

The Role of FinTech in Enhancing Financial Inclusion and Access to Funding for MSMEs in Indonesia's Digital Economy Era



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ABSTRACT

With the rapid development of digital technology, the financial sector is facing major changes that allow MSMEs to access financial services that were previously difficult to reach through traditional financial institutions. MSMEs, as a sector that plays an important role in the Indonesian economy, often face obstacles in obtaining formal financing. Therefore, FinTech has the potential to be a solution in overcoming the financial access gap and accelerating financial inclusion for MSMEs, in line with the increasing penetration of the internet and technology in Indonesia. This study aims to examine the role of FinTech in increasing financial inclusion and access to funding for MSMEs in Indonesia. This study uses a qualitative approach with a type of literature study research to analyze the role of FinTech in increasing financial inclusion and access to funding for MSMEs in the era of Indonesia's digital economy. The results show that the adoption of FinTech can facilitate MSMEs in accessing digital banking services, electronic payments, and technology-based lending platforms, which provide operational convenience and efficiency. However, challenges such as financial literacy, data security, and uneven internet access still need to be overcome so that the full potential of FinTech can be realized to support the economic growth of MSMEs.

1. INTRODUCTION

The rapid development of digital technology has changed many aspects of life, including the financial sector. One of the innovations that emerged in response to this change is Financial Technology (FinTech), which refers to the use of technology to provide financial services (Arner et al., 2016). In Indonesia, with a large population and increasing internet penetration rates, FinTech plays an important role in supporting financial inclusion and providing wider access to funding for micro, small, and medium enterprises (MSMEs) (Maulana et al., 2022). MSMEs are the backbone of Indonesia's

economy, but many still face obstacles in obtaining formal financing from traditional financial institutions (Jha & Dangwal, 2024).

Financial Technology or FinTech is a term that refers to technological innovations used to support or enhance traditional financial services and products (Vives, 2017). By leveraging technologies such as mobile applications, blockchain, artificial intelligence, and big data, FinTech seeks to improve the efficiency and inclusivity of the financial system. FinTech companies often offer services that are more affordable, accessible, and fast compared to conventional financial institutions, allowing



individuals and businesses to obtain financial services in a simpler and more straightforward way (Zhang et al., 2022). FinTech covers various sectors, ranging from digital payments, peer-to-peer (P2P) lending, digital investments, to technology-based insurance (InsurTech) (Teece, 2018).

In Indonesia, the development of FinTech is quite rapid, driven by the increasing use of the internet and smartphones among the public, as well as government support in creating an inclusive digital financial ecosystem (Kurniasari et al., 2021). According to data from Bank Indonesia, the FinTech sector has shown significant growth in recent years, with an increasing number of platforms providing digital payment, investment, and financing services for micro, small, and medium enterprises (MSMEs). This is very important to increase financial inclusion in Indonesia, considering that there are still many people who do not have access to traditional banking services (Tahu & Verawati, 2024). In addition, FinTech can also speed up the financing process for MSMEs which are often constrained by long bureaucracy and requirements that are difficult to meet in the conventional banking system.

Although the potential of FinTech is enormous, the sector faces a number of challenges, especially related to data security, consumer protection, and regulations that have not fully accommodated technological developments (Atikah, 2020). The use of personal data and financial transactions online raises concerns about data leakage and digital fraud. In addition, the gap in digital literacy is also an obstacle, especially for older or less exposed segments of society (Afjal, 2023). However, with the right policy support, innovation in technology, and better public education, the prospects for FinTech in Indonesia are very bright. Evolving

technologies, such as blockchain and artificial intelligence, offer the potential to further improve the transparency, efficiency, and accessibility of financial services, as well as expand financial inclusion across the country.

It is important to understand how FinTech can overcome limited access to finance for MSMEs in Indonesia, especially in the era of a growing digital economy. Studies on the role of FinTech in financial inclusion are very relevant, considering the importance of MSMEs for economic growth and job creation (Safitri, 2020). The Government of Indonesia, through various policies, seeks to increase financial inclusion by involving technology in a more inclusive financial system. However, although the potential of FinTech is enormous, challenges such as data security, digital literacy, and regulations that are not yet fully supportive, are still obstacles that need to be overcome (Ediagbonya & Tioluwani, 2023).

Previous studies have identified the significant role of FinTech in increasing financial inclusion in Indonesia, especially for MSMEs. Research by Karmeli et al., (2021) shows that the use of FinTech has a significant positive impact on the development of MSMEs in Sumbawa Regency. FinTech has had a great influence in the aspects of payment transactions, capital financing, financial arrangements, and sales promotions. This shows that financial technology can be an important driver in encouraging financial inclusion, allowing MSMEs in Sumbawa to more easily access financial services and strengthen their position in the digital economy (Karmeli et al., 2021).

