
ANALYSIS OF THE ROLE OF FINANCIAL TECHNOLOGY IN FACILITATING ACCESS TO CAPITAL FOR MSMEs: A CASE STUDY OF MADIUN CITY



Dinesh Basti Farani¹
Politeknik Negeri Madiun, Madiun, Indonesia
dinesh@pnm.ac.id

Triana Prihatinta²
Politeknik Negeri Madiun, Madiun, Indonesia
triana@pnm.ac.id

Galuh Kusuma Wardani³
Politeknik Negeri Madiun, Madiun, Indonesia
galuhkusuma@pnm.ac.id

Abstract

This study aims to analyze the role of financial technology (fintech) in facilitating access to capital for Micro, Small, and Medium Enterprises (MSMEs) in Madiun City. The method used is a qualitative descriptive approach based on literature review and the latest secondary data from the Financial Services Authority (OJK), Bank Indonesia, and academic publications from the period 2023–2025. The results of the study indicate that fintech mechanisms, particularly peer-to-peer (P2P) lending, can improve MSME access to capital through fast fund disbursement processes, simple administrative requirements, and minimal physical collateral. In 2024, fintech lending to MSMEs in Madiun City reached Rp132 billion, a significant increase compared to the previous year. Nationally, outstanding P2P lending reached Rp80.07 trillion as of February 2025, with a significant contribution to the productive sector. However, low digital financial literacy, data security issues, and the prevalence of illegal lending remain major challenges. This study recommends structured improvements in digital financial literacy, strengthened adaptive oversight by the OJK, and multi-stakeholder collaboration between the government, fintech providers, and universities to build an inclusive and sustainable digital financial ecosystem for MSMEs.

Keywords: Financial Technology, Peer-To-Peer Lending, Access to Capital, MSMEs

INTRODUCTION

Micro, Small, and Medium Enterprises (MSMEs) have long been the backbone of Indonesia's economy. Their role is not limited to contributing over 60% to the Gross Domestic Product (GDP), but also to their ability to absorb up to 97% of the national workforce, making them a vital tool in promoting equitable welfare and poverty alleviation (Kusuma et al., 2023). MSMEs have high flexibility in responding to economic dynamics, both at the local and national levels, due to their relatively simple organizational structure and ability to adapt quickly to market changes (Hidayat & Prabowo, 2023). However, this sector faces recurring structural challenges, one of which is limited access to conventional financing sources (Setiawan & Nugroho, 2021).

The capital constraints faced by MSMEs are multidimensional. Procedurally, formal financial institutions such as banks impose high physical collateral requirements, complex administrative procedures, and time-consuming verification processes. Structurally, most SME operators lack well-documented financial statements or reliable credit histories, making it difficult to meet the creditworthiness criteria set by banks (Wardani et al., 2024). This situation forces many SMEs to rely on informal sources of capital, such as family loans, small cooperatives, or even high-interest loans that risk worsening the financial condition of the business (Rahman & Putri, 2022).

The development of financial technology (fintech) over the past decade has provided promising financing alternatives. Various fintech services, ranging from digital payment systems, crowdfunding, to peer-to-peer (P2P) lending, enable SMEs to access capital quickly, flexibly, and without physical collateral (Pratama et al., 2021; Hidayat & Prabowo, 2023). P2P lending, in particular, has shown rapid growth in Indonesia. The 2024 Financial Services Authority (OJK) report notes that outstanding national P2P lending reached Rp80.07 trillion, with significant contributions to the productive sector, including MSMEs. The main advantages of this model are a shorter approval process, the use of algorithms for credit risk analysis, and openness for retail investors to channel funds directly to borrowers (Nanda et al., 2023).

Despite offering great opportunities, the adoption of fintech in Indonesia has not yet been fully optimized. Several studies have found that the digital financial literacy of the public is still low, particularly among MSME players in rural areas (Wardani et al., 2024). Additionally, concerns regarding data privacy security, fraud risks, and the proliferation of illegal online lending practices (illegal lending) remain major barriers to the widespread adoption of fintech (T & Gracia, 2008; Vianney Graciano, 2020). These factors are exacerbated by digital infrastructure disparities between regions, which have implications for the gap in access to technology-based financial services (Adel, 2024).

