Asian Management and Business Review, Volume 6 Issue 1, 2026: 36-51

The hidden bridge: Revealing how competitive advantage converts innovation capability into MSMEs' performance

Emir Ziedan, Baziedy Aditya Darmawan*

Faculty of Business and Economics, Universitas Islam Indonesia, Yogyakarta 55283, Indonesia

Article History
Received : 2025-06-16
Revised : 2025-07-28
Accepted : 2025-08-21
Published : 2026-02-01

Keywords:
MSMEs' performance; innovation capability; competitive advantage.

***Corresponding author:**
baziedy@uii.ac.id

DOI:
10.20885/AMBR.vol6.iss1.art3

Abstract

Although micro, small, and medium enterprises (MSMEs) play a crucial role in the national economy, they continue to face significant challenges in maintaining their performance. Numerous prior studies have investigated innovation capability as the antecedent of business performance. However, those studies have predominantly concentrated on the direct relationship between innovation capability and business performance, leaving the understanding of how innovation capability translates into improved business performance remains incomplete. Moreover, the role of competitive advantage as the underlying mechanism on the innovation capability-business performance link in the context of MSMEs remains under-explored, highlighting the need for further investigation in this area. Therefore, this study aims to explore the role of competitive advantage as the mediation pathway of innovation capability in enhancing MSMEs' performance by using the lens of dynamic capabilities perspective. Employing a survey, this study collected and used data from 159 MSMEs. The data were then analyzed using partial least squares-structural equation modeling (PLS-SEM) to assess the hypothesized relationships. The findings reveal that both innovation capability and competitive advantage serve as key drivers of MSMEs' performance. Moreover, competitive advantage acts as a mediator, strengthening the impact of innovation capability on business performance. These results offer valuable insights for MSME practitioners, emphasizing the importance of fostering innovation-driven strategies and leveraging competitive advantage to sustain business growth and resilience in an increasingly dynamic market environment.

Introduction

Micro, small, and medium enterprises (MSMEs) play a crucial role in Indonesia's economy, contributing significantly to employment, market expansion, and overall economic growth. According to Indonesia's Minister of Finance, MSMEs account for approximately 62 percent of the national gross domestic product (GDP), a figure that surpasses the contributions of MSMEs in other ASEAN and G20 nations (Andrianto, 2024). Furthermore, MSMEs in Indonesia employ approximately 117 million workers, or 97 percent of the total workforce, and generate 60.4 percent of the nation's total investment (Junaidi, 2023). These statistics highlight the sector's vital role in sustaining and driving national economic stability.

Nonetheless, despite their substantial contribution, Indonesian MSMEs face mounting challenges in maintaining their performance. A recent survey by the Indonesian Ministry of Cooperatives and Small and Medium Enterprises (SMEs) reported a decline in MSMEs' revenue, leading to a deterioration in business performance indices (Hamidah et al., 2024; Perto, 2024). This trend suggests that MSMEs are struggling to remain competitive in an evolving business landscape.

E ISSN 2775-202X

Cohen and Caner (2016) argue that innovation has long been recognized in the organizational management literature as a strategic process that plays a pivotal role in problem-solving. As proof, recent empirical studies have further validated the critical role of innovation capability as a key driver of SMEs' performance across various countries (Bekata & Kero, 2025; Quintero Sepúlveda & Zúñiga Collazos, 2025; Nuryakin, 2024; Sari et al., 2023; Jalil et al., 2022). These findings affirm that innovation serves as a strategic cornerstone for addressing organizational challenges, particularly within the realm of small business management.

Although those contemporary studies have successfully examined the contribution of innovation capability to enhancing SMEs' performance, important gaps still remain. Foremost, prior studies have predominantly concentrated on the direct relationship between innovation capability and SMEs' performance, without unpacking the underlying mechanisms that explain this link (Bekata & Kero, 2025; Nuryakin, 2024; Quintero Sepúlveda & Zúñiga Collazos, 2025; Sari et al., 2023). Consequently, the understanding of how innovation capability translates into improved business performance in the context of MSMEs remains incomplete. However, few empirical studies have examined the mediating mechanism through which innovation capability influences business performance, particularly in the context of MSMEs in emerging economies. This limited attention leaves open important questions regarding the pathways that translate innovation capability into tangible performance outcomes. Therefore, this study addresses an underexplored mediating mechanism gap in the existing literature.

In light of this gap, limited attention has been devoted to exploring the role of competitive advantage as a potential mechanism underpinning the relationship between innovation capability and business performance in the context of MSMEs. In fact, according to the dynamic capabilities theory, firms that continuously develop and refine their core capabilities are more likely to achieve competitive advantage, which leading to superior performance (Teece et al., 1997). In addition, prior empirical studies provide empirical evidence that innovation capability is a source of competitive advantage (Siregar et al., 2025; Widjajanti & Jumbri, 2025; Exposito & Sanchis-Llopis, 2018). Therefore, drawing from the conceptual foundation laid by Teece et al. (1997) and supported by empirical findings from prior studies (Siregar et al., 2025; Widjajanti & Jumbri, 2025; Exposito & Sanchis-Llopis, 2018), it becomes evident that competitive advantage is not only critical enablers of MSMEs' performance, but that may also play a pivotal mediating role in the relationship between innovation capability and performance outcomes. Despite this, competitive advantage has yet to receive adequate scholarly attention as a potential mediating factor that could help elucidate how innovation capability translates into enhanced performance in the context of MSMEs.

Hence, to address the gaps, this study aims to investigates the role of innovation capability and competitive advantage in enhancing business performance, while exploring the role of competitive advantage for its mediating effect on these relationships in context of MSMEs in Indonesia. From a theoretical standpoint, this study contributes to the literature by demonstrating innovation capability as a dynamic capability practice that fosters competitive advantage as the underlying mechanism, which ultimately leading to improve the business performance of MSMEs. Practically, in the face of increasing challenges that hinder business growth, the findings of this study will serve as a valuable reference for MSME owners and managers, providing strategic insights to enhance their business performance through the dynamic capabilities perspective.

