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The Analysis of the Role of Technology, Financial Literacy, and Financial Inclusion on the Performance of Micro, Small, and Medium Enterprise (MMSEs) In Bekasi

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Abstract:
Az'zahra Nifa Shavira. The goal is to investigate how Bekasi City's Micro, Small, Medium-Sized Enterprises (MSMEs) perform in relation to technology, financial literacy, and financial inclusion. A four-point Likert-scale questionnaire was utilized to gather primary data for a quantitative approach. The sample was selected utilizing non-probability sampling with a purposive sampling method. Thirty respondents participated in a pre-test to assess the research instrument before the main survey. Based on the pre-test results, six questionnaire items were eliminated, and the final instrument was subsequently distributed to 200 respondents. Partial Least Squares Structural Equation Modelling (PLS-SEM) with SmartPLS 4.0 was utilized to analyse the data. This outcomes indicate that technology, financial literacy, financial inclusion have a positive significant affect on MSME performance. These outcomes support the Resource-Based View (RBV) theory by emphasizing the importance of strategic resources in enhancing MSME performance.

Keywords:
Technology, Financial Literacy, Financial Inclusion, MSME Performance, PLS-SEM.

BACKGROUND

Digital transformation has become an important driver of competitiveness and business performance among Micro, Small, and Medium Enterprises (MSMEs). The increasing adoption of digital technologies enables MSMEs to improve operational efficiency, expand market reach, strengthen customer relationships, and enhance business sustainability. In practice, MSME owners increasingly utilize smartphones and digital platforms to conduct marketing activities through social media, communicate with customers, and perform business transactions more efficiently. Consequently, technology adoption has become one of the key factors contributing to MSME performance.

Previous studies have reported that digital technology, particularly digital payment systems and digital marketing, positively and significantly improves MSME performance by increasing transaction efficiency and sales performance (Wandira et al., 2024; Zaldy. M et al., 2026). Similar findings have also been reported by (Fatimah et al., 2021; Gunawan et al., 2023; Laurensia et al., 2024), who found that technology adoption positively affects MSME performance.

Despite these findings, empirical evidence remains inconclusive. Several studies have reported that technology does not significantly influence MSME performance (Farina & Opti, 2022; Mukoffi & As'adi, 2021; Tirtayasa et al., 2021). These inconsistent findings may be attributed to limited technological capabilities, low digital literacy, and users' perceptions regarding the complexity of digital technology. Therefore, the effectiveness of technology adoption in improving MSME performance appears to be context-dependent and requires further empirical investigation.

Besides technology adoption, financial literacy has been recognized as another important determinant of MSME performance. Financial literacy reflects business owners' ability to understand and manage financial resources, including transaction recording, cash flow management, and financial decision-making. Previous studies suggest that financially literate entrepreneurs are more capable of managing their businesses efficiently and sustainably, leading to improved business performance (Joko et al., 2022; Martono & Febriyanti, 2023; Widiawan & Sinarwati, 2023). However, other studies have found that financial literacy does not significantly affect MSME performance (Anggriani et al., 2023; Safitri et al., 2023), indicating that financial knowledge alone may not necessarily translate into better business practices.

Financial inclusion has also been identified as an important factor influencing MSME performance. Access to formal financial services, including banking, financing, and digital financial services, enables MSMEs to obtain business capital, improve transaction efficiency, and expand business opportunities (Fadilah et al., 2022; Gunawan et al., 2023; Hertadiani & Lestari, 2021). According to the 2025 National Survey of Financial Literacy and Inclusion (*Survei Nasional Literasi dan Inklusi Keuangan* [SNLIK]), Indonesia's financial literacy index reached 65.43%, while the financial inclusion index was 75.02% (OJK & BPS, 2025). These figures indicate that although access to financial services is relatively high, the level of financial understanding remains comparatively lower. This disparity suggests that greater access to financial services does not necessarily guarantee their effective utilization, which may ultimately influence MSME performance. Furthermore, previous studies have also reported inconsistent findings regarding the relationship between financial inclusion and MSME performance (Anggriani et al., 2023; Suryanto et al., 2024).

MSME performance is commonly assessed through multiple indicators, including profitability, sales growth, operational efficiency, and business sustainability (Joko et al., 2022; Martono & Febriyanti, 2023). Nevertheless, many MSMEs continue to face challenges such as slow revenue growth, inadequate financial record-keeping, and limited managerial capabilities (Leatemia, 2023; Widiawan & Sinarwati, 2023). These challenges highlight the importance of identifying the factors that contribute to improved MSME performance.

