

DOES FINTECH LENDING DRIVE MSME GROWTH? EVIDENCE FROM BANKING MEDIATION

Jesslyn Anggara¹, Rafida Khairani^{2*}, Nasib³

¹Universitas Prima Indonesia, Indonesia

²Universitas Prima Indonesia and PUI Center for Fintech Innovation and Sustainable Economics, Indonesia

³Institut Bisnis Informasi Teknologi dan Bisnis, Indonesia

*Corresponding Author:

rafidakhairani256@gmail.com

Abstract

This study aims to examine the effect of fintech lending on the growth of Micro, Small, and Medium Enterprises (MSMEs) in Indonesia, with a particular focus on the mediating role of the banking industry. MSMEs play a crucial role in the Indonesian economy by contributing significantly to gross domestic product and employment; however, limited access to formal financing remains a major constraint to their development. In this context, fintech lending has emerged as an alternative financing mechanism that offers faster, more flexible, and more accessible funding compared to traditional banking services. This study employs a quantitative approach using secondary data obtained from the Financial Services Authority (OJK), the Central Statistics Agency (BPS), and Data Indonesia, covering the period from January 2022 to December 2025, with a total of 48 observations. The data were analyzed using regression analysis and mediation testing with SPSS. The results indicate that fintech lending has a positive and significant effect on MSME growth. In addition, fintech lending also significantly influences the banking industry. Furthermore, the banking industry has a significant positive effect on MSME growth and fully mediates the relationship between fintech lending and MSME growth. These findings suggest that fintech lending and banking institutions operate in a complementary manner, where banking plays a crucial intermediary role in channeling the impact of fintech into MSME development. Overall, this study provides important insights for policymakers, financial institutions, and fintech developers in strengthening an inclusive and sustainable digital financial ecosystem to support MSME growth in Indonesia.

Keywords: Fintech Lending, MSME Growth, Banking Industry

1. Introduction

The rapid advancement of digital technology has significantly transformed the global financial sector, including in Indonesia. One of the most prominent innovations is financial technology (fintech), particularly peer-to-peer (p2p) lending, which enables direct financing between lenders and borrowers through digital platforms without traditional financial intermediaries. This model offers faster access to funding with fewer procedural barriers compared to conventional banking systems (Boot et al. 2021; Claessens, Frost, and Turner 2018)(Koranteng and You 2025).

However, alongside its rapid growth, fintech lending has also generated several emerging risks and challenges. The proliferation of illegal online lending platforms, low levels of financial and digital literacy, increasing default risks, and data privacy concerns have become major issues in the Indonesian financial ecosystem (Fandiyanto 2024;

Koranteng and You 2024). In addition, fintech lending has begun to disrupt the traditional banking sector by reducing its credit market share, forcing banks to adapt through digital transformation and innovation (Kurniansyah, 2019).

According to data from the financial services authority (OJK), as of February 2022, there were 102 licensed fintech p2p lending companies in Indonesia, with total loan disbursements reaching idr 29.22 trillion, growing by approximately 19% year-on-year. The number of borrower accounts reached 12.76 million, while lender accounts totaled 798 thousand (Katadata, 2022)(Otoritas Jasa Keuangan 2022). This rapid expansion highlights the increasing role of fintech in providing alternative financing solutions.

On the other hand, micro, small, and medium enterprises (MSMEs) remain the backbone of the Indonesian economy, contributing approximately 57.8% to GDP and absorbing more than 97 million workers (Rahardjo et al., 2024). Despite their significant contribution, MSMEs still face major constraints in accessing formal financing, primarily due to limited collateral, inadequate financial records, and high administrative requirements imposed by banks.

Fintech lending has emerged as a promising solution to bridge this financing gap. However, its effectiveness in supporting MSME growth is not always consistent. Empirical evidence shows that not all technological aspects of fintech significantly influence MSME adoption, particularly in terms of social influence and perceived effectiveness (Wanalu, 2023)(Rafida Khairani et al. 2025; Rafida Khairani, Silaban, and Edward 2025; Rafida Khairani, Tantri, and Putri 2025). This indicates that the relationship between fintech lending and MSME growth is more complex and may involve other mediating factors.