Literature Review and Hypotheses Development

Dynamic Capabilities Theory

It is undeniable that contemporary businesses, including MSMEs, are confronted with the constant challenge of operating within highly dynamic environments. The dynamic capabilities theory forms the theoretical foundation for this study. As articulated by (Teece et al., 1997), dynamic capabilities refer to a firm's capacity to integrate, develop, and reconfigure both internal and external competencies, thereby enabling firms to respond effectively to rapid environmental shifts. While the dynamic capabilities framework broadly encompasses dimensions such as sensing, seizing, and reconfiguring (Teece, 2007), this study deliberately focuses on innovation capability. This focus is

theoretically grounded in the classification proposed by Teece (2018), which distinguishes between higher-order, secondary-order, and ordinary dynamic capabilities. As noted by Cheng and Chen (2013), innovation capability is considered a higher-order dynamic capability that directly contributes to organizational renewal and performance (Agostini et al., 2025; Bamel et al., 2019; Fainshmidt et al., 2016). Accordingly, this study isolates innovation capability to examine its strategic role in MSMEs' performance, without conflating its effects with those of other dynamic capability dimensions. Furthermore, prior study has demonstrated that innovation capability acts as an enabler of competitive advantage and superior performance (Exposito & Sanchis-Llopis, 2018). In this regard, Otache (2024) posits that innovation capability can be viewed as an integral element of dynamic organisational capabilities, contributing to sustainable competitive advantage and ultimately driving superior organisational performance in volatile contexts. Hence, employing the dynamic capabilities theory as an analytical lens for this study is highly appropriate and well-justified.

Innovation Capability

Lawson and Samson (2001) assert that innovation capability extends beyond merely developing new business management strategies, it also encompasses the ability to integrate performance with a proactive mindset. While Tajvidi and Karami (2015) define innovation capability as a firm's capacity to continuously enhance its resources and competencies to identify opportunities for product or process development. In this regard, innovation capability enables businesses to meet market demands and swiftly respond to environmental changes (Ilmudeen et al., 2021). Moreover, Hogan et al. (2011) characterize this capability as the firm's capacity to leverage collective knowledge, expertise, and resources to drive innovation across products, services, and systems, ultimately delivering enhanced value. Building upon this perspective, the present study defines innovation capability as a firm's continuous endeavour to convert both internal and external knowledge into novel or refined products, processes, and systems. This capability, therefore, enables organisations to adapt proactively to environmental shifts while ensuring sustainable value creation for their stakeholders.

Competitive Advantage

Competitive advantage is a fundamental concept in strategic management (Otache, 2024). It reflects a firm's unique capacity to strengthen its market position (Otache, 2024). Sigalas (2015) argue that there are multiple meanings of competitive advantage. Ansoff (1965) was among the pioneering scholars to conceptualize competitive advantage, describing it as the distinct attributes or unique features within specific product markets that grant a firm a robust competitive standing. Moreover, according to Barney (1991), competitive advantage is achieved when a firm outperforms its competitors in key areas such as cost efficiency, technological innovation, and management effectiveness. Furthermore, Tu and Wu (2021) describe competitive advantage as the representation of an organization's superior standing relative to its industry rivals. In summary, competitive advantage can be broadly understood as a firm's distinctive ability to secure a stronger market position and outperform its competitors through unique resources, capabilities, and strategic actions.

Business Performance

Business performance is a crucial metric for MSME owners and managers to assess and ensure the sustainability and efficiency of their enterprises. In this context, performance serves as an indicator of whether a business is achieving its objectives and making progress (Otache, 2024). Hussaini and Muhammed (2018) describe business performance as a company's ability to sustain operations, achieve growth, and operate efficiently and profitably. Similarly, Abeysekara et al. (2019) define firm performance as the reflection of the degree to which organizational goals are achieved. Therefore, it could be concluded that business performance reflects how effectively an enterprise achieves its goals, sustains operations, and drives growth and profitability. To fulfil its objective,

this study adopts both financial and non-financial indicators to assess business performance, aligning with the approach recommended by Abeysekara et al. (2019).

Innovation Capability and Competitive Advantage

The dynamic capabilities theory posits that firms possessing core competencies are more likely to attain competitive advantage (Otache & Usang, 2022). Meanwhile, Otache (2024) emphasizes that innovation capability serves as a critical organizational competency that enables SMEs to gain competitive advantage. This assertion is further supported by Exposito and Sanchis-Llopis (2018), who argue that innovation capability is a key driver of sustainable competitive advantage. Several previous studies have reinforced this perspective, highlighting innovation capability as a fundamental source of competitive advantage (Kolbe et al., 2022; Matekenya & Moyo, 2022; Otache, 2024; Siregar et al., 2025; Widjajanti & Jumbri, 2025). Furthermore, Lee and Yoo (2019) argue that competitive advantage relies on a firm's ability to identify, seize, and transform opportunities into valuable market offerings. In this context, firms that successfully adapt to changing environments through innovation are more likely to develop superior products that align with market demands (Lee & Yoo, 2019). Accordingly, this study posits that MSMEs' capability to innovate serves as a key driver in enabling them to achieve a competitive advantage.
H_1: Innovation capability positively influences competitive advantage in MSMEs.

Innovation Capability and Business Performance of MSMEs

Numerous previous studies have highlighted the significant role of innovation capability in driving business success. A previous study conducted by Saunila (2016) indicates that innovation capability is integral to enhancing business performance. Additionally, Matekenya and Moyo (2022) argue that without innovation, firms struggle to adapt to evolving business environments. Furthermore, empirical evidence provided by Kafetzopoulos and Psomas (2015) also supports the notion that innovation capability positively correlates with organizational performance. More recently, Otache (2024) reaffirmed that innovation capability plays a pivotal role in improving MSMEs' performance. Similar findings were reported by Shafi (2021), who demonstrated that innovation capability contributes to both financial and non-financial gains for MSMEs. Given the competitive landscape, businesses must continuously innovate to sustain superior performance (Tariq et al., 2023). Therefore, this study argues that the greater the implementation of innovation capability practices, the higher the performance of MSMEs.
H_2: Innovation capability positively influences business performance of MSMEs.

Competitive Advantage and Business Performance of MSMEs

Pisano (2017) posits that competitive advantage is a crucial determinant of superior business performance. A firm that successfully sustains its competitive advantage is better positioned to achieve superior performance, even in highly dynamic and competitive markets (Otache, 2024). Empirical evidence from Kiyabo and Isaga (2020) confirms that competitive advantage significantly contributes to improved firm performance. Within the context of SMEs, Otache (2024) has demonstrated that competitive advantage plays a vital role in driving business success. Hence, this study asserts that the stronger the competitive advantage of MSMEs, the greater their business performance enhancement.
H_3: Competitive advantage positively influences business performance of MSMEs.