Bekasi was selected as the research setting because MSMEs play a substantial role in the regional economy. According to the Bekasi City Government, the MSME sector employs approximately 410,000 workers, while the number of MSMEs has reached approximately 203,000 business units. These figures demonstrate the strategic importance of MSMEs in supporting regional economic development and employment generation. However, preliminary interviews with several MSME owners revealed that digital technology adoption remains limited to basic activities, such as social media promotion and customer communication through smartphones. In addition, several respondents perceived business location, customer loyalty, and product quality as more influential determinants of business performance than technology adoption or financial inclusion. These interviews were conducted solely to provide contextual background and were not included in the empirical analysis.

The inconsistencies identified in previous empirical findings indicate a research gap regarding the effects of technology adoption, financial literacy, and financial inclusion on MSME performance. Moreover, many previous studies have examined these variables separately, providing only a partial understanding of their combined effects. Therefore, this study aims to examine the simultaneous effects of technology adoption, financial literacy, and financial inclusion on MSME performance among MSMEs in Bekasi.

THEORETICAL FRAMEWORK

Resource-Based View

The theoretical foundation of this study is the Resource-Based View (RBV), which posits that organizational performance is determined by an organization's ability to effectively manage and utilize its internal resources and capabilities to achieve a sustainable competitive advantage (Barney, 1991). According to RBV, organizations possess heterogeneous and relatively immobile resources, and only those that are valuable, rare, inimitable, and non-substitutable (VRIN) can generate superior performance. The theory has evolved to remain relevant in the digital era by emphasizing the strategic role of organizational capabilities, digital technologies, and data in creating sustainable performance under dynamic business environments (Helfat et al., 2023). In the context of Micro, Small, and Medium Enterprises (MSMEs), smartphone-based technology, financial literacy, and financial inclusion can be regarded as strategic resources and capabilities that enhance business performance. Previous studies have reported that financial literacy positively influences MSME performance (Joko et al., 2022; Martono & Febriyanti, 2023), while financial inclusion has also been found to improve business performance (Fadilah et al., 2022; Hertadiani & Lestari, 2021). Likewise, technology adoption has been shown to positively affect MSME performance (Fatimah et al., 2021; Wandira et al., 2024; Zaldy. M et al., 2026), although some studies have reported insignificant relationships (Leatemia, 2023; Safitri et al., 2023). These mixed findings suggest that the contribution of technology, financial literacy, and financial inclusion to MSME performance depends on how effectively these strategic resources and capabilities are managed and leveraged within the organization.

Technology

Technology refers to the systematic application of knowledge, tools, processes, and methods to facilitate human activities and improve business operations (Nainggolan et al., 2022). Within the context of MSMEs, digital technology has become a strategic resource that supports digital transformation by enabling businesses to conduct marketing, communication, financial transactions, and information management through internet-based platforms (Nainggolan et al., 2022; Wijoyo et al., 2020). The digitalization of MSMEs extends beyond the adoption of technological devices and encompasses the integration of e-commerce, digital marketing, and electronic payment systems into business processes, thereby enhancing operational efficiency, expanding market access, and strengthening competitive advantage (Sholihah et al., 2023). In this study, technology is operationalized as the use of smartphones to support business activities, including digital marketing, customer communication, and financial transactions. Smartphones provide MSME owners with an accessible and flexible technological platform for managing daily business operations and engaging with customers. Previous empirical studies have consistently demonstrated that technology adoption positively influences MSME performance by improving business efficiency, increasing sales, and facilitating digital transactions (Fatimah et al., 2021; Wandira et al., 2024; Zaldy. M et al., 2026). However, other studies have reported insignificant relationships between technology adoption and MSME performance (Farina & Opti, 2022; Mukoffi & As'adi, 2021), suggesting that the effectiveness of technology may depend on the extent to which digital resources are effectively utilized within business operations.

