



The Role of Fintech in MSME Financing: A Digital Financial Inclusion Analysis in Indonesia

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Abstract

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The rapid development of digital technology in the financial sector has introduced fintech innovations that play a significant role in improving financial inclusion, particularly for Micro, Small, And Medium Enterprises (MSMEs). This study aims to analyze the role of fintech as an alternative financing solution for MSMEs in Indonesia and to examine the challenges in its implementation. Using a descriptive-analytical method and a qualitative literature review approach, this research explores academic studies, regulatory reports, and publications on fintech and MSMEs. The findings reveal that fintech services, such as Peer-To-Peer (P2P) lending, digital payment, and crowdfunding, provide faster, more flexible, and inclusive financing access compared to conventional banking institutions. However, limited digital financial literacy, regulatory risks, and the sustainability of fintech business models remain critical challenges. This study emphasizes that synergy among fintech companies, the government, banking institutions, and MSME actors is essential to establish an inclusive, secure, and sustainable digital financial ecosystem, thereby enhancing MSME competitiveness while supporting national economic stability.

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1. Introduction

The development of digital technology in the last two decades has brought about major changes in almost all aspects of life, including the financial sector. Digital transformation in the financial sector is not only marked by the adoption of electronic payment systems, but also by the emergence of various financial technology-based service innovations or financial technology (fintech). Fintech has transformed the global financial services landscape, including in Indonesia, by offering new alternatives in accessing, managing, and distributing funds faster, cheaper, and more inclusively compared to conventional financial institutions. The role of fintech in increasing financial inclusion is very significant, especially in developing countries with low levels of literacy and penetration of banking services (Rohman et al., 2023).

Indonesia as a country with a population of more than 270 million people has great potential in the use of fintech. One of the strategic groups that is in the spotlight in the development of fintech services is micro, small, and medium enterprises (MSMEs). MSMEs contribute more than 60% to the national gross domestic product (GDP) and absorb around 97% of the workforce, so the sustainability and development of this sector plays an important role in maintaining Indonesia's economic stability (Wiardi & Saputra, 2022). However, MSMEs in Indonesia still face a number of classic obstacles such as limited capital, difficulty in accessing formal banking services, low financial literacy, and limited human resources. These issues further emphasize the importance of alternative solutions in the provision of financial services for MSMEs.

The phenomenon of the banking access gap or financial inclusion gap between bankable and unbankable communities is one of the crucial issues facing the Indonesian financial system. Many MSMEs are classified as unbankable because they are unable to meet banking administrative requirements, such as providing collateral or an adequate credit track record. Conventional financial institutions are often limited in reaching this segment due to high operational costs and the risk of bad loans. As a consequence, MSMEs experience a considerable financing gap, namely a significant difference between the need for working capital and the amount of credit successfully distributed by formal financial institutions (Rusadi & Benuf, 2020).

In this context, fintech emerged as an innovation that could overcome most of these barriers. The definition of fintech according to the Financial Services Authority (OJK) is the use of technology in the financial system that produces new products, services, technologies, and/or business models, as well as has an impact on monetary stability, financial system stability, and/or payment system efficiency. The types of fintech that are growing rapidly in Indonesia include Peer-To-Peer (P2P) lending, crowdfunding, mobile payments, robo-advisors, and market aggregators. P2P lending, in particular, is widely used as an alternative financing for MSMEs because it offers faster, flexible, uncollateral-free, and digital-based capital based on a digital platform that is easily accessible to small business actors (Chandrawan et al., 2023).

Although it offers a variety of advantages, fintech is inseparable from a number of risks and drawbacks. The challenges faced include regulatory aspects,

consumer protection, data security, and the sustainability of the business model of the fintech platforms themselves. The low level of digital financial literacy is also a factor that has the potential to cause new problems, such as the inability of MSME actors to manage loan risks or being entangled in debt with high interest rates (Rahayu et al., 2023). Therefore, the development of the fintech ecosystem needs to be balanced with adequate regulation, better digital literacy, and support from various stakeholders.

