

The Role of Innovation in Enhancing Competitive Advantage through Market Orientation and Business Environment Factors: A Proposed Framework

Ahmed Rashed Alketebi¹ Siti Norbaya Binti Yahaya²

Faculty Of Technology Management And Technopreneur ship (FPTT) Universiti Teknikal Malaysia Melaka (UTeM) Hang Tuah Jaya, 76100 Durian Tunggal, Melaka, Malaysia

DOI: <https://dx.doi.org/10.47772/IJRISS.2026.10100378>

Received: 20 January 2026; Accepted: 26 January 2026; Published: 07 February 2026

ABSTRACT

In today's rapidly changing, competitive business environment, firms must rely on innovation to achieve and sustain competitive advantage. Innovation has become a cornerstone of national development strategies, especially among SMEs that constitute over 94% of the total companies in the countries. This paper examines how innovation contributes to competitive advantage, how market orientation mediates this relationship, and how business environment factors (such as dynamism, turbulence, institutional environment) moderate the effectiveness of innovation. Drawing on the resource-based view (RBV) and dynamic capabilities perspective, we propose a conceptual model and review empirical evidence. The findings suggest that innovation positively influences competitive advantage; that market orientation is a key mechanism (mediator) translating innovation into competitive advantage; and that the strength of that relationship is contingent upon the business environment (moderator). Implications for managers and scholars are discussed. In conclusion, the study underscores the need for SMEs to not only innovate but to do so with a strategic market orientation and an acute awareness of the external business landscape. These insights offer practical implications for SME managers, policymakers, and innovation hubs aiming to build resilient, high-performing enterprises in the region.

Keywords: Innovation, Competitive Advantage, Market Orientation, Business Environment, Proposed framework.

INTRODUCTION

In an era of globalization, technological change, shifting customer demands and intensifying competition, firms cannot rely solely on cost-leadership or scale alone to stay ahead. Innovation — whether in product, process, service or business model — has emerged as a vital source of competitive advantage (e.g., see findings in Retnawati et al., 2019). At the same time, the concept of market orientation — i.e., a firm's culture and behaviours directed at continuously sensing, creating and responding to customer and competitor information — has been shown to enhance how firms convert capabilities into competitive outcomes (e.g., Widjajanti & Sugiyanto, 2023). Moreover, external business environment factors (such as environmental dynamism, institutional support, turbulence) influence how innovation and market orientation translate into competitive advantage (e.g., Ahmad et al., 2021; Alihusna & Juharsah, 2020).

Despite these insights, there remains a lack of clarity regarding the precise mechanisms through which market orientation enhances the effectiveness of innovation. Research has yet to fully elucidate how customer-focused strategies and inter-functional coordination interact with innovation to generate superior competitive outcomes (Royo-Vela et al., 2022; Kusa et al., 2024). Furthermore, existing studies often lack sector-specific analyses, limiting their applicability across diverse industries. For instance, while some studies focus on manufacturing sectors such as automobile spare parts production (Adiguzel & Sonmez Cakir, 2022) and manufacturing flexibility capabilities (Jafari et al., 2022), others examine service-oriented industries like tourism and hospitality (De la Gala-Velasquez et al., 2023). This heterogeneity highlights the need for more comprehensive research that addresses these dynamics within a broader range of contexts (Durst et al., 2023; Rebiazina et al., 2024).

Adding to the complexity are external environmental factors such as market turbulence, technological change, and competitive intensity. These factors significantly influence the relationship between innovation, market orientation, and competitive advantage. For example, research indicates that market turbulence can amplify or constrain the effectiveness of entrepreneurial and market-oriented strategies. Furyanah et al. (2024) found that market turbulence moderates the relationship between entrepreneurial orientation and marketing performance, underscoring the importance of adapting strategies to external conditions. Similarly, Baquero (2024) demonstrated that environmental dynamism moderates the impact of green entrepreneurial orientation and innovation on performance, revealing the nuanced ways external factors shape strategic outcomes.

