



Digital Marketing and Product Quality as Determinants of MSME Sales Performance in Manokwari Regency

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ARTICLE INFO	ABSTRACT
Article history: Received Jul 30, 2026 Revised Aug 15, 2026 Accepted Aug 21, 2026 Keywords: Digital marketing Product quality Sales performance MSMEs Manokwari	This study examined the effects of digital marketing and product quality on MSME sales performance in Manokwari Regency. A quantitative explanatory design was employed, involving 125 MSME owners selected through purposive sampling. Data were collected using a five-point Likert-scale questionnaire and analyzed using validity and reliability tests, regression diagnostic tests, and multiple linear regression. Digital marketing had a positive and significant effect on sales performance ($B = 0.276$; $t = 2.035$; $p = 0.044$), whereas product quality had a negative and significant effect ($B = -0.261$; $t = -2.328$; $p = 0.022$). The regression model was statistically significant ($F = 5.863$; $p = 0.004$), although its explanatory power was modest ($R^2 = 0.088$; adjusted $R^2 = 0.073$). These findings highlight the importance of expanding digital market reach while ensuring that product-quality improvements remain aligned with consumer preferences, affordability, and local market conditions. <i>This is an open access article under the CC BY-NC license.</i> 

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1. INTRODUCTION

Micro, Small, and Medium Enterprises (MSMEs) are key drivers of regional economic activity because they create employment opportunities, diversify household income sources, and strengthen local production and trade networks. In Manokwari Regency, the research data record 11,285 MSMEs registered with the Office of Cooperatives and MSMEs, representing a diverse range of businesses in the culinary, retail, fashion, handicraft, and service sectors. The large number of business actors reflects substantial economic potential; however, it does not guarantee that all MSMEs possess comparable marketing and sales capabilities. Changes in consumer behavior, widespread smartphone use, and easier access to information have encouraged business owners to adapt to increasingly digital marketing practices (Arumsari et al., 2022; Harahap et al., 2021).

Digital marketing provides MSMEs with opportunities to promote their products beyond geographical constraints through social media, online marketplaces, instant messaging applications, and other digital channels. These channels can be used to communicate product information, facilitate two-way communication, receive orders, retain customers, and assess market responses more rapidly. Digital transformation has also been associated with broader market reach, higher productivity, improved access to financing, and greater economic inclusion when supported by adequate digital literacy, infrastructure, and public policy (Bahasoan et al., 2024; Puspaningtyas et al., 2022). Because digital promotion offers relatively flexible cost structures, it is particularly relevant to MSMEs with limited marketing budgets.

However, the benefits of digitalization do not arise automatically. Many MSMEs still use smartphones primarily for communication and entertainment, while their capacity to create promotional content, manage business accounts, use digital advertising features, and respond

consistently to customers remains uneven. Regional conditions, connectivity, human resource capabilities, and logistics costs may further constrain the effectiveness of digital expansion. Studies on MSME empowerment indicate that strengthening competitiveness through digital marketing requires sustained assistance and the ability to convert technology adoption into productive business activities (Mavilinda et al., 2022; Arumsari et al., 2022; Bahasoan et al., 2024).

Sales growth is not determined by promotional capability alone. Product quality reflects a product's ability to meet customer needs and expectations through performance, reliability, conformity, durability, features, and perceived quality. Products that align with consumer preferences can strengthen satisfaction, encourage repeat purchases, and generate positive word-of-mouth. Conversely, improvements in quality attributes that increase production costs or selling prices, but are not considered important by consumers, may not necessarily lead to higher sales. Product quality should therefore be understood not only from the producer's perspective but also in terms of the value perceived by consumers (Kotler et al., 2022; Tjiptono, 2018).

Previous studies have generally found that digital media use and product quality are associated with stronger business performance or higher sales. Nevertheless, empirical outcomes depend substantially on market characteristics, product type, consumer purchasing power, competition, and the ability of business owners to integrate promotional activities with product value. Manokwari Regency has geographical and market characteristics that differ from those of many other locations examined in Indonesian MSME studies. Local empirical evidence is therefore necessary to ensure that recommendations are not based solely on generalizations from other regions.