The banking industry, meanwhile, continues to play a crucial role in financial intermediation. Data from (Otoritas Jasa Keuangan (OJK) 2023) indicate that MSME credit accounts for approximately 21% of total national lending. Rather than being replaced, the banking sector is increasingly encouraged to collaborate with fintech to expand financial access and improve efficiency. This suggests that the banking industry may act as an important mediating variable in the relationship between fintech lending and MSME growth.

Despite the growing body of literature, a significant research gap remains. Most previous studies tend to examine fintech, banking, and MSME growth separately, without integrating these variables into a unified analytical framework (Fandiyanto 2024) (Judijanto et al., 2024). As a result, limited attention has been given to understanding how fintech lending influences MSME growth through the role of the banking industry.

Therefore, this study aims to analyze the effect of fintech lending on MSME growth in Indonesia, with the banking industry as a mediating variable. This research contributes to the literature by providing a more comprehensive understanding of the interaction between digital financial innovation and traditional financial institutions in supporting sustainable MSME development.

This study is grounded in financial intermediation theory (Gurley and Shaw 1960), which explains the role of financial institutions in efficiently channeling funds between surplus and deficit units. Traditionally, this role has been dominated by banks; however, fintech lending has emerged as a digital form of intermediation that enhances financial access and efficiency (Boot et al. 2021).

In addition, asymmetric information theory (Akerlof 1970) is used to explain how fintech reduces information gaps between lenders and borrowers through digital data and alternative credit scoring, thereby improving MSME access to financing.

This novelty study contributes to the literature by integrating fintech lending, banking industry, and MSME growth into a single empirical model. Unlike prior studies that examine these variables separately, this research highlights the mediating role of the banking sector, providing new evidence that fintech and banking operate in a complementary manner in supporting MSME growth.

2. Theoretical Background

2.1 Financial Intermediation Theory

This study is grounded in Financial Intermediation Theory, which explains the role of financial institutions in channeling funds from surplus units to deficit units efficiently. Traditionally, banks have dominated this function by reducing transaction costs and mitigating risks in financial markets (Gurley and Shaw 1960). However, the emergence of fintech lending introduces a new form of digital intermediation that enhances financial access and efficiency. Fintech platforms enable faster and more flexible financing processes, thereby transforming the traditional structure of financial intermediation (Boot et al. 2021).

2.2. Asymmetric Information Theory

This study also adopts Asymmetric Information Theory, which highlights the imbalance of information between lenders and borrowers. Such conditions often lead to adverse selection and moral hazard in credit markets (Akerlof 1970). Fintech lending addresses this issue by utilizing digital data, alternative credit scoring, and automated systems to reduce information asymmetry. As a result, fintech improves access to financing for MSMEs that are typically underserved by traditional banking institutions (Claessens, Frost, and Turner 2018).

2.3. Fintech Lending and MSME Growth

Fintech lending, particularly peer-to-peer (P2P) lending, provides an alternative financing mechanism that allows MSMEs to access capital more easily. Compared to conventional banking, fintech offers lower transaction costs, faster approval processes, and more flexible requirements. Previous studies show that fintech lending contributes to financial inclusion and supports MSME growth by increasing access to capital and improving business performance (Fandiyanto 2024; R Khairani et al. 2024). However, other findings indicate that the impact of fintech on MSMEs is not always consistent, suggesting that additional factors may influence this relationship (Wanalu 2023).

2.4. Banking Industry and MSMEs Growth

The banking industry remains a key financial intermediary in supporting MSME development. Banks provide structured financing, long-term credit, and financial stability, which are essential for sustainable business growth. Empirical studies indicate that bank lending significantly contributes to MSME growth, particularly in emerging economies (Hasan et al. 2024; Kaur et al. 2023; Saifurrahman and Kassim 2024). Despite the rapid growth of fintech, the role of banks remains critical in ensuring financial stability and supporting large-scale financing.

