
Product Innovation, Organizational Ambidexterity, and Marketing Performance of SMEs During Crisis Recovery: Evidence from the Food and Beverage Sector in Indonesia.

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Abstract

Micro, Small, and Medium Enterprises (MSMEs) constitute a strategic pillar of economic resilience and inclusive growth in emerging economies, particularly in Indonesia. Despite their substantial contribution to employment generation, regional development, and national income, MSMEs remain highly vulnerable to environmental turbulence, especially during periods of economic disruption such as the COVID-19 pandemic. This study investigates the relationship between product innovation, organizational ambidexterity, and marketing performance among SMEs operating in the food and beverage processing sector in Serang City, Banten Province. Specifically, the study examines the direct influence of product innovation on marketing performance, the effect of product innovation on organizational ambidexterity, the impact of organizational ambidexterity on marketing performance, as well as the mediating and moderating roles of organizational ambidexterity. A quantitative explanatory approach was employed using Structural Equation Modeling–Partial Least Squares (SEM-PLS). Data were collected from 170 SMEs selected through random sampling based on predefined business criteria. The findings reveal that product innovation significantly enhances marketing performance and organizational ambidexterity. Organizational ambidexterity also exerts a strong positive influence on marketing performance and acts as a significant mediating mechanism in the innovation–performance relationship. However, the moderating effect of organizational ambidexterity weakens the direct relationship between product innovation and marketing performance. The study highlights the strategic importance of balancing exploratory and exploitative organizational capabilities in strengthening SME competitiveness under uncertain business conditions. The findings contribute to strategic management and marketing capability literature while offering managerial insights for SME sustainability, adaptive innovation, and market resilience in emerging economies.

INTRODUCTION

Micro, Small, and Medium Enterprises (MSMEs) play a fundamental role in fostering economic development, employment generation, entrepreneurial dynamism, and regional economic inclusiveness across emerging economies. In Indonesia, MSMEs represent the dominant business sector and contribute substantially to national economic performance through gross domestic product generation, investment expansion, export contribution, and labour absorption. According to the World Bank and the OECD, SMEs are not only engines of economic growth but also important drivers of economic resilience during periods of macroeconomic uncertainty.

Despite their strategic significance, SMEs remain highly exposed to environmental volatility, particularly during the COVID-19 pandemic, which disrupted supply chains, consumer purchasing behavior, operational continuity, and market accessibility. Many SMEs experienced declining revenues, shrinking market demand, logistical disruptions, and increasing operational costs. The food and beverage sector was among the most affected industries due to mobility restrictions, social distancing regulations, and changing consumption patterns. Consequently, SMEs were compelled to redesign their business models, adapt operational systems, and strengthen innovation capabilities to maintain competitiveness and organizational survival.

Within strategic management literature, product innovation is widely recognized as a critical determinant of organizational competitiveness and market responsiveness. Product

innovation refers to the development or modification of products, services, and operational processes aimed at creating superior customer value and strategic differentiation. Firms capable of continuously introducing adaptive innovations are generally better positioned to respond to environmental turbulence and changing customer expectations.

However, innovation alone may not guarantee sustainable organizational performance. Contemporary organizational theory increasingly emphasizes the importance of organizational ambidexterity, namely the capability of firms to simultaneously pursue exploitation and exploration activities. Exploitation involves refining existing competencies, improving operational efficiency, and maximizing current market opportunities, whereas exploration emphasizes experimentation, flexibility, learning, and the pursuit of new market possibilities. Organizations that successfully balance these dual capabilities tend to demonstrate stronger adaptability, innovation sustainability, and long-term competitiveness.

The relationship between product innovation and marketing performance remains theoretically inconsistent within prior empirical studies. Several studies demonstrate that innovation positively enhances marketing performance, customer growth, and competitive advantage. Conversely, other studies reveal weak or insignificant relationships due to implementation barriers, resource limitations, and organizational rigidity. Such inconsistencies suggest the existence of intervening organizational

mechanisms capable of strengthening or weakening the innovation–performance relationship.

This study proposes organizational ambidexterity as a strategic mechanism linking product innovation and marketing performance. The study argues that SMEs capable of balancing exploratory innovation with exploitative operational discipline are more likely to sustain competitive performance under environmental uncertainty. The research therefore aims to analyze the direct and indirect relationships among product innovation, organizational ambidexterity, and marketing performance among SMEs in the food and beverage processing sector in Serang City, Banten Province.