In addition to external factors, internal organizational enablers such as dynamic capabilities, organizational agility, and knowledge management play a critical role in facilitating the integration of innovation and market orientation. Dynamic capabilities, which include sensing, seizing, and reconfiguring resources, enable firms to respond effectively to rapidly changing market conditions and technological advancements (Kurniawan et al., 2021; Christiansson & Rentzhog, 2020). Organizational agility, meanwhile, enhances a firm's ability to adapt to environmental changes, optimize resources, and align strategies with customer needs, ultimately sustaining competitive advantage. Furthermore, inter-functional coordination fosters collaboration and communication across departments, ensuring that innovation efforts are aligned with market intelligence and strategic objectives (Gerdoçi, Bardhi, & Abazi-Alili, 2023).

Although research has acknowledged the importance of these factors, there remains a lack of comprehensive understanding regarding their interplay within the innovation-market orientation-competitive advantage nexus. Addressing these gaps is crucial for advancing theoretical frameworks that account for both sector-specific dynamics and the moderating effects of environmental and organizational factors. For instance, Mansouri et al. (2022) highlighted the mediating role of market orientation between internal marketing and entrepreneurial orientation, while Pérez-Orozco et al. (2024) explored the role of marketing management in mediating the relationship between digital capabilities and product innovation. These studies point to the complexity of these relationships and the need for further exploration. The remainder of the paper is organised as follows: Section 2 reviews the literature and develops hypotheses; Section 3 methodology; Section 4 discusses implications and limitations; Section 5 concludes.

2. Theoretical literature and hypothesis development

This study is grounded in two key theoretical perspectives: the Resource-Based View (RBV) and the Dynamic Capabilities Theory (DCT). According to the RBV (Barney, 1991), a firm's internal resources and capabilities—if they are valuable, rare, inimitable, and non-substitutable—can generate sustainable competitive advantage. Innovation represents such a strategic capability, as it allows firms to develop unique products, processes, or business models that competitors find difficult to replicate (Barney, 1991). Complementing RBV, the Dynamic Capabilities Theory emphasizes a firm's ability to integrate, build, and reconfigure internal and external competencies to respond to rapidly changing environments (Teece, Pisano et al., 1997). From this lens, innovation and market orientation can be viewed as dynamic capabilities that enable firms to sense market changes, seize new opportunities, and reconfigure resources to maintain competitive advantage (Teece et al., 1997). Building on these theories, the proposed framework of this study proposes that innovation directly enhances competitive advantage, that this relationship is mediated by market orientation, and that business environment factors moderate these effects.

2.1 Innovation and Competitive Advantage

Innovation refers to the process of developing new or improved products, services, or processes that deliver superior value to customers. Within the RBV and DCT perspectives, innovation is viewed as a strategic capability that allows firms to differentiate themselves and sustain superior performance. Innovation is broadly defined as the introduction of new or significantly improved products, processes, services or business models. According to the resource-based view (RBV) and dynamic capabilities theory, innovation represents a valuable, rare, and (potentially) inimitable resource that can underpin sustainable competitive advantage.

The empirical literature further supports the role of innovation in enhancing competitive advantage. For instance, studies by Aniyati and Indayani (2023) and Putri and Setiawan (2022) demonstrate that innovation

positively impacts marketing performance and competitive positioning through its influence on the firm's adaptability and product differentiation. In their study of Malaysian SMEs, Abdullah et al. (2022) also highlighted that innovation, particularly product and marketing innovation, significantly contributes to business performance when integrated with effective design and resource management. Moreover, Tian et al. (2024) found that innovation orientation, particularly during early-stage product development, enhances internal competition and long-term market strength. The importance of innovation is amplified in the UAE's SME landscape, where national strategies like Vision 2030 actively promote innovation-led economic diversification. As highlighted by Almehairbi et al. (2023), open innovation strategies supported by governmental infrastructure in Dubai play a key role in enabling SMEs to compete both locally and internationally. The UAE's business ecosystem provides favorable conditions such as innovation hubs, technology funding, and strategic partnerships that incentivize innovation as a primary lever for competitive success.

Empirical studies support the positive relationship between innovation and competitive advantage. For example, Retnawati et al. (2019) found that innovation had a significant positive impact on competitive advantage in Indonesia's craft industry. Similarly, Widjajanti & Sugiyanto (2023) demonstrated that innovation positively affected competitive advantage and business performance among SMEs.

