# FINTECH IMPACT MSME FINANCIAL PERFORMANCE MEDIATED BY DIGITALIZATION AND MODERATED BY SUSTAINABILITY PRACTICES

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**ABSTRACT**

**Purpose**: This study investigates the impact of financial technology (fintech) adoption on the financial performance of Micro, Small, and Medium Enterprises in Yogyakarta, Indonesia. Specifically, it examines the mediating role of business digitalization and the moderating influence of sustainability practices on this relationship.

**Method**: Employing a quantitative research design, primary data were gathered via structured questionnaires from 155 MSME practitioners, owners or managers in Yogyakarta who utilize fintech in their business operations. The data were analyzed using Partial Least Squares Structural Equation Modeling via SmartPLS, encompassing measurement model assessment, structural model evaluation, and hypothesis testing.

**Finding**: The results demonstrate that fintech adoption exerts a positive and statistically significant influence on both business digitalization and MSME financial performance. Furthermore, business digitalization is positively and significantly associated with improved financial performance, serving as a partial mediator in the relationship between fintech utilization and financial performance. Additionally, sustainability significantly moderates the relationship between business digitalization and MSME financial performance by attenuating its positive effect.

**Novelty**: The novelty of this research lies in the integration of business digitalization as a mediator and sustainability as a moderator within a comprehensive model, providing nuanced insights into the dynamics of fintech adoption and financial performance within the MSME sector in Yogyakarta.

## INTRODUCTION

The rapid technological transformation within the financial sector has cultivated a financial technology (fintech) ecosystem that is increasingly vital for Micro, Small, and Medium Enterprises across diverse sectors and markets. Digital payment services, peer-to-peer lending platforms, and financial management applications offer enhanced transactional convenience, improved access to financing, and operational efficiencies that bolster business competitiveness (Nugraha et al., 2022; Prakasa & Fauzan, 2024). However, fintech utilization remains suboptimal because MSME operators face constraints related to digital literacy, technological readiness, and the integration of digital financial services into their business operations.

MSMEs occupy a strategic position within the Indonesian economy. Data published by the Coordinating Ministry for Economic Affairs of the Republic of Indonesia (Kementerian Koordinator Bidang Perekonomian Republik Indonesia, 2023) indicate that Indonesia has 65.5 million MSMEs, representing 99% of business units. This sector contributes approximately 61% to gross domestic product and absorbs 97% of the national workforce. Financial technology can assist MSMEs by providing more flexible financial services, accelerating transactions, and improving financial management efficiency. The pivotal role of MSMEs is equally pronounced in the Special Region of Yogyakarta, where they constitute 94.6% of all business units and absorb 79% of total employment. (Noviyanti & Erawati, 2021).

This study focuses on Yogyakarta City, whose dynamic business ecosystem encompasses education, tourism, culinary activities, trade, services, and the creative economy (Oeliestina, 2021). According to data published by (Bapperida DIY, n.d.), the number of MSMEs in Yogyakarta City reached 42,500 units in 2025. Although this figure reflects economic potential, MSME owners must strengthen adaptive capabilities to maintain financial performance amid digitalized market competition. Theoretically, fintech can be conceptualized as a valuable digital resource when appropriately managed and integrated into business activities. The Resource-Based View posits that organizational competitive advantages and performance differences depend on the ability to manage internal resources and create value (Alsedrah, 2023; Barney, 1991; Teng et al., 2022).

In this study, fintech utilization is positioned as a resource that facilitates access to financing, transaction efficiency, and capital management. However, technological access alone is insufficient. MSMEs require capabilities that transform fintech adoption into efficient, structured, and responsive business processes. Business digitalization therefore represents the organizational capability through which fintech resources may improve financial performance. Prior research on fintech, digitalization, sustainability, and MSME performance can be synthesized into three main strands. First, studies examining the direct effect of fintech generally report that fintech adoption improves MSME financial performance by facilitating financial access, increasing transaction efficiency, and supporting financial management (Nugraha et al., 2022; Prakasa & Fauzan, 2024).

However, this strand primarily emphasizes the direct relationship between fintech and performance and provides limited explanation of the organizational process through which fintech generates those outcomes. Second, research on digitalization indicates that the integration of digital tools into marketing, accounting, marketplace activities, and other business processes contributes to improved operational efficiency and business performance (Nugraha et al., 2022; Sulasti et al., 2026). Digitalization therefore provides a plausible explanatory mechanism linking technological resources to performance outcomes. Nevertheless, existing studies have not sufficiently positioned business digitalization as a mediating variable that explains how fintech utilization affects MSME financial performance

Third, emerging research connects digitalization and sustainability with MSME resilience and long-term performance (Mohamad et al., 2026; Perumal & Loganathan, 2025; Pham & Vu, 2022). These studies show digital capabilities and sustainability-oriented practices support business continuity and value creation. However, research treating sustainability as a moderator of the relationship between business digitalization and financial performance remains limited. The literature identifies three gaps. First, fintech research emphasizes direct effects, leaving business digitalization's mediating role underexplored. Second, although digitalization is associated with improved MSME performance, empirical testing is needed to establish its role in linking fintech utilization to these outcomes. Third, sustainability's moderating role in the relationship between business digitalization and financial performance has received limited attention among MSMEs in Yogyakarta City.

