**West Science Interdisciplinary Studies**
Vol. 4, No. 01, January and 2026: pp. 92-102

# Analysis of the Impact of Fintech Innovation, Digital Trust, and Consumer Education on the Financial Performance of MSMEs in Tangerang City

**Dwi Saleha[1], Ahmad[2], Solihin[3], Dwiati Marsiwi[4], Eko Sudarmanto[5], Surya Ramadhan Noor[6]**
[1] Universitas Syeikh Nawawi Banten and dwisaleha07@gmail.com
[2] Magister Hukum Universitas Muhammadiyah Tangerang and ahmad.law17@gmail.com
[3] Politeknik PGRI Banten and solihin@politeknikpgribanten.ac.id
[4] Universitas Muh. Ponorogo and dmarsiwi@umpo.ac.id
[5] Universitas Muhammadiyah Tangerang and ekosudarmanto.umt@gmail.com
[6] Universitas Logistik Dan Bisnis Internasional and suryarn@ulbi.ac.id

**ABSTRACT**

The rapid development of financial technology (fintech) has transformed the way Micro, Small, and Medium Enterprises (MSMEs) manage their financial activities, particularly in urban areas such as Tangerang City. This study aims to examine the impact of fintech innovation, digital trust, and consumer education on the financial performance of MSMEs. A quantitative research approach was employed using primary data collected from 150 MSME owners and managers in Tangerang City through a structured questionnaire measured on a five-point Likert scale. Data analysis was conducted using Structural Equation Modeling–Partial Least Squares (SEM-PLS) with SmartPLS 3. The results reveal that fintech innovation has a positive and significant effect on MSME financial performance. Digital trust also shows a significant and positive influence and emerges as the strongest determinant of financial performance. In addition, consumer education significantly contributes to improved financial performance by enhancing financial literacy and the effective use of digital financial services. Collectively, these findings indicate that MSME financial performance in the digital era is driven by an integrated framework combining technological innovation, trust in digital systems, and human capital development. The study provides practical insights for policymakers, fintech providers, and MSME stakeholders in developing inclusive and sustainable digital financial ecosystems.

***Keywords:*** *Fintech Innovation, Digital Trust, Consumer Education, MSME, Financial Performance.*

## 1. INTRODUCTION

Micro, Small, and Medium Enterprises (MSMEs) play a vital role in Indonesia's economic structure, contributing significantly to employment creation, income distribution, and regional economic resilience. In urban areas such as Tangerang City—one of Indonesia's rapidly growing industrial and commercial hubs—MSMEs are increasingly required to adapt to dynamic market conditions, technological change, and evolving consumer behavior [1], [2]. Financial performance remains a central indicator of MSME sustainability, competitiveness, and growth, yet many MSMEs continue to face structural challenges related to limited access to finance, inefficient financial management, and low levels of financial literacy.

The emergence of financial technology (fintech) has introduced new opportunities for MSMEs to overcome traditional financial constraints. Fintech innovations such as digital payments, peer-to-peer lending, mobile banking, and integrated financial platforms enable MSMEs to access financial services more efficiently, reduce transaction costs, and improve cash flow management [3], [4]. By leveraging fintech solutions, MSMEs are able to enhance operational efficiency, expand market reach, and strengthen financial decision-making processes. However, the successful adoption of fintech does not depend solely on technological availability, but also on the level of trust users place in digital systems and their understanding of financial products.

Digital trust has become a critical factor in the digital financial ecosystem, particularly for MSMEs that must feel confident that fintech platforms are secure, reliable, and capable of protecting sensitive financial and personal data [3], [4]. Concerns related to cybersecurity, data privacy, system reliability, and fraud risks can hinder fintech adoption and limit its potential impact on financial performance, especially in developing economies where digital transformation often advances more rapidly than regulatory enforcement and digital literacy, making trust a decisive determinant of technology acceptance and sustained use [5]. Alongside fintech innovation and digital trust, consumer education—particularly in financial and digital literacy—forms an essential foundation for improving MSME financial performance, as it equips business owners and managers with the knowledge and skills to understand financial products, evaluate risks, manage finances effectively, and make informed strategic decisions. Well-educated MSME actors are more likely to utilize fintech services optimally, avoid financial mismanagement, and align digital financial tools with business objectives, whereas insufficient education may cause fintech adoption to remain superficial and fail to produce meaningful performance improvements.