From a Contingency Theory perspective, the benefits of innovation on competitive advantage are further contextualized by the external environment. As argued by Gutiérrez-Broncano et al. (2024) and Baquero (2024), firms that operate in volatile or uncertain environments gain disproportionately from innovation due to their increased need for adaptive strategies and dynamic resource alignment. In such conditions, innovation becomes more than a performance driver it becomes a survival mechanism. This is particularly relevant for UAE SMEs, which often face global competition, technological disruption, and shifting consumer expectations. Studies such as Aljumah, Nuseir, and El Refae (2022) confirm that innovation-related assets, especially those related to analytics and digital capabilities, mediate the path to sustainable competitive advantage. In alignment with these findings, Dewangga and Nugroho (2024) also reinforce that product knowledge and market orientation must be integrated with innovation strategies to unlock superior firm outcomes. Innovation in UAE SMEs is not only stimulated by internal capabilities but also reinforced by institutional support and external market signals.

Given this theoretical and empirical grounding, innovation is proposed as a central driver of competitive advantage in the current study. RBV, DCT, and contextual environmental fit (Contingency Theory), this research asserts that SMEs in the UAE that prioritize innovation be it in product development, process refinement, or organizational transformation are more likely to outperform their competitors. As such, the following hypothesis is posited:

H1: Innovation has a positive and significant effect on competitive advantage amongst SMEs in UAE.

Innovation and market orientation

Innovation plays a foundational role in strengthening market orientation, particularly within SMEs striving to maintain relevance and competitive positioning in dynamic business environments. Empirical evidence continues to support the proposition that innovation contributes directly to the strengthening of market orientation. For example, Fatonah and Haryanto (2022) argue that firms with higher levels of product and process innovation tend to be more attuned to market signals and customer expectations. In their study of SMEs under uncertain conditions, innovation was found to significantly enhance firms' responsiveness to market turbulence and technological change. Similarly, Dewangga and Nugroho (2024) observed that product knowledge and innovation capabilities are significant predictors of market orientation levels among Indonesian MSMEs. Transferring this insight to the UAE setting, SMEs that actively pursue innovative practices especially in techintensive or customer-facing sectors are better equipped to anticipate demand shifts and adapt their offerings accordingly. This capacity becomes even more critical in a globalized, multicultural economy like the UAE, where customer expectations are diverse and continuously evolving. By leveraging innovation as a foundation, SMEs can not only survive but thrive by crafting customer-centric strategies and outperforming less responsive competitors (Chiu et al., 2023; Karaev & Mercan, 2023).

H2: Innovation has a positive and significant relationship with market orientation.

Market Orientation and Competitive Advantage

Market orientation is widely recognized as a strategic posture that enables firms to better understand, respond to, and anticipate customer and market needs, leading to superior competitive positioning. At its core, market orientation encompasses three dimensions: customer orientation, competitor orientation, and inter-functional coordination. These components foster a proactive culture of knowledge generation, dissemination, and responsiveness within an organization, thereby enhancing decision-making and strategic alignment. Firms that actively monitor market changes and align their offerings with the evolving preferences of their customers tend to achieve higher levels of innovation and operational agility.

In the SME context, adopting a strong market orientation can serve as a vital mechanism for overcoming resource constraints and achieving sustainable competitive advantage (Putri & Setiawan, 2022; Abdullah et al., 2023). By embedding customer feedback into product and service development processes, SMEs can deliver value propositions that are not only differentiated but also deeply aligned with market demand. Moreover, competitor orientation allows firms to benchmark their offerings, strategically position themselves, and respond quickly to emerging threats. Inter-functional coordination ensuring collaboration between departments such as R&D, marketing, and customer service further enhances internal synergy and accelerates response time to external market shifts. Research by Bamfo and Kraa (2019) demonstrated that market-oriented SMEs tend to outperform their competitors, particularly when market intelligence is integrated effectively into innovation and operations. In this regard, the UAE provides a fertile ground for market orientation strategies, as government support programs (e.g., Smart Dubai, Khalifa Fund) and digital infrastructure enable SMEs to access market insights and integrate them into decision-making processes.

