

# Linking Innovation and Literacy to MSME Performance via Digital Marketing

Literacy to  
MSME  
Performance

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## ABSTRACT

Digital marketing serves as a key factor in improving the performance of MSMEs. This study investigates the role of digital marketing as a mediating variable by assessing both the direct and indirect impacts of financial literacy and product innovation on MSME performance. Using a descriptive and quantitative research design, the study involved a sample of 250 MSME actors from a specific region. The data were analyzed using Structural Equation Modeling (SEM) based on the Partial Least Squares (PLS) method. The results show that financial literacy and product innovation each have a significant and positive effect on digital marketing. In turn, digital marketing, along with these two variables, plays a crucial role in enhancing MSME performance. Notably, the study finds that digital marketing acts as a full mediator in the relationship between financial literacy and product innovation with MSME performance. This indicates that improvements in financial knowledge and product development can significantly boost business outcomes when supported by effective digital marketing strategies. These findings highlight the importance of integrating financial literacy, innovation, and digital marketing to support MSME growth in the region studied.

**Keywords:** Digital Marketing, Financial Literacy, Intermediaries, MSME Performance, Product Innovation.

## ABSTRAK

Pemasaran digital berperan sebagai faktor kunci dalam meningkatkan kinerja UMKM. Studi ini menyelidiki peran pemasaran digital sebagai variabel mediasi dengan menilai dampak langsung dan tidak langsung literasi keuangan dan inovasi produk terhadap kinerja UMKM. Dengan menggunakan desain penelitian deskriptif dan kuantitatif, studi ini melibatkan sampel 250 pelaku UMKM dari wilayah tertentu. Data dianalisis menggunakan Structural Equation Modeling (SEM) berdasarkan metode Partial Least Squares (PLS). Hasil penelitian menunjukkan bahwa literasi keuangan dan inovasi produk masing-masing memiliki pengaruh yang signifikan dan positif terhadap pemasaran digital. Pada gilirannya, pemasaran digital, bersama dengan kedua variabel ini, memainkan peran penting dalam meningkatkan kinerja UMKM. Studi ini menemukan bahwa pemasaran digital berperan sebagai mediator penuh dalam hubungan antara literasi keuangan dan inovasi produk dengan kinerja UMKM. Hal ini menunjukkan bahwa peningkatan pengetahuan keuangan dan pengembangan produk dapat meningkatkan hasil bisnis secara signifikan jika didukung oleh strategi pemasaran digital yang efektif. Temuan ini menyoroti pentingnya

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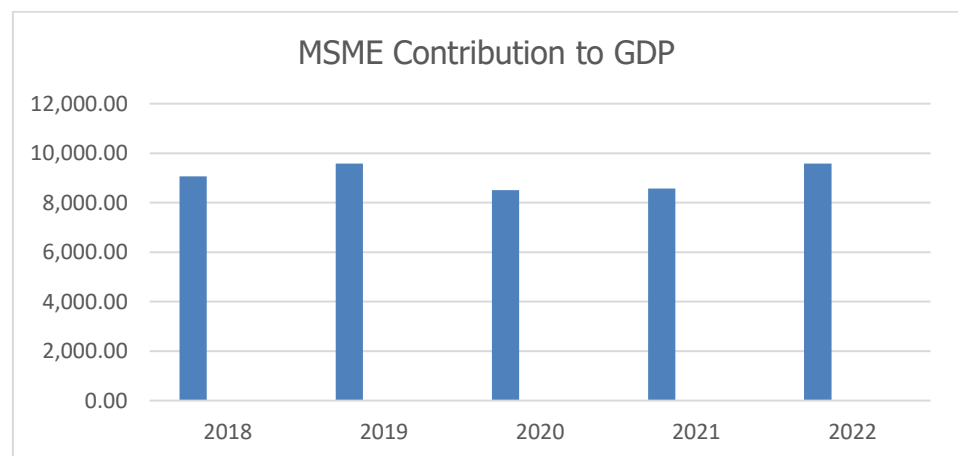
*mengintegrasikan literasi keuangan, inovasi, dan pemasaran digital untuk mendukung pertumbuhan UMKM di wilayah yang diteliti.*

**Kata kunci:** *Pemasaran Digital, Literasi Keuangan, Perantara, Kinerja UMKM, Inovasi Produk.*

## INTRODUCTION

To boost Indonesia's economic development, one key strategy the government must pursue is the advancement of Micro, Small, and Medium Enterprises (MSMEs). These enterprises play a vital role in both regional and national economies (Jannah et al., 2019; Hertadiani & Lestari, 2021). MSMEs are considered the backbone of the economy due to their substantial contributions to job creation, market expansion, innovation, and their significant role in increasing the Gross Domestic Product (GDP). GDP itself is a critical measure of a nation's economic health, reflecting the total added value produced by all business sectors. A higher GDP indicates stronger economic growth and overall national prosperity (Kasenda & Wijayangka, 2019; Aghili & Amirkhani, 2021).

