

Digital Marketing, Product Quality, and Product Innovation as Drivers of MSME Performance in the Digital Economy: Evidence from Ponorogo Regency

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Abstract: This study aims to analyze the effect of digital marketing, product quality, and product innovation on Micro, Small, and Medium Enterprises (MSMEs) performance in the digital era within Ponorogo Subdistrict. Grounded in the Resource-Based View (RBV) perspective, firm performance depends on integrating digital marketing capabilities with unique internal product resources. Using a quantitative causal design, the study targets a population of 2,935 registered MSMEs in Ponorogo Subdistrict. Primary data were collected via structured Likert-scale questionnaires administered to MSME owners adopting digital platforms. Data analysis was performed using Structural Equation Modeling based on Partial Least Squares (SEM-PLS) through SmartPLS. The results indicate that digital marketing, product quality, and product innovation each exert a positive and significant effect on MSME performance. Furthermore, all three variables simultaneously contribute to enhancing enterprise performance. The findings emphasize that combining digital promotional reach with continuous product quality control and innovation is essential for sustaining regional competitive advantage.

Keywords: Digital Marketing, Product Quality, Product Innovation, MSMEs Performance.

Abstrak : Penelitian ini bertujuan untuk menganalisis pengaruh pemasaran digital, kualitas produk, dan inovasi produk terhadap kinerja Usaha Mikro, Kecil, dan Menengah (UMKM) di era digital pada Kecamatan Ponorogo. Berlandaskan perspektif Resource-Based View (RBV), kinerja perusahaan bergantung pada kemampuan mengintegrasikan kapabilitas pemasaran digital dengan sumber daya internal berupa keunggulan produk. Penelitian ini menggunakan desain kuantitatif kausal dengan populasi sebanyak 2.935 UMKM terdaftar di Kecamatan Ponorogo. Data primer dikumpulkan melalui kuesioner terstruktur dengan skala Likert yang diberikan kepada pemilik UMKM yang telah menggunakan platform digital. Analisis data dilakukan menggunakan Structural Equation Modeling berbasis Partial Least Squares (SEM-PLS) melalui aplikasi SmartPLS. Hasil penelitian menunjukkan bahwa pemasaran digital, kualitas produk, dan inovasi produk masing-masing berpengaruh positif dan signifikan terhadap kinerja UMKM. Selain itu, ketiga variabel tersebut secara simultan berkontribusi dalam meningkatkan kinerja usaha. Temuan ini menegaskan bahwa kombinasi jangkauan promosi digital, pengendalian kualitas produk

secara berkelanjutan, dan inovasi menjadi faktor penting dalam mempertahankan keunggulan kompetitif daerah.

Kata Kunci: Pemasaran Digital, Kualitas Produk, Inovasi Produk, Kinerja UMKM.

INTRODUCTION

Amidst an increasingly competitive digital business ecosystem, micro, small, and medium enterprises (MSMEs) face significant challenges in maintaining sustainability and continuously improving their operational performance (Alfarizi et al., 2024; Probohudono et al., 2025). Technology integration through digital marketing strategies and product innovation has proven effective in expanding market reach and improving operational efficiency (Sharabati et al., 2024; Sutrisno et al., 2025). However, this success cannot be achieved alone without the support of superior product quality, which is the primary foundation for building consumer trust (Demirel, 2022; Kosasih et al., 2024). The current phenomenon indicates a gap where many MSMEs have undergone digital transformation but have not achieved optimal performance due to the lack of integration between adaptive marketing capabilities and consistent product quality standards (Chavarnakul et al., 2025; Yaqub & Alsabban, 2023). Therefore, synergy between digital marketing, product innovation, and product quality is a crucial element in accelerating MSME performance, enabling them to make a more significant contribution to economic stability (Rizkita et al., 2025; Türkeş, 2024).

The urgency of optimizing this performance is crucial given that micro, small, and medium enterprises (MSMEs) play a strategic role as key drivers of the economy, both nationally and internationally. MSMEs are globally recognized as pillars of sustainable development, drivers of industrial restructuring, and creators of new job opportunities that increase community income (Dasaraju & Tambunan, 2023). In East Java, the significance of this role is clearly evident through its stable growth trend and dominant contribution to the province's Gross Regional Domestic Product (GRDP). The Head of the East Java Provincial Cooperatives and SMEs Office, Endy Alim Abdi Nusa, emphasized that the contribution of cooperatives and MSMEs to East Java's GRDP has reached 59.18%. In fact, the latest data shows a surge of up to 60.08% (Source: BPS & East Java Provincial Government Public Relations, 2025), which emphasizes that managerial success at the MSME level will have a direct impact on regional economic resilience.