Empirical findings across emerging and developed economies affirm that market orientation positively correlates with firm performance and competitive advantage, particularly when implemented alongside innovation strategies (Ikbar et al., 2023; Karaev & Mercan, 2023). In the UAE, where SMEs are increasingly leveraging digital platforms, CRM systems, and data analytics, market orientation has evolved beyond traditional marketing practices to encompass real-time responsiveness and customer co-creation. This evolution enhances firms' ability to personalize offerings and develop long-term customer relationships, both of which are crucial for sustaining competitive advantage. Studies such as Abrokwah-Larbi (2024) have emphasized the centrality of customer focus in achieving superior business outcomes in SMEs across emerging markets, reinforcing the strategic role of market orientation. Furthermore, the integration of market orientation with organizational learning and entrepreneurial behaviour creates a feedback loop that continuously informs innovation and strengthens market relevance (Fatonah & Haryanto, 2022; Razak et al., 2024). In this context, it is posited that firms with a strong market orientation are more likely to develop competitive capabilities that lead to improved firm performance and long-term viability.

H3: Market orientation has a positive and significant relationship with competitive advantage

Market Orientation as a Mediator

Market orientation refers to an organizational culture and behaviour that emphasizes understanding and satisfying customer needs, monitoring competitors, and coordinating functions to deliver superior value. Firms with high market orientation tend to innovate more effectively because they align innovations with market requirements, thereby ensuring commercial success. Studies show that innovation and market orientation are complementary. Market orientation helps firms identify opportunities for innovation, while innovation provides the means to exploit those opportunities (Yulianingsih et al., 2019; Nasir et al., 2024). Furthermore, market orientation strengthens the impact of innovation on performance by ensuring that new offerings are aligned with customer and market needs.

Empirical evidence supports the mediating role of market orientation. Widjajanti & Sugiyanto (2023) found that market orientation partially mediated the relationship between innovation and business performance among SMEs. Market orientation refers to organisational behaviours that emphasise understanding customer needs, competitor actions, and coordinating across functions to create superior value. It is argued that

innovation alone may not yield competitive advantage unless it is aligned with market needs and properly deployed — market orientation provides the linkage. For example, Widjajanti & Sugiyanto (2023) found that both innovation and market orientation positively influenced competitive advantage via business performance in SME contexts. Separately, research shows that market orientation itself relates positively to competitive advantage. The mediating role of market orientation is especially important for small and medium-sized enterprises (SMEs), which often operate under resource constraints and face intense competitive pressures. In this context, innovation alone may be insufficient to drive performance unless it is embedded within a market-oriented culture that ensures responsiveness to customer needs, competitor actions, and shifting market trends. Market orientation serves as a strategic conduit that transforms innovation initiatives into effective competitive outcomes by facilitating the market fit and strategic alignment of innovations (Aniyati & Indayani, 2023).

Empirical research substantiates this mediating effect. Bamfo and Kraa (2019), in their study of Ghanaian SMEs, revealed that firms with higher levels of market orientation were significantly better at converting innovative activities into enhanced firm performance. Similarly, Abdullah et al. (2023) emphasize that the success of product and marketing innovation hinges on a firm's ability to integrate market insights into its strategic processes—an ability underpinned by strong market orientation. In the UAE, where innovation is heavily promoted through national strategies and digital transformation policies, market orientation acts as a bridge that links internal innovation capacity to real-world market competitiveness (Almehairbi et al., 2023). Moreover, studies such as Pérez-Orozco et al. (2024) demonstrate that market orientation enhances the effectiveness of innovation by ensuring alignment with external demands, improving strategic responsiveness, and increasing organizational agility. These benefits are particularly crucial in environments characterized by rapid change, where failure to align innovation with market realities can result in strategic missteps and resource wastage. Market orientation mediates the relationship between innovation and competitive advantage by ensuring that innovation efforts are grounded in actionable market intelligence and strategically responsive to environmental demands. This mediating role supports the hypothesis:

H4: Market orientation significantly mediates the relationship between innovation and competitive advantage.

Business Environment Factors as Moderators

The business environment encompasses external factors—such as technological dynamism, competitive intensity, regulatory frameworks, and institutional support—that influence firm strategy and performance. From a contingency theory perspective, the impact of innovation on competitive advantage depends on the conditions of the external environment. When environmental dynamism is high, innovation tends to yield greater competitive benefits because firms must constantly adapt to changing market conditions. Conversely, in stable environments, the return on innovation may be lower (Fu et al., 2021; Ahmad et al., 2023). The moderating role of environmental factors has been confirmed in several studies; for instance, Fu et al. (2021) found that the external environment strengthened the positive relationship between innovation capability and SME performance in Pakistan (MDPI Sustainability). Thus, the relationship between innovation and competitive advantage (and possibly between market orientation and competitive advantage) is not uniform—it varies depending on the dynamism and favourability of the business environment.