Financial Literacy

Financial literacy refers to an individual's knowledge, skills, and confidence in understanding and managing financial resources effectively to make informed financial decisions and improve financial well-being (OJK & BPS, 2025). In the context of MSMEs, financial literacy enables business owners to perform essential financial activities, including budgeting, cash flow management, financial record-keeping, and investment decision-making, thereby supporting sustainable business growth (Asari et al., 2023; Choerudin et al., 2023). From the perspective of the Resource-Based View (RBV), financial literacy represents an internal organizational capability that enhances the effective utilization of financial resources and contributes to competitive advantage by improving operational efficiency and reducing financial risk (Barney, 1991). Empirical evidence generally indicates that financial literacy has a positive effect on MSME performance because financially literate entrepreneurs are better equipped to allocate resources, manage business finances, and make strategic decisions (Hanasri et al., 2023; Joko et al., 2022; Martono & Febriyanti, 2023; Widiawan & Sinarwati, 2023). Nevertheless, several studies have reported that financial literacy does not significantly influence MSME performance (Anggriani et al., 2023; Safitri et al., 2023), suggesting that financial knowledge alone may be insufficient to improve business performance unless it is effectively translated into financial management practices.

Financial Inclusion

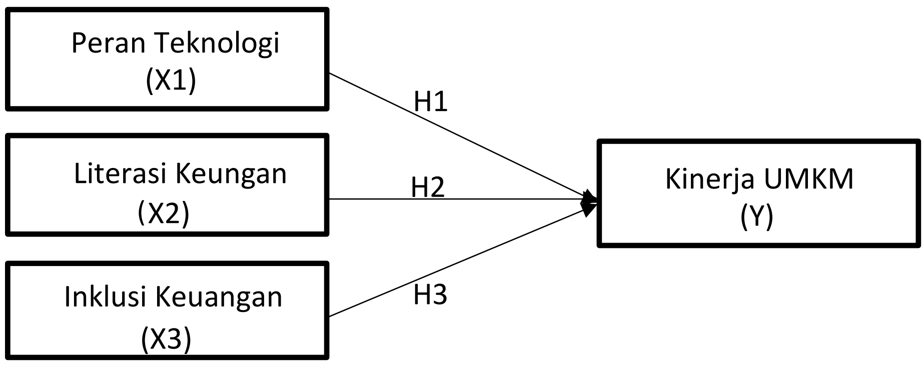
Financial inclusion refers to the availability, accessibility, and effective use of formal financial services by individuals and businesses through affordable, secure, and sustainable financial products that support economic well-being and business development (Akyuwen & Waskito, 2018; Kurniawan & Vaulia, 2022). In the context of MSMEs, financial inclusion enables business owners to access banking services, financing, and digital financial services, thereby facilitating capital acquisition, improving transaction efficiency, and supporting business expansion. Indonesia's financial inclusion policy also emphasizes equitable access to quality financial services that meet the needs and capabilities of all members of society as a means of promoting inclusive economic growth. From the perspective of the Resource-Based View (RBV), financial inclusion can be regarded as access to strategic financial resources that enhance an enterprise's ability to acquire, allocate, and utilize financial capital effectively, thereby strengthening business capabilities and improving organizational performance (Barney, 1991). Empirical evidence generally suggests that financial inclusion positively influences MSME performance by increasing access to financing and improving business efficiency (Fadilah et al., 2022; Gunawan et al., 2023; Hertadiani & Lestari, 2021). However, other studies have reported insignificant relationships between financial inclusion and MSME performance (Leatemia, 2023; Suryanto et al., 2024), indicating that access to financial services alone may not improve business performance unless it is accompanied by the capability to manage and utilize financial resources effectively.

MSMEs Performance

MSME performance refers to the extent to which a business achieves its operational and strategic objectives through efficient resource utilization and sustainable business growth. Business performance is commonly assessed using both financial and non-financial indicators, including sales growth, profitability, operational efficiency, market growth, and business sustainability (Joko et al., 2022; Martono & Febriyanti, 2023). From the perspective of the Resource-Based View (RBV), superior business performance is achieved when organizations effectively utilize valuable internal resources and capabilities to create and sustain competitive advantage (Barney, 1991). In the context of MSMEs, strategic resources such as technology adoption, financial literacy, and financial inclusion can enhance operational efficiency, improve decision-making, and strengthen competitiveness, thereby contributing to improved business performance. Nevertheless, many MSMEs continue to face challenges in achieving sustainable performance due to limited managerial capabilities, inadequate financial management practices, restricted access to financial resources, and slow adoption of digital technologies (Leatemia, 2023; Widiawan & Sinarwati, 2023). Therefore, understanding the determinants of MSME performance is essential for identifying strategies that can improve business competitiveness and support long-term business sustainability.