Improving marketing performance is inseparable from the role of digital marketing. Technological developments have had a tremendous impact on various dimensions of life, including the business and marketing sectors (Gupta et al., 2020). This situation forces businesses to adapt to increase their market reach (Apasrawirote et al., 2022). Digital marketing also serves as an efficient method for facing marketing challenges in the digital age (Sharabati et al., 2024). This strategy has become a crucial aspect of marketing due to its ability to reach a broad audience (Campbell & Farrell, 2020; Shah & Murthi, 2021). By designing and implementing an effective digital strategy, an organization has a greater opportunity to strengthen interactions with customers and achieve desired business results (Gupta et al., 2020; Wielgos et al., 2021). Thus, digital marketing is considered a promotional method that is not only effective and efficient but can also significantly increase sales volume (Wielgos et al., 2021). Research by Sharabati et al. (2024) found that digital marketing has a positive and significant impact on the performance of MSMEs. The results showed that the strengths of digital marketing, including the purpose of use, benefits, and product reputation, contribute directly to improving business performance, such as increasing sales, expanding the market, and enhancing business competitiveness (Gupta et al., 2020; Wielgos et al., 2021).

Product quality plays a crucial role as one of the main factors determining the operational success of MSMEs (Sariyer et al., 2025). Product quality is not only seen from its physical aspect but also represents a business's ability to meet customer needs and expectations (Restrepo-Morales et al., 2024). In an ever-changing market, businesses that focus on quality will have a greater competitive advantage over their competitors (Babayev & Balajayeva, 2023). This is based on the fact that high-quality products can directly increase customer satisfaction, build a positive brand

image, and expand market share (Kataria & Saini, 2019). Numerous empirical studies have shown a positive relationship between product quality and increased revenue and business continuity (Restrepo-Morales et al., 2024). Therefore, for MSMEs, continuous efforts to assess and improve product quality standards are a crucial strategy for achieving optimal and sustainable business results (García-Salirrosas et al., 2024; Jerab & Mabrouk, 2023).

In addition to product quality, product innovation is a crucial factor for the survival and growth of micro, small, and medium enterprises (MSMEs) (Restrepo-Morales et al., 2024), particularly in the face of competition in a dynamic market (Cennamo, 2021). According to research by Octasyilva et al. (2022), product innovation has a positive and significant impact on MSME performance. The results show that product innovation is a key factor in improving business performance because it can encourage increased competitiveness, meet evolving market needs, and create added value for the products produced (Octasyilva et al., 2022; Restrepo-Morales et al., 2024). This dominant figure clearly positions MSMEs as an economic sector that is close to the people whose existence not only supports the growth of other economic sectors, but also significantly creates more job opportunities for millions of residents, as seen from the report of more than 9.7 million MSME actors in East Java (RRI, 2025), so that it will ultimately increase income, boost people's purchasing power, and overall accelerate the regional economy (Anugerah and Nuraini, 2021).

Ponorogo Regency has significant potential for MSME development, as evidenced by the increasing number of business units in recent years (Source: Department of Industry, Cooperatives, and SMEs, Ponorogo Regency Government, 2024), thus offering ample opportunities to strengthen competitiveness and significantly contribute to the local economy. The growth in the number of MSMEs in Ponorogo Regency reflects the government's active involvement in enhancing the capabilities of business actors, including through assistance in digitalizing product marketing to strengthen MSME competitiveness and sales volume (Tambunan & Authour, n.d.) Munna et al., 2024).

Amidst the acceleration of the digital era, the performance of MSMEs in Ponorogo District still faces a number of crucial internal obstacles. The main problem lies in suboptimal digital marketing capabilities, where business actors' use of technology is still limited to conventional communication media without an integrated market optimization strategy (Apasrawirote et al., 2022; Tauro et al., 2021). This condition is exacerbated by the lack of product quality standardization due to weak quality control and packaging, which has resulted in low consumer trust in the online market (Li et al., 2020; Osman et al., 2024). Furthermore, low sensitivity to product innovation makes local products tend to be monotonous and vulnerable to competitiveness due to slow diversification (Hou et al., 2025; Sharma et al., 2024; Yaya et al., 2024). This weak integration between technological mastery, quality consistency, and innovation capabilities cumulatively hinders the optimization of MSME performance in the current digital era.