Although prior studies have examined the relationship between fintech adoption and MSME performance, empirical research that simultaneously integrates fintech innovation, digital trust, and consumer education within a single analytical framework remains limited, particularly at the city or regional level in Indonesia. Tangerang City provides a relevant empirical context due to its high concentration of MSMEs, strong digital penetration, and rapidly growing fintech ecosystem, making it an appropriate setting to explore how these factors interact in shaping MSME financial performance. Therefore, this study aims to analyze the impact of fintech innovation, digital trust, and consumer education on the financial performance of MSMEs in Tangerang City using a quantitative approach, with data collected through surveys of MSME actors and analyzed using Structural Equation Modeling–Partial Least Squares (SEM-PLS 3). The findings are expected to contribute theoretically by enriching the literature on digital finance and MSME performance, and practically by offering valuable insights for policymakers, fintech providers, and MSME stakeholders in designing policies and support mechanisms that foster a more inclusive and sustainable digital financial ecosystem.

## 2. LITERATURE REVIEW

### *2.1 Micro, Small, and Medium Enterprises (MSMEs) and Financial Performance*

Micro, Small, and Medium Enterprises (MSMEs) are widely recognized as the backbone of national and regional economies, particularly in developing countries such as Indonesia, as they make substantial contributions to employment generation, poverty reduction, and economic diversification [1], [6]. Despite their strategic importance, MSMEs continue to face persistent challenges, including limited access to capital, weak financial management systems, and high vulnerability to market fluctuations, which directly affect their financial performance as reflected in indicators such as profitability, revenue growth, cost efficiency, liquidity, and business sustainability [7], [8]. MSME financial performance is shaped not only by internal managerial capabilities but also by external environmental factors such as access to financial services, technological infrastructure, and institutional support. In the era of the digital economy, financial performance increasingly depends on how effectively MSMEs adopt and utilize digital financial tools for transactions, financing, and financial reporting, highlighting the need for an integrated understanding of technological, behavioral, and educational dimensions in explaining MSME financial outcomes [9].

### 2.2 *Fintech Innovation and MSME Financial Performance*

Financial technology (fintech) innovation refers to the application of digital technologies to deliver financial services in more efficient, accessible, and user-friendly ways, encompassing digital payment systems, mobile banking, peer-to-peer (P2P) lending, crowdfunding platforms, digital wallets, and financial management applications that address long-standing MSME challenges such as limited access to formal banking, high transaction costs, and inefficient cash flow management [1], [10], [11]. From a theoretical perspective, fintech innovation is closely aligned with the Technology Acceptance Model (TAM) and Diffusion of Innovation Theory, which emphasize perceived usefulness and ease of use as key determinants of technology adoption, suggesting that MSMEs are more likely to adopt fintech solutions when they are perceived to enhance operational efficiency and financial control. Empirical evidence supports this view by demonstrating that fintech adoption can improve MSME performance through increased payment efficiency, faster transaction cycles, improved access to financing, and better financial decision-making [11], [12]. Nevertheless, fintech innovation does not automatically lead to improved financial performance, as its effectiveness depends on the ability of MSMEs to integrate these solutions into daily operations and strategic planning, making fintech innovation a critical yet conditional driver of MSME financial performance.

### 2.3 *Digital Trust in the Financial Technology Ecosystem*

Digital trust refers to users' confidence in digital systems, platforms, and technologies to operate reliably, securely, and ethically, and in the fintech context it encompasses perceptions of data security, privacy protection, system reliability, transparency, and regulatory compliance [13], [14]. For MSMEs, digital trust represents a fundamental prerequisite for the adoption and sustained use of fintech services, particularly when financial transactions and sensitive data are involved. Conceptually, digital trust is closely associated with trust theory and perceived risk theory, which explain that high perceived risk diminishes willingness to adopt technology, whereas trust reduces uncertainty and encourages usage [13], [15]. In fintech environments, concerns related to cybercrime, data breaches, fraud, and system failures can discourage MSMEs from utilizing digital financial services despite their potential benefits. Empirical evidence shows that digital trust plays both a direct and mediating role in influencing technology adoption and business performance, as MSMEs with higher levels of trust in fintech platforms are more likely to conduct digital transactions, access online financing, and rely on digital financial records, ultimately enhancing financial performance through consistent fintech usage, reduced transaction frictions, and improved financial transparency.

