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# The Influence Of Digital Transformation And Financial Literacy On Msme Performance With Innovation As A Mediating Variable (A Study on MSMEs in Purwosari District)

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**A R T I C L E   I N F O**

*Keywords:*
Digital Transformation; Financial Literacy; Innovation; MSME Performance; Technology Adoption; Knowledge-Based View; Business Competitiveness; Indonesia

**A B S T R A C T**

*This study examines the influence of digital transformation and financial literacy on MSME performance through innovation in Purwosari District, Pasuruan. Using a quantitative approach, data were collected from 100 MSMEs and analyzed with PLS-SEM. The results show that digital transformation directly improves MSME performance, whereas financial literacy has no direct effect. Both variables significantly enhance innovation, which positively affects performance and mediates their relationships with performance. These findings highlight innovation as a key mechanism for transforming digital capabilities and financial knowledge into business outcomes. Therefore, strengthening innovation capacity is essential for improving MSME competitiveness and sustainability.*

**A B S T R A K**

*Penelitian ini mengkaji pengaruh transformasi digital dan literasi keuangan terhadap kinerja UMKM melalui inovasi di Kecamatan Purwosari, Pasuruan. Penelitian menggunakan pendekatan kuantitatif dengan data dari 100 UMKM yang dianalisis menggunakan PLS-SEM. Hasil penelitian menunjukkan bahwa transformasi digital berpengaruh langsung terhadap kinerja UMKM, sedangkan literasi keuangan tidak berpengaruh langsung. Kedua variabel berpengaruh signifikan terhadap inovasi, yang selanjutnya meningkatkan kinerja dan memediasi hubungan keduanya dengan kinerja. Temuan ini menegaskan bahwa inovasi merupakan mekanisme penting dalam mengubah kemampuan digital dan pengetahuan keuangan menjadi hasil bisnis. Oleh karena itu, penguatan kapasitas inovasi diperlukan untuk meningkatkan daya saing dan keberlanjutan UMKM.*

## Introduction

The Micro, Small, and Medium Enterprises (MSMEs) sector is essential for Indonesia's economic stability, contributing making substantial contributions to employment and Gross Domestic Product (GDP).

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In keeping with the OECD perspective, MSMEs are central to economic resilience in developing countries, as they can drive innovation and absorb labour. Supporting this view, Limanseto (2021) reported that more than 64 million MSMEs contribute approximately 61% to Indonesia's GDP, highlighting their strategic importance in the national economy. At the regional level, MSMEs also demonstrate strong contributions. According to Badan Pusat Statistik Jawa Timur (2025), approximately 4.58 million MSMEs in East Java contributed 57.25% to regional GDP during 2021-2022 (Mubyarsah, 2022), while absorbing around 97% of the workforce (Mariska et al., 2023). However, this contribution is not evenly distributed. In Purwosari District, Pasuruan, there were only around 500 MSMEs in 2024, underscoring the need for more targeted, sustainable development efforts.

Despite its potential, MSMEs in Purwosari face several challenges, including declining purchasing power and low market demand, as well as limited adoption of digital technologies (Arifin, 2024). Only a small proportion of MSME actors utilise digital platforms for marketing and transactions, reflecting a gap between technological advancement and business readiness.

Internal constraints further complicate this situation, especially regarding financial literacy and business management. Financial literacy essential for facilitating precise strategic decision-making (Mardiana et al., 2025). It pertains to the degree to which individuals understand financial concepts and can make sound financial decisions under various circumstances (Fitriyah et al., 2022). In practice, entrepreneurs possessing robust financial literacy typically uphold meticulously organized financial records, distinguish between personal and business finances, and employ efficient budgeting procedures (Choiruddin et al., 2025). However, despite the expansion of financial inclusion in East Java, the degree of financial literacy remains comparatively inadequate, leading to difficulties in risk assessment, business planning, and maintaining financial stability.

In this context, innovation emerges as a key factor in enhancing MSME performance. Innovation facilitates organizations in attaining a competitive advantage through product development, process enhancement, and adaptable marketing techniques (Arista et al., 2020; Kotler, 2014). Moreover, innovation immediately enhances performance and acts as a mediating factor connecting digital transformation and financial literacy to business outcomes.

The relationships among these variables can be explained through the Technology Acceptance Model and the Knowledge-Based View. Davis (1989) emphasises perceived usefulness and ease of use as key determinants of technology adoption, while Robert M. Grant (1996) highlights knowledge as a strategic resource for achieving competitive advantage. However, previous studies have reported inconsistent findings, some indicate significant positive effects (Adi, 2023; Li et al., 2023), whereas others find no significant relationships (Istikomah et al., 2024; Wijaya & Yadewani, 2024).

These inconsistencies indicate that the mechanism through which digital transformation and financial literacy influence MSME performance remains unclear, particularly regarding the mediating role of innovation. Therefore, this study seeks to impact of digital transformation and financial literacy on MSME performance in Purwosari District, Pasuruan, by positioning innovation as a mediating variable.

This study offers empirical evidence demonstrating how innovation functions as a bridging mechanism, transforming digital capabilities and financial knowledge into measurable business performance, particularly in relatively underdeveloped MSME areas. The results are anticipated to enhance both theoretical and practical aspects of strengthening MSME competitiveness in the digital era

## Literatur Review

### *Digital Transformation*

Digital transformation is the strategic integration of digital technology to accelerate operational efficiency, expand market penetration, and redesign value creation for businesses. This phenomenon is not merely viewed as the adoption of technical devices, but rather a comprehensive metamorphosis of business models, workflows, and consumer interaction patterns. In the MSME ecosystem, this variable manifests through the utilisation of social media, marketplaces, non-cash payment ecosystems, and the digitalisation of production lines, collectively driving businesses to become more adaptive and competitive (Hadady & Iksan, 2023; Kurniawan et al., 2021). According to the Technology Acceptance Model (TAM), technology adoption is largely determined by two main factors: perceived effectiveness and ease of use. The stronger the entrepreneurs' belief in the superiority of technology, the greater the likelihood of integrating it into business operations. Consistent with previous empirical findings, digital transformation has proven to be a driving force for performance and innovation by enhancing efficiency and democratising information access (Adi, 2023; Zhao et al., 2024).