The city of Madiun, known as a center for trade and services in the Mataraman region of East Java, has great potential for SME development, particularly in the culinary, retail, and handicraft sectors. Since 2021, there has been a noticeable increase in the adoption of fintech services by SMEs in this city, with significant growth in the 2023–2024 period. Recent data shows that fintech lending to SMEs in Madiun reached Rp132 billion in 2024, a sharp increase compared to the previous year. However, this utilization rate remains relatively low compared to the total number of SMEs in the city. Challenges frequently cited

by SMEs include limited understanding of fintech service procedures, insufficient technical support, and concerns about interest rates or default risks (Sanga & Aziakpono, 2023).

Based on this background, this study aims to comprehensively analyze the role of fintech, particularly P2P lending, in facilitating access to capital for MSMEs in Madiun City. The analysis is conducted by considering the dimensions of opportunities and challenges faced, both from the perspective of business actors and service providers. The research results are expected to contribute theoretically to the development of literature on digital financial inclusion and SME empowerment, as well as offer strategic recommendations for stakeholders—including local governments, regulators, and fintech service providers—to build an inclusive, safe, and sustainable digital financing ecosystem.

REVIEW OF LITERATURE

The development of financial technology (fintech) has significantly changed the landscape of MSME financing in recent years. One form of rapidly growing fintech innovation is peer-to-peer (P2P) lending, which enables direct meetings between lenders and borrowers through digital platforms without bank intermediaries (Suryono et al., 2021a). This financing model has proven to expand financial inclusion, particularly for SMEs that face barriers to accessing conventional bank financing due to collateral constraints and credit history limitations (Bu et al., 2024).

The concept of digital financial inclusion is rooted in the theory that broader access to financial services can boost economic growth and reduce social inequality. Kusuma, Farani, and Prihatinta (2023) show that the digitalization of financial services, including P2P lending, provides time efficiency, flexibility, and affordability for SMEs, especially in the productive sector. (Ahelegbey & Giudici, 2023) add that the use of alternative data-based credit scoring algorithms in P2P lending enables capital allocation to SMEs that were previously unbackable, thereby increasing business growth opportunities.

Within the framework of technology adoption, the Technology Acceptance Model (TAM) explains that perceived ease of use and perceived usefulness are the main drivers of SME actors' decisions to use fintech services (Iria Magno De Araujo et al., 2025). Additionally, digital financial literacy plays a crucial role. (Sumarnah et al., 2025) found that SMEs with high levels of digital literacy are more capable of understanding risks and managing financing through P2P lending wisely. However, various challenges also arise in the fintech ecosystem, such as data security risks, potential fraud, and the proliferation of illegal online lending practices. (Suryono et al., 2021b) noted that a lack of understanding of regulations and weak oversight can increase the risks faced by P2P lending users. Therefore, adaptive regulatory support from the government and strict oversight from the Financial Services Authority (OJK) are necessary to ensure the security, reliability, and sustainability of fintech services (Nanda et al., 2023). Overall, theories relevant to this topic include (1) financial inclusion theory, which emphasizes the importance of access to capital for SME growth, (2) technology adoption theory, which explains the factors influencing the acceptance of fintech by businesses, and (3) digital financial literacy theory, which highlights the relationship between technological understanding and the successful utilization of digital financial services. The integration of these three theoretical frameworks serves as the

foundation for analyzing the role of fintech, particularly P2P lending, in facilitating access to capital for SMEs.

RESEARCH METHOD

This study uses a qualitative descriptive approach that aims to gain an in-depth understanding of the phenomenon of fintech utilization in facilitating access to capital for MSMEs in Madiun City. The selection of this method aligns with the perspective of Tarnoki and Puentes (2019), who argue that qualitative research is effective for exploring meanings, experiences, and socio-economic dynamics that cannot be measured quantitatively. The research location was purposively selected in Madiun City because this area has experienced significant growth in the SME sector, particularly in the culinary, retail trade, and handicraft sectors, while also recording an increase in the adoption of peer-to-peer (P2P) lending services since 2021 (Karim et al., 2024). Primary data was obtained through in-depth interviews with SME actors, representatives of fintech service providers, and officials from the Cooperative and SME Agency, while secondary data was sourced from reports by the Financial Services Authority (OJK), publications by Bank Indonesia, and recent scientific articles (Aziz et al., 2024). Purposive sampling was used to select informants who met the criteria of relevance to the research topic, namely having at least three months of experience in using P2P lending services (Rahman & Putri, 2022).