In favourable or positive environmental conditions, the pathway from innovation to competitive advantage tends to be more robust. These environments are characterized by technological openness, relatively stable market demands, and manageable competition. Such conditions provide a fertile ground for SMEs to leverage innovation effectively, facilitating resource mobilization, strategic alignment, and faster product adoption. Similarly, Almehairbi et al. (2023) found that in the UAE's government-supported innovation ecosystem—reinforced by Vision 2031 and robust digital infrastructure—SMEs were better positioned to convert internal innovation into externally recognized market value. The alignment between innovation and environmental readiness enables firms to capitalize on first-mover advantages, improve brand positioning, and enhance customer loyalty, all of which translate into sustained competitive advantage.

Conversely, in negative or hostile environmental conditions, innovation outcomes can become unpredictable and even counterproductive. High levels of market turbulence, rapidly shifting customer preferences, or intense competitive pressure can disrupt the translation of innovation into strategic gain. In such environments, SMEs often lack the stability or market insight necessary to integrate innovation into their value chains effectively. As Baquero (2024) notes, environmental instability introduces uncertainty in performance outcomes and can

dilute the competitive edge offered by even the most well-designed innovations. Furyanah et al. (2024) further argue that high environmental hostility forces firms into reactive, short-term strategies, which may prevent them from fully leveraging their innovation investments for strategic advantage. This uncertainty is particularly critical for SMEs in the UAE operating in highly saturated sectors such as logistics and retail, where the competitive landscape is constantly evolving due to globalization, digital disruption, and shifting policy priorities.

The moderating role of environmental factors thus underscores the importance of strategic fit between innovation and market conditions. Firms operating in positive environmental settings can more easily exploit their innovation potential, translating it into superior performance. In contrast, those in adverse environments must either adapt their innovation strategies to remain competitive or risk underperforming despite high internal innovation capabilities. Ciacchi and Penco (2024) provide evidence that when firms align innovation with external market dynamics, they are more likely to outperform competitors, even in turbulent industries. This highlights the need for SMEs to assess not only their internal readiness for innovation but also the external landscape in which they operate.

Based on this theoretical and empirical understanding, the study proposes the following hypothesis:

H5: Environmental factors significantly moderate the relationship between innovation and competitive advantage, such that the relationship is stronger under positive environmental conditions and weaker under negative environmental conditions.

Summary of empirical researches and gap

Table 1, summarising several empirical studies that relate to the role of innovation, market orientation (or related strategic orientation), competitive advantage, and business-environment moderators. While none map exactly to your full conceptual model (innovation → competitive advantage, mediated by market orientation, moderated by business environment), these studies offer useful parallels and insights. I highlight methodology and key findings.

Table 1 Summary of discussion study with methodology and finding

No.	Study (Authors, Year)	Context / Sample	Key Variables	Methodology	Key Findings
1	Innovation and Market Orientation: The Effect on Competitive Advantage and Marketing Performance (Retnawati, Irmawati & Leong, 2019)	Natural resource–based craft industry (water hyacinth craft), Semarang Regency, Indonesia	Innovation & Market Orientation → Competitive Advantage → Marketing Performance	Quantitative survey of 150 SMEs; SEM (PLS)	Innovation and market orientation had positive and significant effects on competitive advantage, which in turn positively influenced marketing performance.
2	Competitive Advantages Based on Market Orientation and Innovation (Yulianingsih, Palahudin & Mukmin, 2019)	Bag-craft artisans, Bojong Rangkas Village, Indonesia	Market Orientation & Innovation → Competitive Advantage	Quantitative study; sample of 60 respondents; multiple regression analysis	Both market orientation and innovation positively influenced competitive advantage in the artisan context.

