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Dynamic Capabilities as the Foundation of Sustainable Competitive Advantage in MSMEs: The Mediating Role of Strategic Innovation

Nuzleha[1*], Khairul Saleh[2], Reza Pahlepi[3]
[1,2,3] Management Study Program, University Sang Bumi Ruwa Jurai, Indonesia

**Corresponding Author: nuzlehahadjar1970@gmail.com*

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Abstract: In unstable and technologically advanced marketplaces, Micro, Small, and Medium-Sized Enterprises (MSMEs) are under growing pressure to maintain a competitive edge. Using environmental dynamism as a moderating variable and strategic innovation as a mediating variable, this study investigates the impact of dynamic capacities on sustainable competitive advantage among Indonesian MSMEs. MSMEs in manufacturing and creative services sectors were chosen for high exposure to process adaptation, customer experience changes, product renewal, and competition in digital markets. This study, based on the Dynamic Capabilities View, employed a quantitative explanatory design, drawing on 320 usable responses from top managers and MSME owners in Jabodetabek, Bandung, Surabaya, and Yogyakarta. Structural Equation Modeling-Partial Least Squares (SEM-PLS) was used to examine data. The findings demonstrate that strategic innovation (beta = 0.618; p < 0.001) and competitive advantage (beta = 0.342; p < 0.001) are significantly impacted by dynamic capability. Strategic innovation partially mediates the association between dynamic capability and sustainable competitive advantage (indirect effect = 0.279; VAF = 45%) and has a favorable impact on sustainable competitive advantage (beta = 0.451; p < 0.001). Strategic innovation and dynamic capability are positively correlated with environmental dynamism (interaction beta = 0.186; p = 0.002). By elucidating how sensing, seizing, and reconfiguring skills are transformed into sustained competitive advantage through strategic innovation in emerging-market MSMEs, these findings expand the Dynamic Skills View. In practical terms, the results advise MSME owners to develop straightforward market intelligence procedures, expedite innovation-driven decision-making, and reallocate resources through collaborations, digital platforms, and process improvements.

Keywords: *Dynamic Capabilities, Strategic Innovation, Sustainable Competitive Advantage, MSMEs, Environmental Dynamism*

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INTRODUCTION

The results show that dynamic capability has a considerable impact on both durable competitive advantage (beta = 0.342; p < 0.001) and strategic innovation (beta = 0.618; p < 0.001). Strategic innovation positively affects sustainable competitive advantage (beta = 0.451; p < 0.001) and partially mediates the relationship between dynamic capability and sustainable competitive advantage (indirect effect = 0.279; VAF = 45%). Environmental dynamism is positively correlated with both strategic innovation and dynamic capability (interaction beta = 0.186; p = 0.002). By explaining how sensing, grabbing, and reconfiguring skills are translated into persistent competitive advantage through strategic innovation in emerging-market MSMEs, these findings enhance the

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Dynamic Skills View. In practical terms, the findings recommend that MSME owners develop simple methods for gathering market knowledge, accelerate innovation-based decision-making, and reallocate resources through partnerships, digital platforms, and process renewal (Ferreira et al., 2021).

Despite their substantial economic contribution, MSMEs face increasingly complex strategic challenges in the post-pandemic business environment. Changes in consumer behavior, accelerated digitalization, efficiency pressures, intensifying competition, and market uncertainty require MSMEs not only to survive but also to develop a sustainable competitive advantage (Beigi et al., 2023). Recent studies show that digital transformation among Indonesian MSMEs can expand market reach, improve operational efficiency, and enhance profitability; however, its implementation remains constrained by limited resources, low technical capability, and data security issues (Rashidirad & Salimian, 2021).