HYPOTHESIS

This study was conducted to examine the effects of technology, financial literacy, and financial inclusion on MSME performance in Bekasi.



Technology and MSME Performance

Technology plays a strategic role in improving MSME performance by enabling entrepreneurs to conduct business activities more efficiently through digital marketing, customer communication, and financial transactions. From the Resource-Based View (RBV), technology represents a strategic organizational resource that can create competitive advantage when it is effectively utilized to enhance business capabilities and operational efficiency (Barney, 1991). In the context of MSMEs, smartphone-based technologies, digital marketing, and digital payment systems facilitate market expansion, improve transaction efficiency, and support business growth (Nainggolan et al., 2022; Sholihah et al., 2023; Wijoyo et al., 2020). Empirical studies have consistently reported that technology adoption positively influences MSME performance by improving operational and financial performance (Fatimah et al., 2021; Gunawan et al., 2023; Laurensia et al., 2024; Silalahi et al., 2023; Wandira et al., 2024; Zaldy et al., 2026), although several studies have found insignificant relationships (Farina & Opti, 2022; Mukoffi & As'adi, 2021). These inconsistent findings suggest that the contribution of technology to MSME performance depends on how effectively digital technologies are adopted and utilized. Therefore, the first hypothesis of this study is formulated as follows:

H1: Technology has a positive effect on MSME performance.

Financial Literacy and MSME Performance

Financial literacy reflects entrepreneurs' knowledge, skills, and confidence in managing financial resources and making sound financial decisions (OJK & BPS, 2025). According to the Resource-Based View (RBV), financial literacy represents an internal capability that enables business owners to allocate resources efficiently, minimize financial risks, and improve organizational performance (Barney, 1991). Entrepreneurs with higher levels of financial literacy are generally better equipped to manage cash flow, prepare financial records, and make strategic investment decisions that contribute to business sustainability (Asari et al., 2023; Choerudin et al., 2023). Previous studies have demonstrated that financial literacy positively affects MSME performance(Hanasri et al., 2023; Joko et al., 2022; Martono & Febriyanti, 2023; Widiawan & Sinarwati, 2023). Nevertheless, other studies have reported insignificant effects (Anggriani et al., 2023; Safitri et al., 2023), indicating that financial knowledge alone may not improve business performance unless it is effectively applied in business operations. Therefore, the second hypothesis is proposed as follows:

H2: Financial literacy has a positive effect on MSME performance.

Financial Inclusion and MSME Performance

Financial inclusion provides MSME owners with access to formal financial services, including banking, financing, and digital financial services, thereby facilitating business financing, improving transaction efficiency, and supporting business expansion (Akyuwen & Waskito, 2018). From the Resource-Based View (RBV), access to financial services represents access to strategic financial resources that enable firms to strengthen their operational capabilities and improve business performance (Barney, 1991). Previous empirical studies have shown that financial inclusion positively influences MSME performance by increasing access to financial resources and enhancing business efficiency (Fadilah et al., 2022; Gunawan et al., 2023; Hertadiani & Lestari, 2021; Silalahi et al., 2023). However, several studies have reported that financial inclusion does not significantly affect MSME performance (Leatemia, 2023; Suryanto et al., 2024). These mixed findings indicate that the benefits of financial inclusion depend on the extent to which entrepreneurs effectively utilize available financial services to support business activities. Therefore, the third hypothesis is formulated as follows:

H3: Financial inclusion has a positive effect on MSME performance.

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METHOD

Types and Data Source

This study employed a quantitative research approach to examine the effects of technology, financial literacy, and financial inclusion on MSME performance. Quantitative research was chosen because it enables the measurement of relationships among variables using numerical data and statistical analysis. The study used primary data collected directly from respondents through a structured questionnaire.

Population and Sample

The population of this study consisted of Micro, Small, and Medium Enterprise (MSME) owners operating in Bekasi, Indonesia. Based on data from the Central Bureau of Statistics (BPS) of West Java Province (2025), the total MSME population in Bekasi was approximately 203,000 business units. This study employed a non-probability sampling technique using purposive sampling to select respondents who met the predetermined criteria. A total of 200 MSME owners participated in this study.