3	The Inter-Relationship between Innovation Capability and SME Performance: The Moderating Role of the External Environment (Fu et al., 2021)	SMEs (textile sector) in Pakistan; n ≈ 335	Innovation Capability → SME Performance; External Environment (Moderator)	Survey of 350 SMEs (335 valid); PLS-SEM	Innovation capability positively affected SME performance; the external environment strengthened the innovation–performance relationship under dynamic conditions.
4	Modelling the Significance of Strategic Orientation for Competitive Advantage and Economic Sustainability (Yang et al., 2022)	Halal SMEs in Malaysia	Strategic Orientations (customer, competitor, technology, network, innovation) → Competitive Advantage → Economic Sustainability	Quantitative survey (n ≈ 190–200+); hybrid SEM–Neural Network analysis	Innovation orientation had a strong positive influence on competitive advantage; environmental and strategic orientations are critical for sustained competitive advantage.
5	How Do Market Orientation and Innovation... (Widjajanti & Sugiyanto, 2023)	SMEs in Indonesia	Market Orientation & Innovation → Competitive Advantage → Business Performance	Survey; structural modelling with reported coefficients	Innovation had a stronger effect on competitive advantage ($\beta = 0.432$) than market orientation ($\beta = 0.282$); both effects were positive and significant.

In light of the summary of previous studies reported in this study, it is clear that there is a gap in the theoretical contribution, especially when it comes to the context and methods which have led to the above findings. Although extensive research has examined the relationship between innovation and competitive advantage, most existing studies have focused primarily on their direct link, often overlooking the underlying mechanisms and contextual conditions that shape this relationship. Previous empirical evidence confirms that innovation contributes positively to firm competitiveness (Retnawati et al., 2019; Widjajanti & Sugiyanto, 2023), while market orientation also enhances organizational performance (Yulianingsih et al., 2019). However, few studies have explored how market orientation functions as a mediating variable that explains how innovation translates into competitive advantage. In addition, the moderating role of business environment factors—such as environmental dynamism, market turbulence, and institutional support—remains underexplored, despite evidence suggesting that external conditions significantly influence the effectiveness of innovation strategies (Fu et al., 2021). Most prior research has employed separate models examining either mediation or moderation effects, and often within single-industry or SME contexts in emerging economies, limiting the generalizability and integrative understanding of these relationships. Therefore, there is a clear research gap in developing and empirically testing a comprehensive model that investigates the role of innovation in enhancing competitive advantage through market orientation as a mediator, while simultaneously assessing how business environment factors moderate these relationships. Addressing this gap will provide a more nuanced understanding of the interplay between internal capabilities and external conditions in building sustainable competitive advantage.

Proposed framework

The proposed framework of this study integrates the relationships among innovation types, market orientation, and competitive advantage, emphasizing the mediating role of market orientation and the moderating effects of environmental factors. This framework is constructed to provide a comprehensive understanding of how different forms of innovation contribute to competitive advantage through the lens of market orientation, particularly in varying environmental contexts (Putri & Setiawan, 2022; Mansouri, Hosseini, & Daei, 2022). By elucidating these relationships, the framework serves as a foundation for the research methodology and analysis, guiding the investigation into the mechanisms by which firms can strategically leverage innovation and market orientation to enhance their competitive positions (Elbanna & Abdel-Maksoud, 2022; Mercan, 2023). The results of the systematic literature review no doubt played an instrumental role in supporting the research hypotheses. Finally, there are Five hypotheses identified in Figure 1.