Furthermore, the research of Ermi et al., (2023) concluded that the use of Financial Technology (FinTech) significantly plays a role in increasing financial inclusion in MSMEs in Malang City.



FinTech makes it easier for MSMEs to access various digital financial services, which were previously difficult to reach, such as loans, digital payments, and financial management services. With FinTech, MSMEs in Malang City can overcome challenges in accessing finance and improve their operational efficiency. This study emphasizes that the adoption of digital technology is very important in encouraging MSME-based economic growth in the digital economy era (Ermi et al., 2023).

Finally, Qur'anisa et al., (2024) concluded that Financial Technology (FinTech) has a very important role in improving financial access in Indonesia, especially in the digital era. FinTech provides ease and efficiency in accessing digital banking services, electronic payments, and peer-to-peer lending, which is especially beneficial for people who live in remote areas or who were previously unreachable by traditional financial services. However, challenges such as limited access to technology and security risks still need to be addressed. To maximize the potential of FinTech in encouraging financial inclusion, adaptive regulation and collaboration between the FinTech sector and traditional financial institutions are needed (Qur'anisa et al., 2024).

The purpose of this study is to examine the role of FinTech in increasing financial inclusion and expanding access to funding for MSMEs in Indonesia. This study aims to provide insight into successful FinTech business models, factors that affect the adoption of FinTech by MSMEs, and their impact on the performance of small businesses in Indonesia. In addition, this research also aims to provide policy recommendations that can accelerate the use of FinTech as a financing solution for MSMEs.

2. METHOD

This study uses a qualitative approach with a type of literature study research to analyze the role of FinTech in increasing financial inclusion and access to funding for MSMEs in the era of Indonesia's digital economy. Literature studies were chosen because of the relevance of the topic that requires the collection of data from various previously published sources, such as journal articles, reports, books, and other related documents (Booth et al., 2003). This research aims to identify the trends, challenges, and potential of FinTech in improving financial access for MSMEs, as well as to understand its contribution to Indonesia's digital economy. In this study, the main data sources consist of scientific articles, research reports, and other publications that discuss the use of financial technology (FinTech) in the context of financial inclusion and funding for MSMEs in Indonesia, both from domestic and international sources (Creswell & Creswell, 2017).

The data collection technique is carried out by selectively searching and collecting relevant articles related to the research topic through various academic databases such as Google Scholar, JSTOR, and ScienceDirect, as well as relevant industry reports. Selection criteria include articles published in the last five years, relevance to FinTech and MSME topics, and the quality of journals indexed by international databases (Winchester & Snow, 2016). In addition, the references used include articles with empirical research results, case studies, and theories that can provide deeper insights into the impact and challenges of FinTech in financial inclusion.

The data analysis method in this study uses thematic analysis. This approach allows researchers to identify the main themes that emerge in the collected literature, as well as understand how they relate to each other and



contribute to the development of financial inclusion for MSMEs (Braun & Clarke, 2006). The analysis process begins with an in-depth reading of each selected source to gain an understanding of the content and context. After that, the researcher conducted thematic categorization based on relevant subtopics, such as the impact of FinTech on MSME funding access, the challenges faced, and supportive government policies. The results of this thematic analysis will be presented to provide a comprehensive overview of FinTech's contribution to financial inclusion in Indonesia.

3. RESULT AND DISCUSSION

In this study, the researcher conducted a literature study to identify and analyze relevant articles on the role of FinTech in improving financial inclusion and access to funding for MSMEs in the era of Indonesia's digital economy. The data selection process was carried out by selecting articles published in the last 5 years, from leading international journals, as well as reports focusing on FinTech implementation and its impact on MSMEs. From the various articles found, the researcher managed to filter 10 articles that met the criteria of relevance, quality, and contribution to the research topic.