To address these gaps, this study develops an integrated research model in which business digitalization mediates the relationship between fintech utilization and financial performance, while sustainability moderates the relationship between business digitalization and financial performance. Business digitalization encompasses social-media marketing, marketplace utilization, and digital financial recording (Mohamad et al., 2026; Perumal & Loganathan, 2025), thereby translating fintech-enabled financial access into operational improvements, broader market reach, cost efficiency, and enhanced financial performance (Nugraha et al., 2022; Sulasti et al., 2026). This framework clarifies how digital resources become organizational capabilities within MSMEs.

Sustainability encompasses resource efficiency, waste reduction, environmentally friendly practices, and a long-term business orientation (Waqar et al., 2025). Differences in sustainability orientation may strengthen or attenuate the effect of business digitalization on financial performance. Accordingly, this empirical study examines the direct effect of fintech utilization on MSME financial performance, the mediating role of business digitalization, and the moderating role of sustainability among MSMEs in Yogyakarta City. The findings are expected to provide empirical evidence on how digitalization and sustainability shape the relationship between fintech utilization and MSME financial performance from a Resource-Based View perspective. Practically, the study offers implications for MSME managers and policymakers seeking to strengthen digital capabilities, improve financial performance, and promote sustainable business practices in Yogyakarta City.

## LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

The Resource-Based View (RBV), introduced by (Barney, 1991), argues that competitive advantage derives from resources that are valuable, rare, difficult to imitate, and non-substitutable (Alsedrah, 2023; Barney, 1991; Teng et al., 2022). These resources form the foundation of organizational capabilities, enabling firms to combine and manage them in ways that create value and enhance performance. Sustainable growth depends not only on owning physical, human, and organizational resources but also on coordinating them effectively. Fintech utilization constitutes a digital resource supporting access to financing, payment services, and cash-flow management (Alsedrah, 2023; Barney, 1991; Teng et al., 2022). Its use also encourages digital financial recordkeeping, social media marketing, and marketplace integration, contributing to digital capabilities (Pitaloka & Afandy, 2025).

Business digitalization refers to an organizational capability to incorporate technology into operational, marketing, decision-making, and reporting activities (Alsedrah, 2023; Amalia et al., 2023; Hasan et al., 2022; Uyun & Kusuma, 2025), including digital marketing, accounting software, and online marketplaces. By combining fintech with digital resources in integrated processes, MSMEs can simplify transactions, broaden market access, lower costs, and manage cash flows effectively (ER et al., 2023; Triwijayati et al., 2023). From the Resource-Based View, this integration converts technological resources into coordinated organizational capabilities. These capabilities improve information use and operational consistency, while fintech-supported digital practices strengthen the links among financial management, customer engagement, and marketplace activity. Together, they support MSME value creation and performance.

Sustainability, as a complementary capability, supports resilience, resource efficiency, waste reduction, and long-term business viability (Waqar et al., 2025), and may shape how digitalization contributes to financial performance. Sustainability is measured through efficiency indicators, environmentally friendly practices, and long-term orientation, whereas MSME financial performance includes sales growth, profitability, and business stability (Pandak & Nugroho, 2023; Pitaloka & Afandy, 2025; Yaniar et al., 2021). Perception-based measures are appropriate because many MSMEs lack formal financial records. Accordingly, sustainability is conceptualized as a moderator of the relationship between business digitalization and financial performance. This moderation suggests that sustainability orientation may either strengthen or weaken the conversion of digital capabilities into financial outcomes, depending on how sustainability-related practices are integrated into MSME operations.

### The Impact of Fintech Utilization on Business Digitalization

For MSMEs, fintech utilization represents the deployment of digital resources. Improved access to digital financial services, transaction efficiency, and capital accessibility can encourage owners to incorporate technology into their operations (Pitaloka & Afandy, 2025; Yaniar et al., 2021). These functions support digital marketing, financial accounting, and marketplace integration (Pandak & Nugroho, 2023; Rashid et al., 2025). From the RBV, fintech creates value through integration with complementary organizational resources and processes. This complementarity enables MSMEs to transform fintech applications into digital capabilities that strengthen and coordinate technology use across business activities.

MSME operators who use fintech instruments are more likely to reduce dependence on manual processes and adopt digital systems for marketing, financial recording, and marketplace sales (Alsedrah, 2023; Uyun & Kusuma, 2025). Fintech utilization extends beyond financial transactions by facilitating interconnected digital practices across business functions. Alsedrah (2023) examines the relationship between business digitalization and MSME performance, while Uyun & Kusuma (2025) show that accounting digitalization and fintech innovation can improve financial efficiency. Pereira et al. (2026) indicate that digital finance can promote innovation and competitiveness, and Yaniar et al. (2021) find that financial technology and digital marketing positively influence MSME performance. These findings suggest that fintech utilization can encourage the development of digital capabilities and contribute to business digitalization.

H1: Fintech utilization positively influences business digitalization.