MSMEs have made a substantial contribution to the growth of the nation's gross domestic product (Octasylya et al., 2022; Martono & Febriyanti, 2023). The following is data on the contribution of MSMEs to GDP development from 2018–2022:



**Figure 1.** MSME Contribution to GDP

Figure 1 indicates that between 2018 and 2022, MSMEs consistently contributed to the growth of Indonesia's GDP. In 2018, their contribution reached IDR 9,062.6 trillion and increased to IDR 9,580.8 trillion in 2019. However, during 2020 and 2021, the contribution declined to around IDR 8,500 trillion due to the economic downturn triggered by the COVID-19 pandemic. Encouragingly, the figure rebounded in 2022, returning to IDR 9,580 trillion. These figures clearly demonstrate that MSMEs play a crucial role in supporting Indonesia's economic development.

Despite their substantial contribution, MSMEs continue to face numerous challenges in practice. Common issues include limited human resource competencies, difficulties in innovating products, challenges in marketing goods and services, and problems in managing business finances (Murnieks et al., 2020; Hertadiani & Lestari, 2021; Andika et al., 2021). These constraints can hinder their growth and sustainability. Therefore, addressing these barriers is essential to optimizing MSME performance.

To achieve optimal performance, MSMEs must prioritize innovation as a critical success factor. Introducing innovation in products or services can enhance competitiveness and positively influence future performance (Farhan et al., 2022; Irawan, 2023). Although research on the relationship between product innovation and MSME performance has been conducted, the findings remain inconsistent. For instance, studies

by Bouwman et al. (2019) and Saridakis et al. (2019) indicate that product innovation in SMEs leads to increased sales, demonstrating a positive effect. Conversely, research by Ferreira et al. (2018) found that product innovation does not have a significant impact on the performance of MSMEs.

Financial literacy is also a key factor in enhancing the success of MSMEs. A solid understanding of financial principles enables business owners to effectively obtain and manage funds for their operations. According to data from Financial Services Authority (*Otoritas Jasa Keuangan/OJK*), the 2022 national financial literacy and inclusion survey showed an increase to 49.68%. However, this percentage remains low compared to developed countries like Singapore (Himawan, 2019; Idawati & Pratama, 2020). This gap highlights an issue that requires serious attention, as many MSME actors still lack sufficient financial knowledge to manage their businesses effectively.

The rapid advancement of digital technology presents a strategic opportunity to enhance MSME performance. Today, a growing number of business owners are utilizing digital marketing as a means of promoting and selling their products (Hariyani & Wibowo, 2020). This trend is a natural response to the fast-paced evolution of technology. However, despite its growing relevance, further research is still needed to explore the impact of digital marketing on MSME performance in greater depth. Previous studies tend to examine these variables in isolation, and limited research has explored their combined influence, particularly the mediating role of digital marketing in the context of MSME performance. Moreover, studies focusing on these relationships in developing countries, especially after the COVID-19 pandemic, remain scarce.

Therefore, this study aims to analyze the direct effects of product innovation and financial literacy on MSME performance, as well as the mediating effect of digital marketing on these relationships.

## **LITERATURE REVIEW & HYPOTHESIS DEVELOPMENT**

### **Digital Marketing on MSME Performance**

Digital marketing refers to the utilization of digital technology to deliver information about the products or services offered by a business (Aksoy, 2017; Rumbianingrum & Wijayangka, 2018). This approach has emerged as a transformation of traditional marketing methods, which previously relied heavily on face-to-face interactions and physical media. With the advent of digital tools and widespread internet access, marketing activities have increasingly shifted to online platforms (Hazem et al., 2020; Purwanto et al., 2022; Hendratmoko, 2023). Businesses now use various internet-connected devices, such as smartphones, tablets, and computers to advertise, promote, and communicate directly with their target markets. This transition has significantly simplified the process of reaching consumers, as businesses can now deliver personalized, real-time, and interactive messages at a much lower cost compared to conventional methods (Subagyo et al., 2020; Fajri et al., 2021).

