

The Influence of Product Innovation and Marketing Strategy on the Competitiveness of MSMEs

Sri Wartini¹, Dewi Alima Nostalia Suseno²

^{1,2} Politeknik Kelautan dan Perikanan Sidoarjo, Indonesia

Email: alimanostalia@gmail.com

Entered : December 12, 2026
Accepted: March 02, 2026

Revised : January 26, 2026
Published : March 15, 2026

ABSTRACT

This study aims to analyze the effect of product innovation and marketing strategy on the competitiveness of MSMEs in Indonesia, both partially and simultaneously. A causal quantitative approach was employed, with data collected through an online questionnaire distributed via Google Form to 100 MSME owners selected using purposive sampling. The research instruments were developed using a five-point Likert scale based on Gunday et al. (2011) for product innovation (10 items), Kotler & Keller (2016) for marketing strategy (12 items), and Porter (1990) for MSME competitiveness (10 items). Following validity and reliability testing, data were analyzed using multiple linear regression with R statistical software. The results indicate that: (1) product innovation has a positive and significant effect on MSME competitiveness ($\beta = 0.351$; $t = 4.807$; $p < 0.001$); (2) marketing strategy has a positive and significant effect on MSME competitiveness ($\beta = 0.538$; $t = 7.368$; $p < 0.001$); and (3) simultaneously, product innovation and marketing strategy significantly affect MSME competitiveness with $F = 58.200$ ($p < 0.001$) and $R^2 = 0.545$, indicating that both variables explain 54.5% of the variation in MSME competitiveness. These findings imply that MSMEs in Indonesia need to synergistically integrate product innovation capabilities and digital marketing strategies to achieve sustainable competitiveness.

Keywords: product innovation, marketing strategy, competitiveness, MSMEs

INTRODUCTION

Micro, Small, and Medium Enterprises (MSMEs) play a strategically vital role in Indonesia's national economy. According to data from the Ministry of Cooperatives and SMEs (2022), MSMEs contribute more than 60% of the national Gross Domestic Product (GDP) and absorb approximately 97% of the total workforce. This substantial contribution positions MSMEs as the backbone of the national economy, necessitating continuous efforts to strengthen their capacity and competitiveness, particularly in facing the increasingly intense era of globalization and digital transformation.

Despite their significant contribution, many MSMEs still experience structural and managerial constraints that limit their competitiveness. A preliminary survey conducted among MSME owners in the research setting indicates that a considerable proportion of businesses rely on conventional production methods and traditional marketing practices. Many MSME products are still characterized by limited variation, simple packaging, and minimal product differentiation, making it difficult for them to compete with both local competitors and imported products that increasingly penetrate the domestic market. In addition, many MSME actors have not fully utilized digital marketing channels such as



social media platforms and online marketplaces to expand their market reach. These empirical conditions highlight the practical challenges faced by MSMEs in adapting to rapid market changes.

The increasing intensity of market competition, coupled with digital transformation and changing consumer behavior, requires MSME owners to adopt strategies that can sustainably enhance their competitive advantage (Porter, 1990). Consumers today tend to prefer products that offer uniqueness, quality, and innovative value, while also expecting easy access to information and purchasing channels through digital platforms. Consequently, MSMEs that fail to innovate and adapt their marketing strategies may experience declining competitiveness in the marketplace.

Product innovation is one of the key determinants of MSME competitiveness. Product innovation is defined as the development of new products or significant improvements to existing products in terms of quality, design, packaging, or features that provide added value to consumers (OECD/Eurostat, 2018). From a Resource-Based View perspective, Barney (1991) asserts that innovation capability is a valuable, rare, and inimitable internal resource, serving as the foundation for sustainable competitive advantage. MSMEs that consistently innovate have been proven to possess stronger competitive positioning than their rivals (Gunday et al., 2011). In the context of MSMEs, innovation does not necessarily require high technology but can also involve incremental improvements such as product diversification, attractive packaging design, or improved product quality.