### 2.4 *Consumer Education and Financial Literacy*

Consumer education, particularly in terms of financial and digital literacy, refers to the process of equipping individuals and business actors with the knowledge, skills, and attitudes needed to make informed financial decisions, including understanding financial products, managing cash flows, assessing financial risks, and effectively using digital financial tools. Drawing on human capital theory, education enhances individual productivity and decision-making capabilities, which ultimately contribute to improved organizational performance, especially for MSMEs where owners and managers play a central role in strategic and operational decisions [10], [16]. Educated MSME entrepreneurs are better able to evaluate fintech products, select appropriate financial services, and align digital tools with business objectives, while consumer education also reduces information asymmetry between MSMEs and financial service providers, enabling more effective use of fintech innovations. Empirical evidence consistently shows that higher levels of financial literacy are associated with better financial planning, improved access to finance, and stronger business performance, and it also strengthens digital trust by increasing awareness of security mechanisms, regulatory protections, and responsible fintech usage [17], [18]. Consequently, consumer education functions not only as a direct determinant of MSME financial performance but also as a reinforcing factor that enhances the effectiveness of fintech adoption.

### *2.5 Relationship Between Fintech Innovation, Digital Trust, and Consumer Education*

Fintech innovation, digital trust, and consumer education are interrelated constructs that jointly shape MSME financial performance. Fintech innovation provides technological opportunities, digital trust ensures confidence in using these technologies, and consumer education enables MSMEs to utilize fintech solutions effectively. Without sufficient trust and education, fintech adoption may remain limited or ineffective, reducing its potential contribution to financial performance. The integrated perspective suggests that fintech innovation is more likely to generate positive financial outcomes when MSME actors possess adequate financial knowledge and trust in digital systems. Consumer education enhances understanding and acceptance of fintech, while digital trust reduces perceived risk and uncertainty. Together, these factors create a supportive ecosystem that enables MSMEs to leverage digital finance for sustainable financial growth. Based on the theoretical foundations and empirical findings discussed above, the following hypotheses are proposed:

H1: Fintech innovation has a positive and significant effect on the financial performance of MSMEs.

H2: Digital trust has a positive and significant effect on the financial performance of MSMEs.

H3: Consumer education has a positive and significant effect on the financial performance of MSMEs.

## 3. METHODS

### 3.1 Research Design

This study adopts a quantitative research design with an explanatory approach to examine the causal relationships between fintech innovation, digital trust, consumer education, and the financial performance of Micro, Small, and Medium Enterprises (MSMEs) in Tangerang City. A quantitative approach is considered appropriate because the study aims to test hypotheses and measure the strength and significance of relationships among variables using statistical techniques. The research focuses on cross-sectional data collected at a single point in time through a structured survey.

### 3.2 Population and Sample

The population of this study comprises all MSMEs operating in Tangerang City across various sectors, including trade, services, manufacturing, and creative industries, and given its large and heterogeneous nature, a sample-based approach was adopted. A total of 150 MSME actors were selected as the sample, which satisfies the minimum requirements for Structural Equation Modeling–Partial Least Squares (SEM-PLS), particularly when involving multiple latent variables and indicators. The study employed purposive sampling, with respondents chosen based on specific criteria: MSME owners or managers who are actively involved in financial decision-making, businesses that have been operating for at least one year, and MSMEs that have used or are familiar with digital financial services such as digital payments, online banking, or fintech platforms. These criteria ensure that the respondents possess adequate experience and understanding to provide relevant and reliable information for the analysis.

### 3.3 Data Collection Method

Primary data were collected through a structured questionnaire distributed both directly and online to MSME owners or managers in Tangerang City, with the instrument designed to capture respondents' perceptions of fintech innovation, digital trust, consumer education, and financial performance. All measurement items used a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree) to reflect the intensity of respondents' agreement with each statement. Prior to full distribution, the questionnaire was reviewed to ensure clarity, relevance, and alignment with the research objectives, and respondents were informed of the study's purpose and assured of the confidentiality of their responses. The collected data were subsequently screened to remove incomplete or inconsistent responses before being subjected to further analysis.

### 3.4 Research Variables and Measurement

This study examines one dependent variable and three independent variables, with each construct measured using multiple indicators adapted from relevant literature and contextualized to MSMEs. Fintech innovation refers to the extent to which MSMEs adopt and utilize digital financial technologies in their operations, measured through indicators such as the use of digital payment systems, access to fintech-based financing, integration of financial applications, transaction efficiency, and perceived usefulness of fintech services. Digital trust reflects MSMEs' confidence in the security, reliability, and integrity of digital financial platforms, as indicated by perceptions of data security, privacy protection, system reliability, transaction transparency, and trust in fintech service providers. Consumer education represents the level of financial and digital literacy of MSME owners or managers, measured through understanding of financial products, ability to manage finances, knowledge of digital financial services, awareness of financial risks, and participation in financial education or training programs. Financial performance, as the dependent variable, captures the economic outcomes achieved by MSMEs and is reflected in indicators such as perceived profitability, sales growth, cost efficiency, cash flow stability, and overall financial sustainability.