### *Financial Literacy*

Financial literacy reflects an individual's competence in developing financial understanding and allocating financial resources appropriately for strategic decision-making. The scope of this variable includes the accumulation of knowledge, technical skills, and mental attitudes in financial management, covering budget management, debt control, investment orientation, and risk mitigation. For MSME actors, this capacity is an absolute prerequisite to maintaining business resilience and ensuring that every decision is made based on rational calculations (Salsabila et al., 2022; Susilo et al., 2022). In keeping with Knowledge-Based View (KBV), financial literacy is perceived as a strategic form of knowledge asset that can enhance competitive advantage. Financial literacy enhances MSMEs' ability to allocate resources efficiently, including allocating capital for innovation activities. Although some studies have reported insignificant results, the majority of the literature indicates that financial literacy significantly influences companies' performance profiles and innovation capacity (Ashari & Sabandi, 2025; Istikomah et al., 2024; Liu et al., 2020).

***Innovation***

Innovation reflects the company's ability to convert new ideas into economic value by updating products, processes, or marketing strategies. This variable becomes a crucial instrument for maintaining competitiveness amidst the turbulence of a dynamic business environment. In MSMEs, the manifestation of innovation can take the form of product differentiation, improved quality standards, more efficient production methods and the implementation of more creative marketing communication (Irena F, 2023; Taufiq et al., 2020). The Knowledge-Based View (KBV) perspective holds that innovation stems from how organisations leverage knowledge as a primary resource. The intensity of innovation is directly correlated with the entrepreneurs' proficiency in managing their intellectual assets. Previous research shows that innovation not only serves as a direct driver of business performance but also plays a vital mediating role in bridging the impact of digital transformation on business outcomes (Daswal et al., 2023; Muslihin & Riau, 2024).

***MSME Performance***

MSME performance is a representation of the organisation's success achievements over a certain period, reflecting the effectiveness of its business activities. This success is objectively measured through a series of growth indicators, such as sales volume, profitability, capital accumulation, and business coverage expansion. A solid performance level indicates the entity's ability to survive and expand amidst aggressive market competition (Kurniawan et al., 2021; Salsabila et al., 2022). The output of MSME performance is driven by the synergy of various determinants, both internal, such as managerial capabilities and financial literacy, and external, such as technology adoption. Various empirical evidence reinforces that digital transformation and financial literacy have a strong influence on performance, through both direct and indirect effects, with innovation serving as a mediating instrument (Hadady & Iksan, 2023; Susilo et al., 2022; Zhao et al., 2024).

***The Impact of Digital Transformation on MSME Performance***

Integrating digital technologies is essential for enabling MSMEs to enhance operational efficiency, broaden market access, and adapt to the dynamic fluctuations of the business environment. From the perspective Technology Acceptance Model (TAM), entrepreneurs' opinions on usefulness and ease of access the adoption of technology have a significant impact on its uptake. Utilizing tools like social media, e-commerce ecosystems, and digital payment integration creates more agile business processes, which can enhance business performance (Pratamansyah, 2024). Empirical support from Adi (2023) and Hadady & Iksan (2023) demonstrates that MSME performance is positively and significantly impacted by digital transformation, as evidenced by higher sales volume, capital accumulation, labor absorption, and profitability. These findings lead to the following hypothesis:

H1: Digital transformation has a positive and significant impact on MSME performance.

***The Influence of Financial Literacy on MSME Performance***

When it comes to helping MSME actors manage their financial resources, from cash flow management to strategic budget planning, financial literacy is essential. According to the Knowledge-Based View (KBV), financial literacy directly improves organizational performance since it is considered a strategic intellectual asset that can provide competitive advantages (Ardila et al., 2021). Previous studies have demonstrated a positive and significant correlation between financial literacy and MSME performance, including Salsabila et al. (2022), Susilo et al. (2022) and (Daswal et al., 2023). These findings lead to the following hypothesis:

H2: Financial literacy has a positive and significant effect on the performance of MSMEs.

***The Impact of Digital Transformation on Innovation***

Digital transformation opens up horizons for innovation through the democratisation of information access, acceleration of communication, and the implementation of automation systems in business operations. This drives MSME actors' creativity to innovate across product lines, improve process efficiency, and reposition business strategy (Devaraj, 2024). Research by Li et al. (2023), Zhao et al. (2024), Prasetyo & Nisa (2024) confirms that openness to digital technology significantly enhances entrepreneurs' innovative potential. Based on that argument. These findings lead to the following hypothesis:

H3: Digital transformation has a positive and significant impact on innovation.

***The Influence of Financial Literacy on Innovation***

Good financial literacy helps MSME actors allocate resources more precisely for long-term business development. A deep understanding of risk profiles and financial planning makes business actors more

courageous and prepared to implement innovations, both in products and business methodologies (Saharan et al., 2025). Financial literacy and innovation intensity are positively and significantly correlated, according to research by Ashari & Sabandi (2025) and Liu et al. (2020). These findings lead to the following hypothesis:
H4: Financial literacy has a positive and significant effect on innovation.

***The Influence of Innovation on MSME Performance***

Innovation is a key driver of MSME competitiveness through product differentiation and renewed market strategy. From the KBV perspective, innovation capacity reflects entrepreneurs' proficiency in exploiting knowledge to generate added value that enhances performance (Andini et al., 2025). Previous studies by Adi (2023), Taufiq et al. (2020) and Kurniawan et al. (2021) consistently show that innovation significantly enhances business performance. These findings lead to the following hypothesis:
H5: Innovation has a positive and significant effect on the performance of MSMEs.

***The Mediating Role of Innovation between Digital Transformation and MSME Performance***

Digital transformation often does not have an immediate impact on performance. However, it requires an intermediary phase of innovation. The successful adoption of technology, converted into product updates or operational strategies, will only then have a real impact on the final business outcomes. The research by Merín-rodrig & Alegre (2024), Kurniawan et al. (2021) and Muslihin & Riau (2024) strengthens the argument that innovation serves as a mediating factor in the context of digital transformation and business performance. These findings lead to the following hypothesis:
H6: Digital transformation has a positive, significant effect on MSME performance through innovation.