The academic relevance of the study on the role of fintech in supporting MSME financing lies in its contribution to the digital financial literature, business management, and public policy. From the academic side, this research enriches the discourse on innovative strategies in bridging the financial gap faced by MSMEs in the digital era. From a practical perspective, the results of the study can be valuable input for regulators, fintech industry players, and MSME entrepreneurs to make optimal use of technology. The significance of this topic is even more important when it is associated with efforts to realize sustainable national economic stability through the empowerment of MSMEs based on digital financial inclusion.

2. Literature Review

2.1. Definition and Concept of Fintech

Financial technology or fintech is an integration between financial services and digital technology that aims to create efficiency, speed, and accessibility in transactions and financing. According to the Financial Services Authority (*Otoritas Jasa Keuangan*/OJK), fintech can be defined as the use of technology to produce new

products, services, and business models in the financial sector that have an impact on monetary stability and the payment system. This concept is in line with the views of academics who call fintech a disruptive innovation that changes the structure of the traditional financial industry by presenting a simpler, faster, and cheaper service system. Global fintech developments are also influencing the dynamics of the industry in Indonesia, especially with the increasing internet penetration and smartphone use, which allows application-based financial services to reach the wider community (Rohman et al., 2023).

Fintech includes various types of services such as Peer-To-Peer (P2P) lending, mobile payments, digital wallets, crowdfunding, robo-advisors, and market aggregators. Each has a different function, but the goal is the same, which is to provide a technology-based financial alternative. In Indonesia, P2P lending is one of the most developed forms of fintech because it is able to answer the financing needs of MSMEs that have not been served by banks. With this system, lenders can directly connect with borrowers through digital platforms without going through traditional banking mechanisms. However, the development of fintech also poses new challenges, such as the potential for data misuse, weak digital literacy of users, and the need for adequate regulations to maintain financial system stability. A number of studies emphasize that without regulatory support and a healthy ecosystem, the sustainability of fintech can be disrupted, especially if problems arise such as defaults or cybersecurity (Mutamimah & Indriastuti, 2023).

2.2. The Role of Fintech in Financial Inclusion

Financial inclusion is one of the strategic agendas of the Indonesian government, because there is still a large gap between bankable and unbankable communities. Many people, especially in rural areas and MSMEs, do not have access to formal banking services due to limited collateral, documents, and geographical location. The presence of fintech provides an opportunity to expand the reach of financial services in a more efficient, fast, and cheap way. Fintechs such as mobile payments and digital wallets are able to facilitate people's daily transactions without having to rely on banks. In addition, P2P lending-based fintech can provide access to financing for business actors who have difficulty obtaining credit from banks, thus playing an important role in reducing the financial inclusion gap (Edward et al., 2023).

In addition to financial access, fintech also contributes to increasing digital financial literacy. Fintech applications are designed with a simple interface, information transparency, and features that can help users understand transaction and financing mechanisms. Thus, fintech not only provides services, but also becomes a means of financial education. Research shows that the use of fintech can increase public awareness about personal and business financial management, thus having a positive impact on economic empowerment. However, the low level of digital literacy among some people is still an obstacle. If not balanced with adequate education, risks such as excessive loans, defaults, and digital fraud can increase (Ozili, 2020). Therefore, the role of fintech in financial inclusion must be accompanied by a systematic digital literacy strategy and regulations that protect consumers.

2.3. Fintech and MSME Financing

MSMEs are a strategic sector in the Indonesian economy because they contribute greatly to GDP and labor absorption. However, this sector faces the classic obstacle in the form of limited access to financing. The data shows that there is a significant gap between the capital needs of MSMEs and the amount of credit disbursed by banks. This gap is known as the financing gap, which makes it difficult for many MSMEs to develop even though they have great market potential. Fintech, especially through P2P lending and crowdfunding, is here as an innovative solution to bridge the gap. Through P2P lending platforms, MSME actors can obtain working capital loans without having to provide collateral, while individual investors can distribute funds directly with certain yields. This process takes place faster and more transparent than traditional banking mechanisms (Chandrawan et al., 2023).