2.5. The Mediating Role of the Banking Industry

The relationship between fintech lending and MSME growth may not be purely direct. Fintech lending can influence the performance and structure of the banking

industry, which in turn affects MSME growth. Previous literature suggests that fintech and banking operate in a complementary manner, where fintech expands access to financing while banks provide institutional support and stability (Boot et al. 2021)(Saifurrahman and Kassim 2024; Sheng 2021; Yudaruddin et al. 2024). Therefore, the banking industry is expected to mediate the relationship between fintech lending and MSME growth.

2.6. Hypothesis Development

Based on the theoretical framework and previous studies, the hypotheses of this study are formulated as follows:

H₁: Fintech lending has a positive and significant effect on MSME growth.

H₂: Fintech lending has a positive and significant effect on the banking industry.

H₃: The banking industry has a positive and significant effect on MSME growth.

H₄: The banking industry mediates the relationship between fintech lending and MSME growth.

3 Methods

This study employs a quantitative approach with an explanatory research design to examine the relationship between fintech lending and MSME growth, with the banking industry acting as a mediating variable. The objective is to analyze the direct and indirect effects among variables using statistical methods. The study utilizes secondary data obtained from official sources, including the Financial Services Authority (OJK), the Central Statistics Agency (BPS), and DataIndonesia. The observation period covers January 2022 to December 2025, consisting of monthly data, resulting in a total of 48 observations. A full-sample time-series approach is applied, where all available observations are included in the analysis. Although the number of observations is relatively limited, the use of monthly data provides sufficient variability to capture the relationships among variables.

The variables in this study consist of fintech lending as the independent variable, MSME growth as the dependent variable, and the banking industry as the mediating variable. Fintech lending is measured using indicators such as total loan disbursement, number of borrower accounts, and default rates. MSME growth is measured through indicators including the number of MSMEs, business turnover, employment, and production levels. Meanwhile, the banking industry is measured using indicators such as total credit distribution, credit growth, and non-performing loans (NPL). All variables are measured using ratio scales based on aggregated data.

Data analysis was conducted using regression analysis and mediation testing to examine the direct and indirect relationships among variables. The analysis begins with descriptive statistics, followed by classical assumption tests, including normality, multicollinearity, and heteroscedasticity tests, to ensure the validity of the regression model. Regression analysis is then used to examine the direct effects among variables. Finally, mediation analysis is performed using the causal step approach and supported by bootstrapping procedures to assess indirect effects (Baron and Kenny 1986)(Hayes 2018). Regression analysis is commonly used to examine relationships between variables (Gujarati, 2004; Wooldridge, 2016).

4 Results and Discussion

4.1. Descriptive Statistics

Table 1. Descriptive Statistics

Variable	N	Minimum	Maximum	Mean	Std. Deviation
Fintech Lending	48	1.60	308.50	86.6875	106.48019
MSME Growth	48	0.30	98.10	8.2083	13.60464
Banking Industry	48	0.30	12.20	6.0583	2.73938

Source: Processed data (2026)

The descriptive statistics indicate that fintech lending exhibits the highest variability among the variables, as reflected by its relatively large standard deviation. This suggests significant fluctuations in fintech lending activities during the observation period. Meanwhile, MSME growth also shows considerable variation, indicating differences in business performance across time. In contrast, the banking industry variable demonstrates relatively stable variation, reflecting more consistent growth patterns.

4.2. Classical Assumption Tests

4.2.1. Normality Test

The results of the normality test using histogram and normal probability plot indicate that the residuals are normally distributed. The data points follow the diagonal line and form a bell-shaped curve, suggesting that the normality assumption of the regression model has been satisfied.

4.2.2. Multicollinearity Test

Table 2. Multicollinearity Test Results

Variable	Tolerance	VIF
Fintech Lending	0.999	1.001
MSME Growth	0.999	1.001

Source: Processed data (2026)

The multicollinearity test results show that all variables have tolerance values greater than 0.10 and VIF values below 10. This indicates that there is no multicollinearity problem in the regression model, and the independent variables are not highly correlated.