**The Impact of Business Digitalization on MSME Financial Performance**

Business digitalization represents a capability enabling MSMEs to establish a competitive advantage (Alsedrah, 2023; Teng et al., 2022). Digital marketing and marketplace platforms expand market reach, while digital financial-recording applications improve transaction accuracy and cash-flow management. They enhance cost efficiency, information quality, data-driven decision-making, and resource allocation, strengthening profitability and business growth (Alsedrah, 2023; Teng et al., 2022). From the RBV, financial benefits emerge when digital resources become organizational capabilities supporting operations. Digitalization links technology adoption with improved financial outcomes across business activities.s

Alsedrah (2023) found that business digitalization positively impacts MSME performance, whereas (Teng et al., 2022) demonstrated a positive correlation between digital transformation and financial performance. (Uyun & Kusuma, 2025) explained that accounting digitalization and fintech innovation positively influence financial efficiency. Yaniar et al. (2021) observed that technology and digital marketing positively affect MSME performance. Collectively, these results indicate that integrating technology into marketing, transactions, and financial recording enhances operational efficiency, decision-making information, and financial outcomes in MSMEs. Digital capabilities help MSMEs manage resources effectively and respond to dynamic market conditions.

H2: Business digitalization positively influences MSME financial performance.

**The Impact of Fintech Utilization on MSME Financial Performance**

Fintech utilization can improve MSME financial performance through operational efficiency and financing access (Alfzari & Al-Shboul, 2024; Pitaloka & Afandy, 2025). It enables MSMEs to accelerate transactions, reduce administrative and transaction-related costs, strengthen cash-flow management, and access capital sources. These capabilities support sales growth, profitability, and financial stability by improving management of financial activities and resource allocation. Under the Resource-Based View, fintech becomes strategic when operators deploy it according to their operational requirements. Effective management transforms digital financial services into a capability that creates value, improves resource deployment, and strengthens competitive advantage across business and financial decisions. Thus, fintech can contribute to financial outcomes when integrated into MSME operations.

Pitaloka & Afandy, (2025) demonstrate that fintech significantly and positively influences MSME financial performance and sustainability. Pandak & Nugroho, (2023) found that fintech and managerial capabilities positively affect financial performance, while (Alfzari & Al-Shboul, 2024) explain that fintech solutions enhance the financial performance of small and medium-sized enterprises. Rashid et al. (2025) likewise identified a positive effect of fintech on MSME sustainable performance. These findings indicate that MSMEs adopting fintech may outperform businesses relying on traditional methods. Nevertheless, benefits may remain limited when fintech is confined to transactions rather than integrated into business processes.

H3: Fintech utilization positively influences MSME financial performance.

**The Role of Business Digitalization in Mediating the Impact of Fintech Utilization on MSME Financial Performance**

Fintech utilization influences financial performance and business capabilities (Rehman et al., 2025). It supports technology use in payments, financial transactions, financial recording, marketing, and transaction management (Yaniar et al., 2021). However, fintech use alone does not necessarily produce superior financial outcomes. Its value depends on how MSMEs integrate fintech with organizational resources. From the Resource-Based View, business digitalization may mediate the effect of fintech utilization on MSME financial performance. RBV distinguishes resource possession from deployment through organizational capability. Fintech supplies the digital resource, whereas business digitalization organizes and applies it across digital payments, financial recording, marketing, marketplace activities, and data-driven decision-making. Digitalization converts fintech's potential into efficiency, expanded market reach, improved cash-flow management, and revenue-generating activities (Uyun & Kusuma, 2025).

Digitalization mediates this relationship because fintech enables MSMEs to employ digital tools that support the digitalization of business processes. This integration improves information quality, resource allocation, transaction efficiency, and market performance, thereby strengthening financial performance (Rehman et al., 2025). (Yaniar et al., 2021) demonstrate that financial technology and digital marketing positively affect MSME performance, whereas Uyun & Kusuma (2025) indicate that accounting digitalization and fintech innovation improve financial efficiency. Pandak & Nugroho (2023) likewise identified a positive influence of fintech and managerial capabilities on financial performance. Thus, business digitalization is hypothesized to mediate the relationship between fintech utilization and MSME financial performance.

H4: Business digitalization mediates the relationship between fintech utilization and MSME financial performance.

**The Role of Sustainability in Moderating the Impact of Business Digitalization on MSME Financial Performance**

Sustainability influences the relationship between business digitalization and financial performance (Rashid et al., 2025; Waqar et al., 2025). MSMEs adopting sustainability-oriented practices seek to manage resources efficiently, reduce waste, implement environmentally friendly practices, and maintain long-term viability. Under the RBV, sustainability is a complementary capability guiding digital-resource allocation and deployment. It shapes how digital technology supports resource efficiency and value creation and may strengthen or weaken the effect of business digitalization on financial performance. In this context, sustainability concerns how MSMEs direct and organize resources while using digital technologies, connecting digitalization with efficiency, responsible practices, and continued.

Sustainability moderates this relationship because digitalization may not produce the same level of financial benefits across MSMEs; outcomes depend on the priorities and resource-allocation decisions guiding digital-technology adoption. A sustainability-oriented MSME may use digitalization to reduce waste, improve resource efficiency, strengthen resilience, and support responsible practices, thereby enhancing financial benefits over time. Conversely, digitalization that is not aligned with resource efficiency or long-term viability may generate weaker financial outcomes. Waqar et al. (2025) demonstrate that circular economy practices and fintech positively influence sustainable performance, whereas (Rehman et al., 2025) identify a positive effect of fintech adoption on MSME sustainable performance. Rashid et al. (2025) explain that fintech, innovation, and green finance foster MSME sustainable performance. Consequently, the fifth hypothesis follows.

H5: Sustainability moderates the relationship between business digitalization and MSME financial performance.

