed conventional financial services, making them more modern and more accessible to the community (Abbasi et al., 2021). Financial technology has eliminated the need to shop at physical stores, making 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, have 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 system made possible by the help of financial technology. FinTech and digitization continue to advance and grow significantly, as embodied by presence of 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 digitalized financial report, payment technology and online-based loan for MSMEs, to be done easily and efficiently. Moreover, people can also enjoy easier and faster transactions with better user experience. Karim et al., (2022) found that three-fourths of consumers in their research used FinTech to transfer money and make payment. Covid-19 pandemic has accelerated adoption of FinTech that helps businesses and the community make digital payment 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 types of FinTech services have been registered in Indonesia, and they include Crowdfunding and Peer-to-Peer Lending, Market Aggregator, Risk and Investment Management, as well as Payment, Clearing and Settlement. These services aim to promote equitable economy and ease of transactions and help fulfill MSMEs' need for financing or capital (Winarto, 2020).

As business entities, MSME sector plays not only essential but also strategic roles and contributed significantly to Indonesia's economy. Most MSMEs are family-owned businesses, which is why they face fairly 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, these efforts alone remained insufficient. Developing MSMEs is tough 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 made a significant contribution to 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 bigger 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 to not only provide sufficient financial services but also expand their reach.

As FinTech develops rapidly, people and MSMEs must acquire financial literacy . Financial literacy is far more than just knowledge about, skills of and trust in the providers, products and services, but 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 (García-Pérez-de-Lema et al., 2021). As the key person determining business success, MSME owners need to be financially literate so they can make the right financial decisions after taking into account the risks (Liu et al., 2021). Moreover, when lacking financial literacy, the rising number

of unscrupulous FinTech startups as a result of technological advancement may put MSMEs at risk.

Exponential growth of FinTech has forced people to develop financial literacy, and that is why this research aims to examine the influence of adoption of financial technology platforms and financial literacy on the development of MSMEs (as can be seen from increase in sales and assets).

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 bring about a material effect on financial markets and institution as well as financial service provision (Financial Stability Board, 2017). FinTech offers financial solutions that help the community to get access to financial products and financial literacy more easily (Lee & Low, 2018). 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 category 1 and 2 (Bank Indonesia, 2022).

The Financial Service Authority (OJK) stated that the emergence of FinTech has made financial literacy program 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 eventually raise the standard of living of the community. FinTech can connect with the community that has never been served by conventional financial institutions. With the convenience it brings, this technology can also increase e-commerce sales and offer competitive interest rates.

Financial Literacy

The success of 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 any 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 becomes essential given the emergence of new financial products/services as well as complexity of the financial market and a rapidly changing economic environment. According to Bongomin et al., (2016), there are four indicators of financial literacy. Behavior reflects one's efforts and purposes of maintaining 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 actions.

Micro, Small and Medium Enterprises (MSMEs)

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 & Gogova Samonikov, 2018). The total number of MSMEs in Indonesia continues to grow, and various sectors now develop. It is expected that the growth and development of MSMEs can increase the country's Gross Domestic Product and create new job opportunities that will reduce unemployment and alleviate poverty. Although rising number of MSMEs has made competition more intense, FinTech innovations have brought a breath of fresh air to people in the industry. FinTech helps businesspeople access financial products more easily and increase their financial literacy (Sugiarti et al., 2019). They can also use FinTech for capital financing and transaction process.