From a strategic management perspective, the main challenge for MSMEs lies not only in the ownership of resources but also in their ability to manage, renew, and reconfigure those resources to remain aligned with environmental changes. Recent literature on MSMEs emphasizes that competitive advantage in a dynamic environment is increasingly shaped by organizationalorganizational capabilities to respond to market changes and continuously develop adaptive capabilities (Widnyani et al., 2025). This argument is consistent with the view that MSMEs often face limitations in strategic resources; therefore, the ability to develop dynamic capabilities becomes a critical factor in creating sources of competitive advantage (Andika & Muda, 2025).

Dynamic capability has become a central concept in strategic management because it explains how organizations sense opportunities and threats, seize opportunities, and reconfigure organizational assets to respond to environmental changes (Wolor et al., 2025). In the context of MSMEs, dynamic capability is particularly relevant because small firms are generally more vulnerable to market turbulence, resource constraints, technological disruption, and changes in consumer preferences. Thus, MSMEs with stronger dynamic capabilities are expected to be better able to develop adaptive strategies, renew business models, and maintain competitiveness in uncertain business environments (Dukhaykh & Alangri, 2026).

The Dynamic Capabilities View argues that competitive advantage does not emerge solely from the possession of valuable, rare, inimitable, and non-substitutable resources, as emphasized in the Resource-Based View, but from the firm's ability to renew and transform those resources in response to external changes. In a highly dynamic environment, static resources may quickly lose their strategic value if firms are unable to adapt them to changing market conditions. Therefore, dynamic capability is considered a more relevant theoretical lens for explaining how MSMEs build sustainable competitive advantage in the era of disruption, uncertainty, and rapid market transformation (Hadi et al., 2025).

Previous studies have shown that dynamic capabilities contribute positively to firm performance, innovation performance, organizational resilience, and competitive advantage. However, most existing studies still focus on large firms or organizations operating in developed economies, while empirical studies on MSMEs in emerging economies remain relatively limited. This condition creates an important research gap because MSMEs in developing countries often operate under different institutional, financial, technological, and market conditions compared to large firms. As a result, the

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mechanism through which dynamic capabilities generate sustainable competitive advantage in MSMEs requires further investigation (Mishra & Kiran, 2025).

One important mechanism that may explain the relationship between dynamic capability and sustainable competitive advantage is strategic innovation. Strategic innovation refers to a firm's ability to develop new ways to create value, design business models, compete in the market, and respond to customer needs (Arraya, 2025). For MSMEs, strategic innovation may take the form of product renewal, market repositioning, digital channel utilization, service innovation, process improvement, or the development of new collaboration models. Through strategic innovation, dynamic capability can be translated into concrete strategic actions that strengthen competitiveness and long-term business sustainability (Saputra et al., 2024).

In addition to strategic innovation, environmental dynamism is also an important contextual factor in understanding the effectiveness of dynamic capabilities. Environmental dynamism refers to the degree of change and unpredictability in markets, technology, customer preferences, and competitive intensity. In a highly dynamic environment, firms must respond more quickly and flexibly to emerging opportunities and threats (Thamrin et al., 2025). Therefore, the value of dynamic capability may become stronger when MSMEs operate in an environment characterized by rapid change, uncertainty, and intense competition (Prabowo et al., 2021).

This study intends to analyze the impact of dynamic capability on sustainable competitive advantage among MSMEs, investigate the moderating role of environmental dynamism in the relationship between dynamic capability and strategic innovation, and assess the mediating role of strategic innovation based on the empirical phenomenon and theoretical gap mentioned above. According to this study, sustainable competitive advantage is positively affected by dynamic capability; strategic innovation is positively affected by strategic capability; the relationship between dynamic capability and sustainable competitive advantage is mediated by strategic innovation; and the relationship between dynamic capability and strategic innovation is moderated by environmental dynamism.

This work provides both theoretical and practical contributions. In theory, it expands on the Dynamic Capabilities View by incorporating environmental dynamism as a moderating element and strategic innovation as a mediating mechanism to explain MSMEs' sustainable competitive advantage in an emerging economy. In practical terms, the results of this study should help MSME owners, business associations, and legislators develop policies that improve long-term competitiveness, adaptability, and capacity for innovation. As a result, this study is pertinent to both the advancement of strategic management literature and the sustainable growth of MSMEs in Indonesia.