The study contributes theoretically by integrating dynamic capability theory and organizational ambidexterity perspectives into SME marketing performance research. Practically, the study offers strategic recommendations for SME managers, policymakers, and regional development agencies concerning innovation strategy, organizational adaptability, and market resilience.

LITERATURE REVIEW

Marketing Performance

Marketing performance refers to an organization's ability to achieve strategic market objectives through effective customer acquisition, sales growth, profitability enhancement, and market expansion. Modern marketing literature conceptualizes marketing performance as a multidimensional construct encompassing financial outcomes, customer-based outcomes, and strategic competitiveness.

According to Kotler and Keller, marketing performance reflects the effectiveness of strategic marketing implementation in generating sustainable customer value and organizational profitability. Similarly, Morgan, Vorhies, and Mason emphasize that marketing performance represents the outcome of superior marketing capabilities, adaptive market orientation, and strategic resource deployment.

In the context of SMEs, marketing performance is often measured through sales growth, customer growth, market share expansion, customer satisfaction, and profitability improvement. SMEs operating within turbulent markets require adaptive marketing systems capable of responding rapidly to changes in consumer behavior, competitive intensity, and environmental uncertainty.

The indicators adopted in this study include:

- a. Sales volume growth
- b. Customer growth
- c. Profit growth
- d. Customer satisfaction
- e. Market expansion capability

Organizational Ambidexterity

Organizational ambidexterity refers to a firm's capability to simultaneously pursue exploitative and exploratory activities. March conceptualizes exploitation as activities emphasizing refinement, efficiency, implementation, and execution, whereas exploration involves experimentation, innovation, flexibility, and discovery of new opportunities.

Contemporary strategic management literature positions organizational ambidexterity as a dynamic capability essential for long-term competitiveness. According to O'Reilly and Tushman, ambidextrous organizations are capable of balancing operational efficiency with innovation flexibility, thereby enabling firms to adapt to environmental turbulence without sacrificing current performance.

Within SMEs, organizational ambidexterity becomes particularly important because resource limitations require firms to strategically allocate capabilities between short-term operational survival and long-term innovation development. SMEs that excessively focus on exploitation may experience organizational rigidity, whereas excessive exploration may create operational instability and resource inefficiency.

This study operationalizes organizational ambidexterity through the following dimensions:

- a. Human resource capability
- b. Capital strength
- c. Business networking capability
- d. Sales system adaptability
- e. Competitive responsiveness

Product Innovation

Product innovation refers to the introduction of new products, product modifications, technological improvements, or service enhancements designed to create superior customer value and competitive differentiation. Schumpeter originally conceptualized innovation as the creation of "new combinations" capable of transforming

economic structures and competitive dynamics.

In strategic marketing literature, product innovation is considered a critical capability for sustaining customer relevance and organizational competitiveness. Firms capable of continuously innovating are generally better positioned to respond to evolving customer expectations, technological disruption, and market competition.

For SMEs, product innovation is not limited to technological sophistication but also includes packaging improvements, service redesign, delivery innovation, product durability enhancement, and customer-oriented modifications.

The indicators used in this study include:

- a. Product design changes
- b. Service technical improvements
- c. Product development capability
- d. Product usability enhancement
- e. Product durability improvement

HYPOTHESIS DEVELOPMENT

Product Innovation and Marketing Performance

Dynamic capability theory suggests that firms capable of reconfiguring resources through innovation achieve superior market responsiveness and competitive advantage. Product innovation enables SMEs to differentiate products, improve customer value, and strengthen market positioning.

Empirical studies by Calantone et al., Hurley and Hult, and Rosenbusch et al. demonstrate that innovation capability positively influences SME performance, particularly under turbulent market conditions.

Therefore, the following hypothesis is proposed:

H1: Product innovation positively and significantly influences marketing performance.

Product Innovation and Organizational Ambidexterity

Innovation activities require organizations to balance experimentation and operational efficiency simultaneously. Product innovation encourages firms to develop adaptive organizational routines, flexible decision-making structures, and knowledge integration mechanisms.

According to Raisch and Birkinshaw, organizations engaging in sustained innovation activities tend to strengthen ambidextrous capabilities because innovation demands both exploratory learning and exploitative refinement.

Thus, the following hypothesis is proposed:

H2: Product innovation positively and significantly influences organizational ambidexterity.

Organizational Ambidexterity and Marketing Performance

Organizational ambidexterity enables firms to optimize existing operational systems while simultaneously exploring new opportunities. This balance enhances strategic flexibility, customer responsiveness, and organizational resilience.

Studies by Gibson and Birkinshaw, as well as O'Reilly and Tushman, indicate that ambidextrous organizations consistently outperform

less adaptive firms in dynamic business environments.