4.2.3 Heteroscedasticity Test

The scatterplot results demonstrate that the residuals are randomly distributed above and below zero without forming a specific pattern. This indicates the absence of heteroscedasticity, confirming that the regression model meets the homoscedasticity assumption.

4.3 Regression and Mediation Analysis

Table 3. Regression and Mediation Results

Relationship	Coefficient	t-Statistic	p-Value	Result
Fintech → MSME	1.005	2.244	0.008	Significant
Fintech → Banking	0.005	2.415	0.004	Significant

Relationship	Coefficient	t-Statistic	p-Value	Result
Banking → MSME	1.565	2.177	0.035	Significant
Fintech → MSME (with mediator)	-0.013	-0.693	0.492	Not Significant

Source: Processed data (2026)

The results presented in Table 3 provide a comprehensive overview of the regression and mediation analysis conducted in this study. The findings indicate that fintech lending has a positive and significant effect on MSME growth, as evidenced by a coefficient value of 1.005 and a p-value of 0.008. This suggests that increased access to digital financing contributes to improving MSME performance, particularly in terms of business expansion and revenue growth.

Furthermore, fintech lending is found to have a positive and significant effect on the banking industry, with a coefficient value of 0.005 and a p-value of 0.004. This result implies that the growth of fintech lending encourages the banking sector to adapt and innovate, particularly through digital transformation and service improvement.

In addition, the banking industry shows a positive and significant effect on MSME growth, as indicated by a coefficient of 1.565 and a p-value of 0.035. This finding confirms that banks continue to play an essential role in supporting MSMEs by providing structured financing and financial stability.

However, when the banking industry is included as a mediating variable, the direct effect of fintech lending on MSME growth becomes insignificant, as reflected by a p-value of 0.492. This indicates that the banking industry fully mediates the relationship between fintech lending and MSME growth. In other words, the influence of fintech lending on MSME growth occurs indirectly through the banking sector.

4.3.1 Effect of Fintech Lending on MSME Growth

The regression results indicate that fintech lending has a positive and significant effect on MSME growth ($p < 0.05$). This finding suggests that increased access to digital financing enhances MSME performance, particularly in terms of production capacity, revenue, and business expansion.

This result is consistent with Financial Intermediation Theory, which emphasizes the role of financial institutions in improving access to capital and supporting economic growth (Gurley and Shaw 1960). In addition, fintech lending reduces barriers to financing, making it easier for MSMEs to obtain funding.

4.3.2 Effect of Fintech Lending on the Banking Industry

The analysis shows that fintech lending has a positive and significant effect on the banking industry ($p < 0.05$). This indicates that the growth of fintech lending encourages banks to innovate and adapt to digital transformation. This finding supports previous studies suggesting that fintech does not necessarily replace banks but instead drives structural changes in the financial system (Boot et al. 2021).

4.3.3 Effect of the Banking Industry on MSME Growth

The results reveal that the banking industry has a positive and significant effect on MSME growth ($p < 0.05$). This highlights the continued importance of banks in providing structured financing and supporting long-term business development. This finding aligns

with empirical evidence showing that bank lending plays a crucial role in MSME growth, particularly in emerging economies (Hasan et al. 2024).

4.3.4 Mediation Effect of the Banking Industry

The mediation analysis shows that the effect of fintech lending on MSME growth becomes insignificant after including the banking industry variable, while the banking industry remains significant. This indicates that the banking industry fully mediates the relationship between fintech lending and MSME growth. This finding suggests that fintech lending influences MSME growth indirectly through the banking sector. This may occur because fintech primarily provides initial access to financing, while banks offer more structured, larger-scale, and sustainable credit required for long-term MSME development. In other words, fintech and banking operate in a complementary manner, where fintech expands financial access and banks strengthen the impact through institutional support. Mediation analysis provides a more rigorous approach to understanding indirect effects compared to traditional methods by distinguishing different types of mediation (Zhao et al. 2010).