In addition to the financing aspect, fintech also provides additional services such as digital payments, cash management, and transaction recording that greatly help MSMEs in improving operational efficiency. The latest study confirms that the adoption of fintech by MSMEs not only increases access to capital, but also expands markets, strengthens competitiveness, and encourages business sustainability in the digital era. However, the literature also notes the existence of risks, such as a high default rate in the absence of good risk mitigation, as well as the potential for a greater interest burden compared to bank loans. Therefore, the success of fintech in supporting MSMEs is highly dependent on strengthening regulations, digital literacy, and collaboration between fintech platforms and other stakeholders, such as the government and formal financial institutions (Ramadhan, 2021).

3. Methods

This study uses a descriptive-analysis method with a qualitative approach. This approach was chosen because it is suitable to explore the phenomenon of fintech developments and their role in supporting MSME financing in more depth. The purpose of qualitative research is to understand the meaning, views, and dynamics behind the relationship between fintech, financial inclusion, and the sustainability of MSMEs. Using a descriptive method, the researcher seeks to provide a comprehensive overview of the actual conditions, opportunities, and challenges faced by MSMEs in utilizing fintech services.

The data used in this study is sourced from secondary data. Secondary data is chosen because it provides relevant, tested, and obtained information from various scientific publications and other reliable sources. The main data sources include research journals, scientific articles, reports of financial institutions, and publications from regulators such as the Financial Services Authority (OJK), Bank Indonesia (BI), and international institutions such as the World Bank. The literature study was conducted to collect and analyze literature that discusses fintech, MSMEs, financial inclusion, and peer-to-peer lending. Thus, this research is based on a conceptual and empirical framework that has been developed by previous researchers.

Data analysis was carried out through the stages of identification, classification, and interpretation of information from the literature studied. First, the researcher identifies articles and publications that are relevant to the research topic, especially those published in the 2019–2023 range to ensure the relevance and timeliness of the data. Second, the literature is classified based on key themes such

as the definition of fintech, the role of fintech in financial inclusion, MSME challenges, and the potential of fintech as a financing solution. Third, the information collected is interpreted to find patterns, gaps, and opportunities that can be used as a basis for formulating an analysis of research results.

The qualitative approach based on literature studies has several advantages. First, this method allows researchers to gain a deeper understanding of complex and dynamic phenomena. Second, the use of secondary data allows research to cover a broader perspective, both from the academic and practitioner sides. Third, this method provides flexibility in integrating theory with practice in the field, so that the research results are more contextual and applicative. However, the researcher also realized limitations, such as dependence on the quality of literature sources and limitations in obtaining primary data. Therefore, the analysis is done critically by comparing various sources to ensure the objectivity and validity of the research findings.

4. Results

The development of fintech in Indonesia has shown a significant growth trend in the last five years. OJK data noted that the number of registered and licensed fintech companies has increased rapidly, especially in the Peer-To-Peer (P2P) lending and digital payment services sector. This growth is driven by the increasing need for faster, more efficient, and more flexible financial services, especially after the COVID-19 pandemic which accelerated digitalization in various sectors. For MSMEs, the presence of fintech is a strategic alternative in accessing financial

services, considering that many of them are still constrained by the strict requirements of conventional banking. Research shows that P2P lending is able to fill the financing gap left by banks by providing access to working capital without collateral, through a simpler and faster digital-based process (Chandrawan et al., 2023).