The rapid advancement of digital technology has also changed consumer behavior. Many consumers now prefer to make purchases through digital platforms because they are more practical, accessible, and time-saving. Online shopping enables users to browse, compare, and buy products from virtually anywhere, reducing the need to visit physical stores. This shift has encouraged businesses, especially MSMEs, to adopt digital marketing as a core component of their strategies to remain competitive.

Numerous studies have explored the relationship between digital marketing and MSME performance. Research conducted by Aksoy (2017), Lailla et al. (2022), and Purbantina et al. (2022) supports the notion that digital marketing has a positive and significant effect on MSME success. These studies demonstrate that MSMEs that effectively implement digital marketing strategies are more likely to experience improved business performance through increased market reach, stronger customer engagement, and enhanced sales. Therefore, digital marketing serves as a strategic tool that MSMEs can leverage to grow and compete in a rapidly evolving digital economy.

H1: Digital marketing has a significant effect on MSME performance.

### **Product Innovation, Digital Marketing, and MSME Performance**

Product innovation serves as a critical indicator of both economic and social progress by enabling businesses to introduce new strategies or improve existing ones with the goal of enhancing products or services and ultimately increasing profitability (Cahyani et al., 2022; Andersen et al., 2022). This innovation process frequently involves the generation of new ideas or the refinement of existing concepts to better align with evolving consumer needs and market demands. In today's dynamic business environment, technology plays a central role in facilitating product innovation, helping businesses, especially MSMEs optimize their offerings and enhance customer satisfaction (Rachinger et al., 2019; Lailla et al., 2022). For MSMEs, product innovation is not merely about aesthetics or features but a strategic response to consumer behavior that is constantly changing. By focusing on customer satisfaction, product innovation enables businesses to remain relevant and competitive in the marketplace. It allows MSMEs to offer more tailored, efficient, and valuable solutions to their customers, which is essential for building brand loyalty and long-term sustainability.

Empirical evidence supports the importance of product innovation in improving business outcomes. Studies by Potolau and Safriansyah (2022) and Putri (2022) have demonstrated that product innovation has a significant and positive impact on MSME performance, contributing to business growth and operational success. Furthermore, innovative products not only improve the core offerings but also enhance marketing effectiveness. According to Fitri et al. (2018) and Suginam et al. (2025), such innovations support stronger promotional efforts, particularly in digital marketing channels, by making products more appealing and market-responsive. Therefore, product innovation plays a dual role not only as a driver of performance but also as a catalyst for more impactful marketing strategies, both online and offline.

H2: Product innovation has a significant effect on digital marketing.

H3: Product innovation has a significant effect on MSME performance.

### **Financial Literacy and The Mediating Effect of Digital Marketing**

Financial literacy refers to a proper and accurate understanding of the importance of strategic financial management in conducting financial activities. It includes essential knowledge of financial planning, investment decisions, and business finance management (Wulandari et al., 2024; Kumar et al., 2025). With strong financial literacy, business owners are expected to better understand how to secure and manage funding to support operational needs. A lack of financial knowledge is often a major factor behind the failure of many entrepreneurs. Effective financial literacy helps MSME actors run their businesses more efficiently and sustainably. Numerous studies have shown a positive and significant relationship between financial literacy and MSME performance (Susanti et al., 2018; Yanti, 2019). In addition, Suindari & Juniariani (2020) found that business owners with higher financial literacy tend to perform better in applying digital marketing strategies. This suggests that financial literacy not only directly improves MSME performance but also indirectly enhances it through better digital marketing implementation. Financially literate business owners are more capable of allocating budgets.

While not explicitly detailed in the original findings, the relationship between product innovation and MSME performance can also be enhanced through digital marketing (Lubis & Irawati, 2022; Abdillah et al., 2024). Innovative products or services need to be promoted effectively to reach the target market, and digital platforms offer efficient, low-cost solutions for this purpose. As a result, product innovation can significantly affect MSME performance, especially when supported by robust digital marketing strategies. Thus, both financial literacy and product innovation can contribute to MSME success not only directly but also through the strategic use of digital marketing as a mediating factor.

