



THE INFLUENCE OF FINANCIAL TECHNOLOGY (FINTECH) ON THE DEVELOPMENT OF MICRO, SMALL, AND MEDIUM ENTERPRISES (MSMEs) IN TASIKMALAYA CITY

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Abstract. The expansion of the digital economy has driven significant transformation in the financial services sector through the emergence of financial technology (fintech). Fintech integrates technological innovation with financial service functions to provide faster, more efficient, and accessible financial solutions for the wider public. Reshapes conventional financial models by enabling financial transactions without requiring traditional bank accounts, while remaining regulated by Bank Indonesia and the Financial Services Authority to ensure consumer protection. Fintech plays a vital role in Indonesia's payment ecosystem by facilitating digital payment platforms, clearing, and settlement processes, thereby enhancing investment efficiency and reducing transaction risks. empirical analysis supports the relationship between fintech and MSME development. Hypothesis testing reveals that fintech has a positive and significant effect on MSME development, demonstrated by a path coefficient of 0.376 and a p-value of 0.000 (< 0.05). This finding indicates that improved utilization of financial technology contributes to increasing MSME growth, capacity, and competitiveness. Overall, fintech stands as a catalyst for promoting financial inclusion and strengthening MSMEs in the digital economy era.

Keywords: financial technology; msmes; business development.

1. Introduction

The digital economy opens up space for efficiency, broader market access, and innovation in financial services (Kuznetsov et al., 2021). One of the most prominent innovations in this ecosystem is the emergence of financial technology (fintech) (Hosen et al., 2023). Bank Indonesia explains that financial technology (fintech) is the result of a combination of financial services and technology, transforming business models from conventional to moderate (Mutiarra et al., 2019). Financial technology (fintech) is an innovation that combines technology with financial services, offering more efficient, faster, and more accessible solutions to the wider public (Anshari et al., 2021; Caturadina Darnida et al., 2024).

Financial technology provides services in the form of financial transactions without the need to have an account, as is the case with conventional banks. Although not a financial institution like banks, fintech is still regulated by Bank Indonesia to ensure consumer protection. Bank Indonesia mandates that fintech companies register with either Bank Indonesia or the Financial Services Authority. Bank Indonesia states that financial technology (fintech) has the potential to replace the role of formal financial institutions such as banks. In the context of payment systems, financial technology (fintech) contributes by providing a platform for business actors, facilitating payment processes, clearing, and transaction settlement. Furthermore, financial technology (fintech) also supports investment efficiency, reduces payment system risks, and makes it easier for individuals to save, access loans, and obtain capital. According to Bank Indonesia data in 2023, the value of electronic money transactions has exceeded IDR 500 trillion, and QRIS usage has seen significant growth, reaching adoption by millions of

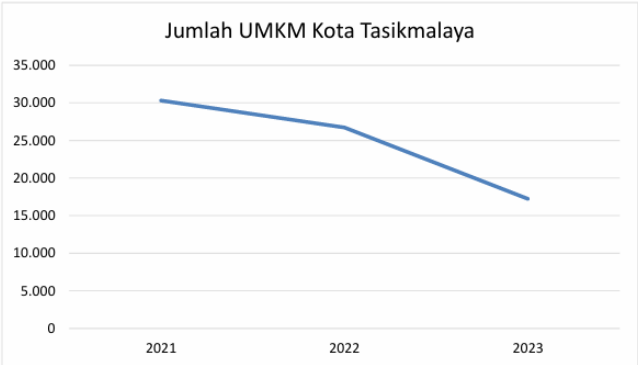
businesses across Indonesia. This will make it easier for micro, small, and medium enterprises (MSMEs) to develop their businesses through online payments without having to pay with cash. This convenience allows MSMEs to benefit and facilitate transactions. MSMEs that only use financial technology (fintech) for payments will provide convenience for customers who make transactions through payment gateway applications, eliminating the hassle of making payments.

Micro, Small, and Medium Enterprises (MSMEs) are a crucial sector in the Indonesian economy because they absorb a large workforce and drive local economic growth. However, amidst the dynamics of the digital economy, MSMEs face various challenges, particularly in terms of access to financial services, transaction efficiency, and market expansion. The emergence of financial technology (fintech) presents a strategic opportunity to overcome these obstacles, as it provides more accessible, faster, and more affordable financial services. Through services such as e-wallets, payment gateways, and peer-to-peer lending, financial technology (fintech) enables Micro, Small, and Medium Enterprises (MSMEs) to conduct business operations more efficiently and integrated with digital platforms. Therefore, it is important to understand the extent to which fintech can encourage the development of Micro, Small, and Medium Enterprises (MSMEs), particularly in a local context, such as Tasikmalaya City, which has significant potential for economic growth based on small-scale enterprises.