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 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. Taking results of the previous studies into consideration, the model of this research can be illustrated as:
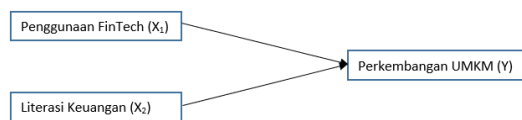

Figure 1. Framework

2. Method

This research investigated whether FinTech and financial literacy can help MSMEs in Indonesia grow. A qualitative research method and convenience sampling were adopted given accessibility, time and cost for conducting research, particularly when involving an extremely large population in which random sampling may be difficult to use. Data were collected by distributing online questionnaires using Google Forms and then processed in several stages. Validity and reliability of the questionnaire were tested using SPSS. Validity test was conducted to measure accuracy of the instrument (questionnaire) in measuring research variables. On the other hand, reliability test was to measure reliability of the questionnaire to

produce consistent results despite repetition of the same test at different points in time. Moreover, a descriptive statistics analysis was performed to study 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 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 (pursuant to Regulations of BI and OJK): (1) Payment System, such as OVO, GOPAY, ShopeePay, DOKU, and Digital Banking; (2) Capital/Loan/P2P Lending Providers, such as KreditCepet, Kredivo, JULO, and Amartha; (3) Market Agregator, such as Cermati, CekAja, DuitPintar, and Digitalmakerter; and (4) Risk 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 that was measured after respondents answered questions regarding financial knowledge, financial attitude and financial behavior.

3. Results and Discussion

Descriptive Analysis

In this research, 125 respondents participated, and they were 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
Grand Total	**125**	**100.00**

Education	Frequency	Percentage (%)
Master's Degree	8	6.40
Bachelor's degree	36	28.80
Senior High School	52	41.60
Junior High School	29	23.20
Grand 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
Grand 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**

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%). It can be concluded that business owners in this research are sufficiently educated in managing business.

As to 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 service (23.30%). The use of FinTech platforms to make investment 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 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 lockdown to make people stay at home. Hit by the spread of Covid-19, MSMEs move their businesses online to survive and earn revenue. To make online transaction process easier, they needed digital payment system that can 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. It can be concluded that 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.

Regression Analysis

Table 2. Determination Test

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

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

Determination Test

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%).

Table 3. Anova Test

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	1324953536193877.800	2	662476768096938.900	21.659	.000[b]
Residual	428207640276710.800	125	3058626000019765.060		
Total	1753161176470588.500	127			

a. Dependent Variable: Development of MSMEs
b. Predictors: (Constant), Financial Literacy, the Use of FinTech

F-Test

At a 95% confidence level, the p-value is less than α (0.00 < 0.05), and therefore the null hypothesis (H0) is rejected. It can be concluded that both independent variables simultaneously and significantly affect the development of MSMEs.

Table 4. Coefficients

Model	Unstandardized Coefficients B	Std. Error	Standardized Coefficients 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	18576047.963	4848699.135	.521	3.831	.002
a. Dependent Variable: Development of MSMEs					

T-Test

a. X1 signifying the use of FinTech
    With a coefficient value of 18378939.277 and a significance level of 0.001 (being less than α=0.05), 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 (being less than α=0.05), X2 variable has a positive and significant influence on the development of MSMEs.

Discussion

The use of FinTech influences Indonesian MSMEs' financial performance because it brings ease and efficiency in technology-based financial management that includes, such as, digitalized financial management, payment technology and online-based loan. The emergence of FinTech has helped MSMEs by allowing customers to make online payment, making transactions faster and more efficient. Moreover, FinTech helps MSMEs secure certain agreeable amounts of capital easily, even without collateral. They no longer need to take out bank loans, and therefore can avoid 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 demand a more democratic and transparent alternative to help people who fail to get access to traditional banking services due to strict banking regulations and limited services in certain regions. In short, FinTech innovations aim to provide the community with alternative solutions and increase financial inclusivity.

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

4. Conclusion and Recommendations

It is expected that results of this research can help businesspeople 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 that is to increase financial literacy and promote financial inclusivity. It is also expected that MSMEs have greater knowledge of financial products and financial management with 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 the use of financial technology and financial literacy as well as increasing sample size to ensure equal distribution of data.

Research Limitations

This research is limited in that only two independent variables, namely the use of FinTech and financial literacy, were used. As a result, this research lacks the ability to draw a comprehensive conclusion regarding MSMEs' development. Moreover, due to limited access, this research adopted convenience sampling technique known for its easy data gathering procedure, making this research unable to represent broader MSME population in Indonesia.

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