This study aims to examine the effects of digital marketing and product quality on the sales performance of MSMEs in Manokwari Regency, both individually and jointly. Its contribution lies in providing survey-based evidence on the extent to which digital marketing practices and perceived product quality explain variations in sales among local MSMEs. Based on this framework, the following hypotheses are proposed: H1, digital marketing has a positive effect on sales performance; H2, product quality has a positive effect on sales performance; and H3, digital marketing and product quality jointly have a significant effect on sales performance.

2. RESEARCH METHOD

This study employed a quantitative explanatory approach with a cross-sectional survey design. The units of analysis were MSME owners and managers operating in Manokwari Regency. The sample consisted of 125 respondents selected through purposive sampling according to the following criteria: the business operated in Manokwari Regency; had been established for at least one year; the owner or manager was directly involved in marketing activities; the respondent understood the development of the firm's sales; and the respondent was willing to participate in the study. This approach was adopted to obtain participants who were able to evaluate marketing practices, product quality, and business sales conditions (Gendro et al., 2022; Sugiyono, 2021).

Primary data were collected using a closed-ended questionnaire based on a five-point Likert scale ranging from 1 = strongly disagree to 5 = strongly agree. Digital marketing (X1) was operationalized through the use of digital media, digital promotion, content quality, customer interaction, and marketing reach. Product quality (X2) was measured through performance, reliability, conformity, durability, and product appearance. Sales performance (Y) was measured through the number of products sold, sales revenue, number of transactions, number of customers, and purchase frequency. Secondary data were used to support the description of MSMEs and the regional context of the study.

The data were analyzed using SPSS. The measurement instrument was assessed using item-total correlations and Cronbach's alpha. Regression assumptions were evaluated using the Kolmogorov-Smirnov test for residual normality, tolerance and the variance inflation factor (VIF) for multicollinearity, and the Glejser test for heteroskedasticity. The multiple linear regression model was specified as $Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + e$. Individual effects were tested using the t-test at $\alpha = 0.05$, joint effects were examined using the F-test, and R^2 was used to assess the proportion of variation in sales performance explained by the two predictors (Ghozali, 2016).

Table 1. Operationalization of research variables

Variable	Operational definition	Main indicators
Digital Marketing (X1)	Use of digital media and technology by MSMEs to market and promote their products.	Digital media use; digital promotion; content quality; customer interaction; marketing reach.
Product Quality (X2)	The ability of MSME products to meet consumer needs and expectations.	Performance; reliability; conformity; durability; product appearance.
Sales Performance (Y)	Sales outcomes achieved by MSMEs within a specified period.	Products sold; sales revenue; transactions; customers; purchase frequency.

3. RESULTS AND DISCUSSION

Respondent Profile

The respondent profile indicates that digital channels have become part of the business activities of most sampled MSMEs. Facebook was the most widely used platform, followed by Instagram and TikTok. In terms of business sector, culinary enterprises dominated the sample. Most businesses had been operating for one to two years, and the majority of owners or managers had completed senior high school. Table 2 summarizes the respondents' characteristics.

Table 2. Respondent characteristics (N = 125)

Characteristic	Category	n	%
Social media	Facebook	65	52.0
	Instagram	30	24.0
	TikTok	20	16.0
	Other (WhatsApp/website/email)	10	8.0
Business sector	Culinary	55	44.0
	Groceries	35	28.0
	Fashion	25	20.0
	Handicrafts	10	8.0
Business age	1 year	30	24.0
	1–2 years	65	52.0
	> 2 years	30	24.0
Education	Primary school	10	8.0
	Junior high school	18	14.4
	Senior high school	72	57.6
	Bachelor's degree	25	20.0

Measurement Quality and Regression Diagnostics

All measurement items were considered valid because their item-total correlation coefficients exceeded the reference r-value specified in the original research data. Item-total correlations ranged from 0.496 to 0.845 for digital marketing, from 0.544 to 0.932 for product quality, and from 0.713 to 0.881 for sales performance. The instruments also demonstrated strong reliability, with Cronbach's alpha values of 0.932 for digital marketing, 0.913 for product quality, and 0.870 for sales performance. These results indicate adequate internal consistency for subsequent regression analysis.