Table 1. Number of MSMEs in Tasikmalaya City in 2021-2023

No	Year	Number of MSMEs
1	2021	30.306
2	2022	26.706
3	2023	17.234

Source: Central Statistics Agency of West Java Province



Source: Central Statistics Agency of West Java Province

Figure 1. Number of MSMEs in Tasikmalaya City in 2021-2023

The data above shows a significant downward trend in the number of Micro, Small, and Medium Enterprises (MSMEs) in Tasikmalaya City from 2021 to 2023. In 2021, the number of Micro, Small, and Medium Enterprises (MSMEs) was recorded at 30,306. However, this number decreased to 26,706 units in 2022 and then sharply decreased again to 17,234 units in 2023. This decline indicates the challenges faced by businesses, both in terms of operational continuity and adaptation to digital developments. Several factors that may contribute to this decline include the continued impact of the COVID-19 pandemic, limited access to technology, and a lack of infrastructure and capital support.

This data is crucial as a basis for examining the role of financial technology (fintech) as a solution to encourage the sustainability and development of Micro, Small, and Medium Enterprises (MSMEs) amidst changes in the digital economy. The development of the digital economy in Indonesia, including in Tasikmalaya City, has shown significant growth thanks to the adoption of technologies such as financial technology (fintech). Fintech provides various rapid, efficient, and affordable financial services, such as cashless transactions, access to capital, and digital financial records.

Its presence is expected to assist Micro, Small, and Medium Enterprises (MSMEs) in developing their businesses, particularly in terms of operational efficiency and market expansion. However, in reality, several challenges remain. One of these is the decline in the number of Micro, Small, and Medium Enterprises (MSMEs) in Tasikmalaya City, from 30,306 in 2021 to 17,234 in 2023, according to data from the Statistics Indonesia (BPS) of West Java Province. This decrease indicates challenges in the sustainability and adaptation of MSMEs to digital transformation. Furthermore, despite the rapid development of financial technology (fintech), its implementation has not been fully optimized among Micro, Small, and Medium Enterprises (MSMEs). Many business owners experience obstacles in utilizing financial technology (fintech) services, such as limited understanding of the technology, concerns about data security and transaction privacy, and the increased risk of cybercrime.

Furthermore, limited digital infrastructure, such as uneven internet access and a lack of supporting devices, also hinders Micro, Small, and Medium Enterprises (MSMEs) from maximizing financial technology utilization. As a result, services such as e-wallets, payment gateways, and peer-to-peer lending are not yet widely and consistently used in their business operations. Therefore, in-depth research is needed to understand the factors influencing the adoption of financial technology (fintech) by Micro, Small, and Medium Enterprises (MSMEs) in Tasikmalaya City, as well as its impact on their business performance and sustainability.

2. Literature Review and Hypothesis

2.1 Financial Technology (Fintech)

Information technology has become a necessity and an integral part of human life. The development of information technology has had a significant impact on the lives of people, both individuals and organizations. People use information technology in the financial sector to access financial products and services. Innovations in information technology provide opportunities for us to conduct financial activities anywhere, anytime, and securely. This information technology innovation in the financial services sector is fintech, which refers to innovation in providing financial services (Wiyono & Kirana, 2020). According to the National Digital Research Center (NDRC) (2020), the term "fintech" refers to innovations using modern technology in the financial sector. In essence, fintech is a technology-based financial service that utilizes an online system to deliver innovative solutions in the financial services sector. Fintech products include electricity bill payments, vehicle installments, or insurance premiums, all handled online, including money transfers and balance checks, using mobile banking. According to Azzahra & Kartini (2022), financial technology is a combination of digital-based information technology and financial services as a new form of innovation. According to Bank Indonesia (2020), financial technology is a breakthrough in technological advancement through the use of technology in the financial system. This utilization can produce new products, services, technologies, and business models that can impact

financial system stability, monetary stability, and the smoothness, reliability, efficiency, and security of payment systems.