In addition to product innovation, marketing strategy plays an equally critical role in strengthening MSME competitiveness. An effective marketing strategy enables MSMEs to reach broader market segments, build brand awareness, and cultivate strong customer loyalty (Kotler & Keller, 2016). In the digital era, the integration of marketing strategies through social media, online marketplaces, and various digital platforms provides MSMEs with greater opportunities to compete on a more level playing field with larger enterprises (Chaffey & Ellis-Chadwick, 2019). The rapid development of digital technology has transformed MSME competition patterns, where the ability to effectively utilize digital marketing channels increasingly determines the sustainability and growth of small businesses.

Several prior studies have examined the effects of product innovation and marketing strategy on MSME competitiveness separately. Rahmawati & Santoso (2021) found that product innovation significantly affects the competitiveness of culinary MSMEs in Surabaya. Wijaya & Pratama (2022) concluded that digital marketing strategies significantly enhance the competitiveness of fashion MSMEs. Nevertheless, research that simultaneously and comprehensively examines the effects of both product innovation and marketing strategy on MSME competitiveness through a quantitative approach remains limited. This gap becomes more relevant considering that, in practice, innovation and marketing strategy are closely interconnected factors that jointly influence business performance.

Therefore, examining both variables simultaneously is important to obtain a more comprehensive understanding of the factors that influence MSME competitiveness. This study seeks to complement and extend previous research by simultaneously testing the influence of both variables on MSME competitiveness. Unlike prior studies that typically examined only one variable, this research supports existing findings while offering a new contribution by integrating both variables within a single analytical model. Based on the foregoing discussion, this study aims to: (1) analyze the effect of product innovation on MSME competitiveness; (2) analyze the effect of marketing strategy on MSME

competitiveness; and (3) analyze the simultaneous effect of product innovation and marketing strategy on MSME competitiveness.

METHODS

Research Design and Approach

This study employs a quantitative approach with a causal research design aimed at examining cause-and-effect relationships among variables. The quantitative approach was selected because it enables systematic hypothesis testing through numerical data that can be statistically analyzed (Creswell, 2014). Data were collected through a survey using an online questionnaire distributed via Google Form. The questionnaire instrument was developed using a five-point Likert scale (1 = Strongly Disagree; 2 = Disagree; 3 = Neutral; 4 = Agree; 5 = Strongly Agree) to measure respondents' perceptions of each research variable.

Population and Sample

The population of this study comprises all active MSMEs in Indonesia that have been operating for a minimum of two years. The sampling technique employed was purposive sampling, which involves the selection of samples based on specific criteria relevant to the research objectives (Sugiyono, 2019). The established sample criteria were: (1) the respondent must be an active owner or manager of an MSME, and (2) the business must have been operating for at least two years with an annual turnover between IDR 50 million and IDR 10 billion.

Sample size determination followed the formula proposed by Green (1991), which recommends a minimum sample size for multiple regression analysis of $N \geq 50 + 8m$, where m represents the number of independent variables. With two independent variables, the minimum required sample is 66 respondents. However, to enhance representativeness and statistical power, this study employed 100 respondents, substantially exceeding the minimum threshold.

Variables and Research Instruments

This study comprises three variables: (1) Product Innovation (X_1) as the first independent variable; (2) Marketing Strategy (X_2) as the second independent variable; and (3) MSME Competitiveness (Y) as the dependent variable.

Product Innovation (X_1) was measured using 10 statement items adapted from the instrument developed by Gunday et al. (2011), encompassing the dimensions of: product novelty, quality improvement, product diversification, packaging innovation, and consumer added value. Marketing Strategy (X_2) was measured using 12 statement items adapted from Kotler & Keller (2016), covering the dimensions of: market segmentation, promotional effectiveness, competitive pricing, distribution reach, and digital media utilization. MSME Competitiveness (Y) was measured using 10 statement items adapted from Porter (1990), encompassing the dimensions of: market share, sales growth, business profitability, and customer satisfaction.

Validity and Reliability Testing

Prior to data collection, the questionnaire instrument was subjected to validity and reliability testing. Validity was assessed using the Pearson Product Moment correlation technique, whereby an item is declared valid if the calculated r -value exceeds the r -table value (r -table = 0.196 for $n = 100$ at $\alpha = 5\%$). Reliability was tested using

Cronbach's Alpha coefficient, whereby an instrument is considered reliable if the alpha value ≥ 0.70 (Hair et al., 2019). All tests were conducted using R Programming.