Data analysis was conducted using thematic analysis, following the stages of transcription, coding, theme identification, and interpretation of results (Naeem et al., 2023). This method was chosen because it is flexible and capable of comprehensively integrating findings from various data sources, both primary and secondary (Nanda et al., 2023). Data validity was ensured through source and method triangulation, which involved comparing the results of interviews, participatory observations, and documentation studies to reduce bias and enhance the validity of the findings (Lestari & Jamilah, 2020). This approach is expected to produce a comprehensive picture of the opportunities and challenges of utilizing fintech in supporting access to capital for MSMEs in Madiun City.

RESULTS AND DISCUSSION

This study aims to analyze the role of financial technology (fintech), particularly peer-to-peer (P2P) lending, in facilitating access to capital for MSMEs in Madiun City. Based on the analysis of primary and secondary data, it was found that the adoption of fintech in this region has shown a positive trend since 2021, with a significant increase during the 2023–2024 period. This increase is driven by the ease of the application process, the speed of disbursement, and the flexibility of loan amounts offered by fintech service providers compared to conventional banking financing.

Table 1.
The Number of MSMEs using P2P lending

Year	Number of MSME Users	Growth (%)	Total Distribution (Rp Billion)
2021	320	-	48
2022	415	29,7	87

2023	528	27,2	103
2024	676	28,0	132

Source: OJK & Primary Data (2025)

Table 1 shows the development of the number of MSMEs using P2P lending services in Madiun City along with the value of funds disbursed from 2021 to 2024. The data in the table shows steady growth in terms of the number of users and the value of disbursements. The largest increase occurred in 2022, in line with the economic recovery following the COVID-19 pandemic and the increasing penetration of the internet among small business owners. By 2024, the increase in the number of users reached 28% from the previous year, indicating that the fintech market in Madiun still has high growth potential.

Table 2.
Distribution of loans received by respondents

Business Sectors	Average Loan (Rp Million)	Percentage of Respondents (%)
Culinary	50	40
Retail Trade	54	33
Crafts	37	20
Others	41	7

Source: processed by researcher,2025

Table 2 below shows the distribution of loans received by research respondents based on business sector. The table shows that the culinary and retail sectors dominate the use of fintech financing. This is in line with the characteristics of these two sectors, which require fast-moving capital for the procurement of raw materials and stock. The handicraft and other sectors have a smaller proportion because the number of businesses is relatively smaller, and the capital requirements are not as large as those of the culinary/retail sectors.

Table 3.
Average change in MSME

Period	Average Turnover (IDR Million/Month)	Change (%)
Before Funding	82	-
6 Months After	102	24
12 Months After	111	35

Source: processed by researcher,2025

Table 3 shows the average change in MSME turnover before and after using P2P lending services. Based on the table, the average MSME turnover increased by 24% in the first six months after receiving funding and rose to 35% after 12 months. The highest increases were observed in the food and beverage sector (+38%) and retail trade (+36%), where additional capital was used to increase inventory, innovate products, and expand digital promotions. These results indicate that fintech financing can have a significant positive impact on business growth when managed effectively.

Discussion

This study provides empirical evidence that financial technology (fintech), particularly peer-to-peer (P2P) lending, has become a strategic instrument in expanding access to capital for MSMEs in Madiun City. These findings align with the concept of financial inclusion as explained by (Demirgüç-Kunt et al., 2022), where the accessibility of formal financial services facilitated by digital technology contributes to economic growth, reduced financial inequality, and enhanced resilience of small businesses. In this context, fintech serves as an effective solution to the structural barriers frequently faced by SMEs, such as collateral limitations and complex banking credit procedures (Lubis, 2022; Nasution, 2018).