Financial technology, also known as fintech, is the replacement of cash payments with non-cash payments through applications. Connecting to the internet and accessing fintech services via smartphones makes them easy and fast to use (Nurrohyani & Sihalo, 2020). Financial technology (fintech), as an information medium used to provide technology-based financial services, has become a strong foundation for efforts to increase the effectiveness and efficiency of financial services (Rachman & Salam, 2018). Based on the definition above, it can be concluded that financial technology (fintech) is a financial service that adapts technological developments combined with the financial sector, combining innovation to provide more effective, efficient, secure, and modern financial transaction processes. The financial technology indicators used, according to Azzahra and Kartini (2022), are as follows: 1) Perceived usefulness, 2) Perceived ease of life, 3) Payment.

2.2 Development in the context of MSMEs

Development in the context of MSMEs can be understood as a systematic and continuous process of enhancing business capacity, productivity, and competitiveness, which manifests in measurable improvements in key performance indicators such as production volume, sales, revenue, profit, workforce expansion, and operational efficiency. This process involves identifying and analyzing growth potentials, supporting the strengthening of internal organizational structures, and monitoring the implementation of growth-oriented initiatives, while not necessarily implementing strategic decisions directly. MSME development further includes innovation, digital adoption, and managerial strengthening as core components that enable businesses to adapt to dynamic market environments and technological changes. In line with this, development also encompasses expansion of business scale and scope, improvement in profitability, and enhancement of human resource capabilities—ensuring MSMEs can sustain growth in the long term. MSME development is a continuous and structured process aimed at strengthening a business's internal capacity, productivity, and competitiveness through improvements in operational performance—such as production levels, sales, revenue, profits, and workforce—accompanied by organizational strengthening, innovation, technology adoption, and market-oriented strategic adjustments. This process encompasses the identification of growth opportunities, expansion of business scale and scope, enhancement of managerial and human resource capabilities, and the integration of digital technology, all of which collectively support the long-term resilience and sustainability of MSMEs. This study uses development variables with indicators adopted from Kartawinata et al. (2020) in the study by Kim et al. (2000), namely:

1. Sales turnover
2. Employment growth
3. Customer Growth

2.3 Financial Technology (Fintech) and the Development of Micro, Small, and Medium Enterprises (MSMEs)

Financial technology (fintech) is an innovation in financial services that utilizes technology to improve the accessibility, efficiency, and quality of financial services. Fintech provides new alternatives for Micro, Small, and Medium Enterprises (MSMEs)

to obtain financing, conduct transactions, and manage finances digitally. According to Arner, Barberis, and Buckley (2015), fintech is a combination of financial services and technology that can generate new business models, applications, processes, and products, which will ultimately impact the financial sector, including small businesses. Fintech provides a solution to the limited access to finance experienced by Micro, Small, and Medium Enterprises (MSMEs), particularly in terms of financing, which has been difficult to obtain from conventional banks. Micro, Small, and Medium Enterprises (MSMEs) in Indonesia often face obstacles in accessing formal funding due to limited collateral, inadequate credit history, and lack of financial literacy. In this context, fintech plays a role as an enabler, bridging Micro, Small, and Medium Enterprises (MSMEs) with alternative funding sources such as peer-to-peer (P2P) lending. The Financial Services Authority (2021) says that P2P lending is one of the fastest-growing areas of fintech. It helps Micro, Small, and Medium Enterprises (MSMEs) get money quickly and without having to put up complicated collateral. Research by Wardhana and Iriani (2020) shows that fintech has a positive impact on the growth of Micro, Small, and Medium Enterprises (MSMEs), particularly in terms of business expansion, operational efficiency, and increased turnover. Furthermore, fintech plays a role not only in financing but also in payment gateway and e-wallet services, helping businesses accept cashless payments, which are considered more practical and efficient (Suryanto et al., 2021). However, there are challenges that need to be addressed, such as low digital financial literacy, data security, and the risk of default in digital lending schemes. Therefore, synergy between regulators, fintech industry players, and Micro, Small, and Medium Enterprises (MSMEs) is crucial to create a healthy and sustainable ecosystem.

Therefore, the relationship between fintech and the development of Micro, Small, and Medium Enterprises (MSMEs) is mutually supportive. Fintech provides a platform that can accelerate the growth of Micro, Small, and Medium Enterprises (MSMEs), while Micro, Small, and Medium Enterprises (MSMEs) are a potential market that continues to drive innovation in the fintech sector.