The regression diagnostic tests indicated that the residuals were normally distributed according to the Kolmogorov-Smirnov test (Asymp. Sig. = 0.201 > 0.05). Both predictors had a tolerance value of 0.966 and a VIF of 1.036, indicating no multicollinearity. The Glejser test yielded significance values of 0.226 for digital marketing and 0.061 for product quality; both values exceeded 0.05, indicating no evidence of heteroskedasticity. Table 3 summarizes the diagnostic results.

Table 3. Summary of validity, reliability, and regression diagnostic tests

Test	Variable/indicator	Value	Conclusion
Validity	Digital marketing	$r = 0.496-0.845$	Valid
	Product quality	$r = 0.544-0.932$	Valid
	Sales performance	$r = 0.713-0.881$	Valid
Reliability	Digital marketing	$\alpha = 0.932$	Reliable
	Product quality	$\alpha = 0.913$	Reliable
	Sales performance	$\alpha = 0.870$	Reliable
Normality	K-S residual	$p = 0.201$	Normal
Multicollinearity	Tolerance; VIF	0.966; 1.036	No multicollinearity
Heteroskedasticity	Glejser X1; X2	$p = 0.226; 0.061$	No heteroskedasticity

Multiple Regression and Hypothesis Testing

The estimated regression equation was $Y = 23.033 + 0.276X_1 - 0.261X_2$. The coefficient for digital marketing was positive, whereas the coefficient for product quality was negative. At the individual predictor level, digital marketing had a positive and significant effect on sales performance ($t = 2.035$; $p = 0.044$), supporting H1. Product quality had a negative and significant effect on sales performance ($t = -2.328$; $p = 0.022$). Because the direction of the coefficient was contrary to the hypothesized positive relationship, H2 was rejected. The joint significance test yielded $F = 5.863$ with $p = 0.004$, supporting H3.

Table 4. Multiple linear regression results and hypothesis testing

Predictor	B	SE	β	t	p	Decision
Constant	23.033	5.285	—	4.358	<0.001	—
Digital marketing	0.276	0.136	0.179	2.035	0.044	H1 supported
Product quality	-0.261	0.112	-0.205	-2.328	0.022	H2 rejected

Table 5. Model fit and coefficient of determination

F	p	R	R ²	Adjusted R ²	Std. Error
5.863	0.004	0.296	0.088	0.073	4.860

The R^2 value of 0.088 indicates that digital marketing and product quality jointly explain approximately 8.8% of the variation in sales performance, while the remaining 91.2% is attributable to factors outside the model. This value is consistent with the ratio of the regression sum of squares to the total sum of squares in the ANOVA results and with the adjusted R^2 of 0.073. Thus, although the model is statistically significant, its explanatory power remains limited.

Digital Marketing and MSME Sales

The positive coefficient for digital marketing indicates that more intensive use of digital channels for promotion, information delivery, customer interaction, and market expansion is associated with higher sales performance. This finding is consistent with studies identifying social media and digital marketing as tools for expanding consumer access and increasing business visibility (Harahap et al., 2021; Arumsari et al., 2022). For MSMEs, this effect is particularly important because digital channels can reduce dependence on physical location and enable business owners to communicate with customers beyond regular operating hours.

This result is also consistent with Bahasoan et al. (2024), who emphasize that digital transformation among MSMEs can expand market reach, strengthen productivity, and increase opportunities for economic inclusion when supported by access to technology and adequate digital capabilities. Within the Manokwari sample, the dominance of Facebook as a marketing channel suggests that business owners tend to select platforms that are easily accessible and already have a broad user base. However, successful digital marketing depends on more than simply maintaining an account; content quality, response speed, promotional consistency, and the ability to convert interactions into transactions remain critical determinants of performance.

The managerial implication is that MSMEs need to shift from using social media merely as an information channel toward managing it as a systematic marketing tool. Product content should convey clear messages, use consistent visuals, provide easily accessible price and location information, and include direct calls to action that guide consumers toward placing orders. Local

government agencies and business-support institutions can reinforce these efforts through practical training, assistance in managing business accounts, the development of digital catalogs, and simple evaluations of reach, customer response, and sales conversion (Mavilinda et al., 2022; Puspaningtyas et al., 2022).