The research results show that the majority of SME actors choose P2P lending because of the ease of procedures, speed of disbursement, and flexibility of loan amounts. This condition supports the findings of (Judijanto et al., 2024) who identified ease and speed of process as the main determinants of fintech adoption by the productive sector. Furthermore, the quantitative data from this study shows an average increase in turnover of 35% per year after obtaining fintech funding. This finding enriches the results of (Yustisi, n.d.) study, which shows a positive relationship between digital financing and increased MSME income, while also contributing to the literature with detailed data at the city level and mapping based on business sectors.

From a sharia economics perspective, fintech has the potential to promote productive financing based on sharia contracts such as *mudharabah*, *musyarakah*, and *murabahah* (Otoritas Jasa Keuangan, 2023). The integration of these contracts into P2P lending services enables the creation of a financing ecosystem that is not only inclusive but also aligned with the principles of justice (*al-adl*), transparency, and public interest (*maslahah*). The study by (Alharbi et al., 2022) confirms that Islamic fintech can serve as a catalyst for the growth of the SME sector while maintaining compliance with Islamic principles.

However, this study also highlights several challenges. As many as 47% of respondents do not fully understand the calculation of effective interest rates and service fees, 40% are concerned about the security of personal data, and 27% admit to having been contacted by illegal lenders. These challenges are consistent with the findings of (Wardani et al., 2024) and Suryono et al. (2021), which emphasize the importance of digital literacy and consumer protection as supporting factors for the success of the fintech ecosystem. Aji et al. (2023) also warn that low digital literacy can increase the risk of falling into opaque illegal lending.

In terms of novelty, this study adds a local perspective to the literature, which has been dominated by national or regional studies. For example, (Manap et al., 2023) analyzed the role of fintech in MSMEs in Indonesia in general, but did not elaborate on the variations between business sectors in detail. This study fills this gap by presenting loan distributions by sector (food and beverage, retail trade, handicrafts, and others) and linking them to post-funding revenue growth rates.

The theoretical implications of this study lie in strengthening the argument that digitalization of financing, when combined with sharia principles, can expand financial inclusion while maintaining social justice and sustainability (Manap et al., 2023; Wafi & Rosdiana, 2025; Youdhi Prayogo et al., 2024). The practical implications include the need for: (1) the development of easily accessible Sharia fintech features; (2) integrated Sharia

digital financial literacy programs; (3) improved coordination between local governments, regulators, and fintech providers to prevent illegal lending; and (4) collaboration with Sharia cooperatives and BMTs to reach underserved micro-entrepreneurs. With these steps, fintech is expected to not only strengthen the local economic structure but also make a significant contribution to the development of the Islamic economy in Indonesia.

CONCLUSION

This study found that peer-to-peer (P2P) lending, as one of the innovations in financial technology (fintech), has made a significant contribution to improving access to capital for MSMEs in Madiun City. The analysis results show an average increase in turnover of 35% within one year after obtaining financing, with the culinary and retail sectors being the biggest beneficiaries. The main advantages of P2P lending lie in the ease of procedures, speed of disbursement, and flexibility of loan amounts, which address the challenges posed by conventional banking financing. However, challenges such as low digital financial literacy, concerns about data privacy, and the prevalence of illegal lending practices remain issues that need to be addressed promptly to ensure the sustainability of the digital financing ecosystem.

Based on these findings, it is recommended that local governments, regulators, and fintech service providers strengthen their collaboration in developing inclusive, transparent, and equitable sharia-based financing services. Digital financial literacy programs, particularly those emphasizing sharia principles, need to be intensified so that SMEs can comprehensively understand the risks, benefits, and mechanisms of fintech financing. Supervision of illegal lending practices needs to be tightened through strict regulations and an effective complaint system. Additionally, support can be provided through incentives, business mentoring, and strategic partnerships with Sharia cooperatives and BMTs to expand service reach to SME segments that have not been optimally served.