***The Mediating Role of Innovation between Financial Literacy and MSME Performance***

Financial literacy does not always directly correlate with profitability, but it drives innovation through smarter business governance and measured decision-making. When financial knowledge manifests in innovative business development, it will accelerate the sustainable performance of MSMEs. Innovation serves as a mediator between financial literacy and organizational outcomes, according to research by Trihudiyatmanto et al. (2022), Irena (2023) and Destrin (2024). These findings lead to the following hypothesis:
H7: Financial literacy has a positive and significant effect on SME performance through innovation.

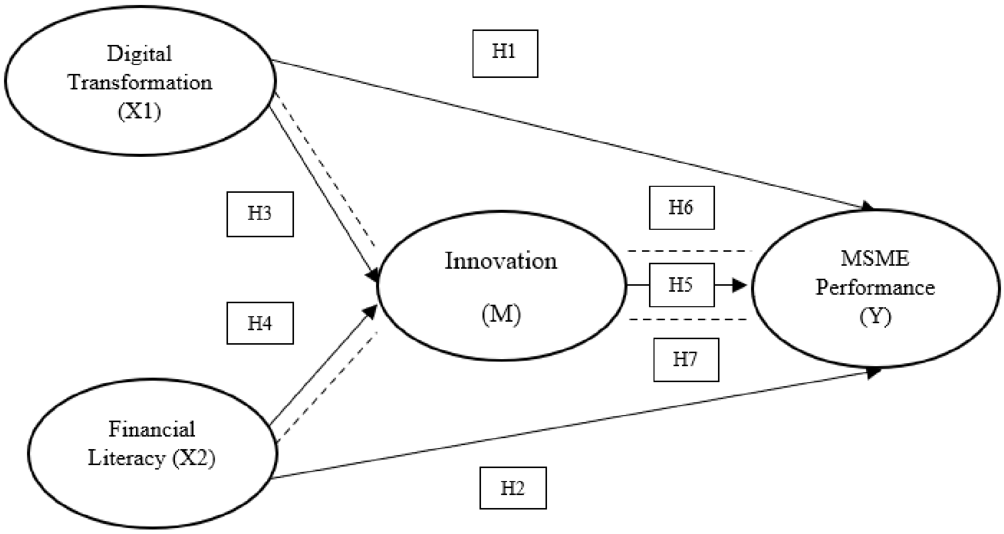


**Figure 1. Conceptual Framework**

*Source: Data processed by researchers (2026)*

## Research Methods

This study employs statistical analysis in a quantitative, positivist manner to test the hypotheses (Sugiyono, 2023). The research was conducted in Purwosari District, Pasuruan Regency. The population comprises approximately 100 MSMEs that have adopted digital technology in their operations. Given the relatively small population, a census sampling technique was used, if all members of the population participated as respondents. (Sugiyono, 2023).

Data were gathered by standardized questionnaires disseminated both online and offline, with response categories ranging from strong disagreement (1) to strong agreement (5) on a five-point likert scale. The factors analyzed comprise digital transformation and financial literacy as independent variables, with MSME performance as the dependent variable, and innovation as an intermediary variable. The measuring markers were modified based on previous investigations, as outlined in Table 1.

**Table 1.** Measurement of Variables

| No. | Variable | Indicators | Scale |
|---|---|---|---|
| 1 | Digital Transformation (Farhani et al., 2021) | 1. Online presence<br>2. Operational simplification<br>3. Digital technology utilization | Likert |
| 2 | Financial Literacy (Susilo et al., 2022) | 1. Financial behaviour<br>2. Financial skills<br>3. Financial knowledge<br>4. Financial attitudes | Likert |
| 3 | Innovation (Ayinaddis, 2023) | 1. Product innovation<br>2. Process innovation<br>3. Market innovation | Likert |
| 4 | MSME Performance (Susilo et al., 2022) | 1. Sales growth<br>2. Capital growth<br>3. Labour growth<br>4. Profit growth | Likert |

*Source: Previous Studies*

Data were analysed using Partial Least Squares Structural Equation Modelling (PLS-SEM), including the evaluation of the measurement model (outer model) and the structural model (inner model). Hypotheses were tested based on the T-statistic (>1.96) and the P-value (<0.05). Mediation analysis was also conducted to examine the role of innovation as an intervening variable (Hair Jr et al., 2021).

## Result and Discussion

***Results***

**Outer Model**

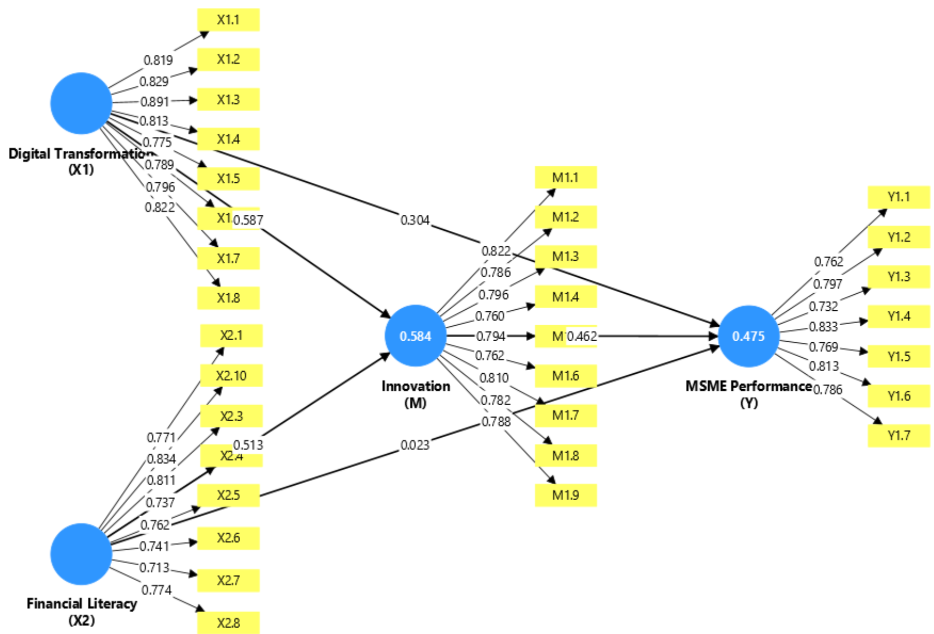


**Figure 2. Outer Model Test**

Based on Figure 2 in the outer loading test above, it can be concluded in the table presentation below:

**Table 2.** Loading Factor Test

| Variable | Item | Loading Factor | Remarks |
|---|---|---|---|
| **Digital Transformation (X1)** | X1.1.1 | 0.819 | Valid |
| | X1.1.2 | 0.829 | Valid |
| | X1.1.3 | 0.891 | Valid |
| | X1.2.1 | 0.813 | Valid |
| | X1.2.2 | 0.775 | Valid |
| | X1.2.3 | 0.789 | Valid |

| | | | |
|---|---|---|---|
| | X1.3.1 | 0.796 | Valid |
| | X1.3.2 | 0.822 | Valid |
| **Financial Literacy (X2)** | X2.1.1 | 0.771 | Valid |
| | X2.1.3 | 0.834 | Valid |
| | X2.2.1 | 0.811 | Valid |
| | X2.2.2 | 0.762 | Valid |
| | X2.2.3 | 0.741 | Valid |
| | X2.3.1 | 0.713 | Valid |
| | X2.3.2 | 0.774 | Valid |
| | X2.4.1 | 0.834 | Valid |
| **Innovation (M)** | M1.1.1 | 0.822 | Valid |
| | M1.1.2 | 0.787 | Valid |
| | M1.1.3 | 0.795 | Valid |
| | M1.2.1 | 0.759 | Valid |
| | M1.2.2 | 0.794 | Valid |
| | M1.2.3 | 0.763 | Valid |
| | M1.3.1 | 0.809 | Valid |
| | M1.3.2 | 0.783 | Valid |
| | M1.3.3 | 0.788 | Valid |
| **MSME Performance (Y)** | Y1.1.1 | 0.762 | Valid |
| | Y1.1.2 | 0.797 | Valid |
| | Y1.2.1 | 0.732 | Valid |
| | Y1.2.2 | 0.833 | Valid |
| | Y1.3.1 | 0.769 | Valid |
| | Y1.3.2 | 0.813 | Valid |
| | Y1.4.1 | 0.786 | Valid |

*Source: Primary Data processed by researchers (2026)*

The results of the second-stage outer-loading analysis, summarised in Table 2, indicate that all measurement items for the variables digital transformation, financial literacy, innovation, and MSME performance have exceeded the threshold of 0.7. In line with these criteria, each indicator in this model is reported to have strong validity in representing its latent construct. As a follow-up to the fulfilment of the loading factor parameter, the next evaluation stage is focused on testing convergent validity at the construct level. This test examines the Average Variance Extracted (AVE) must ensure that each latent variable explains over fifty percent of the variance in the indicators.

**Table 3.** Average Variance Extracted (AVE) Value

| Variable | Average Variance Extracted (AVE) Value | Remarks |
|---|---|---|
| Digital Transformation | 0.668 | Valid |
| Financial Literacy | 0.623 | Valid |
| Innovation | 0.617 | Valid |
| MSME Performance | 0.591 | Valid |

*Source: Primary Data processed by researchers (2026)*

The data presented in Table 3 further confirm the instrument's reliability by calculating Average Variance Extracted (AVE) values. Specifically, the digital transformation variable (X1) recorded a value of 0.668, followed by financial iteracy (X2) at 0.623, innovation (M) at 0.617, and MSME performance (Y) at 0.591. All of these parameters consistently exceed the minimum threshold of 0.50. Accordingly, each variable in the model satisfies the convergent validity criteria in the PLS-SEM analysis.

**Table 4.** Cross Loading Value

| Item | Digital Transformation | Financial Literacy | Innovation | MSME Performance |
|---|---|---|---|---|
| X1.1.1 | **0.819** | 0.005 | 0.534 | 0.517 |

| | | | | |
|---|---|---|---|---|
| X1.1.2 | **0.829** | 0.000 | 0.446 | 0.538 |
| X1.1.3 | **0.891** | -0.005 | 0.498 | 0.466 |
| X1.2.1 | **0.813** | -0.064 | 0.440 | 0.378 |
| X1.2.2 | **0.775** | -0.085 | 0.424 | 0.416 |
| X1.2.3 | **0.789** | 0.015 | 0.502 | 0.520 |
| X1.3.1 | **0.796** | -0.124 | 0.384 | 0.412 |
| X1.3.2 | **0.822** | -0.042 | 0.444 | 0.403 |
| X2.1.1 | 0.039 | **0.771** | 0.416 | 0.204 |
| X2.1.3 | -0.149 | **0.811** | 0.276 | 0.098 |
| X2.2.1 | -0.032 | **0.737** | 0.400 | 0.251 |
| X2.2.2 | 0.018 | **0.762** | 0.405 | 0.185 |
| X2.2.3 | -0.006 | **0.741** | 0.375 | 0.243 |
| X2.3.1 | -0.140 | **0.713** | 0.281 | 0.193 |
| X2.3.2 | -0.054 | **0.774** | 0.361 | 0.045 |
| X2.4.1 | -0.001 | **0.834** | 0.427 | 0.170 |
| M1.1.1 | 0.570 | 0.365 | **0.822** | 0.548 |
| M1.1.2 | 0.356 | 0.407 | **0.786** | 0.516 |
| M1.1.3 | 0.495 | 0.424 | **0.796** | 0.519 |
| M1.2.1 | 0.344 | 0.517 | **0.760** | 0.455 |
| M1.2.2 | 0.375 | 0.387 | **0.794** | 0.462 |
| M1.2.3 | 0.456 | 0.339 | **0.762** | 0.599 |
| M1.3.1 | 0.438 | 0.379 | **0.810** | 0.512 |
| M1.3.2 | 0.395 | 0.355 | **0.782** | 0.455 |
| M1.3.3 | 0.553 | 0.312 | **0.788** | 0.494 |
| Y1.1.1 | 0.486 | 0.185 | 0.520 | **0.762** |
| Y1.1.2 | 0.390 | 0.253 | 0.478 | **0.797** |
| Y1.2.1 | 0.448 | 0.218 | 0.501 | **0.732** |
| Y1.2.2 | 0.424 | 0.212 | 0.521 | **0.833** |
| Y1.3.1 | 0.493 | 0.078 | 0.511 | **0.769** |
| Y1.3.2 | 0.418 | 0.199 | 0.507 | **0.813** |
| Y1.4.1 | 0.432 | 0.162 | 0.499 | **0.786** |