Data Collection Technique

Data were collected using a survey method through the distribution of an online questionnaire via Google Forms. The questionnaire was distributed through digital communication platforms and social media to reach eligible MSME owners in Bekasi. The measurement items were adapted from previous studies and assessed using a four-point Likert scale ranging from 1 (strongly disagree) to 4 (strongly agree).

Data Analysis Techniques

The collected data were analyzed using descriptive statistical analysis and Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS 4 software. The analysis included the assessment of the measurement model through validity and reliability testing, followed by the evaluation of the structural model to test the proposed hypotheses regarding the relationships among technology, financial literacy, financial inclusion, and MSME performance.

RESULT

Descriptive Statistical Analysis Test

In the descriptive statistical analysis test, N equals 200 as the total number of respondent samples. The minimum, maximum, average, and standard deviation values are displayed in the table using SmartPLS 4.0.

TABLE 1. DESCRIPTIVE STATISTICAL ANALYSIS TEST RESULTS

Variabel	N	Min	Maks	*Mean*	STDEV
Peran Teknologi	200	1	4	2,535	1,131

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Literasi Keuangan	200	1	4	2,570	1,127
Inklusi Keuangan	200	1	4	2,500	1,127
Kinerja UMKM	200	1	4	2,500	1,127

Source: Process by Researchers, 2026

Convergent Validity

A pilot test was conducted to evaluate the validity of the measurement instrument using outer loading analysis. Several indicators that did not meet the recommended threshold (outer loading < 0.70) were removed, while the remaining indicators satisfied the convergent validity criterion. The revised questionnaire was subsequently distributed to 200 MSME owners in Bekasi for the main survey, and the outer loading assessment was performed again using the main dataset.

TABLE 2. OUTER LOADING

Item	IK	KU	LK	PT	Keterangan
IK2	0,917				Valid
IK3	0,890				Valid
IK5	0,906				Valid
IK6	0,875				Valid
IK7	0,873				Valid
IK8	0,900				Valid
IK9	0,860				Valid
IK10	0,889				Valid
IK11	0,902				Valid
IK12	0,912				Valid
IK13	0,887				Valid
KU1		0,895			Valid
KU2		0,898			Valid
KU3		0,896			Valid
KU4		0,869			Valid
KU5		0,888			Valid

Item	IK	KU	LK	PT	Keterangan
KU6		0,895			Valid
KU7		0,899			Valid
KU8		0,910			Valid
KU9		0,860			Valid
KU10		0,900			Valid
KU11		0,874			Valid
KU12		0,886			Valid
KU13		0,874			Valid
KU15		0,881			Valid
KU16		0,895			Valid
KU17		0,891			Valid
KU19		0,900			Valid
KU20		0,881			Valid
LK1			0,899		Valid
LK2			0,879		Valid
LK3			0,847		Valid
LK4			0,885		Valid
LK5			0,874		Valid
LK6			0,871		Valid
LK7			0,894		Valid
LK8			0,871		Valid
LK9			0,896		Valid
LK10			0,888		Valid
LK11			0,902		Valid
LK12			0,864		Valid
LK13			0,887		Valid

Item	IK	KU	LK	PT	Keterangan
LK14			0,866		Valid
LK15			0,854		Valid
PT1				0,882	Valid
PT2				0,886	Valid
PT3				0,896	Valid
PT4				0,866	Valid
PT5				0,903	Valid
PT6				0,867	Valid
PT7				0,891	Valid
PT8				0,904	Valid
PT10				0,890	Valid
PT11				0,893	Valid
PT12				0,895	Valid
PT13				0,886	Valid
PT14				0,898	Valid
PT15				0,899	Valid

Source: Process by Researchers, 2026

The results indicate that all measurement indicators achieved outer loading values above the recommended threshold of 0.70, demonstrating satisfactory convergent validity (Hair Jr et al., 2021). Therefore, all retained indicators were considered valid and appropriate for subsequent analysis, indicating that the revised measurement instrument maintained its validity in the main survey.