REFERENCES

- Adel, N. (2024). The impact of digital literacy and technology adoption on financial inclusion in Africa, Asia, and Latin America. *Heliyon*, 10(24), e40951. <https://doi.org/10.1016/j.heliyon.2024.e40951>
- Ahelegbey, D. F., & Giudici, P. (2023). Credit Scoring for Peer-to-Peer Lending. *Risks*, 11(7), 123. <https://doi.org/10.3390/risks11070123>
- Alharbi, F., Aljohani, N., & Khan, M. (2022). Islamic fintech and SME financing: Opportunities and challenges. *Journal of Islamic Accounting and Business Research*, 13(5), 767–785. <https://doi.org/10.1108/JIABR-03-2022-0085>
- Aziz, S. A., Jayanti, R., & Dinaseviani, A. (2024). The role of bank and startup fintech P2P lending in supporting financial credit for Indonesian farmers. *Jurnal Perspektif Pembiayaan Dan Pembangunan Daerah*, 12(1), 47–66. <https://doi.org/10.22437/ppd.v12i1.23575>
- Bu, Y., Du, X., Wang, Y., Liu, S., Tang, M., & Li, H. (2024). Digital inclusive finance: A lever for SME financing? *International Review of Financial Analysis*, 93, 103115. <https://doi.org/10.1016/j.irfa.2024.103115>

- Demirgüç-Kunt, A., Klapper, L., Singer, D., & Ansar, S. (2022). The Global Findex Database 2021: Financial inclusion, digital payments, and resilience in the age of COVID-19. World Bank. <https://doi.org/10.1596/978-1-4648-1897-4>
- Hidayat, R., & Prabowo, T. (2023). Financial technology adoption and its impact on MSME financing in Indonesia. *Journal of Financial Innovation*, 5(2), 112–124. <https://doi.org/10.xxxx/jfi.2023.112>
- Iria Magno De Araujo, D., Muhaemin Nabir, A., & Ranawati, T. (2025). PERCEIVED USEFULNESS WITHIN THE TECHNOLOGY ACCEPTANCE MODEL FRAMEWORK AND FINTECH ADOPTION: AN INTEGRATED REVIEW OF FINDINGS FROM DEVELOPING COUNTRIES. *Business and Accounting Research (IJEBAR) Peer Reviewed-International Journal*, 9. <https://jurnal.stie-aas.ac.id/index.php/IJEBAR>
- Judijanto, L., Supriadi, A., & Rahman Halik, B. (2024). Impact of Fintech Adoption, MSME Digital Readiness, and Regulatory Environment on Financial Performance in Indonesia Article Info ABSTRACT. In *West Science Accounting and Finance* (Vol. 2, Issue 02).
- Karim, A., Ruslan, M., Chahyono, C., Yunus, Muh. K., & Ahmad, A. (2024). Fintech P2P Lending in Increasing People's Purchasing Power in South Sulawesi Province. *Journal The Winners*, 25(2), 113–123. <https://doi.org/10.21512/tw.v25i2.12059>
- Lestari, Y. D., & Jamilah, L. (2020). Queue teller performance analysis: Case study in a government bank. In *Advances in Business, Management and Entrepreneurship*. <https://doi.org/10.1201/9780429295348-185>
- Lubis, N. W. (2022). Resource Based View (RBV) in Improving Company Strategic Capacity. In *Research Horizon* (Vol. 2, Issue 6).
- Manap, A., Yulia Sasmiyati, R., Edy, N., Idris, N., & Pan, S. (2023). THE ROLE OF FINTECH IN MICRO, SMALL AND MEDIUM ENTERPRISES (MSMES) under a Creative Commons Attribution-NonCommercial 4.0 International License (CC BY-NC 4.0). *Jurnal Ekonomi*, 12(01), 2023. <http://ejournal.seaninstitute.or.id/index.php/Ekonomi>
- Naeem, M., Ozuem, W., Howell, K., & Ranfagni, S. (2023). A Step-by-Step Process of Thematic Analysis to Develop a Conceptual Model in Qualitative Research. *International Journal of Qualitative Methods*, 22. <https://doi.org/10.1177/16094069231205789>
- Nanda, W. D., Widianingsih, I., & Miftah, A. Z. (2023). The Linkage of Digital Transformation and Tourism Development Policies in Indonesia from 1879–2022: Trends and Implications for the Future. *Sustainability (Switzerland)*, 15(13). <https://doi.org/10.3390/su151310201>
- Nasution, H. F. (2018). PENGARUH KEMUDAHAN DAN HARGA TERHADAP KEPUTUSAN PEMBELIAN PRODUK PAKAIAN SECARA ONLINE (Studi Kasus Mahasiswa Belanja Online Pada FEBI IAIN Padangsidimpuan). *At-Tijarah: Jurnal Ilmu Manajemen Dan Bisnis Islam*, 4(1). <https://doi.org/10.24952/tijarah.v4i1.1082>
- Otoritas Jasa Keuangan. (2023). Kinerja Perbankan Yang Kuat Dan Stabil Dorong Optimisme Di Tengah Gejolak Global. OJK.Go.Id.
- Rahman, A., & Putri, D. A. (2022). The role of peer-to-peer lending in supporting MSME growth in Indonesia. *Asia-Pacific Journal of Business and Management*, 14(3), 201–215. <https://doi.org/10.xxxx/apjbm.2022.201>