Theoretical Framework And Hypotheses

The conceptual model is grounded in the Dynamic Capabilities View. Dynamic capability is positioned as the key antecedent of strategic innovation and sustainable competitive advantage. Strategic innovation is proposed as a mediating mechanism because it converts sensing, seizing, and reconfiguring into market-relevant value creation. Environmental dynamism is positioned as a moderator because the strategic value of dynamic capability is expected to increase when MSMEs face rapid and unpredictable changes.

H1: Dynamic capability has a positive effect on sustainable competitive advantage.

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Dynamic capability allows MSMEs to identify market opportunities, mobilize resources, and renew routines, thereby creating an advantage that is more difficult for competitors to imitate.

H2: Dynamic capability positively affects strategic innovation.

Firms with stronger sensing, seizing, and reconfiguring capabilities are better positioned to redesign products, business models, processes, and collaboration mechanisms.

H3: Strategic innovation positively affects sustainable competitive advantage.

Strategic innovation enables MSMEs to differentiate their offerings, improve customer responsiveness, increase operational efficiency, and develop distinctive market positions.

H4: Strategic innovation mediates the relationship between dynamic capability and sustainable competitive advantage.

Dynamic capability is expected to influence competitive advantage not only directly but also indirectly, through its conversion into innovation-based strategic outputs.

H5: Environmental dynamism positively moderates the relationship between dynamic capability and strategic innovation.

The effect of dynamic capability on strategic innovation is expected to be stronger when MSMEs operate in environments marked by rapid technological, market, and competitive changes.

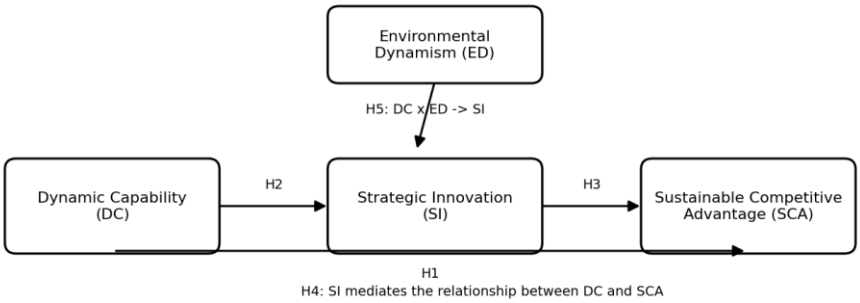


Figure 1. Conceptual Model
Source: Developed by the authors based on the Dynamic Capabilities View.

RESEARCH METHODS

Research Design

This study employed a quantitative approach with an explanatory research design. This design was considered appropriate because the study aimed to examine causal relationships among the proposed variables, namely dynamic capability, strategic innovation, sustainable competitive advantage, and environmental dynamism. The quantitative approach enabled the researcher to test the proposed hypotheses empirically through statistical analysis and to measure the strength and direction of relationships among variables in the research model (Oktaria et al., 2025).

The study used a cross-sectional survey method to collect primary data from respondents. A cross-sectional design was selected because the data were collected at a single point in time, allowing the researcher to capture MSMEs' perceptions and strategic conditions during the research period. The survey method was also appropriate for this

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study because the constructs examined were related to managerial perceptions, strategic decision-making, innovation practices, and competitive conditions within MSMEs (Ratulian et al., 2024).

Data were collected using a structured questionnaire distributed both online and offline from October 2025 to January 2026. Online distribution was conducted to reach respondents more efficiently across different regions. In contrast, offline distribution was used to improve response quality and ensure that the selected respondents met the predetermined criteria. The combination of online and offline methods was expected to increase the response rate and improve the representativeness of the data collected from MSME owners and top managers.