Table 1. Literature Review

No	Author (Year)	Article Title	Journal	Method	Key findings
1	(Muzdalifa et al., 2018)	Peran fintech dalam meningkatkan keuangan inklusif pada UMKM di Indonesia (pendekatan keuangan syariah)	Jurnal Masharif Al-Syariah: Jurnal Ekonomi Dan Perbankan Syariah	This study uses a qualitative method with a descriptive approach.	This study found that FinTech, especially those based on Islamic finance, provides better access for MSMEs in obtaining funding by utilizing digital technology that facilitates financial transactions. FinTech is also helping to expand financial access to areas previously limited by traditional infrastructure. In conclusion, FinTech can be a key driver of MSME financial inclusion in Indonesia, addressing challenges such as limited funding and uneven infrastructure.
2	(Kusdimanto et al., 2022)	Review Peran Inklusi Keuangan Berbasis Fintech Dan	Jurnal Publikasi Manajemen Informatika Dan	This study uses a literature study approach	The results of the study show that FinTech plays an important role in increasing financial inclusion in Indonesia,



		Perilaku Keuangan Untuk Pertumbuhan UKM			especially for SMEs, by facilitating access to financial services such as loans, digital payments, and financial management. FinTech adoption helps SMEs in making better financial decisions, which contributes to the growth and sustainability of their businesses. Therefore, the development of more inclusive FinTech and financial behavior education is very important in supporting the growth of SMEs and the Indonesian economy.
3	(Dewi, 2020)	Dampak Fintech Terhadap Perkembangan Inklusi Keuangan Pada UMKM Di Jawa Timur	Gorontalo Accounting Journal	This study uses a quantitative method with a descriptive approach	This study found that although risk and investment management and market provision in FinTech did not have a significant effect on the financial inclusion of MSMEs, aspects of a cashless society were proven to improve MSME financial knowledge, behavior, and attitudes. In conclusion, cashless society-based financial technology can encourage financial inclusion of MSMEs in East Java, but other aspects such as risk management and market provision need to be further developed to have a greater impact.
4	(Laut & Hutajulu,	Kontribusi Financial	Prosiding Seminar	This study uses a quantitative	The results of the study show that the number of



2019)	Technology dalam Meningkatkan Inklusi Keuangan di Indonesia	Nasional Fakultas Ekonomi Untidar 2019	method with a cross-sectional data approach	borrowers who use FinTech lending services has a significant influence on increasing financial inclusion in Indonesia. Any 1% increase in the number of borrowers can increase financial inclusion by 1.9%. This indicates that the development of FinTech, especially in terms of digital lending, can contribute positively to increasing financial access among the Indonesian people.
5 (Ramadhan, 2021)	Peran Fintech Dalam Meningkatkan Inklusi Keuangan Syariah Pada UMKM Di Kota Makassar	Madinah: Jurnal Studi Islam	This research uses a qualitative approach with case studies	The results of the study show that the use of barcode-based online payment applications such as Paytren provides convenience, time efficiency, and security in transactions. These advantages directly contribute to increasing sharia financial inclusion among MSMEs in Makassar City. The use of FinTech allows MSMEs to conduct transactions with customers more efficiently and securely, which in turn expands their access to Islamic financial services.

Increasing MSMEs' Access to Finance through FinTech

The results of research from Dewi (2020) and Laut & Hutajulu (2019) show that FinTech has a significant contribution in increasing MSMEs' access to financial services. Through various

digital platforms, MSMEs can access loans, payments, and financial management more efficiently. The increase in the number of borrowers who take advantage of FinTech lending directly increases financial inclusion in Indonesia. This research underscores the



importance of developing technology to overcome limited access to funding, especially in areas that were previously less accessible to traditional financial institutions.

The Success of Cashless Society Aspects in Increasing Financial Inclusion

Research by Dewi (2020) and Ramadhan (2021) highlights the role of cashless technology in expanding the financial inclusion of MSMEs. Payment-based apps like Paytren make transactions easier, save time, and provide more security. This shows that the adoption of cashless technology has a positive impact on the financial literacy and behavior of MSMEs. In addition, this technology also helps improve the operational efficiency of MSMEs, especially in big cities such as Makassar.

Challenges in FinTech Development

However, research by Laut & Hutajulu (2019) and Kusdimanto et al. (2022) revealed that although FinTech brings great benefits, some aspects of technology such as risk management and market provision have not had a significant impact on financial inclusion. This indicates that there is a gap in technology adoption that still needs to be fixed, especially in the development of more inclusive services for small and micro MSMEs.

Sharia Finance as a Supporter of FinTech

Ramadhan (2021) emphasizes the role of Islamic finance in encouraging the adoption of FinTech by MSMEs. Sharia-based FinTech such as Paytren offers solutions that not only meet financial needs, but also comply with religious principles that are the preferences of most Indonesians. This shows that a value-based approach can increase trust and adoption of FinTech services among MSMEs.

The Relationship between Financial

Literacy and Financial Inclusion

Research by Kusdimanto et al. (2022) highlights the importance of financial literacy as a key factor in the success of FinTech-based financial inclusion. Even though technology is available, low literacy can hinder the adoption and optimal utilization of FinTech by MSMEs. Therefore, there needs to be an education and mentoring effort to increase MSME actors' understanding of digital financial technology.