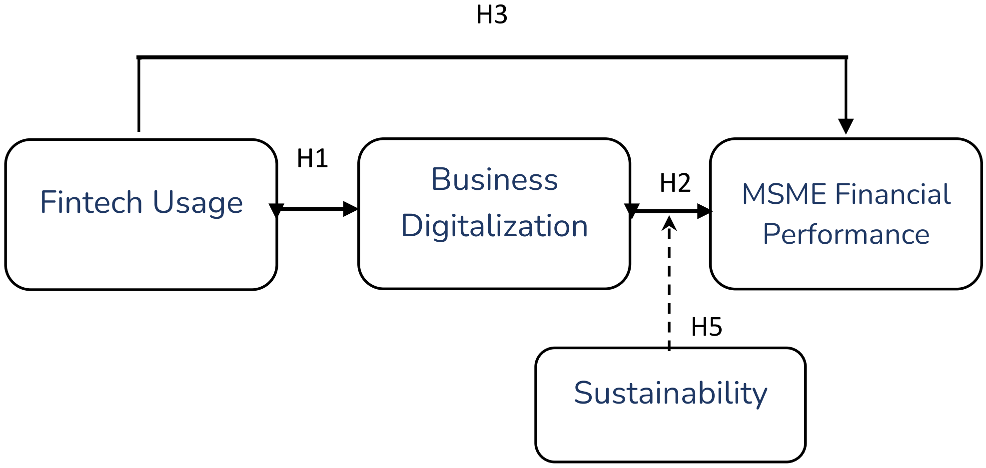


Figure 1
Thinking Framework

## RESEARCH METHODOLOGY

This quantitative study utilizes data collected via a Google Forms questionnaire from 155 MSME practitioners, owners, or managers in Yogyakarta City who use fintech. The population includes MSME practitioners, owners, or managers in this region who integrate digital financial tools, including digital payments, financial transactions, financing, and financial management, into their operations. Convenience sampling was employed, with active fintech usage serving as the inclusion criterion. This technique was selected because the researcher had access to MSMEs that met the study's criteria, while respondent willingness enabled data collection from participants. As this is a non probability sampling method, the findings cannot be generalized to the population of fintech using MSMEs in Yogyakarta City. Therefore, conclusions are confined to the participating sample.

The research utilizes a five-point Likert scale, ranging from "strongly disagree" to "strongly agree," to measure the four primary variables: fintech utilization as the independent variable, business digitalization as the mediating variable, sustainability as the moderating variable, and MSME financial performance as the dependent variable. Fintech utilization is operationalized through ease of access, transaction efficiency, and access to capital. Business digitalization is measured via digital marketing, financial recording, and marketplace utilization. Sustainability is evaluated based on resource efficiency, environmentally friendly practices, and long-term orientation. Finally, MSME financial performance is assessed through sales growth, profitability, and financial stability. These indicators capture the multifaceted nature of fintech adoption and the operational characteristics of MSMEs.

Data analysis is performed using Partial Least Squares Structural Equation Modeling with SmartPLS 3. The analysis procedure follows a systematic evaluation process, beginning with the measurement model evaluation, which assesses convergent validity, discriminant validity, and reliability. This is followed by structural model evaluation, which encompasses model fit, coefficients of determination, and predictive relevance. Finally, hypothesis testing is conducted using bootstrapping procedures; hypotheses are evaluated based on path coefficients, t-statistics, and p-values to determine the significance of direct effects, the mediating influence of business digitalization, and the moderating role of sustainability in the relationship between business digitalization and MSME financial performance.

## RESULT AND DISCUSSION

This study analyzes data from 155 MSME practitioners, owners, or managers in Yogyakarta City who use fintech in their business operations. The culinary sector constitutes the largest respondent group, consisting of 77 participants or 49.68% of the sample. Digital payment services are the most frequently used fintech category, adopted by 136 respondents or 87.74%, including QRIS, electronic wallets, mobile banking, and payment gateways. In addition, 81 respondents or 52.26% have used fintech for at least one year. These characteristics indicate that the sample includes respondents with practical exposure to digital financial services and relevant experience in technology supported business activities.