- H4: Financial literacy has a significant effect on digital marketing.  
 H5: Financial literacy has a significant effect on the performance of MSMEs.  
 H6: Product innovation has a significant effect on MSME performance through digital marketing.  
 H7: Financial literacy has a significant effect on the performance of MSMEs through digital marketing.

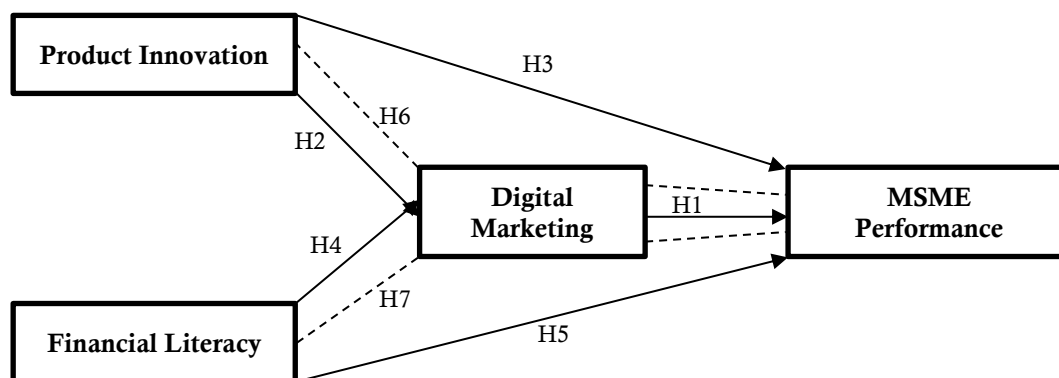


Figure 1. Conceptual Framework

Figure 1 shows a conceptual framework model that illustrates the relationship between product innovation, financial literacy, digital marketing, and MSME performance. In this model, product innovation and financial literacy act as independent variables that influence digital marketing as a mediating variable. Furthermore, digital marketing acts as a link that directly influences MSME performance as a dependent variable. The arrows from product innovation and financial literacy to digital marketing indicate that both variables are thought to have a positive influence on the effectiveness of digital marketing strategies. The arrow from digital marketing to MSME performance illustrates that the success of digital marketing contributes directly to improving MSME performance. This model shows that digital marketing is an important mechanism in bridging the impact of product innovation and financial literacy on the success of small and medium enterprises. Thus, an effective digital marketing strategy is key to optimizing the potential of innovation and financial management to drive the overall growth and performance of MSMEs.

## RESEARCH METHOD

This study adopts a quantitative research approach, which focuses on analyzing numerical data collected directly from primary sources. The primary data in this research were obtained through the distribution of structured questionnaires to selected respondents. Each item within the questionnaire was carefully developed based on operational indicators derived from the four main variables in the study: product innovation, digital marketing, MSME performance, and financial literacy. These variables were selected because of their relevance to the improvement of MSMEs in the current digital economy landscape. The population in this research consisted of MSME actors located in Deli Serdang Regency, North Sumatra, and from this population, a total of 250 respondents were selected to form the sample. The sampling technique used ensured adequate representation of MSME actors from various business categories within the region. The data collection process was conducted over a three-month period starting in early 2023, allowing enough time to reach the targeted number of respondents and ensure the completeness and accuracy of the data. For data analysis, the study employed the Structural Equation Modeling (SEM) technique, specifically using the Partial Least Square (PLS) approach. The PLS-SEM method was chosen due to its suitability for complex models involving multiple variables

and relationships, especially when the research involves both direct and indirect effects between constructs. This method is also useful when the research data do not meet normality assumptions or involve small to medium sample sizes.

The analytical procedure began with an assessment of the measurement model (outer model), which evaluated the reliability and validity of the instruments used to measure each variable. Reliability tests ensured that the questionnaire items consistently measured the intended constructs, while validity tests assessed how well those items represented the theoretical variables. After confirming the adequacy of the measurement model, the next step was to examine the structural model (inner model). This stage involved testing the relationships among the latent variables to determine the significance and strength of the direct and indirect effects hypothesized in the study framework (Aghili & Amirkhani, 2021). The chosen methods provided a robust analytical framework for assessing the role of product innovation and financial literacy in enhancing MSME performance through the mediating role of digital marketing.