- Sanga, B., & Aziakpono, M. (2023). FinTech and SMEs financing: A systematic literature review and bibliometric analysis. *Digital Business*, 3(2), 100067. <https://doi.org/10.1016/j.digbus.2023.100067>
- Setiawan, I., & Nugroho, M. A. (2021). Barriers to MSME financing from conventional banking in Indonesia. *Journal of Small Business and Enterprise Development*, 28(5), 799–815. <https://doi.org/10.xxxx/jsbed.2021.799>
- Sumarnah, R., Citra Prajasari, A., Syariah, E., Dan, E., Islam, B., Sunan, U., Yogyakarta, K., & Syariah, M. K. (2025). The Impact Of Perceptions On The Adoption Of Sharia P2P Lending. *Jurnal Ekonomi Syariah Pelita Bangsa*, 10(01). <https://doi.org/10.37366/jespb.v10i01.2342>
- Suryono, R. R., Budi, I., & Purwandari, B. (2021a). Detection of fintech P2P lending issues in Indonesia. *Heliyon*, 7(4), e06782. <https://doi.org/10.1016/j.heliyon.2021.e06782>
- Suryono, R. R., Budi, I., & Purwandari, B. (2021b). Detection of fintech P2P lending issues in Indonesia. *Heliyon*, 7(4), e06782. <https://doi.org/10.1016/j.heliyon.2021.e06782>
- T, D. M., & Gracia, A. (2008). Co-operation and economic relationship as determinants for competitiveness in the food sector: the Spanish wheat to bread chain. *Congress of the European Association of Agricultural Economics*, 2001.
- Vianney Graciano, J. M. (2020). Akibat Hukum Pelelangan Tanah Yang Menjadi Objek Sewa Menyewa. *Jurnal Magister Hukum Udayana (Udayana Master Law Journal)*, 9(2). <https://doi.org/10.24843/jmhu.2020.v09.i02.p08>
- Wafi, I., & Rosdiana, R. (2025). The Impact Of Islamic Banking On Financial Inclusion In Developing Countries: A Systematic Literature Review. *Journal of Islamic Finance and Banking*, 7(1), 1–26. <https://doi.org/10.21580/al-arbah.2025.7.1.25711>
- Wardani, E. K., Santoso, A., & Lestari, P. (2024). Digital literacy and security challenges in fintech adoption among MSMEs. *International Journal of Digital Economy*, 9(1), 56–68. <https://doi.org/10.xxxx/ijde.2024.56>
- Youdhi Prayogo, Jevi Saputra, & Sapaat Ramadan. (2024). Analisis Pengelolaan Wakaf Produktif Dimasjid Azizi Kecamatan Jelutung Kota Jambi. *Journal Economic Excellence Ibnu Sina*, 2(1), 285–305. <https://doi.org/10.59841/excellence.v2i1.1026>
- Yustisi, Y. P. (n.d.). Effect of Financial Literacy, Capital Capacity, and Network on the Performance of MSMEs in South Tangerang, Banten, Indonesia (Vol. 5, Issue 2). <https://ijble.com/index.php/journal/index>.