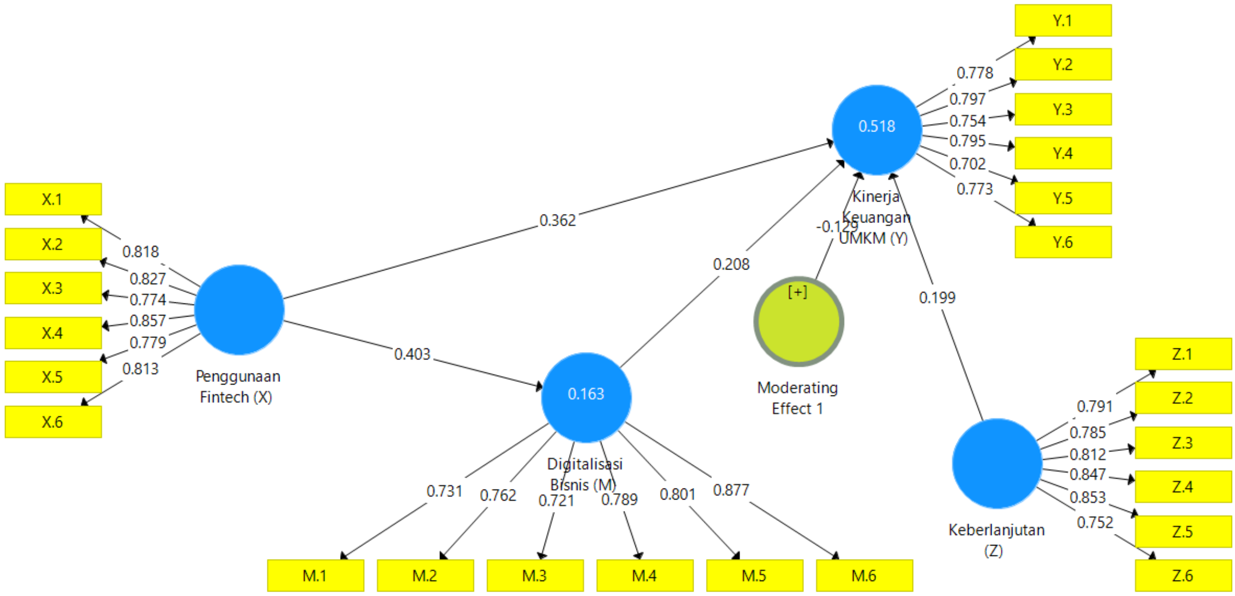


Figure 2
Outer Model Results
Source: Processed primary data, 2026.

### Convergent Validity Test

Based on the findings from the outer model evaluation, each indicator in this study is required to exhibit a loading factor exceeding 0.70 to satisfy the requisite criteria for convergent validity.

Tabel 1
Convergent Validity Test

| Variabel | Indicator | Outer Loading | Description |
|---|---|---|---|
| Fintech Usage (X) | X.1 | 0.818 | Valid |
| | X.2 | 0.827 | Valid |
| | X.3 | 0.774 | Valid |
| | X.4 | 0.857 | Valid |
| | X.5 | 0.779 | Valid |
| | X.6 | 0.813 | Valid |
| MSME Financial Performance (Y) | Y.1 | 0.778 | Valid |
| | Y.2 | 0.797 | Valid |
| | Y.3 | 0.754 | Valid |
| | Y.4 | 0.795 | Valid |
| | Y.5 | 0.702 | Valid |
| | Y.6 | 0.773 | Valid |
| Business Digitalization (M) | M.1 | 0.731 | Valid |

| Variabel | Indicator | Outer Loading | Description |
|---|---|---|---|
| | M.2 | 0.762 | Valid |
| | M.3 | 0.721 | Valid |
| | M.4 | 0.789 | Valid |
| | M.5 | 0.801 | Valid |
| | M.6 | 0.877 | Valid |
| Sustainability (Z) | Z.1 | 0.791 | Valid |
| | Z.2 | 0.785 | Valid |
| | Z.3 | 0.812 | Valid |
| | Z.4 | 0.847 | Valid |
| | Z.5 | 0.853 | Valid |
| | Z.6 | 0.752 | Valid |

Source: Processed primary data, 2026.

Convergent validity was initially evaluated through the outer loading of each reflective indicator. As presented in Table 1, all indicators recorded values above 0.70. Fintech utilization indicators ranged from 0.774 to 0.857, business digitalization indicators ranged from 0.721 to 0.877, sustainability indicators ranged from 0.752 to 0.853, and MSME financial performance indicators ranged from 0.702 to 0.797. These values are consistent with the outer model figure. Therefore, every indicator adequately represents its respective construct, no indicator requires removal, and the measurement items can be retained for subsequent reliability and structural model evaluations.

**Average Variance Extracted Analysis**

Tabel 2

Average Variance Extracted Results

| | AVE |
|---|---|
| Fintech Usage (X) | 0.659 |
| MSME Financial Performance (Y) | 0.589 |
| Business Digitalization (M) | 0.611 |
| Sustainability (Z) | 0.652 |

Source: Processed primary data, 2026.

Table 2 reports the Average Variance Extracted values for the four primary reflective constructs. Fintech utilization records an AVE of 0.659, MSME financial performance 0.589, business digitalization 0.611, and sustainability 0.652. All values exceed the minimum threshold of 0.50, indicating that each construct explains more than half of the variance in its respective indicators. These results confirm adequate convergent validity at the construct level and support the retention of all measurement items. The interaction term is not interpreted as a reflective construct because it is generated specifically for moderation analysis.

**Composite Reliability Test**

Tabel 3

Average Variance Extracted Results

| | Cronbach's alpha | Composite reliabilty |
|---|---|---|
| Fintech Usage (X) | 0.896 | 0.920 |
| MSME Financial Performance (Y) | 0.860 | 0.896 |
| Business Digitalization (M) | 0.872 | 0.904 |
| Sustainability (Z) | 0.893 | 0.918 |

Source: Processed primary data, 2026.

Table 3 presents the internal consistency reliability results for the four primary constructs in this study. Cronbach's alpha values range from 0.860 to 0.896, while composite reliability values range from 0.896 to 0.920. All values exceed the recommended threshold of 0.70, indicating that the indicators consistently measure their respective constructs. The relatively close values between Cronbach's alpha and composite reliability also suggest that reliability is not driven by a single dominant indicator. Accordingly, fintech utilization, business digitalization, sustainability, and MSME financial performance demonstrate adequate internal consistency for subsequent structural model evaluation.