Data Analysis Techniques

Data analysis was conducted in two stages. The first stage involved classical assumption testing, comprising: (1) normality testing using the Kolmogorov-Smirnov test to ensure that residuals are normally distributed; (2) multicollinearity testing using the Variance Inflation Factor (VIF) with a threshold of $VIF < 10$ to confirm the absence of strong correlations among independent variables; and (3) heteroscedasticity testing using the Breusch-Pagan test to verify the homogeneity of residual variance (Ghozali, 2018).

The second stage involved multiple linear regression analysis to test the research hypotheses using the equation: $Y = \alpha + \beta_1X_1 + \beta_2X_2 + \varepsilon$, where Y denotes MSME competitiveness, X_1 denotes product innovation, X_2 denotes marketing strategy, α is the constant, β_1 and β_2 are regression coefficients, and ε is the error term. Hypothesis testing was conducted through: (1) the t-test to examine the partial effect of each independent variable on the dependent variable at a significance level of $\alpha = 5\%$; (2) the F-test to examine the simultaneous effect of all independent variables on the dependent variable; and (3) the coefficient of determination (R^2) to measure the proportion of variation in the dependent variable explained by the independent variables (Sugiyono, 2019). All analyses were performed using R Programming.

RESULTS AND DISCUSSION

Respondent Characteristics

This study successfully collected 100 questionnaires, all of which were valid and processable (response rate 100%). As shown in Table 1, the majority of respondents were male (58%), aged 30–40 years (46%), with a business duration of 6–10 years (41%). The most common business type was culinary (34%), followed by fashion and crafts (28%), services (21%), and others (17%). The dominance of productive-age respondents with 6–10 years of business experience indicates that the research sample comprises MSME owners with adequate operational experience, enabling them to provide relevant assessments of product innovation, marketing strategy, and competitiveness variables.

Table 1. Respondent Characteristics

Characteristic	Category	n	%
Gender	Male	58	58%
	Female	42	42%
Age	< 30 years	23	23%
	30–40 years	46	46%
	> 40 years	31	31%
Business Duration	2–5 years	38	38%
	6–10 years	41	41%
	> 10 years	21	21%
Business Type	Culinary	34	34%
	Craft	28	28%

Characteristic	Category	n	%
	Services	21	21%
	Others	17	17%

Source: Primary data processed, 2026

Descriptive Statistics

Table 2 presents the descriptive statistics for the three research variables. Product innovation (X_1) had a mean of 3.55 (SD = 0.80), classified as moderate, indicating that MSME owners have engaged in product innovation but not yet consistently or optimally. Marketing strategy (X_2) had a mean of 3.37 (SD = 0.81), also in the moderate category, suggesting that marketing strategy implementation still requires improvement. Meanwhile, MSME competitiveness (Y) had a mean of 2.63 (SD = 0.66), falling in the low-moderate category, indicating considerable room for improvement. Skewness values approaching zero across all three variables confirm a relatively symmetric distribution approximating normality.

Table 2. Descriptive Statistics of Research Variables

Variable	n	Mean	SD	Min	Max	Skew	Category
Product Innovation (X_1)	100	3,55	0,80	1,40	4,90	-0,21	Moderate
Marketing Strategy (X_2)	100	3,37	0,81	1,42	5,00	-0,33	Moderate
MSME Competitiveness (Y)	100	2,63	0,66	1,00	4,30	-0,05	Low-Moderate

Source: R output, 2026. Categories: 1.00–2.33 = Low; 2.34–3.67 = Moderate; 3.68–5.00 = High

Validity and Reliability Testing

The results of validity and reliability testing are presented in Table 3. All items across the three variables were declared valid, with calculated r-values exceeding the r-table value (0.196). Cronbach's Alpha values substantially exceeded the minimum threshold of 0.70 for all variables: X_1 ($\alpha = 0.935$), X_2 ($\alpha = 0.946$), and Y ($\alpha = 0.895$). These high alpha values indicate excellent internal consistency across all instruments, confirming that the measurements reliably capture the intended latent constructs (Hair et al., 2019).