RESEARCH METHODS

This research is a quantitative study aimed (Gazzola et al., 2020) at examining the influence of several independent variables, namely digital marketing (X_1), product quality (X_2), and product innovation (X_3), on the dependent variable, MSME performance (Y). The scope of this research focuses on micro, small, and medium enterprises (MSMEs) operating in Ponorogo District, Ponorogo Regency, East Java. This location was selected based on the increasing adoption of digital technology by MSMEs in the region, particularly in online marketing through social media and e-commerce. Quantitative research methods are scientific steps taken by a researcher using a quantitative approach to obtain data that is quantified and analyzed to answer/solve a problem (Hamzah et al., 2022). The results of this quantitative research can be generalized by the researcher, which cannot be done by qualitative researchers because they do not draw generalizations, but rather analyze the object of their research in depth.

The population in this study includes all micro, small, and medium enterprises (MSMEs) in Ponorogo District registered with the Ponorogo Regency Trade, Cooperatives, and Micro Enterprises Office in 2024, totaling 2,935 business units. This number includes digital businesses in the same

region and year. Because official data on the number of MSMEs in 2025 is unavailable, 2024 data was used as the sampling frame. Access to data sourced from the official database of the relevant agency will be adjusted through research permit procedures. Information collection in this study was conducted by distributing questionnaires to eligible participants using a combination of digital (online) and in-person (offline) methods. This combined approach was implemented to maximize the questionnaire return rate and ensure that the data obtained represented the three culinary sub-sectors being studied (Younas *et al.*, 2025).

Meanwhile, to mitigate the challenges of digital message readability and strengthen data validity, researchers also implemented an offline method. This method involved visiting the operational locations of culinary MSMEs in Ponorogo District during business downtime. Researchers brought digital devices (smartphones/tablets) loaded with electronic questionnaires and provided physical questionnaires to facilitate the entrepreneurs' direct completion of the research instruments under the researcher's guidance. The respondent criteria determined in this study are: (1) MSME actors operating in 3 (three) sub-sectors of the culinary industry, namely the service sector providing places (cafes/restaurants), the food producer sector, and the beverage producer sector, (2) MSMEs that have used digital platforms in their marketing, (3) MSMEs that have been operating for at least 3 years, and (4) their business operational activities are physically within the geographical area of Ponorogo District. The data analysis in this study used Partial Least Squares with the SEM-PLS application. For model testing, see the conceptual model research in Figure 1 below:

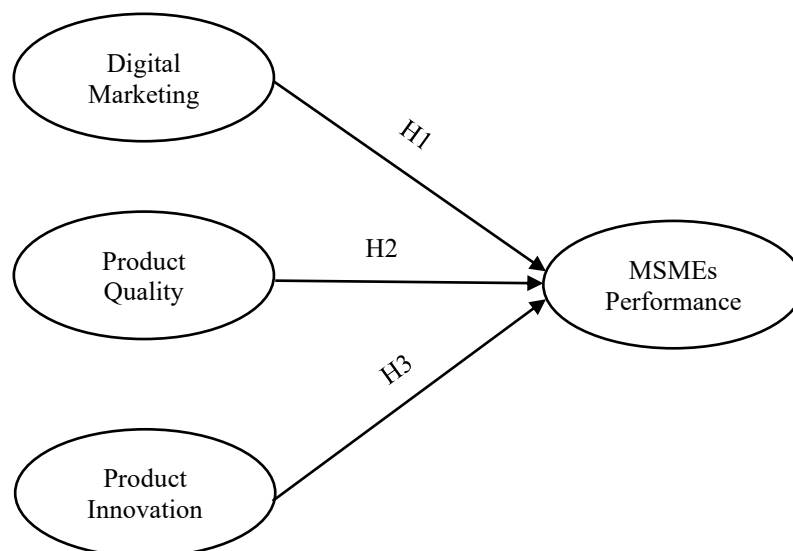


Figure 1: Conceptual Model Research

RESULTS AND DISCUSSION

Results

The object of this research is micro, small, and medium enterprises (MSMEs) in the food and beverage sector operating within Ponorogo District, Ponorogo Regency. According to data from the Ponorogo Regency Department of Industry, Cooperatives, and SMEs, this region has the largest number of business operators at the regency level, with a total of 2,935 business units, making it a center of economic growth and a key barometer for local trade activity. As entities located in the city center, MSMEs in Ponorogo District exhibit dynamic characteristics and are increasingly adapting to technological disruption through the use of the internet, social media, and marketplace platforms in their daily activities.