Population and Sample

The population of this study comprised MSMEs operating in the manufacturing and creative service sectors across Jabodetabek, Bandung, Surabaya, and Yogyakarta. These regions were selected because they represent major economic and creative business centers in Indonesia, where MSMEs are exposed to rapid market changes, technological shifts, and intense competition. The selection of the manufacturing and creative service sectors was also relevant because both sectors require continuous strategic adaptation, innovation, and resource reconfiguration to remain competitive in dynamic business environments (Ongkowijoyo et al., 2025).

This study used purposive sampling because the research required respondents who had relevant knowledge, experience, and authority in making strategic decisions within their firms. Purposive sampling is appropriate when researchers intentionally select respondents based on specific characteristics that are directly related to the research objectives (Susiang, 2024). Therefore, the respondents in this study were selected based on three criteria: MSMEs that had operated for at least three years, had between 5 and 99 employees, and were represented by owners or top managers who had strategic decision-making authority (Omar et al., 2025).

The minimum sample size was determined based on the SEM-PLS guideline, which suggests that sample adequacy should consider model complexity, the number of indicators, statistical power, and the number of structural paths in the research model (Ferreira et al., 2021). A total of 350 questionnaires were distributed, and 320 were usable, resulting in a response rate of 91.4%. The sample size was considered adequate for SEM-PLS analysis because PLS-SEM is suitable for predictive and explanatory models involving latent variables, mediation, and moderation effects (Djafri et al., 2026).

Instrument Development and Operational Definition

All variables were measured using a five-point Likert scale ranging from 1 = strongly disagree to 5 = strongly agree. The instrument was adapted from established concepts in strategic management and innovation studies and then adjusted to the MSME context. Dynamic capability was operationalized through sensing, seizing, and reconfiguring dimensions (Teece, 2007; Wang & Ahmed, 2007). Strategic innovation reflected business model innovation, customer value innovation, process innovation, and partnership innovation (Markides, 1997; Afuah, 2009). Sustainable competitive advantage reflected uniqueness, quality, efficiency, responsiveness, and innovation capacity (Barney, 1991). Environmental dynamism reflected market uncertainty, technological change, shifts in customer preferences, and competitive intensity (Dess & Beard, 1984; Jansen et al., 2006).

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The questionnaire was reviewed for content relevance and clarity before the main survey. Items were adapted into language that could be understood by MSME owners and managers while retaining each construct's theoretical meaning. A limited pre-test was used to identify unclear wording and improve item readability. Pre-test responses were not included in the final analysis.

Table 1. Operational Definition and Measurement Indicators

Variable	Role	Dimension	Indicator	Operational Meaning	Source
Dynamic Capability (DC)	Independent variable	Sensing	DC1-DC3	Ability to identify customer changes, market opportunities, and external threats	Teece (2007); Wang & Ahmed (2007)
Dynamic Capability (DC)	Independent variable	Seizing	DC4-DC6	Ability to mobilize resources, make strategic decisions, and capture business opportunities	Teece (2007); Eisenhardt & Martin (2000)
Dynamic Capability (DC)	Independent variable	Reconfiguring	DC7-DC9	Ability to renew resources, redesign processes, and adjust organizational routines	Teece et al. (1997); Helfat & Peteraf (2003)
Strategic Innovation (SI)	Mediating variable	Business model innovation	SI1-SI2	Development of new revenue logic, delivery channels, or value creation mechanisms	Markides (1997); Afuah (2009)
Strategic Innovation (SI)	Mediating variable	Customer value innovation	SI3-SI4	Creation of new benefits, experiences, or service approaches for customers	Damanpour (1991); O'Cass & Ngo (2011)
Strategic Innovation (SI)	Mediating variable	Strategic process innovation	SI5-SI6	Improvement of internal processes, efficiency, and strategic routines	Afuah (2009); Ferreira et al. (2021)
Strategic Innovation (SI)	Mediating variable	Partnership innovation	SI7-SI8	Use of collaboration and ecosystem relationships to strengthen innovation	Teece (2007); Ferreira et al. (2021)
Sustainable Competitive Advantage (SCA)	Dependent variable	Uniqueness and differentiation	SCA1-SCA2	Ability to offer distinctive products, services, or market positions	Barney (1991); Porter (1985)
Sustainable Competitive Advantage (SCA)	Dependent variable	Quality and efficiency	SCA3-SCA5	Ability to maintain superior quality, cost efficiency, and reliable operations	Barney (1991); Prabowo et al. (2021)
Sustainable Competitive	Dependent variable	Customer responsiveness	SCA6-SCA7	Ability to respond to customer needs	Jaworski & Kohli (1993);