Innovation Capability, Competitive Advantage, and Business Performance of MSMEs

The dynamic capabilities theory suggests that firms equipped with strong core competencies are more likely to achieve competitive advantage and superior performance (Otache & Usang, 2022). Consequently, Otache (2024) argues that innovation capability is a critical organizational resource that not only fosters competitive advantage but also drives MSMEs' performance. Empirical findings within the SMEs sector further substantiate this claim. For instance, Keskin et al. (2021) found that firms capable of developing strategic competencies to gain competitive advantage were

more likely to achieve superior performance. Similarly, Exposito and Sanchis-Llopis (2018) provide empirical evidence that innovation capability serves as an essential driver of competitive advantage, while Kiyabo and Isaga (2020) highlight the significant impact of competitive advantage in enhancing business performance. These studies collectively indicate that competitive advantage serves as a mechanism through which innovation capability translates into improved MSMEs' performance. Additionally, previous studies have empirically demonstrated the mediating role of competitive advantage in linking antecedents with performance outcomes (Keskin et al., 2021; Kiyabo & Isaga, 2020). Accordingly, this study argues that competitive advantage serves as a mediating factor that elucidates how the impact of innovation capability translates into MSMEs' performance.

H_4: Competitive advantage mediates the relationship between innovation capability and business performance of MSMEs.

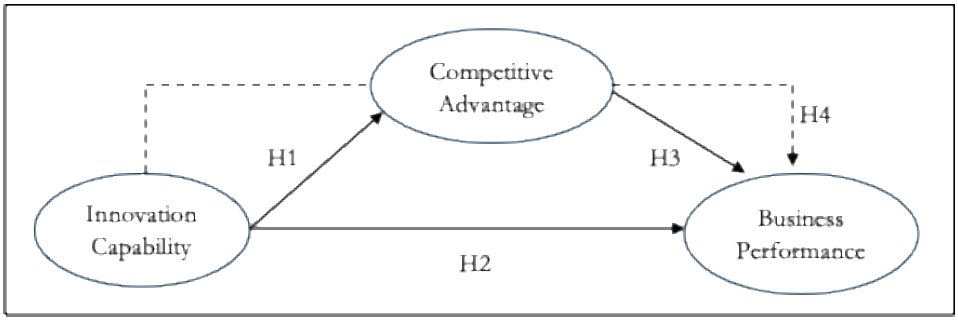

Figure 1. The Research Framework

Research Methods

Sample

This study employed a quantitative research approach using a survey method to collect data and test hypotheses in alignment with the research objectives. The data collection process was conducted through a survey targeting MSMEs with an innovation-oriented operations, located in Java, Indonesia. The sample selection followed a non-probability sampling approach, specifically utilizing purposive sampling, where the sampling process in this study was restricted to particular respondents deemed capable of providing the necessary information, as they meet specific criteria established by the researcher (Sekaran & Bougie, 2016).

The first criterion required that each MSME had been in operation for at least five years, ensuring that the selected firms had sufficient time to engage in innovation activities. The second criterion stipulated that the MSMEs must have undertaken some form of innovation, whether related to products, services, processes, or other types of innovation. These two conditions were incorporated as screening questions at the beginning of the questionnaire. Prospective respondents who answered 'no' to either screening question were automatically excluded from proceeding with the remainder of the survey. This screening mechanism was critical to ensure that the respondents were selected in alignment with the study's objective of obtaining valid and relevant data. Within this framework, MSMEs were represented by owners or managers, who served as the primary respondents. The determination of the minimum sample size was based on statistical power considerations aligned with the analytical tool used in this study, partial least squares structural equation modeling (PLS-SEM). Referring to the statistical power threshold within the range of 0.11 to 0.2 at a 5 percent significance level, the minimum required sample size for this study was 155 respondents (Hair et al., 2022).

Measurement, Data Collection, and Data Analysis

The measurement instruments in this study were adapted from established scales used in previous research, ensuring validity and reliability in representing the observed constructs. A five-point Likert scale was used, ranging from 1 ("strongly disagree") to 5 ("strongly agree"). In this study, business

performance (P) was measured using five items adapted from Abeysekara et al. (2019), while innovation capability (IC) was assessed using five items adapted from Shafi (2021). Additionally, competitive advantage (CA) was evaluated based on six items adapted from Abeysekara et al. (2019). Table 1 provides a summary of the measurement instruments employed in this study.

Table 1. Measurement Items

Variables	Item Code	Item Statements
Business Performance (Abeysekara et al., 2019)	P1	The firm is capable of increasing sales revenue
	P2	The firm is able to expand its market share
	P3	Its products command a substantial share of the market
	P4	The firm consistently generates profit from each sale
	P5	The firm meet or exceed targeted profit goals
Innovation Capability (Shafi, 2021)	IC1	The firm frequently experiments with new ideas
	IC2	It consistently seeks novel ways to perform tasks or processes
	IC3	Demonstrates creativity in the way it operates its business
	IC4	Capable of developing new products or services
	IC5	Often takes the lead in launching new products to the market
Competitive Advantage (Abeysekara et al., 2019)	CA1	The brand is widely recognized by its customers
	CA2	It has built a strong reputation for quality
	CA3	Customers can easily distinguish its products from competitors'
	CA4	There is a high level of customer loyalty towards its products
	CA5	Maintains close and long-term relationships with its customers
	CA6	It consistently offers products that align with customer needs

Data collection was conducted by distributing online questionnaires directly to the owners or managers of MSMEs through various digital platforms, including social media and e-commerce channels. Utilizing these platforms allowed the study to reach a wider range of respondents efficiently and cost-effectively, particularly given the dispersed nature of MSMEs across different regions. This approach not only facilitated timely data gathering but also providing convenient access for busy business owners and managers to participate at their own pace and availability. The collected data were analyzed using the PLS-SEM approach, involving an assessment of both the measurement model and structural model, as recommended by Hair et al. (2022). This analytical approach was chosen to ensure a comprehensive evaluation of construct validity, reliability, and the hypothesized relationships within the study model, including the direct and indirect effect.

Results and Discussion

A total of 165 respondents initially participated in the data collection phase. However, 6 responses were subsequently excluded from further analysis due to indications of straight-lining behavior. Such straight-lining responses, which occur when respondents provide the same answer repeatedly without thoughtful consideration, are often associated with low respondent attentiveness (Zhang & Conrad, 2014). This phenomenon can introduce systematic bias, resulting in a standard deviation of zero that fails to accurately represent the true variance of the measured constructs (Paas & Morren, 2018). Consequently, 159 valid responses were retained for the final analysis. This sample size exceeds the minimum requirement of 155 respondents, which is determined based on the recommended statistical power for analyses conducted using the PLS-SEM technique.