Table 1. Average Variance Extracted Value

No	Variables	Average Variance Extracted (AVE)	Standar	Information
1	Digital marketing	0.671	0,05	Valid
2	Product quality	0.626	0,05	Valid
3	Product innovation	0.730	0,05	Valid
4	MSMEs performance	0.616	0,05	Valid

Source: SmartPLS 4.1.1.8 Output. (2026)

Based on the table 2 above, the test results show that all research variables have an Average Variance Extracted (AVE) value above 0.05. The lowest AVE value is found in the MSMEs performance variable at 0.616, while the highest value is found in the product innovation variable at 0.730. Meanwhile, the product quality variable obtained an AVE value of 0.626, and the digital marketing variable at 0.671. These results indicate that all variables in this study have met the criteria for convergent validity, so that the research construct is declared able to adequately explain the indicator variance.

Table 2. Fornell–Larcker values

No	Variables	Digital marketing	Product quality	Product innovation	MSMEs Performance
1	Digital marketing	0.819			
2	Product quality	0.774	0.785		
3	Product innovation	0.500	0.556	0.854	
4	MSMEs Performance	0.735	0.750	0.459	0.791

Source: SmartPLS 4.1.1.8 Output. (2026)

Based on the extraction Table 2 above, the Average Variance Extracted (AVE) value of each variable has been calculated. The analysis results show that the square root of the AVE value for the digital marketing variable is 0.819, which is higher than its correlation values with other variables, namely 0.774, 0.500, and 0.735. Furthermore, the product quality variable has a square root of the AVE value of 0.785, which is also greater than its correlation values with digital marketing (0.774), product innovation (0.556), and MSMEs' performance (0.750). The same thing is shown by the product innovation variable with a square root of the AVE value of 0.854, which is higher than its correlation values with digital marketing (0.500), product quality (0.556), and MSMEs' performance (0.459). Meanwhile, the MSMEs Performance variable has an AVE square root value of 0.791, which is greater than its correlation with digital marketing (0.735), product quality (0.750), and product innovation (0.459).

Table 3. Cronbach's Alpha and Composite Reliability Values

No	Variables	Cronbach's Alpha	Composite Reliability	Information
1.	Digital marketing	0.837	0.841	Reliable
2.	Product quality	0.800	0.806	Reliable
3.	Product innovation	0.876	0.885	Reliable
4.	MSMEs performance	0.790	0.802	Reliable

Source: SmartPLS 4.1.1.8 Output. (2026)

Based on Table 3, the reliability analysis above shows that all variables in this study have a very good level of reliability. This is evident from the Cronbach's alpha values for each variable, which ranged from 0.790 to 0.876. The lowest value was recorded for the MSMEs performance

variable, with a value of 0.790, while the highest value was recorded for the product innovation variable, with a value of 0.876. All Cronbach's alpha values exceeding the minimum threshold of 0.70 indicate that this research instrument has good consistency.

Table 4. R-Square Values

No		R-Square	R-Square Adjusted
1.	<i>MSMEs Performance</i>	0,694	0,684

Source: SmartPLS 4.1.1.8 Output. (2026)

Based on Table 4 above, the R-square value for the dependent variable, MSME performance, is 0.694, and the adjusted R-square value is 0.684. The R-square value of 0.694 indicates that the variability or contribution of the independent variables in the model explains 69.4% of the MSME performance variable. Meanwhile, the remaining 30.6% is explained by variables outside the research model that were not included in the study. The R-square value of 0.694 also indicates that the structural model has a strong (substantial) level of predictive ability, as it is above the threshold for a good contribution in explaining the MSME performance phenomenon studied.

Table 5. Hypothesis Test Analysis

No	Variables	T-Statistics (O/STDEV)	P Values
1.	Digital marketing -> MSMEs performance	3.629	0.000
2.	Product quality -> MSMEs performance	2.114	0.035
3.	Product innovation -> MSMEs performance	2.900	0.004

Source: SmartPLS 4.1.1.8 Output. (2026)

The results of the hypothesis test analysis in Table 5 show that all three hypotheses proposed were accepted because they met the significance criteria (T-Statistics > 1.96 and P-Values < 0.05). Specifically, the digital marketing variable was shown to have a significant effect on MSMEs' performance (T-Statistics = 3.629; P-Values = 0.000). Furthermore, the product quality (T-Statistics = 2.114; P-Values = 0.035) and product innovation (T-Statistics = 2.900; P-Values = 0.004) variables were also shown to have a significant effect. These findings indicate that the performance of MSMEs in this industry is significantly influenced by these three factors, with the effectiveness of digital marketing strategies being the most dominant factor compared to product quality and product innovation.