Therefore:

H3: Organizational ambidexterity positively and significantly influences marketing performance.

Moderating Role of Organizational Ambidexterity

Although ambidexterity generally strengthens organizational adaptability, excessive balancing pressures may create managerial complexity, coordination costs, and strategic dilution. Under certain conditions, ambidexterity may weaken the direct contribution of innovation toward immediate marketing outcomes due to divided organizational focus.

Accordingly:

H4: Organizational ambidexterity moderates the relationship between product innovation and marketing performance.

Mediating Role of Organizational Ambidexterity

Organizational ambidexterity may also function as a strategic mechanism translating innovation capability into superior marketing outcomes. Firms capable of integrating innovation activities with adaptive organizational processes are more likely to achieve sustainable marketing effectiveness.

Therefore:

H5: Organizational ambidexterity mediates the relationship between product innovation and marketing performance.

RESEARCH METHODOLOGY

This study employed a quantitative explanatory design using a

causal research approach. The independent variable was product innovation, the dependent variable was marketing performance, and organizational ambidexterity served as both mediating and moderating variable.

The research focused on SMEs operating within the food and beverage processing sector in Serang City, Banten Province, Indonesia. Based on data obtained from the regional SME agency, the total population consisted of 1,858 SMEs.

A random sampling technique was utilized to select respondents meeting predetermined criteria, including:

- a. Business capital ranging from IDR 200 million to IDR 2.5 billion
- b. Minimum workforce of three employees
- c. Operational history exceeding three years
- d. Ownership of registered product branding
- e. A total of 170 SMEs participated in the study.

Data collection utilized structured questionnaires measured using a 10-point Likert scale. Data analysis was conducted through two stages:

Descriptive statistical analysis using SPSS Version 26

Inferential analysis using Structural Equation Modeling–Partial Least Squares (SEM-PLS) with SmartPLS 4.10

Measurement validity was assessed using:

- Outer loading (>0.70)
- Average Variance Extracted (AVE >0.50)
- Composite reliability (>0.70)
- Cronbach's alpha (>0.70)

Structural relationships were evaluated using bootstrapping procedures, path coefficients, and coefficient of determination (R^2).

RESULTS AND DISCUSSION

RESULTS

Outer Model Evaluation

The measurement model demonstrated strong convergent validity and reliability across all constructs. All indicators exhibited outer loading values exceeding the recommended threshold of 0.70, indicating satisfactory construct representation.

The Average Variance Extracted (AVE) values surpassed 0.50 for all variables, confirming adequate convergent validity. Similarly, Cronbach's alpha and composite reliability values exceeded 0.70, demonstrating strong internal consistency.

From a managerial perspective, these findings indicate that the constructs of product innovation, organizational ambidexterity, and marketing performance are operationally measurable and strategically relevant for SMEs operating under environmental uncertainty.

Bootstrapping and Hypothesis Testing

The bootstrapping results confirmed that product innovation significantly influences marketing performance. SMEs capable of introducing adaptive product modifications, improving service quality, and enhancing product functionality demonstrated stronger sales growth and customer responsiveness.

Strategically, this finding indicates that innovation serves not merely as a creative process but as a competitive survival mechanism. SMEs capable of rapidly translating customer insights into product adaptation are more resilient during market disruptions.

The findings also demonstrate that product innovation significantly influences organizational ambidexterity. Innovation-oriented SMEs tend to develop stronger organizational flexibility, adaptive learning routines, and balanced strategic capabilities.

From a tactical management perspective, continuous innovation compels organizations to simultaneously strengthen operational discipline and strategic experimentation. SMEs unable to balance these dimensions often experience organizational rigidity or uncontrolled experimentation.

Furthermore, organizational ambidexterity significantly enhances marketing performance and emerged as the strongest predictor within the structural model. Ambidextrous SMEs possess greater capability to maintain operational efficiency while simultaneously adapting to changing market demands.

Managerially, this suggests that SME sustainability depends not solely on innovation intensity but on organizational capability to institutionalize innovation into operational systems. Firms that successfully integrate exploration and exploitation are more capable of maintaining customer relevance, operational continuity, and strategic flexibility.

DISCUSSION

The findings reinforce dynamic capability theory by demonstrating that SME competitiveness depends not only on innovation output but also on organizational adaptability. Product innovation alone is insufficient if organizations lack the structural flexibility required to implement innovation effectively.

The COVID-19 crisis accelerated environmental uncertainty and forced SMEs to adopt more adaptive organizational behaviors. In this context, organizational ambidexterity became a strategic necessity rather than a managerial luxury.