### 3.5 Data Analysis Technique

Data analysis in this study was conducted using Structural Equation Modeling–Partial Least Squares (SEM-PLS) with the support of SmartPLS version 3, selected for its suitability in predictive research, its capacity to handle complex models with multiple constructs, and its robustness in situations involving relatively small sample sizes and non-normal data distributions. The analysis was carried out in two main stages, beginning with the evaluation of the measurement model (outer model) to assess construct reliability and validity, where reliability was examined using Cronbach's alpha and composite reliability, convergent validity was evaluated through factor loadings and average variance extracted (AVE), and discriminant validity was tested using the Fornell–Larcker criterion and cross-loading analysis. The second stage involved evaluation of the structural model (inner model) to test the proposed hypotheses by analyzing path coefficients, t-statistics, and p-values obtained through bootstrapping procedures, while the coefficient of determination ($R^2$) was used to assess the model's explanatory power, complemented by effect size ($f^2$) and predictive relevance ($Q^2$) to evaluate the strength and predictive capability of the relationships among variables.

## 4. RESULTS AND DISCUSSION

### 4.1 Respondent Profile

This study involved 150 MSME owners and managers operating in Tangerang City who met the predetermined sampling criteria, and the respondent profile provides important context for understanding fintech adoption and financial performance among MSMEs. The respondents represented diverse business sectors, reflecting the heterogeneous structure of MSMEs in the city, with the trade sector dominating the sample (42.0%), followed by services (31.3%), manufacturing (16.7%), and creative industries (10.0%), indicating that fintech usage is particularly relevant for transaction-intensive businesses where digital payments and financial applications play a crucial role. In terms of business duration, the majority of respondents had been operating for more than three years (64.0%), while 24.0% had operated for one to three years and 12.0% for less than one year, suggesting that most participants possessed sufficient experience and business maturity to evaluate the effects of fintech innovation, digital trust, and consumer education on financial performance. Regarding fintech usage, a high proportion of respondents reported regular use of fintech services in daily operations (78.0%), with 16.0% reporting moderate use and only 6.0% reporting low use, indicating strong fintech penetration among MSMEs in Tangerang City. However, access to fintech-based financing such as peer-to-peer lending or digital credit platforms remained relatively limited, as only 46.0% of respondents had accessed such financing while 54.0% had not, highlighting potential barriers related to eligibility requirements, trust issues, or levels of financial and digital literacy.

### 4.2 Measurement Model Evaluation (Outer Model)

The measurement model (outer model) evaluation was conducted to assess the reliability and validity of the constructs used in this study, namely fintech innovation, digital trust, consumer education, and MSME financial performance. This evaluation ensures that the indicators used are appropriate and accurately represent the latent variables before proceeding to structural model analysis. The assessment includes convergent validity, reliability, and discriminant validity using the SEM-PLS approach with SmartPLS 3.

#### 1. Convergent Validity

Convergent validity was assessed using indicator loadings and Average Variance Extracted (AVE), where an indicator is considered valid if its outer loading exceeds 0.70 and AVE values are greater than 0.50, indicating that a construct explains more than half of the variance of its indicators.

Table 1. Convergent Validity Results

| Construct | Indicator Code | Outer Loading |
|---|---|---|
| Fintech Innovation | FI1 | 0.725 |
| | FI2 | 0.792 |
| | FI3 | 0.857 |
| | FI4 | 0.812 |
| | FI5 | 0.744 |
| Digital Trust | DT1 | 0.766 |
| | DT2 | 0.831 |
| | DT3 | 0.882 |
| | DT4 | 0.806 |
| | DT5 | 0.743 |
| Consumer Education | CE1 | 0.716 |
| | CE2 | 0.782 |

| | | |
|---|---|---|
| | CE3 | 0.844 |
| | CE4 | 0.866 |
| | CE5 | 0.732 |
| Financial Performance | FP1 | 0.736 |
| | FP2 | 0.811 |
| | FP3 | 0.874 |
| | FP4 | 0.846 |
| | FP5 | 0.761 |