Discussion

Based on the results of the first hypothesis test (H1), the digital marketing variable is proven to have a positive and significant influence on MSME performance. This is indicated by the T-statistic value of 3.629, which is greater than the T-table of 1.96, and the P-value of 0.000, which is much smaller than the 0.05 significance level. These statistical findings indicate that any improvement or optimization of digital marketing strategies carried out by business actors will be followed by a significant increase in MSME operational and financial performance. This is in line with research (Sharabati *et al.*, 2024), the findings of this study indicate that digital marketing has a positive and significant impact on the performance of small and medium enterprises (SMEs).

Based on the results of the second hypothesis test (H2), the data analysis shows that product quality has a positive and significant influence on MSME performance. This significance is proven by the T-statistic value of 2.114, which exceeds the critical threshold of 1.96, supported by a P-value of 0.035, which is below the 5% significance standard (0.05). Thus, it can be concluded that maintained and superior product quality is one of the main triggers in driving increased business performance. This finding also confirms the results of a previous empirical study by Restrepo-Morales *et al.* (2024), which stated that "Based on the results of the research analysis, it was found that product quality has a significant and positive influence on the performance of a company

(MSME)." This means that based on the results of the research analysis, it was found that product quality has a significant and positive influence on company performance (MSME). Furthermore, research by Febrianti et al. (2022) found that product quality has a positive and significant impact on MSME sales performance.

Based on the results of the third hypothesis test (H3), the hypothesis test for the product innovation variable shows a positive and significant influence on MSME performance. This significance indicator is clearly visible from the t-statistic value of 2.900, which is greater than 1.96, and the very convincing p-value of $0.004 < 0.05$. These empirical results prove that creativity and novelty applied to products can be a strong stimulus for improving MSME performance. The results of this study provide concrete support for the development of the RBV theory, proving that internal innovation capacity is a key strategic asset for winning competition in a dynamic market. Furthermore, these findings also align with and reinforce previous research by Octasyilva et al. (2022), which states that "Product innovation has a significant positive influence on the performance of Micro and Small Enterprises (MSEs) in food processing led by women." This means that product innovation has a significant positive influence on the performance of micro and small enterprises (MSEs) in food processing led by women. Furthermore, research by Restrepo-Morales et al. (2024) concluded that the analysis results show that product innovation has a much clearer and more tangible impact or effect on company performance compared to changes or improvements in management and organizational structures.

CONCLUSIONS AND RECOMMENDATIONS

Digital marketing has been shown to have a positive and significant impact on the performance of MSMEs in Ponorogo District. These findings indicate that optimizing digital-based marketing strategies, such as utilizing social media, e-commerce, and strengthening online interactions, significantly boosts sales growth, increases the number of customers, and sustainably expands MSME market share. Product quality has been shown to have a positive and significant impact on MSMEs' performance in Ponorogo District. These results indicate that MSMEs' ability to maintain and improve product quality, both in terms of durability, reliability, and suitability to consumer needs, is a crucial factor in increasing customer satisfaction and loyalty, which ultimately has a direct impact on improved financial performance and business stability.

Product innovation has been shown to have a positive and significant impact on the performance of MSMEs in Ponorogo District. These findings indicate that business owners' creativity in product innovation, whether through product variations, packaging refreshes, or adaptations to the latest market trends, is an effective strategic capability for gaining competitive advantage in the digital age, increasing product appeal, and extending the lifespan of MSMEs. Digital marketing, product quality, and product innovation have been shown to have a positive and significant influence on MSME performance in Ponorogo District, with an $F_{(count)}$ value of 72.57. The collective combination of these three variables is essential to drive long-term business growth indicators, where expanding digital market reach must be supported by maintained quality standards and adaptive product creativity.

Furthermore, the research findings still have weaknesses, namely that MSMEs in Ponorogo District are advised to adopt a holistic business approach by aligning digital marketing strategies and innovation capacity without neglecting product quality aspects. Practically, business actors must be more proactive in utilizing digital platforms, such as optimizing social media (Instagram, Facebook, TikTok) and utilizing marketplaces (Shopee, Tokopedia), to expand market reach, increase online interaction with consumers, and analyze market behavior trends regularly. However, this broad digital market penetration must be balanced with maintaining consistent product quality by meeting standard specifications, increasing durability, and ensuring product conformity with promotional information displayed online to maintain consumer trust. Furthermore, amidst intense competition in the digital era, MSMEs are required to continue to innovate products, whether through modifications to formulations/raw materials, updating physical designs to be more functional and aesthetic, or improving visual identity (branding and packaging). Through the synergy between adaptive digital marketing capabilities, consistent

product quality, and continuous innovation, MSMEs in Ponorogo District can increase sales, increase the number of customers, expand market share, and optimize sustainable business profit growth.

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