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Variable	Role	Dimension	Indicator	Operational Meaning	Source
Advantage (SCA)				faster and better than competitors	Rashidirad & Salimian (2020)
Sustainable Competitive Advantage (SCA)	Dependent variable	Innovation capacity	SCA8-SCA10	Ability to sustain renewal and market adaptation over time	Teece (2007); Ferreira et al. (2021)
Environmental Dynamism (ED)	Moderating variable	Market and technological dynamism	ED1-ED3	Perceived unpredictability of demand, technology, and customer preferences	Dess & Beard (1984); Jansen et al. (2006)
Environmental Dynamism (ED)	Moderating variable	Competitive dynamism	ED4-ED6	Intensity and speed of competitor actions and market changes	Miller & Friesen (1983); Purwanti et al. (2022)

Operational Definition and Variable Measurement

A five-point Likert scale, with 1 denoting "strongly disagree" and 5 denoting "strongly agree," was used to measure each of the study's variables. Because the constructs in this study include management perceptions of organizational competence, strategic innovation, environmental conditions, and competitive advantage, the Likert scale was employed. Because it enables quantification and statistical assessment of subjective views, this type of scale is frequently used in quantitative business and management research (Purmono, 2024).

Nine indicators reflecting three dimensions—sensing, seizing, and reconfiguring—were used to measure dynamic capability as the independent variable. Seizing is the ability to mobilize resources to capture strategic opportunities; reconfiguring is the ability to renew and transform organizational resources in response to environmental changes; and sensing is the firm's ability to recognize opportunities and threats in the external environment. The dynamic capability framework, which highlights a company's capacity to adapt, renew, and reconfigure resources amid shifting business conditions, is compatible with these aspects (Erlany et al., 2023).

Strategic innovation as the mediating variable was measured using eight indicators covering business model innovation, customer value innovation, strategic process innovation, and partnership ecosystem innovation. Sustainable competitive advantage as the dependent variable was measured using ten indicators reflecting uniqueness, superior quality, cost efficiency, customer responsiveness, and innovation capacity. Environmental dynamism as the moderating variable was measured using six indicators representing market uncertainty, technological change, shifts in customer preferences, and competitive intensity. The use of multi-item indicators for each latent construct is recommended in SEM-PLS because it improves construct representation and supports more reliable evaluation of the measurement model (Larabi, 2026).

Data Analysis Technique

Structural Equation Modeling–Partial Least Squares (SEM-PLS) was used to examine the data. Because SEM-PLS is well-suited to examining intricate models with numerous latent variables, mediation, and moderation effects, it was chosen. Additionally,

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investigations with prediction-oriented goals and theory-development aims can benefit from this approach, particularly when the research model comprises numerous dimensions assessed by multiple indicators (Amrullah & Rohimat, 2026). SmartPLS software was used to estimate the measurement model and structural model.

Evaluation of the measurement model and evaluation of the structural model were the two primary phases of the investigation. Convergent validity, discriminant validity, and reliability were examined in order to evaluate the measurement model. Average Variance Extracted (AVE) and outer loading values were used to assess convergent validity, and Composite Reliability and Cronbach's alpha were used to assess reliability. The Heterotrait-Monotrait Ratio (HTMT) was used to assess discriminant validity, as it is a rigorous criterion for determining whether latent constructs are empirically distinct, according to contemporary methodological literature (Ragmoun & Aloulou, 2026).