The Potential of FinTech in Supporting Local Economic Growth

Overall, the five studies concluded that FinTech has great potential in increasing financial inclusion and supporting local economic growth, especially through the empowerment of MSMEs. However, there are challenges that need to be overcome, such as financial literacy, technology access gaps, and the development of services that suit the needs of MSMEs. By overcoming these obstacles, FinTech can become the main driving force in accelerating financial inclusion and strengthening the digital economy in Indonesia.

Discussion

Overall, these findings show the great potential of FinTech in overcoming the challenges faced by MSMEs related to limited access to finance, especially in areas that have been isolated from banking services. However, it should be noted that there is still inequality in the adoption of this technology between MSMEs based in big cities and those in remote areas. Therefore, greater efforts are needed to introduce and educate MSME actors in the area about FinTech, so that they can utilize technology more optimally.

The cashless society phenomenon is very relevant to the digitalization trend that is happening around the world, especially in Indonesia. In the context of MSMEs, the adoption of digital payment systems will



facilitate transactions and accelerate cash flow. However, the biggest challenge still faced is digital literacy and finance. Many MSME actors, especially those based in the regions, do not fully understand how to manage digital transactions properly. Therefore, digital financial education must be part of efforts to increase financial inclusion among MSMEs.

I agree with the findings of Kusdimanto et al. (2022), which show that although there are many FinTech platforms, not all MSMEs can access them easily. Existing services are often less inclusive, reaching only larger, more established market segments. To encourage maximum financial inclusion, it is very important for FinTech providers to develop products that are more affordable and more in line with the characteristics of MSMEs that have small business scales or that do not have many assets. This can be done by introducing services that are more based on alternative data or analytics to assess creditworthiness, rather than relying solely on physical collateral.

I see that financial literacy is still a big challenge in Indonesia, especially among MSMEs. Although there are many FinTech platforms that provide convenience, without sufficient understanding of financial management, the use of this technology can actually have a negative impact on MSMEs. Therefore, the development of digital financial literacy training programs is very important to help MSMEs understand the benefits and risks contained in the use of financial technology, as well as improve their ability to make wiser financial decisions.

The role of Islamic finance in financial inclusion for MSMEs is very important, especially in Indonesia, which has a majority Muslim population. Sharia FinTech products provide solutions that are not only financially profitable,

but also ethically and morally. By providing a platform that is in accordance with sharia principles, it is hoped that smaller MSMEs or those who were previously reluctant to use conventional financial services can more easily access funding and other financial services. Therefore, the development of more innovative and inclusive sharia FinTech is very important to encourage the economic growth of MSMEs in Indonesia.

This infrastructure challenge is indeed an issue that needs to be solved immediately. Increasing more equitable internet access throughout Indonesia must be a priority so that no MSMEs are left behind in utilizing FinTech technology. The government and the private sector need to work together to accelerate the development of digital infrastructure in areas that are still struggling in terms of connectivity. This is an important step so that an inclusive digital economy can be realized for all levels of society, including MSMEs.

CONCLUSION

This study concludes that Financial Technology (FinTech) has made a significant contribution in increasing financial inclusion and access to funding for MSMEs in Indonesia. FinTech, which includes various platforms such as digital lending, electronic payments, and digital banking, allows MSMEs to access financial services that were previously difficult to reach, especially for MSMEs located in remote areas or underserved by the traditional banking system.

With the increasing penetration of the internet and the advancement of digital technology, FinTech can overcome the main problems faced by MSMEs, such as difficulties in obtaining financing and limited access to finance. However, challenges such as financial literacy,



limited digital infrastructure, and data security risks still need to be overcome to accelerate FinTech adoption more widely and inclusively.

FinTech also plays an important role in facilitating MSMEs in managing transactions faster and more efficiently through a cashless society system, which not only benefits MSMEs operationally, but also increases transaction transparency and security. This research shows that sharia-based FinTech also opens greater access for MSMEs who want financial products that are in accordance with religious principles.

To maximize the potential of FinTech, it is important to increase financial and digital literacy among MSMEs, especially in remote areas. In addition, the improvement of digital infrastructure and equitable distribution of internet access need to be encouraged so that the adoption of FinTech is not hampered. Adaptive regulations in terms of personal data protection and transaction security are also crucial, followed by more inclusive product diversification from FinTech providers, including sharia-based services. Finally, collaboration between FinTech and traditional financial institutions needs to be strengthened to create more integrated financial solutions and open up more opportunities for MSMEs.

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