Based on the data presented in Table 2, the majority of respondents in this study hold managerial positions (63.52%), while a smaller proportion consists of business owners (36.48%). In terms of industry distribution, culinary businesses dominate the sample, accounting for 42.77% of respondents, followed by services (11.32%) and fashion (9.43%). Other sectors, including retail, pharmacy, beauty and cosmetics, automotive, furniture, handcrafts, processing, farm and fisheries, agribusiness, and technology, represent smaller fractions, each contributing less than 7% to the overall sample. This diversity highlights the breadth of MSMEs engaged in various sectors, reflecting a realistic cross-section of industries prevalent in the MSME landscape.

Table 2. The Profile of Respondents

Characteristics	Categories	Frequencies (N = 159)	Percentage (%)
Positions	Managers	101	63.52
	Owners	58	36.48
Industries	Culinary	68	42.77
	Services	18	11.32
	Fashion	15	9.43
	Retail	11	6.92
	Pharmacy	9	5.66
	Beauty/Cosmetics	7	4.40
	Automotive	5	3.14
	Furniture	4	2.52
	Handcrafts	4	2.52
	Processing	4	2.52
	Farm and Fisheries	4	2.52
	Agribusiness	3	1.89
	Technology	2	1.26
	Others	5	3.14
Business Age	5-7 years	108	67.92
	8-10 years	26	16.35
	10-15 years	11	6.92
	15-20 years	3	1.89
	> 20 years	11	6.92
Annual Revenues	≤ IDR 300 Million	112	70.44
	> IDR 300 Million - 2.5 Billion	41	25.79
	> IDR 2.5 Billion - 50 Billion	6	3.77

Regarding business age, most enterprises have been in operation for five to seven years (67.92%), indicating relatively established businesses with a degree of operational stability. A smaller portion has operated for eight to ten years (16.35%), while only a few have surpassed a decade in operation. In terms of annual revenue, the data reveal that 70.44% of respondents fall within the micro-enterprise category, with revenues not exceeding IDR 300 million annually. Meanwhile, 25.79% are classified as small enterprises, earning between IDR 300 million and IDR 2.5 billion, and only 3.77% qualify as medium-sized enterprises with revenues ranging from IDR 2.5 billion to IDR 50 billion. This distribution clearly indicates that the study predominantly captures the perspectives of micro and small enterprises, which aligns with the financial characteristics typical of MSMEs in developing economies.

Table 3. Measurement Model Evaluation

Item	Outer Loadings	AVE	Cronbach's Alpha	Composite Reliability
P1	0.866			
P2	0.834			
P3	0.798			
P4	0.654			
P5	0.759	0.617	0.843	0.889
IC1	0.755			
IC2	0.764			
IC3	0.823			
IC4	0.756			
IC5	0.546	0.540	0.783	0.852
CA1	0.695			
CA2	0.729			
CA3	0.714			
CA4	0.674			
CA5	0.742			
CA6	0.739	0.513	0.811	0.863

To assess the measurement model, a series of tests were conducted to ensure indicator reliability, convergent validity, and internal consistency reliability, following the guidelines recommended by Hair et al. (2022) for PLS-SEM analyses. Firstly, the outer loadings for each item were examined to confirm indicator reliability. As shown in Table 3, most items demonstrate satisfactory loading values above the suggested threshold of 0.7. However, a few items, including P4 (0.654), IC5 (0.546), CA1 (0.695), and CA4 (0.674), are exhibit loadings slightly below 0.7. Consistent with the recommendation by Hair et al. (2022), these indicators were retained because their loading values fall within the range of 0.4 to 0.7 and the constructs' convergent validity remains robust (AVE > 0.5).

Convergent validity was evaluated using the average variance extracted (AVE). The AVE values for business performance (0.617), innovation capability (0.540), and competitive advantage (0.513) all exceed the minimum threshold of 0.5, indicating that each construct adequately explains more than half of the variance in its indicators. Next, the internal consistency reliability was verified through Cronbach's alpha and composite reliability scores. All constructs achieved Cronbach's alpha values above 0.7 (business performance = 0.843; innovation capability = 0.783; competitive advantage = 0.811) and composite reliability values exceeding 0.8 (business performance = 0.889; innovation capability = 0.852; competitive advantage = 0.863), confirming that the measurement model possesses satisfactory reliability (Hair et al., 2022).

Table 4. The Discriminant Validity: Heterotrait-Monotrait

Variables	Business Performance	Competitive Advantage	Innovation Capability
Business Performance			
Competitive Advantage	0.494		
Innovation Capability	0.542	0.621	

To verify the distinctiveness of the constructs in this study, discriminant validity was assessed using the heterotrait-monotrait (HTMT) ratio of correlations, as recommended by Hair et al. (2022) for PLS-SEM approach. The HTMT method is widely acknowledged as a robust approach for assessing discriminant validity in variance-based SEM, particularly within the context of PLS-SEM (Hair et al., 2022; Henseler et al., 2015). Table 4 presents the HTMT values among the three latent variables, namely innovation capability, competitive advantage, and business performance. As shown, the highest correlation observed between innovation capability and competitive advantage (HTMT = 0.621), while the HTMT value between innovation capability and business performance is 0.542, and the value between competitive advantage and business performance is 0.494. As all HTMT values fall well below the conservative threshold of 0.85, these results confirm that each construct captures a unique conceptual domain, and thus discriminant validity is firmly established (Hair et al., 2022). These findings collectively establish that the measurement model possesses satisfactory reliability and validity, supporting its use in further structural analysis.

Table 5. Common Method Bias Evaluation: Inner VIF

	Business Performance	Competitive Advantage	Innovation Capability
Business Performance			
Competitive Advantage	1.34		
Innovation Capability	1.34	1	

To mitigate concerns related to common method bias (CMB) which is a potential threat in self-reported survey research, this study employed an inner variance inflation factor (VIF) assessment within the PLS-SEM framework. Following the guidance of Hair et al. (2022), the inner VIF approach is considered a reliable and practical technique to detect collinearity that may arise due to common method variance among latent constructs. As presented in Table 5, the VIF values for competitive advantage and innovation capability as the endogenous variables are ranging from 1.00 to 1.34, which are fall well below the commonly accepted threshold of 3 (Hair et al., 2022) or

3.3 (Kock, 2015). Hence, these results provide empirical assurance that the model is free from substantial common method bias, reinforcing the integrity and credibility of the findings (Hair et al., 2022; Kock, 2015).