4.4 Discussion

The findings of this study highlight the important role of fintech lending and the banking industry in supporting MSME growth in Indonesia (Wakhyuni, Rahayu, and Novirsari 2024). Fintech lending enhances access to capital and reduces financial constraints, particularly for MSMEs that face difficulties in obtaining financing from traditional banking institutions (Claessens, Frost, and Turner 2018)(Hoque et al. 2024). This confirms that digital financial services contribute significantly to improving financial inclusion and expanding access to funding for small businesses (Djohan et al. 2025).

Furthermore, the results show that fintech lending has a significant effect on the banking industry, indicating that the growth of fintech encourages banks to adapt and innovate in response to digital transformation. This finding supports previous studies suggesting that fintech does not replace traditional banking institutions but instead drives structural changes in the financial system (Boot et al. 2021)(Airlangga, Sunitiyoso, and Sudrajad 2025). In this context, fintech acts as a catalyst for modernization in the banking sector, particularly in improving efficiency and service delivery.

The results also reveal that the banking industry has a positive and significant effect on MSME growth (Ayuni et al. 2025). This highlights the continued importance of banks in providing structured financing, long-term credit, and financial stability, which are essential for sustainable business development (Demirgüç-Kunt, AnsarS., and L. 2022; Hasan et al. 2024). Empirical evidence suggests that bank lending remains a key determinant of SME growth, especially in emerging economies where financial markets are still developing (Hasan et al. 2024) (Sarto and Ozili 2026).

A key finding of this study is the presence of full mediation, where the effect of fintech lending on MSME growth becomes insignificant after the inclusion of the banking industry variable (Nurhidayah et al. 2025). This indicates that fintech lending influences MSME growth indirectly through the banking sector (Nurhidayah et al. 2025). In other words, the banking industry acts as a transmission channel that strengthens the impact of fintech on the real sector (Rafida Khairani, Tantri, and Putri 2025). This finding provides new empirical evidence that complements previous studies, which have largely examined fintech and MSME growth separately without considering the mediating role of banking institutions (Harianto et al. 2025).

From a theoretical perspective, these findings reinforce Financial Intermediation Theory, which emphasizes the role of financial institutions in channeling funds efficiently within the economy (Gurley and Shaw 1960). However, this study extends the theory by highlighting the evolving nature of financial intermediation in the digital era, where fintech platforms and banking institutions operate in a complementary manner rather than as substitutes (Boot et al. 2021). Moreover, the results also align with Asymmetric Information Theory, which explains how financial intermediaries reduce information gaps between lenders and borrowers (Akerlof 1970). Fintech lending, through digital data and alternative credit scoring, helps reduce information asymmetry, while the banking sector strengthens the reliability and stability of financial transactions (Sanga and Aziakpono 2023). From a practical perspective, these findings imply that collaboration between fintech companies and banking institutions is essential to build a sustainable and inclusive financial ecosystem. Fintech can expand financial access, while banks provide institutional support, risk management, and large-scale financing (Agung et al. 2024; Ladian and Fauzi 2025). Therefore, policymakers should encourage synergy between fintech and banking sectors to enhance MSME development, particularly in emerging economies such as Indonesia.

5 Conclusion

This study aims to examine the effect of fintech lending on MSME growth in Indonesia, with the banking industry acting as a mediating variable. The results show that fintech lending has a positive and significant effect on MSME growth and the banking industry. Furthermore, the banking industry also has a positive and significant effect on MSME growth. The mediation analysis reveals that the banking industry fully mediates the relationship between fintech lending and MSME growth. This indicates that the impact of fintech lending on MSME growth occurs indirectly through the banking sector. Therefore, fintech and banking institutions do not operate as substitutes but rather as complementary components in supporting MSME development. The findings of this study contribute to the literature by providing empirical evidence on the integrated role of fintech lending and the banking industry in promoting MSME growth. In practical terms, this study highlights the importance of strengthening collaboration between fintech companies and banking institutions to create a more inclusive and sustainable financial ecosystem.

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