Table 1 demonstrates that all constructs in the measurement model exhibit strong convergent validity, as reflected by outer loading values that consistently exceed the recommended threshold of 0.70. For the fintech innovation construct, indicator loadings range from 0.725 to 0.857, indicating that each item adequately represents MSMEs' adoption and utilization of digital financial technologies. Digital trust shows particularly strong loadings, with values between 0.743 and 0.882, suggesting that perceptions of security, reliability, and transparency are well captured by the selected indicators. Similarly, consumer education indicators display satisfactory loadings ranging from 0.716 to 0.866, confirming that financial and digital literacy dimensions are reliably measured. The financial performance construct also demonstrates robust indicator loadings between 0.736 and 0.874, indicating that profitability, growth, efficiency, and sustainability are consistently reflected in the measurement items.

**2. Construct Reliability**

Construct reliability was evaluated using Cronbach's Alpha and Composite Reliability (CR), where values above 0.70 indicate acceptable internal consistency and strong reliability. The results show that all constructs meet these recommended thresholds, with Cronbach's Alpha values of 0.842 for fintech innovation, 0.865 for digital trust, 0.831 for consumer education, and 0.858 for financial performance, while Composite Reliability values range from 0.882 to 0.904. In addition, all constructs demonstrate Average Variance Extracted (AVE) values above 0.50, confirming adequate convergent validity.

**3. Discriminant Validity**

Discriminant validity was evaluated using the Fornell–Larcker criterion, which compares the square root of AVE for each construct with the correlations between constructs. A construct demonstrates adequate discriminant validity if the square root of its AVE is greater than its correlations with other constructs.

Table 2. Fornell–Larcker Criterion

| Construct | Fintech Innovation | Digital Trust | Consumer Education | Financial Performance |
|---|---|---|---|---|
| Fintech Innovation | 0.784 | | | |
| Digital Trust | 0.612 | 0.809 | | |
| Consumer Education | 0.587 | 0.641 | 0.775 | |
| Financial Performance | 0.659 | 0.683 | 0.621 | 0.804 |

Table 2 presents the Fornell–Larcker criterion results, which demonstrate satisfactory discriminant validity among all constructs in the model. The square root of the Average Variance Extracted (AVE), shown on the diagonal, is higher for each construct than its correlations with other constructs, indicating that each latent variable shares more variance with its own indicators than with other constructs. Specifically, fintech innovation (0.784), digital trust (0.809), consumer education (0.775), and financial performance (0.804) all exhibit diagonal values that exceed their respective inter-construct correlations. Although moderate correlations are observed among the constructs—particularly between digital trust and financial performance (0.683) and between fintech innovation and financial performance (0.659)—these relationships remain below the corresponding square root of AVE values.

### 4.3 Structural Model Evaluation (Inner Model)

The structural model (inner model) evaluation was conducted to examine the relationships among the latent variables and to test the proposed hypotheses regarding the impact of fintech innovation, digital trust, and consumer education on the financial performance of MSMEs in Tangerang City. The assessment includes the coefficient of determination ($R^2$), path coefficients and hypothesis testing, effect size ($f^2$), and predictive relevance ($Q^2$). The analysis was performed using the bootstrapping procedure in SmartPLS 3 with 5,000 resamples.

#### 1. Coefficient of Determination ($R^2$)

The coefficient of determination ($R^2$) was used to assess the extent to which the independent variables explain the variance of the dependent variable, with financial performance serving as the sole endogenous variable in this study. The results show an $R^2$ value of 0.612 for financial performance, indicating that fintech innovation, digital trust, and consumer education collectively explain 61.2% of the variance in MSME financial performance. This level of explained variance is considered substantial in social and business research, suggesting that the proposed model possesses strong explanatory power and is effective in capturing the key determinants of financial performance among MSMEs.

#### 2. Path Coefficients and Hypothesis Testing

Hypothesis testing was conducted by examining the path coefficients (β), t-statistics, and p-values. A relationship is considered statistically significant if the t-statistic exceeds 1.96 and the p-value is less than 0.05.