3. Method

We used a quantitative method to compile this research, which involves processing the results and drawing conclusions. This research method will determine the significant relationship between the two variables studied. The population in this study is The population in this study was 74,246 Micro, Small, and Medium Enterprises (MSMEs) operating in 2021–2023. This study took samples based on the minimum sample size reference for the SEM model at least 100 respondents (Kelloway, 2015).

4. Result and Discussion

4.1 Validity and Reliability test

Validity testing is used to measure the validity of a questionnaire. A questionnaire is considered valid if its questions accurately reveal what it is intended to measure. Therefore, validity can be used to determine whether the questionnaire questions truly measure what it purports to measure (Ghozali, 2018). Convergent validity is based on the principle that the measures (manifest variables) of a construct should be highly correlated. Convergent validity is assessed based on the loading factor and the Average Variance Extracted (AVE) value. The rule of thumb used in convergent validity testing is a loading factor value > 0.5 and an AVE value > 0.5 (R. W. Batubara, 2018) (Imam Ghozali &

Henky Laten 2015). The average variance extracted (AVE) results are presented in the table below:

Table 2. Validity Test Fintech and Development of MSMEs

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Fintech	0.945	0.955	0.956	0.782
Development MSMEs	0.846	0.864	0.896	0.683

Based on the table above, it can be concluded that the AVE (Average Variant Extracted) value for each variable is greater than 0.5. The AVE (Average Variant Extracted) for the fintech variable is $0.782 > 0.5$. Furthermore, for Development MSMEs variable, the AVE (Average Variant Extracted) value is $0.683 > 0.5$. Therefore, it can be concluded that the variables or constructs used are valid. Based on the data presented in the table above, it can be concluded that each research variable has a Cronbach's alpha and composite reliability value > 0.06 . Based on these results, the variables used in the study are reliable.

The results of the Composite Reliability (CR), Average Variant Extracted (AVE), and Cronbach's Alpha calculations all indicate that the fintech and Development MSMEs measurement model meets model fit. In other words, all manifest variables are valid and reliable in measuring all variables.

4.2 R Square Analysis

R-square is a measure of the proportion of variation in the influenced (endogenous) value that can be explained by the influencing variables (exogenous). This is useful for predicting whether the model is good or bad. The R-square result for the endogenous latent variable of 0.75 indicates that the model is substantial (good), 0.50 indicates that the model is moderate (medium) and 0.25 indicates that the model is weak (bad), (Juliandi, 2018). Based on the data processing that has been done using the smart PLS 3.0 program, the R-square value is obtained which can be seen in the following table:

Table 3. R Square Value Result

	R Square	R Square Adjusted
Y	0,113	0,108

From table above, it is known that the influence of fintech on Development MSMEs with the R-square value indicates that variations in online loan values can be explained by variations in financial literacy values of 11.3% and 88.7% are influenced by other variables.

4.3 Effect Size (f^2)

This formula is used to determine whether the endogenous latent variable is strongly influenced by the exogenous latent variable. It can be processed as follows: (Ghozali and Latan, 2015).

$$f^2 = \frac{R^2_{include} - R^2_{exclude}}{1 - R^2_{include}}$$

If the f^2 value is 0.02, the effect is small, if 0.15 is medium, and if 0.35 is large, the influence of the exogenous latent variable is considered large (Ghozali and Latan, 2015:81). The output is as follows:

Table 4. F Square Value Result

	Financial Technology	Development MSMEs
Fintech Development MSMEs		0.127

From the output above, it can be seen that the Financial Technology variable has a small effect on Development MSMEs with an F-square value of 0.127. The results show that the F-square value of 0.165 is greater than 0.02, which means that 0.127 is greater than the critical threshold value of 0.02. This means that the influence of the Financial Technology variable on Development MSMEs in this study is considered "weak." This indicates that Financial Technology has a weak influence on the level of Development MSMEs.

4.4 Hypothesis testing

This test is used to determine the path coefficients of the structural model. The goal is to test the significance of all relationships or hypotheses. Based on data processing performed using the smart PLS 3.0 program, the results of the direct and indirect influence hypothesis tests can be seen in the following path coefficient and outer loading tables:

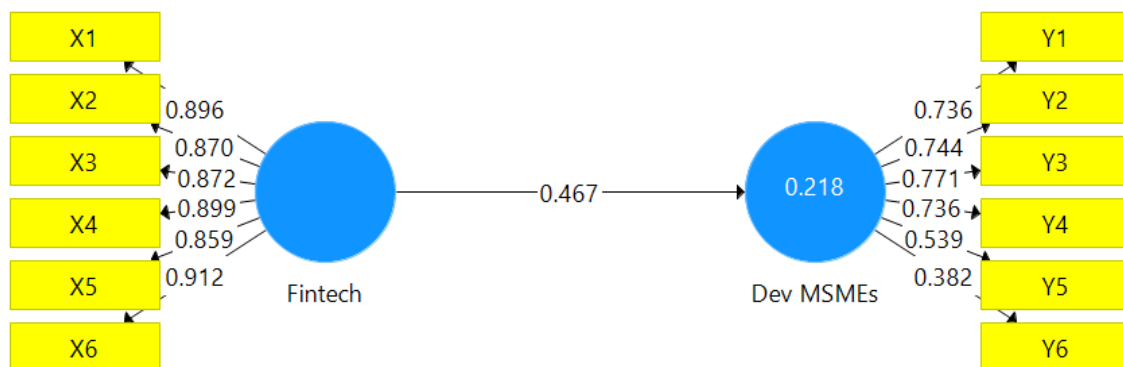


Figure 2. SEM Basic Model

A structural model is a model that connects exogenous latent variables with endogenous latent variables or the relationship between endogenous variables and other endogenous variables. Based on this structural model, the equation in this study can be formulated as follows:

$$\text{Development MSMEs} = 0.467 \text{ Financial Technology}$$

The results of the PLS calculation related to the financial technology calculation model for Financial Technology are depicted in the figure.

Table 5. Path Coefficient

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
Fintech -> Dev MSMEs	0.335	0.343	0.048	6.969	0.000

Based on the table above, it can be stated that the hypothesis testing shows that the effect of financial literacy on online loans has a path coefficient of 0.376. This indicates that the better the financial technology will increase development of MSMEs. This effect has a probability value (p-value) of $0.000 < 0.05$, meaning that fintech has a significant effect on development MSMEs.

4.5 Discussion

The influence of financial technology (fintech) on the development of MSMEs in Tasikmalaya City can be defined as the level of utilization of available digital financial services by business actors. These services cover various aspects, such as access to business capital, transaction speed and security, and the ability to reach a wider range of consumers through digital payment systems. With fintech services such as payment gateways, e-wallets, and peer-to-peer lending, MSMEs can conduct transactions more efficiently and flexibly, which in turn contributes to increased turnover, customer growth, and workforce expansion. This evidence demonstrates that MSMEs' understanding and skills in using fintech significantly impact business effectiveness.

The greater the ability to adapt to digital financial technology, the greater the potential for MSMEs to grow sustainably. According to Azzahra & Kartini (2022), fintech can be viewed across three main dimensions: perceived usefulness, perceived ease of life, and payment. These three dimensions act as drivers of technology adoption by business actors. The use of fintech drives changes in business behavior, where MSMEs assisted by technology are more likely to digitize transaction processes, financial recording, and marketing. This reinforces Davis's (1989) theory in the Technology Acceptance Model (TAM), which states that perceptions of the benefits and practicality of technology will influence individuals' attitudes toward using information systems.

Therefore, it can be concluded that fintech is not merely a transaction tool but rather a strategic enabler that allows MSMEs to increase efficiency, expand their business reach, and create added value in the digital business environment. Research results indicate that the higher a business owner's perception of the benefits and relevance of fintech, the greater their business growth.

5. Conclusion

The study concludes that financial technology (fintech) plays a crucial role in supporting the transformation and growth of micro, small, and medium enterprises (MSMEs) in Indonesia. Fintech not only facilitates efficient and accessible financial transactions but also enhances payment processes, improves financial management, and broadens market access for business actors. Regulatory oversight by Bank Indonesia and the Financial Services Authority ensures that fintech operations remain safe, reliable, and beneficial for consumers. The empirical findings reinforce fintech's strategic contribution to MSME development. The hypothesis testing results show a positive and significant relationship, with a path coefficient of 0.376 and a p-value of 0.000, indicating that greater adoption and effective use of fintech services directly enhance MSME development. This

means that as MSMEs improve their understanding and utilization of fintech-based financial services, their business capacity, operational efficiency, and competitive strength also increase. In conclusion, fintech serves as an important driver of MSME advancement in the digital economy, enabling broader financial inclusion, easier access to capital, and more efficient business operations. Strengthening fintech adoption among MSMEs is therefore essential for achieving sustainable economic growth and fostering a more inclusive digital financial ecosystem.

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