Table 3. Results of Validity and Reliability Testing

Variable	Item	r-calc	Cronbach Alpha	Note
Product Innovation (X_1)	10	0,748 – 0,847	0,935	Valid & Reliabel ✓
Marketing Strategy (X_2)	12	0,726 – 0,847	0,946	Valid & Reliabel ✓
MSME Competitiveness (Y)	10	0,677 – 0,758	0,895	Valid & Reliabel ✓

Source: R output, 2026

Classical Assumption Testing

The results of classical assumption testing are presented in Table 4 and visualized in Figure 1. The Lilliefors normality test yielded $D = 0.032$ with $p = 0.999 > 0.05$, confirming normally distributed residuals. Visual confirmation through the Q-Q plot data points closely following the diagonal line, corroborating the statistical test result. Multicollinearity testing showed VIF = 1.139 for both variables, well below the threshold of 10 (Ghozali, 2018), confirming the absence of multicollinearity. The Breusch-Pagan heteroscedasticity test produced $BP = 3.391$ with $p = 0.184 > 0.05$. The Scale-Location plot displays a relatively flat red line, confirming homogeneity of residual variance.

Furthermore, the Residuals vs Leverage plot shows no observations exceeding Cook's distance boundaries, indicating the absence of influential outliers.

Table 4. Results of Classical Assumption Testing

Test	Method	Statistic	Result
Normality	Kolmogorov-Smirnov (Lilliefors)	D = 0,032; p = 0,999	Normal ✓
Multicollinearity	VIF — X ₁	1,139	Tidak ada / None ✓
	VIF — X ₂	1,139	Tidak ada / None ✓
Heteroscedasticity	Breusch-Pagan	BP = 3,391; p = 0,184	Tidak ada / None ✓

Source: R output, 2026

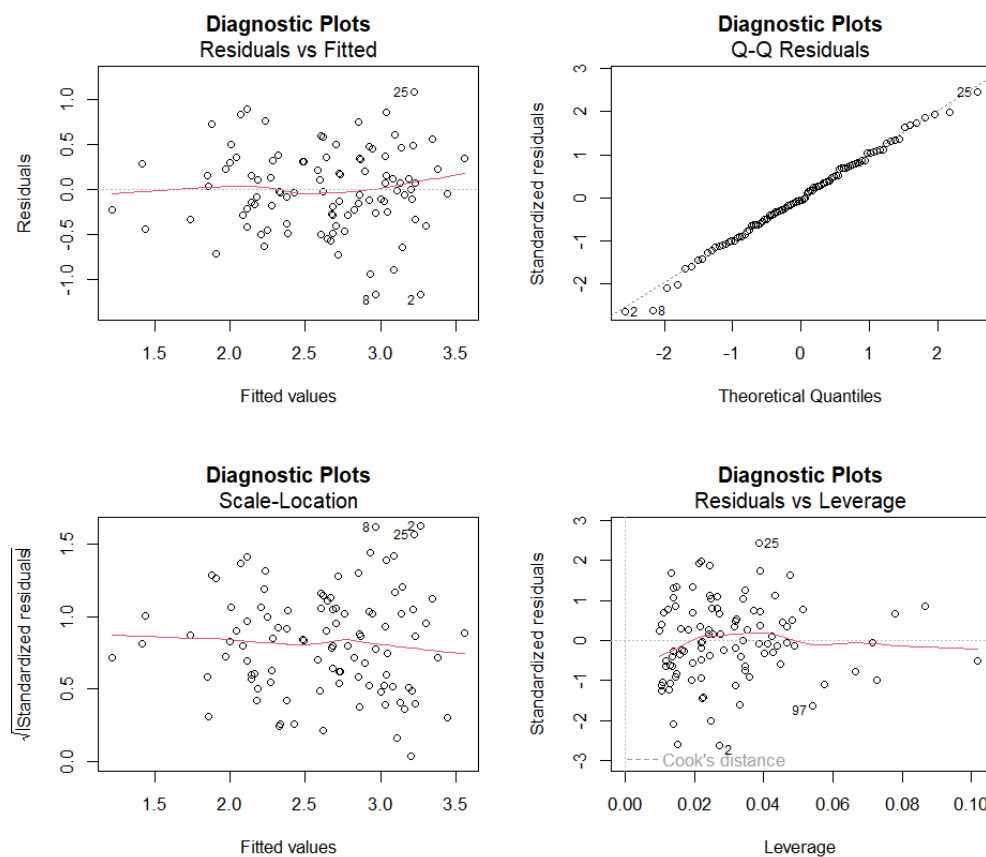


Figure 1. Diagnostic Plots of Regression Model Assumption Testing Source: R output, 2026