One of the important phenomena is the increasing participation of MSMEs in utilizing P2P lending services. Platforms such as Modalku, Investree, and Amartha have played a role in distributing billions of rupiah in financing to small business actors. MSMEs that previously had difficulty accessing capital now have new opportunities to expand their businesses, increase production capacity, and increase distribution networks. Previous research confirms that the use of fintech, especially digital financing, not only contributes to the availability of capital, but also helps MSMEs in improving operational efficiency through the integration of payment systems and electronic transaction management (Winarto, 2020). In other words, fintech not only functions as a provider of capital, but also as a digital ecosystem that strengthens the competitiveness of MSMEs in an increasingly competitive market.

However, while the growth of fintech brings many benefits, significant challenges remain. One of the main obstacles is the low digital financial literacy among MSME actors. Many small business actors do not understand the risks of using fintech services, both in terms of interest costs, potential defaults, and data security. As a result, some MSMEs are trapped in financing problems that actually burden the sustainability of their businesses. Research shows that financial literacy

is an important factor in determining the extent to which fintech can function as a long-term solution for MSMEs. Without sufficient understanding, the use of fintech can be a double-edged sword that poses new problems in business financial management (Ayustia et al., 2023).

In addition to the literacy factor, regulatory risks are also a major concern. Fintech, especially P2P lending, faces challenges related to consumer protection, information transparency, and user data security. Several cases of default in the P2P lending industry point to the need for stricter oversight from regulators to maintain public trust. The OJK has issued various policies to strengthen supervision, including recording obligations, loan restrictions, and consumer protection mechanisms. However, implementation in the field still faces obstacles due to the growing number of platforms and the variety of business models they implement. The latest study emphasizes that adaptive and innovative regulation is needed for fintech to develop sustainably without sacrificing the stability of the national financial system (Yunita et al., 2022).

The MSME financing gap remains a prominent issue in the results of this study. Although fintech has contributed to distributing funds to MSMEs, data shows that the amount of financing available still does not fully cover the business capital needs. Bank Indonesia noted that the MSME financing gap reaches hundreds of trillions of rupiah, which means that fintech financing only covers a small part of the total needs. This is due to the limited capital capacity of fintech platforms, as well as the low participation of individual and institutional investors in digital financing schemes. Thus, fintech plays an important role, but has not been able to be the sole

solution in solving the problem of MSME financing gaps. There needs to be synergy between fintech, banking, and the government to address this challenge comprehensively (Edward et al., 2023).

Furthermore, the results of this study show a positive correlation between fintech adoption and increasing the competitiveness of MSMEs. MSMEs that utilize fintech services not only earn capital, but are also able to expand market reach through the integration of digital payments and e-commerce-based marketing. Services such as digital wallets and QR code payments make it easier for MSMEs to reach a wider range of consumers, including the younger generation who are more familiar with digital transactions. In addition, data from the World Bank confirms that the digitalization of financial services has a direct impact on increasing the productivity of small and medium-sized enterprises in developing countries. These findings show that the use of fintech can be a catalyst for the transformation of MSMEs towards a more inclusive digital economy (Marissa & Fitriyah, 2023).

Nonetheless, the challenges of fintech business sustainability cannot be ignored either. Some platforms face difficulties maintaining the quality of their loan portfolios, especially during times of unstable economic conditions. The level of Non-Performing Loans (NPLs) in the P2P lending sector had increased during the pandemic, which raised concerns about the sustainability of this business model. Therefore, the success of fintech in supporting MSMEs is highly dependent on their ability to implement risk mitigation, strengthen credit scoring systems, and maintain transparency to stakeholders. Research underscores the importance of sustainable innovation, both in terms of technology and business models, so that fintech

remains relevant and able to survive in the face of global economic dynamics (Pizzi, 2021).

The results of this study confirm that fintech has great potential to support MSME financing and expand financial inclusion in Indonesia. However, these benefits cannot necessarily be felt equally by all MSME actors. Differences in digital literacy levels, technology access, and business readiness are factors that determine the level of fintech adoption. In addition, there are regulatory, security, and business sustainability risks that must be overcome immediately. Therefore, collaboration is needed between regulators, fintech industry players, and conventional financial institutions to build a digital financial ecosystem that is more inclusive, sustainable, and supports national economic growth. By strengthening literacy, regulation, and financing capacity, fintech can be a strategic solution in answering the needs of MSMEs in the digital transformation era.