Table 6. Hypotheses Testing Results

Hypotheses	Path Coeff.	t-stats	p-values	Results	R-Square	Q-Square
IC → CA	0.504**	8.763	0.000	H1 supported	0.254	0.120
IC → P	0.337*	3.097	0.002	H2 supported		
CA → P	0.256*	3.046	0.002	H3 supported		
IC → CA → P	0.129*	2.747	0.006	H4 supported	0.266	0.153

Note.*p<0.01; **p<0.000.

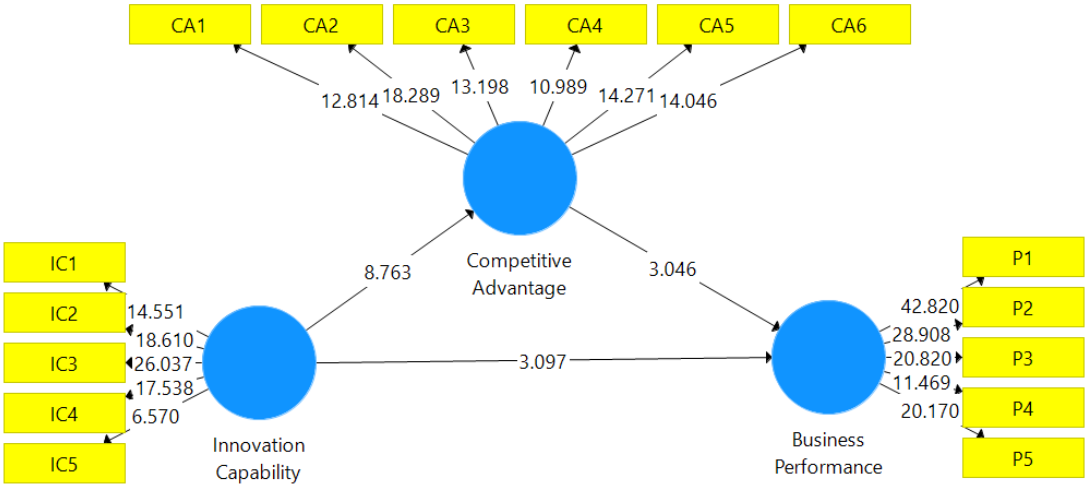

Figure 2. The Structural Model

In accordance with the guidelines for PLS-SEM analysis outlined by Hair et al. (2022), the structural model in this study was rigorously evaluated through the examination of path coefficients, t-statistics, p-values, and coefficient of determination (R^2) to test the proposed hypotheses. As presented in Table 6, the analysis provides compelling empirical support for all hypothesized relationships. Specifically, the direct effect of innovation capability on competitive advantage is significant ($\beta = 0.504$, $t = 8.763$, $p < 0.000$), confirming H1 and indicating that firms with stronger innovation capabilities are more likely to develop a competitive edge ($R^2 = 0.254$). Likewise, innovation capability exerts a positive and significant direct impact on business performance ($\beta = 0.337$, $t = 3.097$, $p = 0.002$), supporting H2.

Moreover, competitive advantage also demonstrates a significant positive effect on business performance ($\beta = 0.256$, $t = 3.046$, $p = 0.002$), validating H3. Notably, the mediation analysis reveals that competitive advantage partially mediates the relationship between innovation capability and business performance, with an indirect effect of 0.129 ($t = 2.747$, $p = 0.006$), thereby supporting H4. Following the criteria suggested by Hair et al. (2022), this pattern of results classifies competitive advantage as a complementary partial mediator, given that both the direct and indirect paths are statistically significant and move in the same direction. Collectively, the model accounts for 26.6% of the variance in business performance, underscoring the modest explanatory power of the proposed framework.

Additionally, this study employed the blindfolding procedure to further assess the model's predictive accuracy, as recommended by Hair et al. (2022). The Q^2 values obtained for the endogenous constructs are 0.120 (competitive advantage) and 0.153 (business performance). According to Hair et al. (2022), Q^2 values greater than zero suggest that the model has predictive capability for a particular endogenous construct. Therefore, with both endogenous have Q^2 values above the threshold of zero, indicating that the model possesses acceptable predictive relevance. These results confirm that the proposed structural model not only explains substantial variance

(R^2) in the key outcomes but also demonstrates satisfactory predictive accuracy, reinforcing the robustness of the theoretical framework and its applicability in the MSMEs context.

Table 7. Effect Size (f^2)

	Business Performance	Competitive Advantage	Innovation Capability
Business Performance			
Competitive Advantage	0.067		
Innovation Capability	0.115	0.340	

Furthermore, this study further assessed the contribution of each exogenous construct to its corresponding endogenous variable by examining effect sizes (f^2). The effect size quantifies the magnitude of an exogenous construct's impact on an endogenous construct, beyond what is already explained by other predictors in the model (Hair et al., 2022). According to the guidelines provided by Cohen (1988), f^2 values of 0.02, 0.15, and 0.35 correspond to small, medium, and large effects, respectively. As presented in Table 7, innovation capability exerts a moderate effect on competitive advantage, with an f^2 value of 0.340, suggesting that it plays a substantial role in shaping a firm's competitive positioning. In addition, innovation capability demonstrates a small-to-moderate effect on business performance ($f^2 = 0.115$), indicating that its direct influence, while present, is relatively modest. Meanwhile, competitive advantage shows a small effect on business performance ($f^2 = 0.067$), implying that while it contributes to performance outcomes, its effect is not dominant when compared to innovation capability. Based on these thresholds, the findings confirm that innovation capability not only plays a pivotal role in enhancing competitive advantage but also moderately contributes to business performance, hence, underscoring its strategic value in the MSME context.

Discussion

The results of this study shed important light on the intricate relationships among innovation capability, competitive advantage, and business performance within the context of MSMEs. By rigorously testing the proposed hypotheses through the PLS-SEM approach, the analysis confirms that innovation capability significantly drives competitive advantage, which in turn enhances business performance. Moreover, the evidence that competitive advantage functions as a complementary partial mediator reinforces the notion that innovation capability alone may not sufficient. Rather, its positive effects are amplified when organizations successfully convert innovative efforts into distinct competitive positioning.

Beyond its direct impact, this study demonstrates that innovation capability is instrumental in cultivating a robust competitive advantage, a finding that echoes earlier research (Exposito & Sanchis-Llopis, 2018b; Kolbe et al., 2022; Matekenya & Moyo, 2022; Siregar et al., 2025; Widjajanti & Jumbri, 2025). Achieving and sustaining competitive advantage hinges on a firm's ability to recognize opportunities, mobilize resources, and transform them into unique offerings that meet evolving market demands (Lee & Yoo, 2019). Organizations adept at navigating environmental turbulence through innovation are more likely to deliver differentiated value propositions, thereby securing a favorable position relative to competitors (Lee & Yoo, 2019).