Multiple Linear Regression Analysis

The results of multiple linear regression analysis are presented in Table 5. The regression equation formed is: $Y = 0.118 + 0.290X_1 + 0.438X_2 + \varepsilon$. The R^2 value of 0.545 indicates that product innovation and marketing strategy together explain 54.5% of MSME competitiveness variation, while the remaining 45.5% is attributed to other variables outside the model. The Adjusted R^2 of 0.536, which closely approximates R^2 , indicates that the model does not suffer from overfitting. The F-value of 58.200 with Sig. F = 0.000 < 0.05 confirms the overall statistical significance and predictive utility of the model. Note: *** significant at $p < 0.001$.

Table 5. Results of Multiple Linear Regression Analysis

Variable	B	Std. Error	Beta (β)	t	Sig.
Constant	0,118	0,241	-	0,488	0,627
Product Innovation (X_1)	0,290	0,060	0,351	4,807	0,000***
Marketing Strategy (X_2)	0,438	0,060	0,538	7,368	0,000***

R = 0,738 | R² = 0,545 | Adjusted R² = 0,536 | F = 58,200 | Sig. F = 0,000

Source: R output, 2026

Discussion

The Effect of Product Innovation on MSME Competitiveness (H1).

The results indicate that product innovation has a positive and significant effect on MSME competitiveness ($\beta = 0.351$; $t = 4.807$; $p < 0.001$), thus H1 is supported. The regression coefficient of 0.290 indicates that each unit increase in product innovation increases MSME competitiveness by 0.290 units, holding other variables constant. This finding is theoretically grounded in the Resource-Based View, which asserts that innovation capability is a valuable, rare, and inimitable internal resource (Barney, 1991). When MSMEs develop genuinely new products or make significant improvements to existing ones in terms of quality, design, packaging, or features, they create value propositions that differentiate them from market competitors. Sustained product innovation also contributes to enhanced customer satisfaction and loyalty, ultimately strengthening MSMEs' competitive positioning (Teece et al., 1997). This result is consistent with Fang et al. (2024), who demonstrated that digital innovation capability is a primary pathway to competitive advantage in SMEs. Nonetheless, the lower beta value of X_1 (0.351) compared to X_2 (0.538) suggests that in the MSME context, marketing strategy exerts a more direct impact on competitiveness than product innovation alone.

The Effect of Marketing Strategy on MSME Competitiveness (H2).

Marketing strategy has a positive and significant effect on MSME competitiveness ($\beta = 0.538$; $t = 7.368$; $p < 0.001$), thus H2 is supported, with a greater influence than product innovation, as reflected in the regression coefficient of 0.438. This indicates that MSMEs' capacity to design and execute effective marketing strategies, encompassing appropriate market segmentation, competitive pricing, relevant promotion, and utilization of digital platforms delivers a more direct and measurable impact on competitiveness. This finding aligns with Kotler & Keller (2016), who argue that effective marketing strategy creates meaningful differentiation in consumers' minds while building strong brand equity. In the digital transformation era, MSMEs integrating marketing through social media and online marketplaces can reach substantially broader market segments at greater efficiency (Chaffey & Ellis-Chadwick, 2019). This result is also consistent with Prihandono et al. (2024), who found that targeted digital marketing strategies improve MSME performance by up to 32% in competitive markets, and with Sudirman & Nurfaisah (2025), who showed that digital entrepreneurship approaches increase MSME market penetration rates by 40%.

The Simultaneous Effect of Product Innovation and Marketing Strategy on MSME Competitiveness (H3).

Simultaneously, product innovation and marketing strategy have a significant effect on MSME competitiveness ($F = 58.200$; $p < 0.001$), thus H3 is supported. The

Adjusted R^2 of 0.536 demonstrates strong and substantial predictive power. This finding affirms that product innovation and marketing strategy are not merely two independent factors, but two capabilities that synergistically reinforce each other in building competitiveness. Innovative products without strong marketing strategies will not optimally reach the market; conversely, strong marketing strategies without innovative product support will lose differentiation advantage. The integration of both creates a synergistic effect that comprehensively drives competitiveness. This aligns with the dynamic capabilities perspective (Teece et al., 1997), emphasizing that an organization's ability to integrate, build, and reconfigure internal competencies constitutes the foundation of sustainable competitive advantage in a continuously evolving business environment.