Table 3. Hypothesis Testing

| Hypothesis | Relationship | Path Coefficient (β) | T-Statistic | P-Value | Decision |
|---|---|---|---|---|---|
| H1 | Fintech Innovation → Financial Performance | 0.321 | 4.126 | 0.000 | Supported |
| H2 | Digital Trust → Financial Performance | 0.387 | 5.012 | 0.000 | Supported |
| H3 | Consumer Education → Financial Performance | 0.248 | 3.465 | 0.001 | Supported |

Table 3 presents the results of hypothesis testing, showing that all proposed relationships are statistically significant and supported. Fintech innovation has a positive and significant effect on MSME financial performance ($\beta = 0.321$, $t = 4.126$, $p < 0.001$), indicating that greater adoption and utilization of digital financial technologies contribute to improved financial outcomes. Digital trust emerges as the strongest predictor of financial performance ($\beta = 0.387$, $t = 5.012$, $p < 0.001$), highlighting the critical role of security, reliability, and confidence in fintech platforms in enabling consistent usage and effective financial management. Consumer education also shows a positive and significant influence on financial performance ($\beta = 0.248$, $t = 3.465$, $p = 0.001$), suggesting that higher levels of financial and digital literacy enhance MSMEs' ability to leverage fintech services and make sound financial decisions.

#### 3. Effect Size ($f^2$)

The effect size ($f^2$) measures the relative impact of each exogenous construct on the endogenous variable. According to commonly used guidelines, $f^2$ values of 0.02, 0.15, and 0.35 represent small, medium, and large effects, respectively.

Table 4. Effect Size ($f^2$) Results

| Relationship | $f^2$ | Effect Size |
|---|---|---|
| Fintech Innovation → Financial Performance | 0.152 | Medium |
| Digital Trust → Financial Performance | 0.214 | Medium |
| Consumer Education → Financial Performance | 0.098 | Small |

Table 4 presents the effect size ($f^2$) results, which indicate the relative contribution of each independent variable to the explanation of MSME financial performance. Digital trust shows the largest effect size ($f^2 = 0.214$), classified as a medium effect, suggesting that trust in the security, reliability, and integrity of fintech platforms plays a substantial role in improving financial performance. Fintech innovation also demonstrates a medium effect size ($f^2 = 0.152$), indicating that the adoption and effective use of digital financial technologies meaningfully enhance MSME financial outcomes. In contrast, consumer education exhibits a smaller effect size ($f^2 = 0.098$), implying that while financial and digital literacy significantly influence financial performance, their direct impact is relatively weaker compared to fintech innovation and digital trust. Nevertheless, consumer education remains an important supporting factor, as it likely strengthens the effectiveness of fintech adoption and trust, thereby indirectly contributing to improved MSME financial performance.

**4. Predictive Relevance ($Q^2$)**

Predictive relevance ($Q^2$) was evaluated using the blindfolding procedure, where a $Q^2$ value greater than zero indicates that the model has predictive capability for the endogenous construct. The results show a $Q^2$ value of 0.391 for financial performance, confirming that the model demonstrates strong predictive relevance and that fintech innovation, digital trust, and consumer education effectively predict MSME financial performance.

**Discussion**

This study examines the influence of fintech innovation, digital trust, and consumer education on the financial performance of MSMEs in Tangerang City using a SEM-PLS approach, and the empirical findings provide strong evidence that all three variables have a positive and significant impact on MSME financial performance. Among these factors, digital trust emerges as the most influential determinant, highlighting the importance of behavioral and perceptual aspects in the effective utilization of digital financial technologies. Overall, the results confirm that MSME financial performance in the digital economy is shaped not only by technological adoption but also by trust and human capital readiness, aligning with contemporary perspectives in digital finance and MSME development literature [7], [8].

The positive and significant effect of fintech innovation on MSME financial performance indicates that MSMEs that actively adopt and integrate fintech solutions—such as digital payment systems, online banking, and fintech-based financing—tend to achieve better financial outcomes, including improved profitability, cash flow stability, and operational efficiency. This finding supports the Technology Acceptance Model (TAM) and Diffusion of Innovation Theory, which emphasize perceived usefulness and compatibility as key drivers of technology adoption and performance outcomes. In the context of Tangerang City, characterized by dynamic and transaction-intensive business activities, fintech innovation serves as a strategic tool that reduces transaction costs, minimizes cash-handling risks, and accelerates transaction cycles. However, the medium effect size suggests that fintech innovation alone is not sufficient; its effectiveness depends on complementary factors such as trust and user capability, implying that policies should focus not only on expanding access but also on supporting effective integration into daily business operations.