*Source: Primary Data processed by researchers (2026)*

The findings demonstrate that each indicator exhibits the largest cross-loading value on its respective construct in comparison to other constructs within the model. This discovery validates that each element empirically distinguishes the construct it measures specifically and does not overlap with other variables. The elevated internal consistency verifies that the structure meets the necessary criteria for validity as a discriminant. Overall, the results suggest that all items in this study demonstrate strong discriminant validity, rendering the instrument appropriate for additional evaluation inside the structural framework.

**Table 5.** Cronbach's Alpha *and* Composite Reliability Values

| | **Cronbach's Alpha** | **Composite Reliability** | **Remaks** |
|---|---|---|---|
| **Digital Transformation** | 0.929 | 0.933 | Reliable |
| **Financial Literacy** | 0.901 | 0.906 | Reliable |
| **Innovation** | 0.924 | 0.926 | Reliable |
| **MSME Performance** | 0.896 | 0.896 | Reliable |

*Source: Primary Data processed by researchers (2026)*

The instrument's reliability in this study is confirmed by very strong consistency scores across all observed variables. For the digital transformation (X1) parameter, this instrument yielded a composite reliability of 0.933 and a cronbach's alpha of 0.929, both nearly perfect. The same strength is also reflected in the financial literacy (X2) variable, where the composite reliability score is 0.906, with an alpha of 0.901. On the other hand, the innovation dimension (M) shows equally stable performance with scores of 0.926 and 0.924. Meanwhile, although it is in the lowest position among the variables, the MSME performance (Y) remains secure, with identical reliability scores of 0.896 for both reliability metrics.

**Inner Model**

**Table 6.** R-Square Value ($R^2$)

| | R-Square | Percentage (%) | Remaks |
|---|---|---|---|
| **Innovation** | 0.584 | 58.4% | Moderate |
| **MSME Performance** | 0.475 | 47.5% | Weak |

*Source: Primary Data processed by researchers (2026)*

The predictive capacity of this structural model is reflected in the coefficients of determination for its two endogenous variables. It is recorded that the synergy between digital transformation and financial literacy accounts for 58.4% of triggering innovation, while the remaining 41.6% is influenced by external causes beyond observation. On the other hand, these two determinants also account for 47.5% of the fluctuations in MSME performance. These figures affirm that integrating technology and financial literacy is not merely complementary but a crucial tool that can substantially drive competitiveness and business performance at the grassroots level.

**Table 7.** F-Square Value

| | Innovation | MSME Performance | Remaks |
|---|---|---|---|
| **Digital Transformation** | | 0.096 | Small influence |
| **Digital Transformation** | 0.826 | | Big influence |
| **Financial Literacy** | | 0.001 | No influence |
| **Financial Literacy** | 0.632 | | Big influence |
| **Innovation** | | 0.169 | Influence of medium |

*Source: Primary Data processed by researchers (2026)*

Dissecting the effect size through the f-square parameter reveals the specific contributions of each relationship path in the structural model in greater depth. The most striking finding is the dominance of digital transformation and financial literacy in driving the emergence of innovation, where both recorded values of 0.826 and 0.632, respectively, fall into the category of very large influence. On the contrary, the direct link between financial literacy and business performance is almost undetectable with a marginal score of 0.001. Meanwhile, digital transformation and innovation themselves provide varying degrees of impetus to MSME performance, each with impacts categorized as small (0.096) and moderate (0.169), respectively. This pattern suggests that technology and financial skills do not instantly boost performance but are more effective when channeled through an innovation engine first.

**Table 8.** Predictive Relevance

| | $Q^2$predict |
|---|---|
| **Innovation** | 0.536 |
| **MSME Performance** | 0.338 |

*Source: Primary Data processed by researchers (2026)*

The predictive relevance indicator (Q2) in this model sharpens the estimation accuracy for both endogenous variables. Based on the calculations, the Innovation variable recorded a value of 0.536, positioning it within the strong predictive relevance category. Meanwhile, the MSME performance variable yielded a value of 0.338, indicating moderate predictive capacity. The acquisition of these figures ensures that this structural model is not only capable of explaining the existing data but also has reliable predictive accuracy for future innovation and SME business performance.

**Table 9.** Test Value Model Fit

| | Saturated Model & Estimated Model |
|---|---|
| **SRMR** | 0.071 |

*Source: Primary Data processed by researchers (2026)*

The structural model's accuracy in representing the empirical data is confirmed by an SRMR score of 0.071. Given the conventional threshold of 0.08, the results confirm that the model accurately represents the data.

**Table 10.** T-Statistics Value and P-Value Direct Effect

| | Path Coefficient (β) | T Statistics | P Values | Remarks |
|---|---|---|---|---|
| Digital Transformation (X1) → MSME Performance (Y) | 0.304 | 2.372 | 0.018 | Accepted |
| Financial Literacy (X2) → MSME Performance (Y) | 0.023 | 0.235 | 0.814 | Rejected |

| | | | | |
|---|---|---|---|---|
| Digital Transformation (X1) → Innovation (M) | 0.587 | 10.755 | 0.000 | Accepted |
| Financial Literacy (X2) → Innovation (M) | 0.513 | 9.157 | 0.000 | Accepted |
| Innovation (M) → MSME Performance (Y) | 0.462 | 3.210 | 0.001 | Accepted |

*Source: Primary Data processed by researchers (2026)*

The results of the bootstrapping test in Table 10 reveal quite contrasting dynamics in the relationships between variables. These findings confirm that digital transformation (X1) plays a crucial role with a significant impact on MSME performance (Y) (p=0.018; T=2.372), thus H1 is accepted. Conversely, the model found an anomaly with financial literacy (X2), which apparently has no direct influence on business performance (p=0.814; T=0.235), leading to the rejection of H2. On the other hand, both independent variables exhibit a strong influence on the emergence of business innovations. Both digital transformation and financial literacy have empirically proven to be the main determinants of innovation (M), with very high significance levels (p=0.000), thus H3 and H4 are accepted, with very strong T-statistic values (10.755 and 9.157, respectively). The existence of innovation (M) is verified as a vital driver of MSME performance (Y) (p=0.001; T=3.210), thereby simultaneously validating H5. Overall, this series of tests provides an overview indicating that almost all relationship paths in this structural model are valid, except for the direct transmission of influence from financial literacy to performance, which was not detected as significant.