**Heterotrait-Monotrait Ratio Results**

Tabel 4
Heterotrait-Monotrait Ratio Results

| | Business Digitalization (M) | Sustainability (Z) | MSME Financial Performance (Y) | Fintech Usage (X) |
|---|---|---|---|---|
| Business Digitalization (M) | | | | |
| Sustainability (Z) | 0.311 | | | |
| MSME Financial Performance (Y) | 0.511 | 0.590 | | |
| Fintech Usage (X) | 0.443 | 0.572 | 0.717 | |

Source: Processed primary data, 2026.

Table 4 presents the results of the discriminant validity assessment using the heterotrait–monotrait ratio. The HTMT values among the four primary constructs range from 0.311 to 0.717. The highest value, 0.717, is observed between fintech utilization and MSME financial performance, while all other values remain below the recommended threshold of 0.90. These findings indicate that business digitalization, sustainability, MSME financial performance, and fintech utilization are empirically distinct constructs. Therefore, the measurement model satisfies the requirements for discriminant validity and provides an adequate basis for evaluating the structural model.

**Structural Model Evaluation**

Tabel 5
Structural Model Evaluation

| | R Square | R Square Adjust | Q Square |
|---|---|---|---|
| Business Digitalization (M) | 0.163 | 0.157 | 0.090 |
| MSME Financial Performance (Y) | 0.518 | 0.505 | 0.285 |

Source: Processed primary data, 2026.

Table 4 reveals that fintech utilization accounts for 16.3% of the variance in business digitalization, with an adjusted $R^2$ of 0.157. Furthermore, the combined effects of fintech utilization, business digitalization, sustainability, and their interaction term elucidate 51.8% of the variability in MSME financial performance, as indicated by an adjusted $R^2$ of 0.505. The predictive relevance of the model is substantiated by $Q^2$ values of 0.090 for business digitalization and 0.285 for financial performance, both exceeding zero. Additionally, the $SRMR$ values for both the saturated 0.064 and estimated 0.065 models fall below the 0.08 threshold, signifying an acceptable fit between the hypothesized model and the empirical data.

## Hypothesis Testing Results

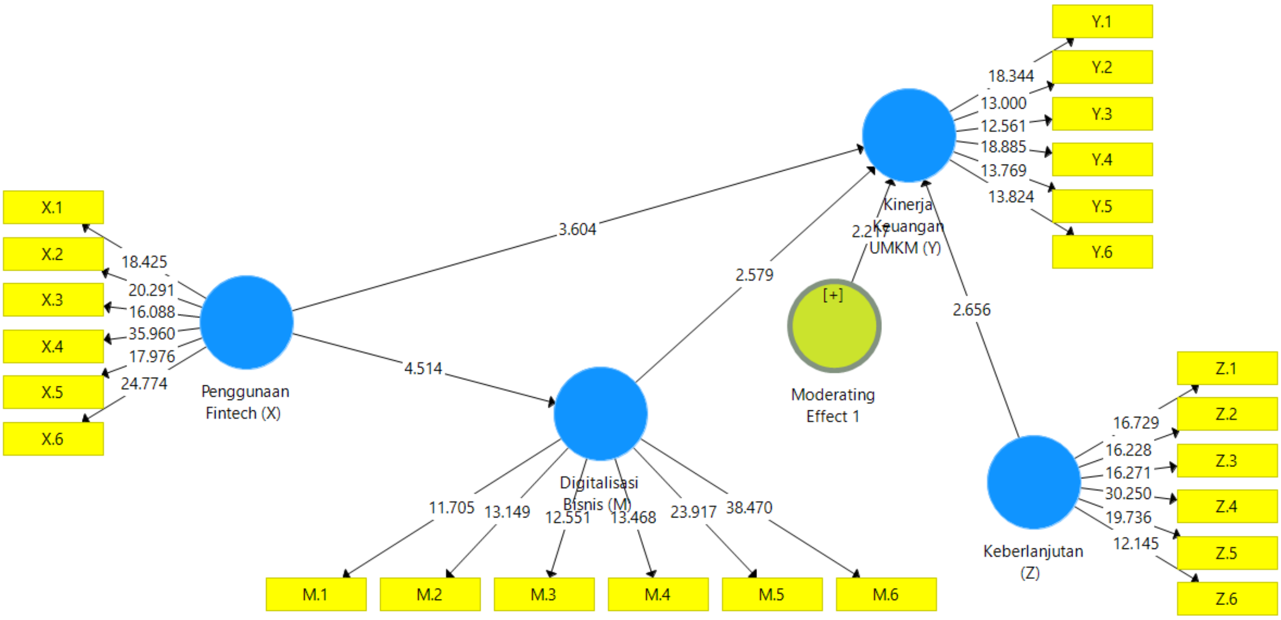


Figure 3
Booststrapping Results
Source: Processed primary data, 2026.

Bootstrapping procedures were employed to evaluate the significance of the hypothesized structural relationships, using a $t$-statistic threshold above 1.96 and a $p$-value below 0.05. Table 6 presents the direct and interaction effects, while Table 7 reports the specific indirect effect through business digitalization. The results indicate that fintech utilization significantly influences business digitalization and MSME financial performance. Business digitalization also significantly influences financial performance, while the interaction between business digitalization and sustainability is statistically significant. Furthermore, the indirect pathway from fintech utilization to financial performance through business digitalization is positive and significant.