Managerial Implications

The findings of this study carry several important managerial implications. First, MSME owners are advised to allocate resources proportionally between product innovation development and marketing strategy enhancement. Given that marketing strategy exerts a greater influence ($\beta = 0.538$) than product innovation ($\beta = 0.351$), investment in marketing capabilities particularly digital marketing, should be prioritized in the short term. Second, product innovation remains an indispensable long-term foundation. MSMEs need to develop systematic innovation routines, from consumer needs research and prototype development to post-launch evaluation. Third, government agencies and MSME support institutions should strengthen training programs that simultaneously integrate product innovation and digital marketing literacy, given that their synergism is empirically proven to significantly enhance MSME competitiveness.

CONCLUSIONS

This study aimed to analyze the effect of product innovation and marketing strategy on MSME competitiveness in Indonesia, both partially and simultaneously. Based on multiple linear regression analysis of 100 MSME respondents, three primary conclusions were reached.

First, product innovation has a positive and significant effect on MSME competitiveness ($\beta = 0.351$; $t = 4.807$; $p < 0.001$). This confirms that MSMEs that consistently develop and renew their products, through quality improvement, diversification, and packaging innovation are able to build sustainable competitive advantage. Thus, H1 is supported.

Second, marketing strategy has a positive and significant effect on MSME competitiveness, with a greater influence than product innovation ($\beta = 0.538$; $t = 7.368$; $p < 0.001$). This finding affirms that MSMEs' capacity to design effective marketing strategies particularly by leveraging digital platforms and social media constitutes the primary determinant of competitiveness in the digital transformation era. Thus, H2 is supported.

Third, product innovation and marketing strategy simultaneously have a significant effect on MSME competitiveness ($F = 58.200$; $p < 0.001$; $R^2 = 0.545$). Both variables together explain 54.5% of the variation in competitiveness, indicating that the synergistic integration of product innovation capability and marketing strategy produces a greater impact than either variable alone. Thus, H3 is supported.

This study contributes theoretically by confirming the relevance of the Resource-Based View (Barney, 1991) and dynamic capabilities (Teece et al., 1997) perspectives in

the Indonesian MSME context, while providing empirical evidence that the synergistic integration of product innovation and marketing strategy significantly enhances competitiveness. Practically, the findings recommend that MSME owners prioritize investment in digital marketing capabilities in the short term while simultaneously building systematic product innovation routines for long-term sustainability.

This study has several limitations that warrant acknowledgment. The cross-sectional design precludes capturing the dynamic changes in MSME competitiveness over time. Furthermore, the 45.5% unexplained variance suggests the existence of other relevant variables such as human resource capabilities, access to capital, and external environmental factors that could be explored in future research. Subsequent studies are recommended to adopt longitudinal methods or incorporate mediating and moderating variables to achieve a more comprehensive understanding.

REFERENCE

- Aaker, D. A., & McLoughlin, D. (2020). *Strategic market management: Global perspectives* (2nd ed.). John Wiley & Sons.
- Badan Pusat Statistik. (2023). *Statistik usaha mikro, kecil dan menengah 2022*. BPS Indonesia. <https://www.bps.go.id>
- Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17(1), 99–120. <https://doi.org/10.1177/014920639101700108>
- Chaffey, D., & Ellis-Chadwick, F. (2019). *Digital marketing: Strategy, implementation and practice* (7th ed.). Pearson Education.
- Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches* (4th ed.). SAGE Publications.
- Damanpour, F., & Aravind, D. (2012). Managerial innovation: Conceptions, processes, and antecedents. *Management and Organization Review*, 8(2), 423–454. <https://doi.org/10.1111/j.1740-8784.2011.00233.x>
- Fang, Y., Li, X., & Zhang, H. (2024). Digital capability and business model innovation as a pathway to SME competitiveness: Evidence from emerging markets. *Journal of Small Business Management*, 62(3), 412–438. <https://doi.org/10.1080/00472778.2023.2198741>
- Ghozali, I. (2018). *Aplikasi analisis multivariate dengan program IBM SPSS 25* (Edisi 9). Badan Penerbit Universitas Diponegoro.
- Green, S. B. (1991). How many subjects does it take to do a regression analysis? *Multivariate Behavioral Research*, 26(3), 499–510. https://doi.org/10.1207/s15327906mbr2603_7
- Gunday, G., Ulusoy, G., Kilic, K., & Alpkan, L. (2011). Effects of innovation types on firm performance. *International Journal of Production Economics*, 133(2), 662–676. <https://doi.org/10.1016/j.ijpe.2011.05.014>
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2019). *Multivariate data analysis* (8th ed.). Cengage Learning.
- Hanaysha, J. R., Al-Shaikh, M. E., Joghee, S., & Alzoubi, H. M. (2022). Impact of innovation capabilities on business sustainability in small and medium enterprises. *FIIB Business Review*, 11(1), 67–78. <https://doi.org/10.1177/23197145211042232>