The structural model was evaluated using the coefficient of determination (R^2), predictive relevance (Q^2), effect size (f^2), path coefficients, and significance testing through bootstrapping. Bootstrapping is recommended in PLS-SEM because it is a non-parametric procedure for testing the statistical significance of path coefficients, indirect effects, and other model estimates. The mediation effect of strategic innovation was tested through the bootstrapping procedure for indirect effects, while the moderating effect of environmental dynamism was tested using the product indicator approach. These procedures were used to determine whether dynamic capability directly influences sustainable competitive advantage, whether strategic innovation mediates this relationship, and whether environmental dynamism strengthens or weakens the relationship between dynamic capability and strategic innovation (Purwanti et al., 2022).

RESULTS AND DISCUSSION

Respondent Profile

320 MSME owners and senior managers from the manufacturing and creative services industries made up the study's respondents. Gender-wise, 41.6% of respondents were female and 58.4% were male. According to this composition, male respondents held slightly more strategic decision-making positions within the sampled MSMEs. However, the number of female respondents also shows the increased participation of women in managing and developing MSMEs in Indonesia.

By age, the majority of respondents were between 31 and 40 years old, accounting for 42.2% of the total sample. This age group represents a productive managerial segment that is generally more adaptive to market changes, technological development, and innovation practices. Respondents in this category are also likely to have sufficient business experience while remaining open to new strategic approaches to managing their enterprises.

Regarding educational background, most respondents held a bachelor's degree, representing 61.3% of the sample. This indicates that the majority of MSME owners and managers in this study had a relatively adequate level of formal education to understand strategic issues, business innovation, and competitive dynamics. Educational background is important because it may influence managerial capability to identify business opportunities, process market information, and make strategic decisions.

By the business sector, 53.8% of respondents operated in the manufacturing sector, while 46.2% operated in the creative services sector. This relatively balanced composition provides a relevant empirical context for examining dynamic capability,

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strategic innovation, and sustainable competitive advantage. Both sectors are exposed to competitive pressure, changing customer preferences, technological shifts, and the need for continuous innovation (NNAAV et al., 2025).

The average age of the sampled MSMEs was 7.2 years, and the average number of employees was 23. These characteristics indicate that the respondents represented established MSMEs rather than newly founded businesses. Firms that have operated for more than three years are more likely to have developed organizational routines, strategic experience, and adaptive capabilities, making them well-suited to analyzing the relationships among dynamic capability, strategic innovation, and sustainable competitive advantage.

Table 2. Respondent Profile

Category	Classification	Frequency	Percentage (%)
Gender	Male	187	58.4
Gender	Female	133	41.6
Age	21-30 years	64	20.0
Age	31-40 years	135	42.2
Age	41-50 years	82	25.6
Age	> 50 years	39	12.2
Education	Senior high school/diploma	89	27.8
Education	Bachelor's degree	196	61.3
Education	Postgraduate	35	10.9
Business sector	Manufacturing	172	53.8
Business sector	Creative services	148	46.2
Business age	Mean	7.2 years	-
Number of employees	Mean	23 employees	-

Measurement Model Evaluation / Outer Model

The measurement model was evaluated to determine the validity and reliability of the constructs employed in this investigation. Before examining the structural links among latent variables in SEM-PLS, the measurement model must be assessed. This stage is crucial to ensuring that the research instrument has adequate psychometric quality and that each indication accurately reflects its corresponding construct (Kusumayanti, 2025).

According to the findings, every indicator had a loading factor greater than 0.70. This shows that each indicator satisfied the convergent validity condition and exhibited a strong association with its latent construct. Loading factor values over the required threshold show that the indicators are valid indices of dynamic competence, strategic innovation, sustained competitive advantage, and environmental dynamism.

The Average Variance Extracted (AVE) values for all constructions were likewise over 0.50. Specifically, dynamic capability had an AVE of 0.634, strategic innovation had an AVE of 0.618, sustainable competitive advantage had an AVE of 0.645, and environmental dynamism had an AVE of 0.602. Convergent validity was confirmed by these findings, which show that each concept accounted for more than 50% of the variance in its indicators.