## Path Coefficients Results

Tabel 6
Path Coefficients Results

| | AVE | $T_{statistic}$ | $P_{values}$ |
|---|---|---|---|
| Fintech Usage (X) -> Business Digitalization (M) | 0.403 | 0.546 | 0.000 |
| Business Digitalization (M) -> MSME Financial Performance (Y) | 0.208 | 2.817 | 0.005 |
| Fintech Usage (X) -> MSME Financial Performance (Y) | 0.362 | 3.557 | 0.000 |
| Sustainability (Z) -> MSME Financial Performance (Y) | 0.199 | 2.653 | 0.008 |
| Moderating Effect -> MSME Financial Performance (Y) | -0.129 | 2.224 | 0.027 |

Source: Processed primary data, 2026.

Table 6 indicates that hypotheses H1, H2, H3, and H5 are supported. The empirical findings demonstrate that fintech utilization positively influences both business digitalization and MSME financial performance, while business digitalization exerts a significant positive effect on financial performance. Additionally, sustainability demonstrates a significant positive main effect on financial performance, although this path was incorporated into the model primarily to contextualize the moderation analysis rather than as a distinct hypothesis. Conversely, the significant negative interaction coefficient reveals an attenuating moderation effect; this suggests that while higher sustainability does not directly impair financial performance, it diminishes the marginal strength of the positive relationship between business digitalization and MSME financial performance.

**Specific Indirect Effect**

Tabel 7
Specific Indirect Effect

| | AVE | $T_{statistic}$ | $P_{values}$ |
|---|---|---|---|
| Fintech Usage (X) -> Business Digitalization (M) -> MSME Financial Performance (Y) | 0.084 | 2.179 | 0.030 |

Source: Processed primary data, 2026.

Table 7 indicates that the specific indirect effect of fintech utilization on MSME financial performance through business digitalization is positive and statistically significant, with a path coefficient of 0.084, a $t$-statistic of 2.179, and a $p$-value of 0.030. Therefore, H4 is supported. The direct relationship between fintech utilization and financial performance also remains positive and significant. Since the direct and indirect effects are statistically significant and operate in the same direction, business digitalization functions as a partial complementary mediator. This finding indicates that fintech improves financial performance through both direct transaction-related benefits and the development of broader digital business capabilities.

**The Influence of Fintech Usage on Business Digitalization**

The results indicate that fintech adoption exerts a positive and significant influence on business digitalization, with a path coefficient of 0.403, a t-statistic of 4.514, and a p-value < 0.001. Consequently, H1 is supported. This coefficient suggests that improved fintech utilization corresponds to a higher level of digitalization in MSME operations. Adopting digital payments, transactions, and financial services encourages business owners to integrate digital marketing and recording. These findings support the Resource-Based View, positing that technology acts as a strategic resource. Fintech serves as a foundational step for MSMEs to cultivate digital capabilities, aligning with Rehman et al. (2025), Yaniar et al. (2021), and Uyun & Kusuma (2025) regarding business process transformation.

**The Influence of Business Digitalization on MSME Financial Performance**

The analysis shows that business digitalization exerts a positive and significant influence on financial performance, with a path coefficient of 0.208, a t-statistic of 2.579, and a p-value of 0.010. Consequently, H2 is supported. Applying technology in marketing and record-keeping assists MSMEs in enhancing operational efficiency and management. Digitalization facilitates consumer outreach and provides data for informed financial decisions. These findings support the Resource-Based View, as digital technology confers competitive benefits when developed into internal capabilities. These results align with Alsedrah (2023), Teng et al. (2022), Uyun & Kusuma (2025), and Yaniar et al. (2021), which observe that digital transformation positively correlates with efficiency and improved financial performanceg.

**The Influence of Fintech Usage on MSME Financial Performance**

The results indicate that fintech usage exerts a positive and significant influence on financial performance, with a path coefficient of 0.362, a t-statistic of 3.604, and a p-value < 0.001. Consequently, H3 is supported. Fintech assists MSME actors in accelerating transactions and improving access to financial services. With digital payments widely adopted, fintech is primarily leveraged to support operational efficiency and cash flow management. These findings are consistent with the Resource-Based View, positioning fintech as a valuable digital resource for enhancing capabilities. The results support Alfzari & Al-Shboul (2024), Pandak & Nugroho (2023), Pitaloka & Afandy (2025), and Yaniar et al. (2021), demonstrating that fintech utilization drives financial performance through improved transaction and management efficiency.

**The Role of Business Digitalization in Mediating the Influence of Fintech Usage on MSME Financial Performance**

The indirect influence of fintech usage on financial performance through business digitalization exhibits a path coefficient of 0.084, a t-statistic of 2.179, and a p-value of 0.030. Consequently, H4 is supported. The direct influence remains significant, demonstrating that business digitalization functions as a partial complementary mediator. These findings suggest that fintech enhances performance both directly through efficiency and indirectly through the advancement of digital capabilities. Digitalization acts as a critical mechanism that translates fintech utilization into structured financial recording. These results support the Resource-Based View and align with Pereira et al. (2026), Rehman et al. (2025), Uyun & Kusuma (2025), and Yaniar et al. (2021) regarding the integration of technology into business processes.