The study also reveals that organizational ambidexterity operates as a double-edged strategic mechanism. While it enhances adaptability and performance, excessive balancing between exploration and exploitation may reduce strategic focus and increase managerial complexity.

For SME managers, the findings imply several tactical priorities:

1. Innovation activities should be aligned with market intelligence and customer insight systems.
2. SMEs should develop flexible organizational routines capable of responding rapidly to environmental change.
3. Operational efficiency should remain balanced with experimentation and market exploration.
4. Human resource development should emphasize adaptive capability, collaborative learning, and strategic responsiveness.

5. SMEs should strengthen digital marketing, customer analytics, and agile product development systems.

For policymakers, the findings indicate the importance of supporting SME adaptive capability through innovation funding, digital transformation programs, managerial training, and collaborative business ecosystems.

CONCLUSION

This study demonstrates that product innovation significantly enhances both marketing performance and organizational ambidexterity among SMEs operating in the food and beverage processing sector in Serang City, Banten Province.

Organizational ambidexterity also exerts a substantial positive influence on marketing performance and functions as an important mediating mechanism linking innovation capability to organizational outcomes. However, excessive ambidextrous balancing may weaken the direct effectiveness of innovation initiatives due to increasing coordination complexity and strategic dispersion.

The findings indicate that sustainable SME competitiveness requires not only continuous product innovation but also adaptive organizational systems capable of balancing operational efficiency and strategic flexibility simultaneously.

Theoretically, the study contributes to dynamic capability and organizational ambidexterity literature within emerging economy contexts. Practically, the findings provide managerial guidance for SMEs seeking

to strengthen resilience, innovation sustainability, and market competitiveness under uncertain business environments.

Future research should investigate the influence of digital transformation capability, entrepreneurial orientation, artificial intelligence adoption, and sustainability-oriented innovation on SME marketing performance.

REFERENCES

- Barney, J. B. "Firm Resources and Sustained Competitive Advantage." *Journal of Management*, vol. 17, no. 1, 1991, pp. 99–120.
- Calantone, R. J., Cavusgil, S. T., and Zhao, Y. "Learning Orientation, Firm Innovation Capability, and Firm Performance." *Industrial Marketing Management*, vol. 31, no. 6, 2002, pp. 515–524.
- Gibson, C. B., and Birkinshaw, J. "The Antecedents, Consequences, and Mediating Role of Organizational Ambidexterity." *Academy of Management Journal*, vol. 47, no. 2, 2004, pp. 209–226.
- Hurley, R. F., and Hult, G. T. M. "Innovation, Market Orientation, and Organizational Learning." *Journal of Marketing*, vol. 62, no. 3, 1998, pp. 42–54.
- Kotler, P., and Keller, K. L. *Marketing Management*. 16th ed. Pearson, 2022.
- March, J. G. "Exploration and Exploitation in Organizational Learning." *Organization Science*, vol. 2, no. 1, 1991, pp. 71–87.
- Morgan, N. A., Vorhies, D. W., and Mason, C. H. "Market Orientation, Marketing Capabilities, and Firm Performance." *Strategic Management*

Journal, vol. 30, no. 8, 2009, pp. 909–920.

O'Reilly, C. A., and Tushman, M. L. "Organizational Ambidexterity: Past, Present, and Future." *Academy of Management Perspectives*, vol. 27, no. 4, 2013, pp. 324–338.

Raisch, S., and Birkinshaw, J. "Organizational Ambidexterity: Antecedents, Outcomes, and Moderators." *Journal of Management*, vol. 34, no. 3, 2008, pp. 375–409.

Rosenbusch, N., Brinckmann, J., and Bausch, A. "Is Innovation Always Beneficial? A Meta-Analysis of the Relationship Between Innovation and Performance in SMEs." *Journal of Business Venturing*, vol. 26, no. 4, 2011, pp. 441–457.

Schumpeter, J. A. *The Theory of Economic Development*. Cambridge, MA: Harvard University Press, 1934.

Teece, D. J. "Explicating Dynamic Capabilities." *Strategic Management Journal*, vol. 28, no. 13, 2007, pp. 1319–1350.

World Bank. *Small and Medium Enterprises (SMEs) Finance Report*. Washington DC, 2023.

OECD. *SME and Entrepreneurship Outlook*. Paris, 2023.

Hair, J. F., Hult, G. T. M., Ringle, C. M., and Sarstedt, M. *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*. 3rd ed. Sage Publications, 2022