Product Quality and MSME Sales

Product quality showed a negative and significant coefficient. This finding differs from the initial hypothesis, which predicted a positive relationship. The result should be interpreted cautiously: the regression estimate does not imply that product quality should be reduced; rather, it indicates that higher product-quality scores, as perceived by respondents, were associated with lower sales performance scores within this sample. Product quality remains an important component of customer value, but its commercial benefits depend on whether product attributes align with customer needs, acceptable price levels, and local market characteristics (Kotler et al., 2022; Tjiptono, 2018).

Several mechanisms may plausibly explain this relationship, although they were not directly measured in the survey. First, certain quality improvements may increase production costs and selling prices, encouraging price-sensitive consumers to choose less expensive alternatives. Second, attributes regarded as indicators of high quality by business owners may not be the attributes most valued by consumers. Third, even high-quality products may generate limited sales when promotion, availability, service, or distribution is inadequate. Because the study employed a cross-sectional design and relied on business owners' assessments, the negative association is better interpreted as a signal of the need for stronger product-market fit rather than as a reason to lower quality standards.

For MSMEs in Manokwari, quality strategies should focus on attributes directly experienced and valued by consumers, such as taste or product functionality, reliability, hygiene, packaging, size accuracy, durability, and consistency. Evaluation can be conducted through customer feedback, complaint records, identification of products with the highest repeat-purchase rates, and price comparisons with competitors. This approach allows investments in quality to improve not only product specifications but also the value that consumers are willing to pay for.

Joint Effects, Model Explanatory Power, and Managerial Implications

The F-test showed that digital marketing and product quality jointly had a significant relationship with sales performance. This finding suggests that marketing and product decisions should be managed as an integrated business strategy. Digital marketing can generate awareness and improve market access, while the product itself must deliver sufficient value to encourage purchases and repeat transactions. If either element is misaligned with market expectations, sales growth may remain constrained even when the other element improves.

Despite its statistical significance, the R^2 value of 0.088 indicates that most of the variation in sales performance is explained by factors outside the two variables examined. This finding is practically important because MSME sales may also be influenced by price, consumer purchasing power, location, service quality, working capital, innovation, competition, stock availability, distribution networks, logistics, and seasonal demand. MSMEs should therefore not rely on either digital promotion or product quality as a stand-alone strategy. A more effective approach is to integrate digital marketing with pricing, inventory management, customer service, product innovation, and cost control.

For local government, these findings support the development of a more integrated MSME empowerment program. Digital training should be accompanied by assistance in product standardization, packaging, sales record-keeping, financial literacy, and market access. Such an approach is more responsive to MSME needs than digitalization programs that focus solely on creating social media accounts. In the long term, connectivity infrastructure and stronger business capabilities will determine whether digital adoption can translate into higher productivity and broader market reach (Bahasoan et al., 2024).

4. CONCLUSION

This study demonstrates that digital marketing has a positive and significant effect on the sales performance of MSMEs in Manokwari Regency ($B = 0.276$; $p = 0.044$), indicating that more effective

use of digital channels is associated with higher sales performance. Product quality, however, has a negative and significant effect ($B = -0.261$; $p = 0.022$), meaning that the hypothesis predicting a positive relationship is not supported. This result should not be interpreted as a recommendation to reduce product quality; rather, it highlights the need to ensure that quality improvements genuinely align with consumer preferences, purchasing power, and market-acceptable prices. Jointly, the two variables have a significant effect on sales performance ($F = 5.863$; $p = 0.004$), although the model has limited explanatory power ($R^2 = 0.088$; adjusted $R^2 = 0.073$).

MSME owners are advised to develop digital marketing systematically through consistent content, responsive communication, clear product catalogs, and the use of customer-interaction data, while also evaluating product quality on the basis of consumer feedback and price-value fit. The Government of Manokwari Regency should integrate digital marketing training with assistance in quality improvement, packaging, financial literacy, market access, and logistics. Future research should consider incorporating variables such as price, innovation, service quality, capital, competition, and market orientation to improve the model's ability to explain MSME sales performance.

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