**The Role of Sustainability in Moderating the Influence of Business Digitalization on MSME Financial Performance**

The interaction between business digitalization and sustainability negatively affects financial performance, with a path coefficient of -0.129, a t-statistic of 2.217, and a p-value of 0.027, supporting H5. Sustainability has a positive effect on financial performance. Under RBV, fintech represents a digital resource, while digitalization and sustainability function as capabilities. The negative interaction indicates that digitalization's positive contribution weakens at higher sustainability levels, not that sustainability reduces financial performance. This interpretation supports careful integration, as discussed by Rehman et al. (2025) and (Pitaloka & Afandy, 2025). However, organizational complexity, implementation costs, and resource constraints were not measured. Therefore, the finding should be interpreted cautiously as an attenuating moderation effect rather than evidence of an organizational constraint.

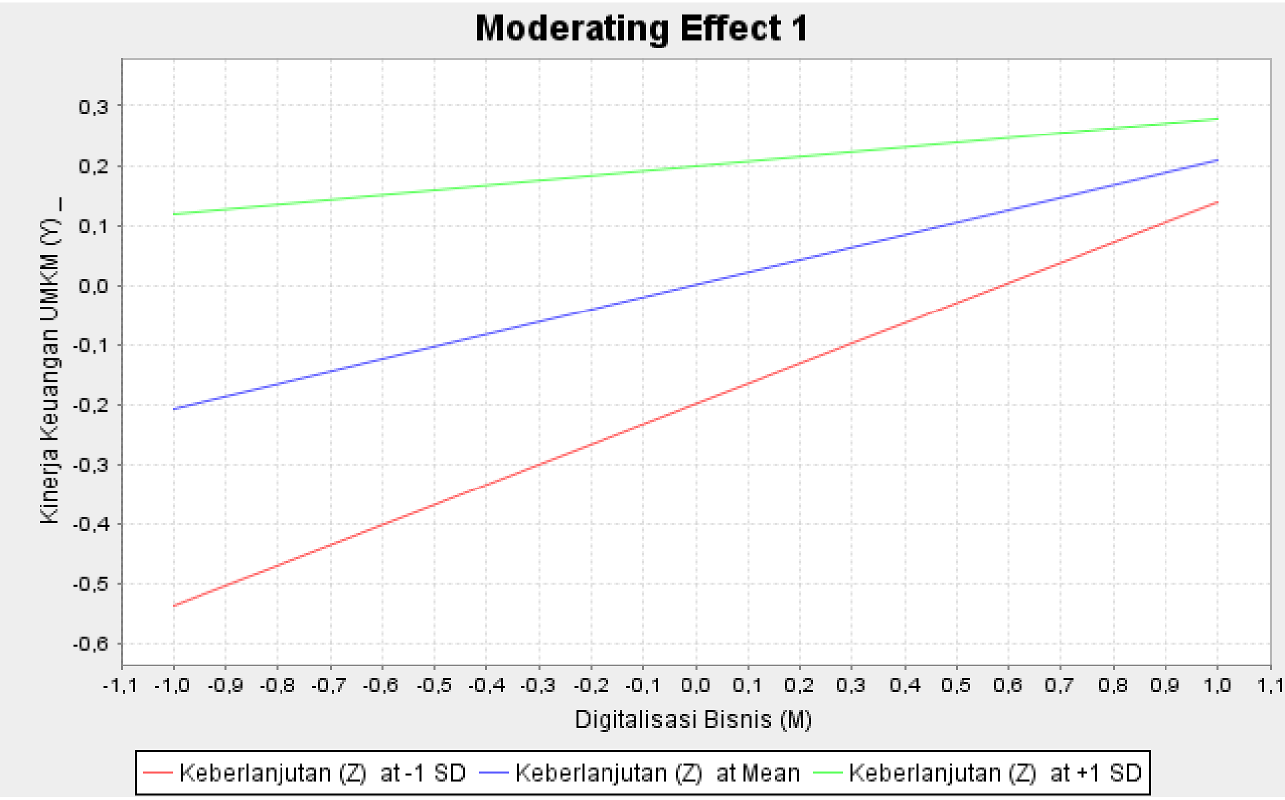


Figure 4

Moderating Effect of Sustainability

Source: Processed primary data, 2026.

A simple slope pattern shows that the positive relationship becomes flatter at higher levels of sustainability than at lower levels of this moderating strategic factor. This indicates that sustainability does not eliminate the beneficial effect of business digitalization; instead, it attenuates the additional financial gains associated with further digitalization. Accordingly, the negative interaction coefficient should be interpreted as a weakening effect rather than a negative direct effect of sustainability. This interpretation is also consistent with the positive and significant direct effect of sustainability on financial performance observed in the structural model.

## CONCLUSION AND RECOMMENDATIONS

This study confirms that fintech usage significantly bolsters business digitalization and the financial performance of MSMEs in Yogyakarta City. Business digitalization functions as a partial complementary mediator, enabling fintech to enhance performance through both direct transaction efficiency and indirect technology integration. Notably, sustainability negatively moderates digitalization's impact on financial outcomes, although sustainability itself positively affects firm performance. Therefore, MSME operators should strategically integrate fintech with digital marketing, financial recording, and sustainable practices incrementally to mitigate potential resource constraints. Furthermore, policymakers and service providers must prioritize tailored digital mentoring and accessible financial technologies. Future investigations should broaden geographical scopes and examine variables like digital competence and managerial readiness to explain the remaining variance in digitalization impacts beyond current fintech adoption levels.

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