Cronbach's alpha and Composite Reliability were used to evaluate reliability. All Composite Reliability values, which ranged from 0.862 to 0.921, were above 0.70, according to the findings. Likewise, all Cronbach's alpha values, ranging from 0.821 to 0.894, exceeded 0.70. These results show that each construct was reliable for further investigation and exhibited excellent internal consistency.

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Because all HTMT values were less than 0.85 and each construct's square root of AVE was higher than its correlations with other constructs according to the Fornell-Larcker criterion, discriminant validity was also satisfied. These findings confirm that each model construct was experimentally distinct from the others. The measurement model was therefore suitable for evaluating the structural model, as it met the criteria for convergent validity, discriminant validity, and reliability.

Table 3. Results of Convergent Validity and Reliability Testing

Variable	Loading Range	AVE	CR	Cronbach's α
Dynamic Capability (DC)	0.742–0.867	0.634	0.912	0.885
Strategic Innovation (SI)	0.758–0.842	0.618	0.897	0.864
Sustainable Competitive Advantage (SCA)	0.721–0.883	0.645	0.921	0.894
Environmental Dynamism (ED)	0.749–0.831	0.602	0.862	0.821

Structural Model Evaluation

After confirming the validity and reliability of the measurement model, the next stage was evaluating the structural model. The structural model evaluation was conducted to assess the model's predictive power and test the proposed hypotheses. In SEM-PLS, the inner model is commonly assessed using R^2, Q^2, f^2, path coefficients, and bootstrapping significance testing (Rashidirad & Salimian, 2021).

The R^2 value for strategic innovation was 0.487, indicating that dynamic capability and environmental dynamism explained 48.7% of the variance in strategic innovation. This value can be categorized as moderate. It suggests that MSMEs' ability to sense opportunities, seize strategic opportunities, and reconfigure resources contributes substantially to their ability to develop strategic innovation.

The R^2 value for sustainable competitive advantage was 0.621, indicating that dynamic capability and strategic innovation explained 62.1% of the variance in sustainable competitive advantage. This value can be categorized as strong in the context of behavioral and management research. It shows that the model has good explanatory power in explaining how MSMEs build and maintain competitive advantage in dynamic business environments.

Predictive relevance was assessed using Stone-Geisser's Q^2 value. The Q^2 values for strategic innovation and sustainable competitive advantage were 0.294 and 0.385, respectively. Since both values were greater than zero, the model demonstrated good predictive relevance. This means that the proposed model is not only statistically significant but also predictive of the endogenous constructs.

The model fit was evaluated using the Standardized Root Mean Square Residual (SRMR). The SRMR value was 0.062, which is below the recommended threshold of 0.08. This result indicates that the overall model fit was adequate. Therefore, the structural model was considered suitable for hypothesis testing and interpretation.

Table 4. Results of Hypothesis Testing

Hypothesis	Path	Coefficient (β)	t-value	p-value	Result
H1	DC → SCA	0.342	5.247	0.000	Supported
H2	DC → SI	0.618	12.384	0.000	Supported
H3	SI → SCA	0.451	7.823	0.000	Supported
H4	DC → SI → SCA	0.279	6.452	0.000	Supported; Partial Mediation, VAF = 45%
H5	DC × ED → SI	0.186	3.142	0.002	Supported

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Discussion

The first hypothesis testing result showed that dynamic capability had a positive and significant effect on sustainable competitive advantage among MSMEs, with a path coefficient of 0.342 and a p-value below 0.001. This finding indicates that MSMEs with stronger dynamic capabilities are more likely to achieve sustainable competitive advantage. The ability to sense market opportunities, seize strategic opportunities, and reconfigure organizational resources enables MSMEs to respond more effectively to changes in the external environment. This finding is consistent with recent studies showing that dynamic capabilities help SMEs sustain competitiveness by strengthening adaptation, innovation, and resource reconfiguration in uncertain business environments (Widnyani et al., 2025).