## RESULTS

The findings of this study's analysis of the convergent validity test research model are as follows:

Table 1. Validity Test Results

Variable	Indicator	Results
Product Innovation	IP1	0.765
	IP2	0.843
	IP3	0.754
	IP4	0.721
Financial Literacy	LK1	0.711
	LK2	0.765
	LK3	0.845
	LK4	0.832
Digital Marketing	DM1	0.789
	DM2	0.823
	DM3	0.865
	DM4	0.789
	DM5	0.753
MSME Performance	KU1	0.743
	KU2	0.823
	KU3	0.834
	KU4	0.798
	KU5	0.733

Table 1 presents the results of the measurement of indicators for the four main variables in this study, namely Product Innovation, Financial Literacy, Digital Marketing, and MSME Performance. Each variable is measured using several indicators that show the outer loading value or contribution of each indicator to the variable construct. For the Product Innovation variable, indicators IP1 to IP4 show values between 0.721 and 0.843, which reflects the consistency and strength of the indicators in measuring product innovation. The Financial Literacy variable consists of four indicators (LK1–LK4) with values between 0.711 and 0.845, indicating that all indicators are in the valid category. Meanwhile, the Digital Marketing variable is measured using five indicators (DM1–DM5), with loading values ranging from 0.753 to 0.865, indicating that all indicators contribute significantly to the digital marketing construct. Finally, MSME Performance is measured through five indicators (KU1–KU5), which have values between 0.733 and 0.834, indicating that these indicators are quite strong in representing MSME performance. Overall, all indicators in the table show outer loading values above the minimum threshold of 0.7, so it can be concluded that the instrument used in this study meets the convergent validity criteria and is suitable for use in further analysis. The findings of the validity test, which are displayed in the above table, indicate that every

indication in the study model is more significant than 0.70. These findings additionally show that every research variable is legitimate and that additional testing is possible. The purpose of the reliability test is to evaluate the research data's dependability. The outcomes of evaluating the data's dependability in this investigation are as follows:

Table 2. Reliability Test Results

Variable	Cronbach's Alpha
Product Innovation	0.883
Financial Literacy	0.834
Digital Marketing	0.812
MSME Performance	0.854

The table above presents Cronbach's Alpha values to measure the reliability or internal consistency of the instruments used in the study for each variable. A high Cronbach's Alpha value indicates that the indicators within a variable are consistent in measuring the intended construct. The Product Innovation variable had the highest value, at 0.883, indicating excellent reliability. Furthermore, Financial Literacy had a value of 0.834, Digital Marketing 0.812, and MSME Performance 0.854 all of which are above the minimum threshold of 0.7 commonly used to declare an instrument reliable. Therefore, it can be concluded that all four variables in this study have high reliability and that the instruments used are worthy of further analysis.

The table above displays the results of the data reliability test conducted for this study; the average composite reliability value is greater than 0.50. This indicates that all indicators of this study are credible.

Table 3. R-Square Value

Variable	Value R	R Square Adjusted
Digital Marketing	0.451	0.432
MSME Performance	0.560	0.520

Based on the data presented in Table 3, the Adjusted R Square value for MSME performance is 0.520, indicating that 52.0% of the variance in performance can be explained by the variables included in the study. The remaining 48.0% is attributed to other factors not examined in this research. For the digital marketing variable, the Adjusted R Square value is 0.432, meaning that 43.2% of its variation is accounted for by the model, while the remaining 56.8% is influenced by external variables beyond the scope of this study.

The next step involves evaluating the model's predictive relevance using the Q<sup>2</sup> value. This value functions similarly to the coefficient of determination, where a Q<sup>2</sup> value greater than zero indicates that the model has predictive relevance. Conversely, a Q<sup>2</sup> value below zero suggests weak predictive capability. To put it another way, the model may be seen as a better match if all of the Q<sup>2</sup> values are greater than 0. The following are the findings of this study's predictive value of relevance calculation:

$$Q^2 = 1 - (1 - R^2_1)(1 - R^2_2)(1 - R^2_n)$$

$$Q^2 = 1 - (1 - 0.520)(1 - 0.432)$$

$$Q^2 = 1 - (0.480)(0.568)$$

$$P^2 = 1 - 0.272$$

$$Q^2 = 0.728$$

Based on the calculation results, the Q<sup>2</sup> value obtained in this study is 0.728. This indicates that the variables analyzed MSME performance, digital marketing, financial literacy, and product innovation collectively explain 72.8% of the model's predictive accuracy. The remaining 27.2% is influenced by other factors not included in this research, suggesting the need for further exploration to identify additional contributing

variables. The findings of this study's hypothesis testing are as follows. The outcomes are displayed in Table 4 below:

Table 4. Research Hypothesis Test Results

Variable	Original Sample (O)	Sample Mean (M)	T-Statistics ( O/STDEV )	Standard Deviation (STDEV)	P-Value	Information
Digital marketing -> MSME Performance	0.234	0.213	3.429	0.289	0.001	Significant
Product Innovation -> Digital marketing	0.321	0.378	9.174	0.234	0.000	Significant
Product Innovation -> MSME Performance	0.243	0.345	3.234	0.389	0.002	Significant
Financial Literacy -> Digital marketing	0.453	0.453	3.210	0.189	0.001	Significant
Financial Literacy -> MSME Performance	0.367	0.367	9.132	0.276	0.000	Significant
Product Innovation -> Digital marketing -> MSME Performance	0.451	0.332	3.430	0.089	0.001	Significant
Financial Literacy -> Digital marketing -> MSME Performance	0.378	0.353	9.110	0.098	0.000	Significant

Table 4 shows the results of a path analysis using the Partial Least Squares (PLS) method to test the direct and indirect effects between variables in the research model. Based on the Original Sample (O) value, T-Statistics, and P-Value, all paths showed significant results. The Digital Marketing path to MSME Performance had a coefficient of 0.234 with a T-Statistic of 3.429 and a P-Value of 0.001, indicating a positive and significant effect. Product Innovation also showed a significant effect on Digital Marketing with a coefficient of 0.321 and a T-Statistic of 9.174 (P-Value of 0.000). Meanwhile, the direct effect of Product Innovation on MSME Performance was also significant (O = 0.243; P-Value of 0.002).

Likewise, Financial Literacy on Digital Marketing, which has a coefficient of 0.453 and P-Value 0.001, and Financial Literacy on MSME Performance which shows a positive and highly significant influence (O = 0.367; P-Value 0.000). For the indirect influence, Product Innovation through Digital Marketing on MSME Performance shows a significant influence with a value of 0.451 and T-Statistic of 3.430 (P-Value 0.001). Likewise, Financial Literacy through Digital Marketing on MSME Performance has a strong and significant influence (O = 0.378; T-Statistic 9.110; P-Value 0.000). Overall, all paths in this model support the research hypothesis, both directly and through digital marketing mediation.

The results of this study demonstrate that digital marketing has a significant impact on MSME performance. The analysis confirms that effective digital marketing improves business outcomes, aligning with current consumer behavior where most prefer online shopping. Consequently, digital marketing has become a vital component of modern business operations. Furthermore, the study reveals that product innovation significantly influences digital marketing, as shown by a significance value of 0.000. This supports the second hypothesis, emphasizing the need for MSMEs to invest in quality product development to strengthen their digital marketing efforts. Strong product innovation leads to more compelling marketing strategies, increasing customer interest and competitiveness.

The study also confirms that product innovation has a direct and significant effect on MSME performance, supported by a significance value of 0.002. Developing innovative and improved products is essential to meet evolving consumer needs, which in turn drives better business results. In addition, financial literacy significantly impacts digital marketing, confirming the fourth hypothesis. Business owners with good financial literacy are more capable of making strategic decisions, including effectively using digital

marketing to grow their businesses. Proper financial management ensures smoother operations and supports targeted marketing efforts. The research also shows that financial literacy directly influences MSME performance, as evidenced by a significance value well below 0.05. Entrepreneurs with strong financial knowledge are better at managing resources, making decisions, and sustaining business performance.

The study further supports that product innovation affects MSME performance through digital marketing, as shown by a significance value of 0.001. This suggests that innovative products enhance digital marketing, which then contributes to stronger performance outcomes. Lastly, financial literacy is also found to influence MSME performance indirectly through digital marketing, supported by a 0.000-significance value. Financially literate business owners are better positioned to optimize digital marketing, which ultimately improves overall business performance.