In addition, consistent with prior empirical evidence, the direct positive influence of innovation capability on business performance underscores its strategic importance for MSMEs (Bekata & Kero, 2025; Quintero Sepúlveda & Zúñiga Collazos, 2025; Nuryakin, 2024; Sari et al., 2023; Jalil et al., 2022). As firms strengthen their capacity to innovate, they are better positioned to create value, deliver superior products and services, and adapt effectively to shifting market conditions (Otache, 2024; Otache & Usang, 2022). This observation also aligns with a substantial body of literature identifying innovation as a fundamental driver of firm performance (Athiyah & Darmawan, 2025; Darmawan, 2022; Darmawan & Anugrahani, 2025; Kafetzopoulos & Psomas, 2015; Khoiri & Darmawan, 2024; Matekenya & Moyo, 2022; Saunila, 2016; Shafi, 2021). Importantly, innovation contributes to both tangible financial gains and broader intangible benefits, solidifying its role as an indispensable asset for sustainable growth (Shafi, 2021). Conversely, MSMEs that neglect to invest in innovation risk losing relevance and resilience in

today's volatile business environment (Matekenya & Moyo, 2022), highlighting the criticality of continuous innovation for long-term competitiveness.

Furthermore, the significant and positive effect of competitive advantage on business performance reaffirms its status as a vital strategic asset for MSMEs, consistent with the findings of Otache (2024) and Tu and Wu (2021). Prior studies have robustly established that cultivating a distinctive competitive edge contributes to superior financial outcomes and operational efficiency (Kiyabo & Isaga, 2020). This reinforces the practical imperative for MSMEs to channel innovative efforts into building and sustaining competitive advantages that directly translate into enhanced performance metrics.

Notably, the validated mediating role of competitive advantage provides fresh insights into how innovation capability exerts its influence on performance outcomes. The results indicate that competitive advantage acts as a key conduit, strengthening the pathway from innovation to superior business results as indicates by previous studies (Kiyabo & Isaga, 2020; Exposito & Sanchis-Llopis, 2018; Pisano, 2017). This mediation effect substantiates the theoretical premise that dynamic capabilities, such as innovation, must be harnessed strategically to yield sustained performance benefits through the creation of defensible competitive positions (Pisano, 2017). Collectively, these findings highlight the imperative for MSMEs to integrate innovation-driven strategies with deliberate efforts to cultivate and protect their competitive advantage, ensuring resilience and sustained growth in increasingly dynamic markets.

Conclusion and Implication

This study advances the understanding of how innovation capability and competitive advantage collectively contribute to the performance of MSMEs. By empirically validating the direct and indirect pathways among these constructs, the findings confirm that innovation capability serves as a pivotal driver not only of competitive advantage but also of superior business performance. More importantly, the evidence reveals that competitive advantage plays a complementary partial mediating role in the innovation capability–performance link, a result that aligns well with the dynamic capabilities perspective. This underscores that merely possessing innovation capability is insufficient unless it is strategically leveraged to develop and sustain a defensible competitive position in the market.

These insights extend the ongoing discourse on MSME growth by demonstrating that competitive advantage is both a key antecedent and a critical mechanism that amplifies the positive impact of innovation efforts on performance outcomes. Collectively, the study reaffirms the importance of prioritizing innovation initiatives as a foundation for strengthening competitive advantage, thereby positioning MSMEs to navigate competitive pressures and achieve sustained success. While the model's explanatory power is modest, the relationships established provide a robust basis for both scholarly inquiry and practical application.

From a theoretical standpoint, this study provides meaningful contributions by empirically demonstrating that competitive advantage is a vital mediator in the nexus between innovation capability and MSMEs' performance. This finding reinforces the dynamic capabilities perspective, which posits that firms must continuously integrate, build, and reconfigure resources to respond to changing environments and achieve a sustainable competitive edge. By evidencing that innovation capability alone does not automatically translate into superior performance without being transformed into competitive advantage, this research enriches the theoretical understanding of how dynamic capabilities operate within the MSMEs context, particularly in emerging economies.

Practically, these insights carry significant implications for MSME owners and managers striving to enhance firm performance in competitive and turbulent markets. Managers should view investment in innovation not as an isolated activity but as a strategic lever to cultivate unique strengths that set their businesses apart from rivals. Concretely, this means developing structured processes to capture, deploy, and protect innovative ideas, ensuring they translate into distinctive products, services, or operational improvements that customers value. Furthermore, MSME leaders should focus on nurturing a culture that encourages creativity and adaptability, while

simultaneously reinforcing capabilities that defend and sustain their competitive advantage over time. By doing so, firms can maximize the returns on their innovation investments and build a resilient foundation for long-term growth and profitability.

Limitations and Directions for Future Research

While this study offers valuable insights into the interplay between innovation capability, competitive advantage, and MSME performance, it is not without its limitations. First, the respondent pool was predominantly composed of MSMEs operating within the culinary industry, which accounted for approximately 42.77% of the total sample. This sectoral dominance may constrain the generalizability of the findings across the broader landscape of MSMEs, particularly in sectors that exhibit differing operational dynamics or innovation patterns. Second, a significant majority of the participating firms were classified as micro-enterprises, representing 70.44% of the total sample. While this reflects the structural reality of MSME demographics in many developing economies, it may limit the applicability of the results to small and medium-sized enterprises. Hence, future research is encouraged to adopt a more balanced sampling strategy that captures a wider cross-section of industries beyond culinary-focused enterprises. Additionally, future studies should strive to ensure a more equitable distribution across the micro, small, and medium enterprise classifications. Such diversification would not only offer a more holistic understanding of MSME dynamics but also provide richer insights into how innovation and competitive strategies vary according to firm size and industry context.

Acknowledgment

This research would not have been possible without the invaluable support of all parties involved. The authors would like to express their sincere gratitude to the Center for Development of Management Studies, Department of Management, Faculty of Business and Economics, Universitas Islam Indonesia, for their trust and financial support. This support has enabled us to conduct this study comprehensively and to produce findings that contribute meaningfully to the advancement of management scholarship and practice in Indonesia.