5. Discussion

The results of this study show that fintech has an important role in bridging the MSME financing gap in Indonesia. Fintech, especially through peer-to-peer (P2P) lending services, has proven to be able to provide faster and more flexible access to capital than conventional banks. However, these benefits have not completely closed the existing financing gap due to limited capital capacity from fintech platforms. Therefore, fintech should be seen as complementary finance, not as a full replacement for the banking system. In other words, collaboration between

fintech, banking, and government is still needed to create a more inclusive and sustainable financial ecosystem (Rusadi & Benuf, 2020).

Other findings show that the level of digital financial literacy is a crucial factor in determining the effectiveness of fintech utilization. Many MSMEs still face obstacles in understanding the risk of loan interest, contract terms, and optimal use of digital applications. This condition shows that although fintech provides wider access, without adequate literacy, MSMEs have the potential to be trapped in new problems such as high debt burdens or data misuse. Thus, digital literacy is not only the responsibility of individual business actors, but also needs to be supported by systematic education programs from regulators, financial institutions, and fintech service providers (Panos & Wilson, 2020). Research confirms that good digital literacy can improve people's ability to utilize fintech services more productively and safely. In addition, this discussion also highlighted the regulatory and sustainability aspects of the fintech business. Strict and adaptive regulations are needed to maintain public trust, prevent predatory practices, and protect consumers from adverse risks.

In this context, the OJK and Bank Indonesia have taken supervisory measures, but challenges remain significant given the rapid development of technology and the emergence of complex new business models. On the other hand, the sustainability of the fintech business is also greatly influenced by the platform's ability to manage credit risk, maintain transparency, and innovate in a sustainable manner. Previous research has shown that fintechs that manage to survive in the long term are those that are able to build trust through good governance as well as strengthen their risk management systems (Agus Yulistiyono & Suryati, 2023). By

considering these results, it can be concluded that fintech does have great potential as a catalyst for MSME development, but it cannot be separated from fundamental challenges. Technological innovation must be balanced with financial literacy, adaptive regulation, and multi-stakeholder collaboration. If this can be realized, fintech will become a strategic instrument to strengthen the competitiveness of MSMEs while supporting national economic stability.

6. Conclusion

This research highlights the strategic role of fintech in supporting the financing and development of MSMEs in Indonesia. Fintech, through services such as Peer-To-Peer (P2P) lending, crowdfunding, and digital payment systems, has presented financing alternatives that are more inclusive, fast, and flexible compared to traditional banking institutions. The presence of fintech allows MSMEs to obtain access to capital without collateral, utilize efficient digital payments, and integrate electronic transaction recording. Thus, fintech not only functions as a source of capital, but also as part of a digital ecosystem that strengthens the competitiveness of MSMEs in the era of economic transformation. However, the use of fintech is inseparable from a number of fundamental challenges. The issue of digital financial literacy is still a major obstacle, because many MSME actors do not fully understand the risks of loans, data governance, and digital service mechanisms.

In addition, regulatory risks and the sustainability of fintech businesses are also a serious concern. Some platforms still face limited capital, high default rates, and potential practices that harm consumers. This shows that fintech's success in

supporting MSMEs is highly dependent on a strong regulatory ecosystem, transparent corporate governance, and collaboration with conventional financial institutions and the government. Therefore, strategies to strengthen digital literacy, increase regulatory capacity, and multi-stakeholder collaboration are the main keys in optimizing fintech's potential. If this can be realized, fintech will play a role not only as an alternative financing instrument, but also as a catalyst for MSME empowerment and a driver of more inclusive, stable, and sustainable national economic growth.

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