Average Variance Extracted (AVE)

TABLE 3. AVERAGE VARIANCE EXTRACTED (AVE)

Variabel	*Average Variance Extracted* (AVE)
IK	0,800
KU	0,789
LK	0,772

PT	0,792

Source: Process by Researchers, 2026

Based on the results of the Average Variance Extracted (AVE) analysis presented in Table 3, all constructs achieved AVE values above the recommended threshold of 0.50, indicating satisfactory convergent validity (Hair et al., 2021). Financial Inclusion (FI) obtained an AVE value of 0.800, MSME Performance (MP) 0.789, Financial Literacy (FL) 0.772, and Technology (TECH) 0.792. These results indicate that all constructs adequately explain the variance of their respective indicators and satisfy the convergent validity criterion.

Heterotrait-Monotrait Ratio

TABLE 4. HETEROTRAIT-MONOTRAIT RATIO

	IK	KU	LK	PT
IK				
KU	0,490			
LK	0,203	0,496		
PT	0,173	0,475	0,209	

Source: Process by Researchers, 2026

As presented in Table 4, all HTMT values were below the recommended threshold of 0.90, ranging from 0.173 to 0.496. These results indicate that all constructs satisfied the discriminant validity criterion.

Discriminant Validity

TABLE 5. DISCRIMINANT VALIDITY (CROSS LOADING)

Variabel	IK	KU	LK	PT
IK2	0,917	0,407	0,173	0,157
IK3	0,890	0,453	0,181	0,175
IK5	0,906	0,469	0,200	0,134
IK6	0,875	0,401	0,176	0,145
IK7	0,873	0,423	0,210	0,138
IK8	0,900	0,441	0,199	0,147
IK9	0,884	0,456	0,141	0,121

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Variabel	IK	KU	LK	PT
IK10	0,889	0,396	0,172	0,157
IK11	0,902	0,431	0,178	0,199
IK12	0,912	0,426	0,135	0,130
IK13	0,887	0,424	0,195	0,159
KU1	0,493	0,895	0,417	0,414
KU2	0,425	0,898	0,500	0,408
KU3	0,429	0,896	0,467	0,445
KU4	0,379	0,869	0,440	0,393
KU5	0,427	0,888	0,447	0,385
KU6	0,478	0,895	0,445	0,410
KU7	0,460	0,899	0,383	0,410
KU8	0,420	0,910	0,394	0,417
KU9	0,376	0,860	0,405	0,423
KU10	0,411	0,900	0,431	0,406
KU11	0,428	0,874	0,380	0,454
KU12	0,423	0,886	0,441	0,422
KU13	0,437	0,874	0,448	0,392
KU15	0,408	0,881	0,446	0,438
KU16	0,423	0,895	0,459	0,441
KU17	0,423	0,891	0,396	0,401
KU19	0,433	0,900	0,511	0,372
KU20	0,404	0,881	0,411	0,457
LK1	0,130	0,432	0,899	0,239
LK2	0,215	0,450	0,879	0,191
LK3	0,215	0,429	0,847	0,205
LK4	0,233	0,433	0,855	0,187
LK5	0,129	0,454	0,874	0,197
LK6	0,144	0,414	0,871	0,131
LK7	0,179	0,445	0,894	0,198

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Variabel	IK	KU	LK	PT
LK8	0,170	0,467	0,871	0,210
LK9	0,170	0,421	0,896	0,185
LK10	0,193	0,470	0,888	0,128
LK11	0,186	0,422	0,902	0,205
LK12	0,152	0,443	0,864	0,244
LK13	0,163	0,401	0,887	0,126
LK14	0,134	0,350	0,866	0,173
LK15	0,214	0,395	0,854	0,101
PT1	0,127	0,378	0,098	0,882
PT2	0,156	0,439	0,252	0,886
PT3	0,137	0,408	0,139	0,896
PT4	0,202	0,359	0,167	0,866
PT5	0,143	0,459	0,170	0,903
PT6	0,145	0,420	0,181	0,867
PT7	0,088	0,434	0,201	0,891
PT8	0,161	0,432	0,186	0,904
PT10	0,145	0,426	0,176	0,890
PT11	0,189	0,439	0,247	0,893
PT12	0,124	0,407	0,170	0,895
PT13	0,137	0,394	0,215	0,886
PT14	0,176	0,411	0,157	0,898
PT15	0,179	0,408	0,209	0,899

Source: Process by Researchers, 2026

As presented in Table 5, all indicators for the Technology, Financial Literacy, Financial Inclusion, and MSME Performance constructs exhibited higher loadings on their respective constructs than on any other constructs. These findings confirm that all indicators satisfied the discriminant validity criterion and further support the results of the HTMT and Fornell–Larcker assessments. Therefore, all constructs were considered valid and suitable for subsequent analysis.