The second hypothesis confirmed that dynamic capability had a positive and significant effect on strategic innovation, with a path coefficient of 0.618 and a p-value below 0.001. This result shows that dynamic capability is a strong predictor of strategic innovation. MSMEs that can identify changes in customer needs, capture emerging opportunities, and reconfigure their resources tend to be better positioned to develop new business models, improve value creation, and redesign strategic processes. This finding supports recent evidence that dynamic capabilities strengthen firms' innovation capacity by enabling them to align internal resources with technological change, market shifts, and new strategic opportunities (Saputra et al., 2024).

The third hypothesis showed that strategic innovation had a positive and significant effect on sustainable competitive advantage, with a path coefficient of 0.451 and a p-value below 0.001. This finding indicates that strategic innovation is an important driver of competitive advantage for MSMEs. Through strategic innovation, MSMEs can create unique value propositions, improve customer responsiveness, redesign business processes, and differentiate themselves from competitors. Recent studies also emphasize that an innovation strategy contributes to firm competitiveness by enabling organizations to renew their value-creation logic and develop more distinctive market positions (Prabowo et al., 2021).

The fourth hypothesis was confirmed: strategic innovation partially mediated the relationship between dynamic capability and sustainable competitive advantage, with an indirect effect coefficient of 0.279 and a VAF of 45%. This means that dynamic capability influences sustainable competitive advantage both directly and indirectly through strategic innovation. The partial mediation result suggests that dynamic capability alone is insufficient to create a sustainable advantage unless it is translated into concrete strategic innovation. For MSMEs, this implies that sensing, seizing, and reconfiguring capabilities must be translated into innovative business models, improved customer value, strategic process renewal, and collaborative ecosystems. This result is consistent with recent findings that dynamic capabilities are more effective in supporting competitiveness when they are translated into innovation-related outputs and strategic renewal processes (Mishra & Kiran, 2025).

The fifth hypothesis showed that environmental dynamism moderated the relationship between dynamic capability and strategic innovation, with an interaction coefficient of 0.186 and a p-value of 0.002. This finding indicates that the effect of dynamic capability on strategic innovation becomes stronger when MSMEs operate in a more dynamic environment. In stable environments, operational capabilities may be sufficient to support business continuity. However, in dynamic environments characterized by

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rapid technological change, shifting customer preferences, and intense competition, dynamic capability becomes more critical for stimulating strategic innovation. This result strengthens the contingency perspective in strategic management, which argues that the value of organizational capabilities depends on the environmental context in which firms operate.

CONCLUSION AND RECOMMENDATIONS

This study concludes that dynamic capability is an important foundation for sustainable competitive advantage among MSMEs, both directly and through the mediating role of strategic innovation. Strategic innovation functions as a transformation mechanism that translates organizational capabilities into competitive outputs in the market. Environmental dynamism strengthens the effectiveness of dynamic capability in generating strategic innovation, indicating that the value of dynamic capability is contextual. Therefore, MSME actors need to develop a simple market intelligence system to strengthen sensing capability, build organizational flexibility to support seizing through faster decision-making, regularly reconfigure resources through process restructuring and strategic partnerships, foster a culture of experimentation and business model innovation, and adjust the intensity of dynamic capability development according to the level of environmental dynamism in their respective industries.

From a policy perspective, the government, particularly through the Ministry of Cooperatives and SMEs, should design incubation programs that focus on developing MSMEs' dynamic capabilities rather than merely providing financial assistance. This study has several limitations, including its cross-sectional design, geographical scope limited to Java, and focus on only two industrial sectors. Future studies are recommended to employ a longitudinal design, expand the industrial and geographical scope, and integrate additional relevant variables, such as digital capability, green innovation, and entrepreneurial orientation, to provide a more comprehensive understanding of how MSMEs build sustainable competitive advantage in dynamic business environments.

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