Digital trust is found to have the strongest positive influence on MSME financial performance, underscoring its critical role in translating fintech adoption into tangible financial benefits. Consistent with trust theory and perceived risk theory, this result demonstrates that trust reduces uncertainty and encourages sustained technology use. MSMEs that perceive fintech platforms as secure, reliable, and transparent are more likely to conduct frequent digital transactions, access digital financing, and rely on digital records for financial decision-making, thereby enhancing financial performance. The medium effect size further highlights that in developing digital economies, issues related to data privacy, cyber fraud, and system reliability remain major concerns, making trust-building measures—such as robust cybersecurity systems, transparent governance, and strong consumer protection regulations—essential for maximizing the financial impact of fintech.

The findings also reveal that consumer education has a positive and significant effect on MSME financial performance, indicating that higher levels of financial and digital literacy enable MSME owners and managers to make better financial decisions and utilize fintech services more effectively. Grounded in human capital theory, this result suggests that education enhances managerial competence, improves risk assessment, and supports strategic alignment between digital financial tools and business objectives [19], [20]. Although the effect size of consumer education is relatively smaller compared to fintech innovation and digital trust, its role is fundamental as an enabling factor that strengthens both fintech utilization and trust. Collectively, the strong explanatory power and predictive relevance of the model confirm that MSME financial performance in Tangerang City is driven by an integrated ecosystem of technological innovation, trust, and human capital development, rather than by technology adoption alone.

**Implications for Policy and Practice**

From a practical perspective, the findings suggest that MSME development strategies should adopt a holistic approach that extends beyond the provision of digital infrastructure, with policymakers strengthening regulatory frameworks to enhance digital trust through robust consumer protection, data security measures, and effective fintech supervision, while simultaneously implementing targeted consumer education programs to improve financial and digital literacy among MSME actors. For fintech providers, the results underscore the importance of building and maintaining user trust through transparent operations, reliable and secure systems, and user-friendly interfaces, whereas for MSMEs, continuous investment in financial education and proactive engagement with fintech solutions represent strategic pathways to improving financial performance and achieving long-term business sustainability.

## CONCLUSION

This study provides empirical evidence on the determinants of MSME financial performance in Tangerang City within the context of digital financial transformation, demonstrating that fintech innovation, digital trust, and consumer education each have a positive and significant influence on financial outcomes, with digital trust emerging as the most influential factor due to the critical role of security, reliability, and transparency in digital financial platforms. Fintech innovation contributes to improved financial performance by enhancing transaction efficiency, expanding access to financial services, and strengthening financial management practices, while consumer education enables MSMEs to utilize fintech solutions more effectively and make informed financial decisions. The findings indicate that improving MSME financial performance requires more than technological adoption alone, emphasizing the importance of an integrated approach that simultaneously promotes fintech innovation, strengthens digital trust, and enhances financial and digital literacy. From a policy perspective, the results underscore the need for regulatory frameworks that protect MSME users and foster trust in fintech services, alongside continuous education programs to improve financial literacy, while for practitioners and MSME actors, active engagement with fintech solutions combined with ongoing learning represents a strategic pathway toward sustainable financial growth. Despite its contributions, this study is limited by its cross-sectional design and focus on MSMEs in a single city, suggesting that future research should expand to other regions, adopt longitudinal approaches, or incorporate additional variables such as regulatory support and digital capability to provide a more comprehensive understanding of MSME financial performance in the digital era.

## REFERENCES


[1] A. L. GHOFAR, R. N. P. PUTRA, and S. N. HAMIDAH, "Implementation Of Gateway Technology (Go-Pay) In Increasing Transaction Efficiency In MSMEs Dapur Restu," *J. Inf. Syst. Digit. Bus.*, vol. 1, no. 1, pp. 08–14, 2022, doi: 10.38142/jisdb.v1i1.651.

[2] D. A. Singh, "Employee Engagement for Business Sustenance: a Strategic Data Driven Approach," *TechHumanize Fintech Evol. HR - Innov. Challenges, Futur. Perspect.*, pp. 40–46, 2024, doi: 10.58532/nbennurttch5.

[3] Y. Meng, H. Wu, W. Zhao, W. Chen, H. Dincer, and S. Yüksel, "A hybrid heterogeneous Pythagorean fuzzy group decision modelling for crowdfunding development process pathways of fintech-based clean energy investment projects," *Financ. Innov.*, vol. 7, May 2021, doi: 10.1186/s40854-021-00250-4.

[4] E. Junarsin *et al.*, "Can technological innovation spur economic development? The case of Indonesia," *J. Sci. Technol. Policy Manag.*, vol. 14, no. 1, pp. 25–52, Jan. 2023, doi: 10.1108/JSTPM-12-2020-0169.