- Kementerian Koperasi dan UKM. (2022). *Perkembangan data usaha mikro, kecil, menengah dan usaha besar*. Kemenkop UKM RI. <https://kemenkopukm.go.id>
- Kotler, P., & Keller, K. L. (2016). *Marketing management* (15th ed.). Pearson Education.
- Nuryakin, N., & Maryati, T. (2023). SME competitive advantage and business performance: The role of product innovation and digital marketing strategy in the post-pandemic era. *Jurnal Siasat Bisnis*, 27(1), 1–17. <https://doi.org/10.20885/jsb.vol27.iss1.art1>
- OECD/Eurostat. (2018). *Oslo manual 2018: Guidelines for collecting, reporting and using data on innovation* (4th ed.). OECD Publishing. <https://doi.org/10.1787/97892264304604-en>
- Porter, M. E. (1990). *The competitive advantage of nations*. Free Press.
- Prahalad, C. K., & Hamel, G. (1990). The core competence of the corporation. *Harvard Business Review*, 68(3), 79–91.
- Prihandono, D., Wulandari, A., & Santoso, B. (2024). Digital transformation and SME performance: The mediating role of marketing capability in competitive markets. *Jurnal Manajemen dan Kewirausahaan*, 26(1), 45–62. <https://doi.org/10.9744/jmk.26.1.45-62>
- Rahmawati, D., & Santoso, A. (2021). Pengaruh inovasi produk terhadap daya saing UMKM kuliner di Surabaya. *Jurnal Ilmu Manajemen*, 9(4), 1423–1434. <https://doi.org/10.26740/jim.v9n4.p1423-1434>
- Setiawan, H., & Sudarsono, A. (2023). Pengaruh inovasi produk dan strategi pemasaran digital terhadap kinerja UMKM: Studi empiris pasca pandemi COVID-19. *Jurnal Manajemen dan Pemasaran Jasa*, 16(1), 87–104. <https://doi.org/10.25105/jmpj.v16i1.15892>
- Sudirman, A., & Nurfaisah, N. (2025). Digital entrepreneurship strategies and market penetration in SME Industry 4.0: Empirical evidence from Indonesian MSMEs. *Jurnal Manajemen Bisnis*, 16(1), 78–96. <https://doi.org/10.18196/jmb.16175>
- Sugiyono. (2019). *Metode penelitian kuantitatif, kualitatif, dan R&D* (Edisi 2). Alfabeta.
- Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal*, 18(7), 509–533. [https://doi.org/10.1002/\(SICI\)1097-0266\(199708\)18:7<509::AID-SMJ882>3.0.CO;2-Z](https://doi.org/10.1002/(SICI)1097-0266(199708)18:7<509::AID-SMJ882>3.0.CO;2-Z)
- Wernerfelt, B. (1984). A resource-based view of the firm. *Strategic Management Journal*, 5(2), 171–180. <https://doi.org/10.1002/smj.4250050207>
- Wijaya, R., & Pratama, A. (2022). Strategi pemasaran digital dan daya saing UMKM fashion di era new normal. *Jurnal Ekonomi dan Bisnis*, 25(2), 211–228. <https://doi.org/10.24914/jeb.v25i2.4892>