## **DISCUSSION**

MSMEs continue to play a vital role in economic development, yet they face persistent challenges that hinder optimal performance. These include limited human resource capabilities, weak product innovation, poor marketing strategies, and insufficient financial management (Murnieks et al., 2020; Astuti & Nugroho, 2023). Overcoming these barriers is crucial to improving MSME performance and sustainability. This study explores three key factors, such as product innovation, financial literacy, and digital marketing, and their direct and indirect influences on MSME performance. Product innovation is recognized as a strategic asset that enhances competitiveness and operational outcomes. It allows MSMEs to remain agile, meet dynamic consumer needs, and increase customer loyalty (Lailla et al., 2022). The results of this study confirm that product innovation has a significant and positive effect on MSME performance, supporting previous findings by Potolau and Safriansyah (2022) and Putri (2022). However, prior research shows mixed outcomes; while Bouwman et al. (2019) and Saridakis et al. (2019) found a positive link between innovation and performance, Ferreira et al. (2018) and Patria et al. (2023) found no significant impact. These inconsistencies suggest that contextual factors may influence how innovation drives performance.

Moreover, the study reveals that product innovation significantly affects digital marketing. As innovative products are introduced, they require effective digital promotion strategies to reach target markets (Fitri et al., 2018; Pranata et al., 2024). Digital platforms allow MSMEs to engage broader audiences at a lower cost, reinforcing the role of innovation in shaping promotional effectiveness. Financial literacy is another critical factor that significantly influences MSME performance. With a solid understanding of financial concepts, MSME actors can manage budgets, evaluate investments, and make informed business decisions (Susanti et al., 2018; Yanti, 2019; Umboh & Aryanto, 2023). This study supports those findings, showing that financial literacy positively impacts business outcomes. However, OJK (2022) reports that Indonesia's national financial literacy rate remains at 49.68%, which is relatively low compared to countries like Singapore. This gap highlights the urgent need to improve MSME actors' financial education.

Additionally, the study confirms that financial literacy significantly affects digital marketing. Suindari and Juniariani (2020) argue that financially literate entrepreneurs are more capable of planning and executing cost-effective marketing strategies, which this study corroborates. Strong financial knowledge enables business owners to allocate resources wisely and optimize marketing efforts, further enhancing business performance. Digital marketing itself has a direct and significant impact on MSME performance. As consumer behavior shifts toward online shopping, digital marketing becomes increasingly essential (Aksoy, 2017; Rachmadana et al., 2024). Research by Lailla et al. (2022) and Purbantina et al. (2022) supports the claim that effective digital marketing increases market reach, customer engagement, and sales. This study reinforces those findings, showing that digital marketing not only drives business outcomes directly but also mediates the effects of product innovation and financial literacy on performance.

This study contributes to the literature by confirming that product innovation and financial literacy influence MSME performance both directly and indirectly through digital marketing. These results align with recent calls for integrated strategies in MSME development, particularly in the post-pandemic digital economy. For MSMEs to thrive, stakeholders must prioritize innovation, enhance financial education, and embrace digital tools as core components of sustainable growth.

## CONCLUSION

This study concludes that all proposed hypotheses are supported, confirming that both product innovation and financial literacy have significant and positive effects on MSME performance, either directly or indirectly through digital marketing. These findings highlight the importance of integrating innovation, financial management, and digital promotion as strategic components in business operations. The effective implementation of these elements contributes substantially to enhancing competitiveness, efficiency, and growth among MSMEs. Practical implications of this research suggest that MSME owners should be equipped with better knowledge and skills in financial management, product development, and digital marketing. Government bodies, business support organizations, and educational institutions are encouraged to conduct training programs and workshops aimed at increasing financial literacy and innovation capabilities. Moreover, promoting the use of digital marketing tools is crucial, as they allow MSMEs to expand market reach and connect with consumers beyond geographic limitations.

From a theoretical perspective, this study enriches the existing literature by demonstrating the mediating role of digital marketing in strengthening the relationship between financial literacy, product innovation, and MSME performance. It also responds to previous research gaps by analyzing these variables in a combined model, particularly in a developing country context. However, this study is not without limitations. The research was limited to MSMEs in the food sector, which may restrict the generalizability of the findings to other industries. Future research is recommended to include a more diverse sample covering various MSME sectors such as fashion, manufacturing, or services. Expanding the geographical scope and exploring other potential mediating variables may also provide deeper insights into the dynamics affecting MSME performance in the digital era.

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