**Table 11.** T-Statistics Value and P-Value Indirect Effect

| | **Original Sample (O)** | **T Statistics (\|O/STDEV\|)** | **P Values** | **Remarks** |
|---|---|---|---|---|
| Digital Transformation (X1) → Innovation (M) → MSME Performance (Y) | 0.271 | 3.261 | 0.001 | Mediating |
| Financial Literacy (X2) → Innovation (M) → MSME Performance (Y) | 0.237 | 2.993 | 0.003 | Mediating |

*Source: Primary Data processed by researchers (2026)*

Indirect effect analysis reveals the crucial role of innovation (M) as a transmission bridge for the independent variable toward business performance. Based on statistical analysis, the mediation path of digital transformation on MSME performance through Innovation yielded a T-statistic of 3.261 and a p-value of 0.001. This sharp significance proves that digital technology does not work in a vacuum, it requires transforming ideas and creative processes (innovation) into tangible financial results. However, H6 was accepted. Parallel to these findings, innovation has also been empirically proven to mediate the influence of financial literacy on MSME performance. This path yielded a T-statistic of 2.993 and a p-value of 0.003, confirming that financial management skills will only significantly boost business performance if they trigger the emergence of strategic innovations. This finding automatically validates H7.

***Discussion***

**The Impact of Digital Transformation on MSME Performance**

Digital transformation substantially enhances the performance of micro, small, and medium enterprises (MSMEs) by enhancing operational efficiency and broadening market access. However, the overall effect remains limited because most MSMEs primarily use digital tools at a basic level, mainly for communication and marketing, rather than integrating them into their core business processes. This signifies that the efficacy of digital transformation relies not solely on the degree of adoption but also on the depth of integration of these technologies into routine operations. Without deeper integration, the potential contribution to performance improvement is not fully realised. These findings support the arguments of Adi (2023), Hadady & Iksan (2023) and Kurniawan et al. (2021) regarding the crucial role of digital transformation in MSME development. They also align with the Technology Acceptance Model, which asserts that perceived usefulness and ease of use drive technology adoption and ultimately improve business performance.

**The Influence of Financial Literacy on MSME Performance**

The results demonstrate that financial literacy does not have a significant direct influence on MSME performance, suggesting that financial knowledge alone is inadequatet for enhancing business outcomes. This reflects a gap between understanding and implementation, as MSME actors have not applied their financial skills in key activities including as cash flow management, separating personal and business finances, and risk mitigation. This condition indicates that financial literacy remains limited to basic understanding and has not yet developed into a strategic capability in business decision-making. As a result, financial knowledge does not automatically translate into improved performance. These results align with previous research (Istikomah et al., 2024; Ramaiyanti et al., 2023; Wulandari & Fitriyah, 2024). In the Knowledge-Based View (KBV), knowledge is regarded as an asset that generates competitive value only when actively managed and applied in daily operations.

**The Influence of Digital Transformation on Innovation**

Digital transformation positively and significantly influences innovation within MSMEs, as the use of digital technologies facilitates access to market information and supports the development of new ideas. However, innovation remains largely concentrated in digital marketing activities, while the use of technology for deeper process innovation is still limited. This suggests that MSMEs tend to utilise digital tools at a surface level, focusing on promotion rather than optimising internal operations. As a result, the possibility of digital transformation to drive more sustainable and structural innovation has not been fully realised. These findings corroborate previous studies (Zhao et al., 2024; Li et al., 2023; Prasetyo & Nisa, 2024) and are in accordance with the Technology Acceptance Model, which asserts that technology adoption creates opportunities for innovation, though its impact depends on its extent of utilisation. The impact of financial literacy on innovation

**The Influence of Financial Literacy on Innovation**

Financial literacy positively and significantly influences innovation within MSMEs, indicating that better financial understanding enables entrepreneurs to allocate resources more efficiently and handle risks more effectively. This indicate that financial literacy has yet to be completely recognized as a strategic competency. However, the transformation of financial knowledge into sustainable innovation remains limited. This suggests that financial literacy has not yet fully developed into a strategic capability, as many MSMEs are still unable to convert financial insights into consistent innovation practices. As a result, its contribution to innovation is present but not yet optimal. These findings corroborate previous studies (Liu et al., 2020; Duréndez et al., 2023; Ashari & Sabandi, 2025). From a KBV perspective, financial insights act as a strategic asset that accelerates the generation of novel value via innovation pathways when properly exploited.

**The Impact of Innovation on MSME Performance**

Innovation has a positive and significant effect on MSME performance, indicating that the ability to develop products and adapt business strategies contributes to improved business outcomes. However, the sustainability of innovation remains a challenge, as many MSMEs do not consistently engage in continuous improvement activities. This suggests that innovation among MSMEs tends to be situational rather than strategic, with renewal efforts often reactive to market changes rather than systematically planned. As a result, the potential of innovation to generate sustained performance improvements has not been fully optimised. These findings are consistent with prior studies (Taufiq et al., 2020; Kurniawan et al., 2021; Adi, 2023) and align with the Knowledge-Based View, which highlights that performance gains depend on the ability to transform knowledge into innovation continuously.