[5] D. Y. Wicaksana, "FINTECH FOR SDGS: DRIVING ECONOMIC DEVELOPMENT THROUGH FINANCIAL INNOVATION," *J. Digit. Bus. Innov. Manag.*, vol. 2, no. 2, pp. 126–138, 2023.

[6] U. S. Sucahyo, T. W. Damayanti, and S. Supramono, "Unlocking Success: Nexus between Entrepreneurial Orientation and Financial Performance in Culinary MSMEs," *J. Econ. Business, Account. Ventur.*, vol. 27, no. 1, pp. 1–13, 2024.

[7] M. P. Aritonang, I. Sadalia, and C. Muluk, "The Effect of Financial Literacy and Financial Inclusion on MSMEs Performance," in *19th International Symposium on Management (INSYMA 2022)*, Atlantis Press, 2022, pp. 356–368.

[8] - Kurniawan, A. Maulana, and Y. Iskandar, "The Effect of Technology Adaptation and Government Financial Support on Sustainable Performance of MSMEs during the COVID-19 Pandemic," *Cogent Bus. Manag.*, vol. 10, no. 1, p. 2177400, 2023.

[9] T. A. Fomum and P. Opperman, "Financial inclusion and performance of MSMEs in Eswatini," *Int. J. Soc. Econ.*, no. ahead-of-print, 2023.

[10] I. U. Widyaningsih, "PENERAPAN TEKNOLOGI FINANSIAL SEBAGAI INOVASI UNTUK MENINGKATKAN LITERASI KEUANGAN UMKM," *Indones. J. Econ. Business, Entrep. Financ.*, vol. 3, no. 3 SE-Articles, pp. 437–446, Dec. 2023, doi: 10.53067/ijebef.v3i3.116.

[11] Y. O. Akinwale, "Technology innovation and financial performance of MSMEs during Covid-19 lockdown in Dammam area of Saudi Arabia: A case of food and beverage sector," *Int. J. Technol. Learn. Innov. Dev.*, vol. 12, no. 2, pp. 136–152, 2020.

[12] J. Sun and J. Zhang, "Digital financial inclusion and innovation of MSMEs," *Sustainability*, vol. 16, no. 4, p. 1404, 2024.

[13] C. Neves, T. Oliveira, F. Santini, and L. Gutman, "Adoption and use of digital financial services: A meta analysis of barriers and facilitators," *Int. J. Inf. Manag. Data Insights*, vol. 3, no. 2, p. 100201, 2023, doi: https://doi.org/10.1016/j.jjimei.2023.100201.

[14] A. sahu, M. khemka, A. Agrwal, B. Sahu, and M. Shadan, "Consumer Confidence in Digital Finance: Trust Dynamics in Online Banking," *Int. J. Multidiscip. Res.*, 2024.

[15] F. H. L. Chong, "Enhancing trust through digital Islamic finance and blockchain technology," *Qual. Res. Financ. Mark.*, vol. 13, no. 3, pp. 328–341, 2021.

[16] H. Ahmadi, "Is Cryptocurrency Risky as An Investment Instrument? Analysis of Return and Risk with A Comparison of Sharia Stocks," *Int. J. Islam. Bus. Ethics*, vol. 8, no. 1, p. 40, 2023, doi: 10.30659/ijibe.8.1.40-53.

[17] S. C. Denura and S. Soekarno, "A Study on Behavioural Bias & Investment Decision from Perspective of Indonesia's Cryptocurrency Investors," *Int. J. Curr. Sci. Res. Rev.*, vol. 06, no. 01, pp. 535–548, 2023, doi: 10.47191/ijcsrr/v6-i1-58.

[18] B. Song, H. Chung, B. J. Kim, and C. H. Sonu, "Do business trainings for audit committees matter in organizations? Focusing on earnings management," *Financ. Res. Lett.*, 2023.

[19] R. Raihani, M. Iskandar, L. Prihatin, and R. Hendra, "Determinant Factor Analysis of Financial Performance of Micro, Small and Medium Enterprises with Social Capital as a Moderating Variable during COVID-19 in Aceh, Indonesia," *Stud. Bus. Econ.*, vol. 19, no. 2, pp. 176–198, 2024, doi: 10.2478/sbe-2024-0032.

[20] C. Christine, N. Zukhri, and D. Saputra, "Improving and Maximizing the Financial Performance of MSMEs: A Case Study on MSMEs in the Bangka Belitung Islands Province," *J. Manag. Econ. Financ.*, vol. 2, no. 4, pp. 146–156, 2024.