References

Abeysekara, N., Wang, H., & Kuruppuarachchi, D. (2019). Effect of supply-chain resilience on firm performance and competitive advantage. *Business Process Management Journal*, *25*(7), 1673–1695. https://doi.org/10.1108/BPMJ-09-2018-0241

Agostini, L., Nosella, A., Sarala, R., & Nkeng, C. (2025). Emerging trends around strategic flexibility: a systematic review supported by bibliometric techniques. *Management Decision*, *63*(6), 1835–1881. https://doi.org/10.1108/MD-02-2023-0135

Andrianto, R. (2024, March 7). *Peran UMKM RI Terhadap Ekonomi Terbesar se-ASEAN & G20, Sri Mulyani: UMKM memiliki peran besar dalam perekonomian*. CNBC Indonesia. https://www.cnbcindonesia.com/research/20240307164553-128-520510/sri-mulyani-peran-umkm-ri-terhadap-ekonomi-terbesar-se-asean-g20

Ansoff, H. I. (1965). *Corporate Strategy*. McGraw-Hill.

Athiyah, F., & Darmawan, B. A. (2025). Analysis of the of customer orientation on MSMEs' performance: testing the mediating role of innovativeness. *Management and Economics Journal*, *9*(1), 81–96. https://doi.org/10.18860/mec-j.v9i1.30071

Bamel, N., Dhir, S., & Sushil, S. (2019). Inter-partner dynamics and joint venture competitiveness: a fuzzy TISM approach. *Benchmarking: An International Journal*, *26*(1), 97–116. https://doi.org/10.1108/BIJ-02-2018-0041

Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, *17*(1), 99–120. https://doi.org/10.1177/014920639101700108

Bekata, A. T., & Kero, C. A. (2025). Modeling the significance of strategic orientation for innovation capabilities and enterprise performance: evidence from Ethiopian SMEs. *Cogent Business & Management*, *12*(1). https://doi.org/10.1080/23311975.2024.2440122

Cheng, C. C. J., & Chen, J. (2013). Breakthrough innovation: the roles of dynamic innovation capabilities and open innovation activities. *Journal of Business & Industrial Marketing*, *28*(5), 444–454. https://doi.org/10.1108/08858621311330281

Cohen, J. (1988). *Statistical Power Analysis for the Behavioral Sciences* (2nd Edition). Routledge. https://doi.org/10.4324/9780203771587

Cohen, S. K., & Caner, T. (2016). Converting inventions into breakthrough innovations: the role of exploitation and alliance network knowledge heterogeneity. *Journal of Engineering and Technology Management*, *40*, 29–44. https://doi.org/10.1016/j.jengtecman.2016.03.002

Darmawan, B. A. (2022). Improving MSMEs operational performance: the role of knowledge management and product innovation. In M. M. Rahman (Ed.), *Proceedings of the International Conference on Industrial Engineering & Operations Management* (pp. 2369–2376). IEOM Society International .

Darmawan, B. A., & Anugrahani, R. M. D. (2025). Play the Second Fiddle: Examining the Role of Innovation in Knowledge Management-Operational Performance Relationship. In A. Ullah & S. Anwar (Eds.), *Lecture Notes in Networks and Systems* (Vol. 1248, pp. 699–709). Springer. https://doi.org/10.1007/978-981-96-1758-6_58

Exposito, A., & Sanchis-Llopis, J. A. (2018a). Innovation and business performance for Spanish SMEs: new evidence from a multi-dimensional approach. *International Small Business Journal: Researching Entrepreneurship*, *36*(8), 911–931. https://doi.org/10.1177/0266242618782596

Exposito, A., & Sanchis-Llopis, J. A. (2018b). Innovation and business performance for Spanish SMEs: New evidence from a multi-dimensional approach. *International Small Business Journal: Researching Entrepreneurship*, *36*(8), 911–931. https://doi.org/10.1177/0266242618782596

Fainshmidt, S., Pezeshkan, A., Lance Frazier, M., Nair, A., & Markowski, E. (2016). Dynamic capabilities and organizational performance: a meta-analytic evaluation and extension. *Journal of Management Studies*, *53*(8), 1348–1380. https://doi.org/10.1111/joms.12213

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

Hamidah, H., Putra, H. R., & Putri, R. (2024, September 28). *Daya Beli Masyarakat Menurun, Teten Masduki: UMKM Ikut Terdampak*. Tempo. https://bisnis.tempo.co/read/1921925/daya-beli-masyarakat-menurun-teten-masduki-umkm-ikut-terdampak

Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, *43*(1), 115–135. https://doi.org/10.1007/s11747-014-0403-8

Hogan, S. J., Soutar, G. N., McColl-Kennedy, J. R., & Sweeney, J. C. (2011). Reconceptualizing professional service firm innovation capability: scale development. *Industrial Marketing Management*, *40*(8), 1264–1273. https://doi.org/10.1016/j.indmarman.2011.10.002

Hussaini, U., & Muhammed, U. D. (2018). The effect of internal control on performance of commercial banks in Nigeria. *International Journal of Management Research and Review*, *8*(2), 13–32.

Ilmudeen, A., Bao, Y., Alharbi, I. M., & Zubair, N. (2021). Revisiting dynamic capability for organizations' innovation types. *European Journal of Innovation Management*, *24*(2), 507–532. https://doi.org/10.1108/EJIM-06-2019-0144

Jalil, M. F., Ali, A., & Kamarulzaman, R. (2022). Does innovation capability improve SME performance in Malaysia? the mediating effect of technology adoption. *The International*

Journal of Entrepreneurship and Innovation, *23*(4), 253–267. https://doi.org/10.1177/14657503211048967

Junaidi, M. (2023, July 15). *UMKM Hebat, Perekonomian Meningkat, Sri Mulyani: Meminta semua Kementerian memperbaiki pengelolaan dana sektor UMKM*. Direktorat Jenderal Perbendaharaan Kementerian Keuangan RI. https://djpb.kemenkeu.go.id/portal/id/berita/lainnya/opini/4133-umkm-hebat,-perekonomian-nasional-meningkat.html

Kafetzopoulos, D., & Psomas, E. (2015). The impact of innovation capability on the performance of manufacturing companies. *Journal of Manufacturing Technology Management*, *26*(1), 104–130. https://doi.org/10.1108/JMTM-12-2012-0117

Keskin, H., Ayar Şentürk, H., Tatoglu, E., Gölgeci, I., Kalaycioglu, O., & Etlioglu, H. T. (2021). The simultaneous effect of firm capabilities and competitive strategies on export performance: the role of competitive advantages and competitive intensity. *International Marketing Review*, *38*(6), 1242–1266. https://doi.org/10.1108/IMR-09-2019-0227

Khoiri, A. R., & Darmawan, B. A. (2024). It takes two to tango: how customer orientation and innovation behavior synergize to drive MSMEs' performance. *Journal of Business and Management Review*, *5*(12), 1123–1136. https://doi.org/https://doi.org/10.47153/jbmr.v5i12.1193

Kiyabo, K., & Isaga, N. (2020). Entrepreneurial orientation, competitive advantage, and SMEs' performance: application of firm growth and personal wealth measures. *Journal of Innovation and Entrepreneurship*, *9*(1), 12. https://doi.org/10.1186/s13731-020-00123-7

Kock, N. (2015). Common method bias in PLS-SEM. *International Journal of E-Collaboration*, *11*(4), 1–10. https://doi.org/10.4018/ijec.2015100101

Kolbe, D., Frasquet, M., & Calderon, H. (2022). The role of market orientation and innovation capability in export performance of small- and medium-sized enterprises: a Latin American perspective. *Multinational Business Review*, *30*(2), 289–312.