Reliability Test

TABLE 6. COMPOSITE RELIABILITY AND CRONBACH'S ALPHA

Variabel	*Cronbach's Alpha*	*Composite Reliability (rho_a)*	*Composite Reliability (rho_c)*
IK	0,975	0,976	0,978
KU	0,984	0,984	0,985
LK	0,979	0,980	0,981
PT	0,980	0,981	0,982

Source: Process by Researchers, 2026

As presented in Table 6, all constructs demonstrated Cronbach's Alpha, Composite Reliability (rho_a), and Composite Reliability (rho_c) values exceeding the recommended threshold of 0.70. Financial Inclusion reported values of 0.975, 0.976, and 0.978; MSME Performance 0.984, 0.984, and 0.985; Financial Literacy 0.979, 0.980, and 0.981; and Technology 0.980, 0.981, and 0.982, respectively. These results indicate that all constructs achieved satisfactory internal consistency and met the reliability criterion, confirming that the measurement indicators were reliable for subsequent analysis.

Inner VIF Values

TABLE 7. INNER VIF VALUES

	VIF
IK → KU	1,060
LK → KU	1,076
PT → KU	1,064

Source: Process by Researchers, 2026

As presented in Table 7, the inner VIF values were 1.060 for Financial Inclusion → MSME Performance, 1.076 for Financial Literacy → MSME Performance, and 1.064 for Technology → MSME Performance. All VIF values were below the recommended threshold of 5.00, indicating the absence of multicollinearity among the exogenous constructs. Therefore, the structural model satisfied the collinearity assumption.

R2 (Coefficient of determination)

TABLE 8. R SQUARE

	R-square	*R-square adjusted*
KU	0,500	0,492

Source: Process by Researchers, 2026

As presented in Table 8, the MSME Performance construct achieved an R^2 value of 0.500 and an adjusted R^2 value of 0.492. An R^2 value of 0.500 indicates a moderate level of explanatory power. These results suggest that Technology, Financial Literacy, and Financial Inclusion jointly explain 50.0% of the variance in MSME Performance, while the remaining 50.0% is attributable to other factors not included in the research model. Therefore, the structural model demonstrates a moderate explanatory capability.

F^2 (Effect Size)

TABLE 9. F SQUARE

	F-Square
IK → KU	0,238
LK → KU	0,227
PT → KU	0,212

Source: Process by Researchers, 2026

As presented in Table 9, Financial Inclusion, Financial Literacy, and Technology obtained f^2 values of 0.238, 0.227, and 0.212, respectively. All f^2 values fall within the range of 0.15 to less than 0.35, indicating a medium effect size. These results suggest that each exogenous construct has a moderate contribution to explaining the variance in MSME Performance.

Model Fit

TABLE 10. MODEL FIT

	Saturated Model	*Estimated Model*
SRMR	0,036	0,036
d_ULS	2,272	2,272
d_G	2,225	2,255
Chi-Square	2134,788	2134,788
NFI	0,869	0,869

Source: Process by Researchers, 2026

As presented in Table 10, the SRMR values for both the saturated model and the estimated model were 0.036. These values are below the recommended threshold of 0.08, indicating a good model fit. The results suggest that the discrepancy between the observed correlation matrix and the model-implied correlation matrix is low, demonstrating that the proposed model adequately fits the data.

Q^2 (Predictive Relevance)

TABLE 11. PREDICTIVE RELEVANCE (Q2)

	Q^2predict
KU1	0,406
KU2	0,410
KU3	0,414
KU4	0,348
KU5	0,364
KU6	0,411
KU7	0,360
KU8	0,343
KU9	0,332
KU10	0,355
KU11	0,365
KU12	0,381
KU13	0,376
KU15	0,385
KU16	0,404
KU17	0,340
KU19	0,399
KU20	0,370

Source: Process by Researchers, 2026

As presented in Table 11, all indicators of the MSME Performance construct produced Q^2_predict values greater than 0, ranging from 0.332 to 0.414. These results indicate that the model has predictive relevance, demonstrating its capability to predict the endogenous construct.