**The Mediating Role of Innovation between Digital Transformation and MSME Performance**

Innovation significantly mediates the relationship between digital transformation and MSME performance, indicating that digital technologies improve performance primarily when they are transformed into innovative products, processes, or business models. This suggests that digital transformation acts as an enabler rather than a direct driver of performance, as many MSMEs still utilise technology at a basic level. Without innovation, the benefits of digital adoption remain limited and do not translate into measurable business outcomes. These findings are consistent with prior studies (Merín-rodrig & Alegre, 2024; Kurniawan et al., 2021; Muslihin & Riau, 2024) and reinforce the Knowledge-Based View, which highlights that value is created when capabilities are converted into innovation.

**The Mediating Role of Innovation between Financial Literacy and MSME Performance**

Innovation significantly mediates the relationship between financial literacy and MSME performance, indicating that financial knowledge contributes to performance only when it is translated into innovative actions. This finding reveals that financial literacy among MSMEs is often not sufficiently operationalised, as many entrepreneurs possess financial knowledge but fail to convert it into value creating strategies. As a result, financial literacy remains underutilised and does not directly generate measurable business outcomes. These findings are consistent with prior studies (Destrin, 2024; Trihudiyatmanto et al., 2022; Irena & Lusy, 2023) and align with the Knowledge-Based View, which emphasises that knowledge creates value only when it is effectively transformed into action.

## Conclusion and Suggestion

**Conclusion**

This study shows that digital transformation directly improves MSME performance by increasing operational efficiency and expanding market reach. In contrast, financial literacy has no direct effect unless it is applied in business practices. More importantly, both factors contribute to innovation, a key mechanism that transforms digital capabilities and financial knowledge into competitive advantage. These findings support the Knowledge-Based View by showing that knowledge creates value only when applied in innovative practices, and extend the

Technology Acceptance Model by indicating that technology adoption becomes meaningful when it leads to innovation. Practically, MSME development should focus on integrating digital transformation, financial literacy, and innovation to achieve sustainable business performance.

**Suggestion**

Based on these findings, MSME development programs should not only focus on improving digital adoption and financial literacy, but also on strengthening innovation capabilities. Entrepreneurs are encouraged to actively transform their digital and financial resources into innovative products, processes, and business strategies. In addition, policymakers and supporting institutions should design integrated programs that combine digital training, financial literacy education, and innovation facilitation to ensure that these capabilities can effectively improve MSME performance.

## References


Adi, A. S. (2023). The effect of digital transformation and innovation on SMEs ' performance in times of COVID-19, *Journal of Problems and Perspectives in Management,* 84-100. https://doi.org/10.21511/ppm

Andini, A., Waruwu, E. K., & Tarigan, Y. A. (2025). Peran inovasi dalam meningkatkan daya saing usaha mikro kecil dan menengah ( UMKM ) di Kota Medan, *Jurnal Bisnis Kreatif dan Inovatif,* 2, 330-336.

Ardila, I., Rumain, S., & Mardani, R. M. (2021). Pengaruh literasi keuangan dan pengelolaan keuangan terhadap kinerja keuangan pada UMKM Kota Malang, *Jurnal Riset Manajemen,* 66–80.

Arifin, M. (2024). Pedagang pasar Purwosari Pasuruan curhat jualan sepi, Khofifah siapkan solusi. Detik Jatim. detik.com/jatim/pilkada/d-7641807/pedagang-pasar-purwosari-pasuruan-curhat-jualan-sepi-khofifah-siapkan-solusi

Arista, A., Yuliana, I., & Kustiningsih, N. (2020). Strategi inovasi terhadap peningkatan profit di masa pandemi pada UMKM Our Mask. *Journal of Accounting and Financial Issue,* 1(2), 61-66.

Ashari, R. Z., & Sabandi, M. (2025). Pengaruh literasi keuangan terhadap perilaku inovasi produk hijau dan inovasi proses hijau di moderasi gender pada usaha kecil dan menengah di Boyolali, *Journal of Jambura Economic Education,* 7(3), 882–894.

Ayinaddis, S. G. (2023). The effect of innovation orientation on firm performance : evidence from micro and small manufacturing firms in selected towns of Awi Zone, Ethiopia, *Journal of Innovation and Entrepreneurship*. https://doi.org/10.1186/s13731-023-00290-3

Choiruddin, M. N., Pratikto, H., Murwani, F. D., & Restuningdiah, N. (2025). Financial literacy, FinTech, and contemporary innovation in Islamic economic law: an analysis of MSME performance sustainability in Indonesia and Malaysia, *Scientific Islamic Law Journal of Sharia Faculty,* 4(2), 976–1008.

Daswal Putri M.G, Nursanty A. I, F. K. . (2023). Pengaruh inovasi, penggunaan informasi akuntansi, dan literasi keuangan, *Jurnal Ilmiah Ekonomi dan Bisnis,* 2(3), 610–618.

Destrin. (2024). Dampak literasi keuangan terhadap kinerja UMKM dengan inovasi sebagai variabel mediasi, *Jurnal Literasi Akuntansi*, 4(4), 184-189. https://doi.org/10.55587/jla.v4i4.142

Devaraj, S. M. (2024). Digital transformation and innovation : Driving business growth, *International Journal of Scientific Research in Computer Science, Engineering and Information Technology,* 10(5), 885–894.

Duréndez, A., Soto, J. D., & Guijarro, A. M. (2023). The influence of financial literacy on SMEs innovation : the mediating effects of MCS and risk-taking, *Financial Innovation*, 1-26. https://doi.org/10.1186/s40854-022-00414-w

Farhani, I., Chaniago, H., & Kunci, K. (2021). Faktor penentu transformasi digital UMKM : Bukti dari Indonesia, *Jurnal Politeknik Negeri Bandung,* 110-115.

Fitriyah, Hermawan, A., & Suharsono, N. (2022). The impact of financial literacy, financial attitudes and financial behaviour on MSMEs growth, *International Journal of Science, Technology & Management,* 1560–1566.

Hadady, H., & Iksan, I. (2023). Digital transformation and small business performance, *International Journal of Business, Law, and Education,* 4(2), 678–687.