Lawson, B., & Samson, D. (2001). Developing innovation capability in organisations: a dynamic capabilities approach. *International Journal of Innovation Management*, *05*(03), 377–400. https://doi.org/10.1142/S1363919601000427

Lee, K., & Yoo, J. (2019). How does open innovation lead competitive advantage? a dynamic capability view perspective. *PLOS ONE*, *14*(11), e0223405. https://doi.org/10.1371/journal.pone.0223405

Matekenya, W., & Moyo, C. (2022). Innovation as a driver of SMME performance in South Africa: a quantile regression approach. *African Journal of Economic and Management Studies*, *13*(3), 452–467. https://doi.org/10.1108/AJEMS-06-2021-0306

Nuryakin, N. (2024). Entrepreneurial orientation and SME export performance: unveiling the mediating roles of innovation capability and international networking accessibility in the brass industry. *Journal of Entrepreneurship, Management and Innovation*, *20*(1), 30–46. https://doi.org/10.7341/20242012

Otache, I. (2024). Innovation capability, strategic flexibility and SME performance: the roles of competitive advantage and competitive intensity. *African Journal of Economic and Management Studies*, *15*(2), 248–262. https://doi.org/10.1108/AJEMS-06-2023-0221

Otache, I., & Usang, O. U. E. (2022). Innovation capability and SME performance in times of economic crisis: does government support moderate? *African Journal of Economic and Management Studies*, *13*(1), 76–88. https://doi.org/10.1108/AJEMS-08-2021-0362

Paas, L. J., & Morren, M. (2018). Please do not answer if you are reading this: respondent attention in online panels. *Marketing Letters*, *29*(1), 13–21. https://doi.org/10.1007/s11002-018-9448-7

Perto, P. (2024, September 6). *Omzet UMKM 2024 Turun karena Daya Beli Masyarakat Anjlok*. Telusur. https://telusur.co.id/detail/omzet-umkm-2024-turun-karena-daya-beli-masyarakat-anjlok

Pisano, G. P. (2017). Toward a prescriptive theory of dynamic capabilities: connecting strategic choice, learning, and competition. *Industrial and Corporate Change*, *26*(5), 747–762. https://doi.org/10.1093/icc/dtx026

Quintero Sepúlveda, I. C., & Zúñiga Collazos, A. (2025). Innovation capabilities, innovation strategies and performance: an empirical analysis in SMEs. *Technology Analysis & Strategic Management*, *37*(1), 19–34. https://doi.org/10.1080/09537325.2023.2280523

Sari, D., Kusuma, B. A., Sihotang, J., & Febrianti, T. (2023). The role of entrepreneurial marketing & innovation capability in the performance of SMEs during covid-19 pandemic: evidence of MSMEs in West Java. *Cogent Business & Management*, *10*(1). https://doi.org/10.1080/23311975.2023.2194091

Saunila, M. (2016). Performance measurement approach for innovation capability in SMEs. *International Journal of Productivity and Performance Management*, *65*(2), 162–176. https://doi.org/10.1108/IJPPM-08-2014-0123

Sekaran, U., & Bougie, R. (2016). *Research Methods for Business: A Skill-Building Approach* (7th ed.). Wiley & Sons.

Shafi, M. (2021). Sustainable development of micro firms: examining the effects of cooperation on handicraft firm's performance through innovation capability. *International Journal of Emerging Markets*, *16*(8), 1634–1653. https://doi.org/10.1108/IJOEM-11-2019-0989

Sigalas, C. (2015). Competitive advantage: the known unknown concept. *Management Decision*, *53*(9), 2004–2016. https://doi.org/10.1108/MD-05-2015-0185

Siregar, O. M., Selwendri, N. A., & Nasution, M. D. T. P. (2025). Why do market orientation, product innovation capability, marketing performance, and competitiveness of small and medium-scale enterprises differ. *International Journal of Productivity and Quality Management*, *45*(2), 165–186. https://doi.org/10.1504/IJPQM.2025.146636

Tajvidi, M., & Karami, A. (2015). Innovation Capacity. In *Product Development Strategy* (pp. 125–146). Palgrave Macmillan UK. https://doi.org/10.1057/9781137501394_5

Tariq, A., Ehsan, S., Badir, Y. F., Memon, M. A., & Khan Sumbal, M. S. U. (2023). Does green process innovation affect a firm's financial risk? The moderating role of slack resources and competitive intensity. *European Journal of Innovation Management*, *26*(4), 1168–1185. https://doi.org/10.1108/EJIM-05-2021-0265

Teece, D. J. (2007). Explicating dynamic capabilities: the nature and microfoundations of (sustainable) enterprise performance. *Strategic Management Journal*, *28*(13), 1319–1350. https://doi.org/10.1002/smj.640

Teece, D. J. (2018). Business models and dynamic capabilities. *Long Range Planning*, *51*(1), 40–49. https://doi.org/10.1016/j.lrp.2017.06.007

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

Tu, Y., & Wu, W. (2021). How does green innovation improve enterprises' competitive advantage? The role of organizational learning. *Sustainable Production and Consumption*, *26*, 504–516. https://doi.org/10.1016/j.spc.2020.12.031

Widjajanti, K., & Jumbri, I. A. (2025). Technopreneurship, innovation capability and social media marketing as catalysts for competitive advantages: a study of batik MSMEs in Pekalongan, Indonesia. *Multidisciplinary Science Journal*, *7*(8), 2025367. https://doi.org/10.31893/multiscience.2025367

Zhang, C., & Conrad, F. G. (2014). Speeding in Web Surveys: The tendency to answer very fast and its association with straightlining. *Survey Research Methods*, *8*(22), 127–135.