Path Coefficient

TABLE 12. BOOTSTRAPPING

	Original Sample (O)	Sample *mean* (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
IK → KU	0,355	0,357	0,050	7,126	0,000
LK → KU	0,350	0,351	0,056	6,211	0,000
PT → KU	0,336	0,337	0,054	6,274	0,000

Source: Process by Researchers, 2026

As presented in Table 12, all structural relationships exhibited positive path coefficients (original sample), T-statistics greater than 1.96, and p-values below 0.05. These results indicate that Technology, Financial Literacy, and Financial Inclusion each have a positive and significant effect on MSME Performance. Financial Inclusion demonstrated the strongest effect ($\beta = 0.355$), followed by Financial Literacy ($\beta = 0.350$) and Technology ($\beta = 0.336$).

DISCUSSION

1. The Effect of Technology on MSME Performance

The results indicate that technology has a positive and significant effect on MSME performance, supporting the first hypothesis. This finding suggests that the use of smartphone-based technology, including digital marketing, customer communication, and digital payment systems, enables MSMEs to improve operational efficiency, expand market reach, and enhance business performance. According to the Resource-Based View (RBV), technology represents a strategic organizational resource that contributes to competitive advantage when it is effectively utilized (Barney, 1991). The findings are consistent with previous studies by Fatimah et al. (2021), Gunawan et al. (2023), Laurensia et al. (2024), Wandira et al. (2024), and Zaldy et al. (2026), which reported that technology positively influences MSME performance. Therefore, greater utilization of digital technology can contribute to sustainable improvements in MSME performance.

2. The Effect of Financial Literacy on MSME Performance

The findings reveal that financial literacy has a positive and significant effect on MSME performance, supporting the second hypothesis. This result indicates that MSME owners with higher levels of financial literacy are better able to manage financial resources, maintain financial records, control cash flow, and make informed financial decisions, thereby improving business performance. From the Resource-Based View (RBV), financial literacy is regarded as an internal organizational capability that enables business owners to utilize financial resources more effectively and efficiently (Barney, 1991). The results are consistent with previous studies conducted by Joko et al. (2022), Martono and Febriyanti (2023), Widiawan and Sinarwati (2023), and Hanasri et al. (2023), all of which found that financial literacy positively affects MSME performance. Consequently, improving financial literacy among MSME owners is expected to strengthen business sustainability and enhance organizational performance.

3. **The Effect of Financial Inclusion on MSME Performance**

The results demonstrate that financial inclusion has a positive and significant effect on MSME performance, supporting the third hypothesis. This finding suggests that access to formal financial services, including banking services, financing, and digital financial services, enables MSMEs to obtain financial resources, improve transaction efficiency, and support business expansion. According to the Resource-Based View (RBV), financial inclusion provides access to strategic financial resources that strengthen business capabilities and contribute to improved organizational performance (Barney, 1991). These findings are consistent with previous studies by Fadilah et al. (2022), Hertadiani and Lestari (2021), Gunawan et al. (2023), and Silalahi et al. (2023), which reported a positive relationship between financial inclusion and MSME performance. Therefore, increasing access to and effective utilization of formal financial services can support sustainable business growth and improve MSME performance.

CONCLUSION

This study examined the effects of technology, financial literacy, and financial inclusion on MSME performance among Micro, Small, and Medium Enterprises (MSMEs) in Bekasi, Indonesia. The findings indicate that all three variables have positive and significant effects on MSME performance. Financial inclusion demonstrated the strongest influence, followed by financial literacy and technology. These results suggest that MSME performance can be enhanced by improving access to formal financial services, strengthening entrepreneurs' financial knowledge and capabilities, and promoting the effective use of smartphone-based technologies for business activities. Furthermore, the findings support the Resource-Based View (RBV), which posits that strategic resources and organizational capabilities contribute to superior business performance when they are effectively utilized.

This study contributes to the existing literature by providing empirical evidence on the simultaneous effects of technology, financial literacy, and financial inclusion on MSME performance within the context of Bekasi, Indonesia. The findings offer practical implications for policymakers and relevant stakeholders to develop programs that promote digital technology adoption, strengthen financial literacy, and expand access to formal financial services for MSMEs. Despite these contributions, this study is limited to MSMEs operating in Bekasi and focuses on three explanatory variables. Future research is encouraged to include broader geographical coverage and additional variables, such as entrepreneurial orientation, innovation capability, business strategy, or government support, to provide a more comprehensive understanding of the factors influencing MSME performance.

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