Hair Jr, J. F., Hult, G. T. M., Ringle, C. M., Sarstedt, M., Danks, N. P., & Ray, S. (2021). Partial least squeres structural equation modeling (PLS-SEM). In *Springer* (Vol. 30, Issue 1).

Irena, F., & Lusy. (2023). Benarkah inovasi mempengaruhi kinerja UMKM? Studi kasus di Gresik dan Sidoarjo, *Jurnal Ilmiah Edunomika,* 07(02), 1–14.

Istikomah, N., Lestari, B. A. H., & Ridhawati, R. (2024). The influence of financial literacy, financial inclusion, financial attitudes, and taxation knowledge on the performance and sustainability of small and medium industries in Mataram City, *International Students Conference of Accounting & Business*, 3(1), 646–663.

Kotler, P. (2014). Manajemen Pemasaran. Prenhalindo.

Kurniawan, A., Rahayu, A., Wibowo, L. A., & Indonesia, U. P. (2021). Pengaruh transformasi digital terhadap kinerja bank pembangunan daerah di Indonesia, *Jurnal Ilmu Keuangan dan Perbankan,* 10(2), 159-181.

Li, S., Gao, L., Han, C., Gupta, B., Alhalabi, W., & Almakdi, S. (2023). Exploring the effect of digital transformation on firm' innovation, *Journal of Innovation & Knowledge*, 8(1), 1-10. https://doi.org/10.1016/j.jik.2023.100317

Limanseto, H. (2021). UMKM menjadi pilar penting dalam perekonomian Indonesia. Kementerian Koordinator Bidang Perekonomian Republik Indonesia.

Liu, B., Wang, J., & Fung, A. (2020). The impact of entrepreneurs ' s financial literacy on innovation within small and medium-sized enterprises, *International Small Business Journal: Researching Entrepreneurship,* 1-19. https://doi.org/10.1177/0266242620959073

Mardiana., Supriyanto, A. S., Diana, I. N., Suprayitno, E., & Ekowati, V. (2025). Growing the performance of SMEs, *Jurnal Aplikasi Manajemen,* 23(1), 63–74.

Mariska, R., Siregar, F. H., Ahmad, A. K., Hasanah, U., Pratama, W. A., & Lubis, A. (2023). Pengembangan produk unggulan UMKM dalam mendukung pertumbuhan ekonomi di Desa Sukasari Kecamatan Pegajahan Kabupaten Serdang Bedagai, *Journal of Human and Education,* 3(2), 292-298.

Merín-rodrig, J., & Alegre, J. (2024). Technovation digital transformation and firm performance in innovative SMEs : The mediating role of business model innovation, 134(March). https://doi.org/10.1016/j.technovation.2024.103027

Mubyarsah, L. R. (2022). Kontribusi UMKM di Jatim untuk PDB capai 57 persen. *Jawa Pos.* https://www.jawapos.com/berita-sekitar-anda/01369845/kontribusi-umkm-di-jatim-untuk-pdb-capai-57-persen

Muslihin, A., & Riau, U. (2024). Pengaruh transformasi digital terhadap kinerja UMKM : Peran inovasi sebagai variabel mediasi, *Journal of Sustainable Entrepreneur Regional Industry,* 1(1), 1–6. https://doi.org/10.31004/aulad.vxix.xx

Prasetyo, D. D., & Nisa, F. L. (2024). Pengaruh transformasi digital pada inovasi dalam start up di Indonesia, *Jurnal Abdimas Bela Negara,* 5(1), 33–43.

Pratamansyah, S. R. (2024). Transformasi digital dan pertumbuhan UMKM : Analisis dampak teknologi pada kinerja usaha kecil dan menengah di Indonesia, *Jurnal Akuntansi, Manajemen, dan Perencanaan Kebijakan,* 2(2), 1–17.

Ramaiyanti, S., Azlina, N., Riau, U., Baru, S., & City, P. (2023). Improving the performance of MSMEs through innovation, financial literacy, and digitalization, *Jurnal Riset Akuntansi Kontemporer*, *15*(2), 151–161.

Saharan, M. S., Mansor, R., Ruslan, M. F., & Azhar, N. A. (2025). Financial literacy and SME success : A critical review of current literature and emerging perspectives, *International Journal of Research and Innovation in Social Science,* 9(9), 8470–8482. https://doi.org/10.47772/IJRISS

Salsabila, A., Fikri, K., & Nahda, K. (2022). The effect of financial literacy on MSME performance through financial access and financial risk attitude as a mediation variable, *Jurnal Economic Resources,* 6(2), 238–247.

Sugiyono. (2023). Metode penelitian kuantitatif, kualitatif, dan R&D (5th ed.). CV Alfabeta.

Susilo, J., Anisma, Y. S. A. (2022). The effect of financial literacy, financial inclusion, and innovation on MSMEs performance, *Jurnal Kajian Akuntansi dan Bisnis Terkini,* 3(2), 1–10.

Taufiq, M., Prihatni, R., Gurendrawati, E., & Jakarta, U. N. (2020). Pengaruh inovasi, kualitas produk, dan penggunaan sistem akuntansi terhadap kinerja UMKM, *Jurnal Akuntansi, Perpajakan dan Auditing,* 1(2), 204–220.

Trihudiyatmanto, M., Mojotengah, K., Wonosobo, K., & Tengah, J. (2022). Inovasi produk: Dalam meningkatkan kinerja usaha mikro kecil dan menengah (UMKM), *Jurnal Akuntansi dan Manajemen,* 19(2), 164–175.

Wijaya, R., Yadewani, D. W. H. (2024). Digital transformation and performance of small and medium enterprises: Empirical evindence in Pariaman City, *Jurnal Dimensi,* 13(2), 514–523.

Wulandari, A. T., & Fitriyah. (2024). The effect of financial literacy and financial technology on financial performance with education as a moderating variable (Study on MSMEs in the culinary sector in Malang City), *International Journal of Economics, Business and Innovation Research, 03*(04), 169–182.

Zhao, X., Chen, Q., Yuan, X., Yu, Y., & Zhang, H. (2024). Study on the impact of digital transformation on the innovation on evidence from Chinese listed companies. *Scientific Reports,* 1–20. https://doi.org/10.1038/s41598-024-56345-2