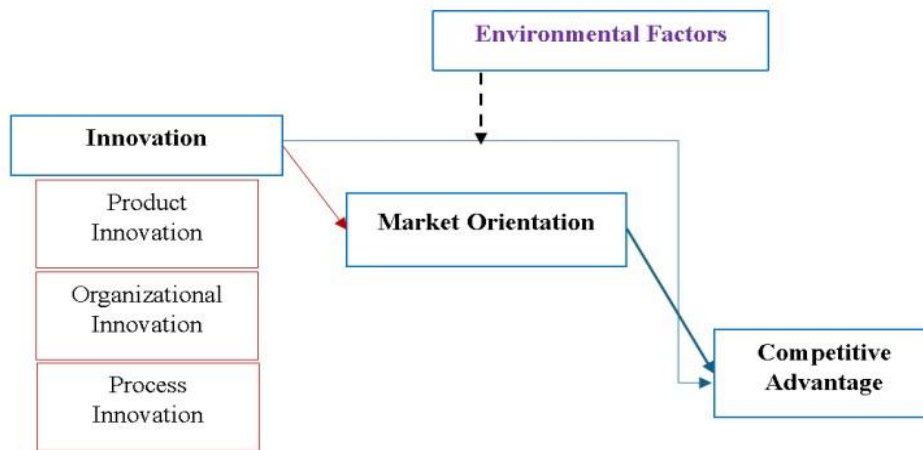


Figure 1. Proposed framework 3.Methodology

In this paper, a literature review on the relationship between Innovation, Competitive advantage, Market orientation, Business environment, beginning with the sorting out of the sources by filtering the focus area of the paper. The selection of the sources was based on the following criteria: (i) the document had to be in journal format, (ii) the discussion must concern the Innovation, (iii) the timeframe must be from 2016 to 2025, according to the development of Industry 4.0, and (iv) the keywords used for browsing were {Innovation, Competitive advantage} and {Market orientation, Business environment}. The articles on innovation were selected electronically by examining the keywords and titles in scholarly databases (Scopus, Web of Science, and Emerald Science). This was followed by a manual check that was performed by scanning the table of contents to ensure that the sources were reliable and fulfilled the criteria set for this work. It was critical to carefully identify and pick the relevant articles to ensure the credibility and accuracy of the discovery.

DISCUSSION AND IMPLICATIONS

At the core of the proposed framework are the independent variables representing the types of innovation: product innovation, process innovation, and organizational innovation. Product innovation involves the development of new or significantly improved products or services, enabling firms to meet evolving customer needs and differentiate themselves in the marketplace (Ghaazi et al., 2024). Process innovation pertains to the implementation of new or significantly improved production or delivery methods, enhancing operational efficiency and reducing costs (Bahrami, Sajadieh, & Mardani, 2022). Organizational innovation encompasses changes in organizational structures, management practices, or business models to improve performance and adaptability (Elbanna & Abdel-Maksoud, 2022; Pundziene, Nemanis, & Zukauskas, 2022).

The mediating variable, market orientation, is conceptualized as a firm's strategic focus on understanding and satisfying customer needs, being cognizant of competitor strategies, and ensuring effective inter-functional coordination (Mansouri et al., 2022; Putri & Setiawan, 2022). Market orientation is further decomposed into three dimensions: customer orientation, competitor orientation, and inter-functional coordination. Customer

orientation emphasizes the importance of comprehending and responding to customer preferences to deliver superior value (Ikbar et al., 2023; Tuominen et al., 2023). Competitor orientation involves analyzing competitors' strategies and actions to inform the firm's strategic positioning (Royo-Vela et al., 2022; Vlastic, 2023). Interfunctional coordination refers to the collaborative efforts among various departments within the organization to achieve common goals and facilitate the implementation of strategies (Kusa, Duda, & Suder, 2024).

Competitive advantage, the dependent variable in the framework, represents a firm's ability to achieve superior performance relative to its competitors by delivering unique value to customers (Mercan, 2023). It is the outcome of effectively leveraging innovation and market orientation to meet market needs more effectively than rivals (Razak, Ramli, & Azis, 2024). Achieving competitive advantage enables firms to sustain long-term success in increasingly competitive and dynamic markets (Baquero, 2024; Putri & Setiawan, 2022).

The proposed framework posits that innovation types have direct effects on competitive advantage. Product, process, and organizational innovations directly enhance a firm's competitive position by introducing new offerings, improving operational efficiencies, and fostering adaptability, respectively (Mercan, 2023; Karaev & Mercan, 2023). For instance, product innovation leads to unique offerings that better meet customer needs, thereby strengthening market position (Ghaazi et al., 2024). Process innovation improves efficiency and reduces costs, contributing to a cost advantage over competitors (Bahrami et al., 2022;). Organizational innovation enhances the firm's ability to respond to market changes and implement strategies effectively (Elbanna & Abdel-Maksoud, 2022; Chierici et al., 2021).

Moreover, the proposed framework highlights the mediating role of market orientation in the relationship between innovation and competitive advantage. By aligning innovation efforts with market demands, market orientation enhances the effectiveness of innovations (Putri & Setiawan, 2022; Mansouri et al., 2022). A strong customer orientation ensures that product innovations address actual customer needs, leading to increased customer satisfaction and loyalty (Ikbar et al., 2023; Tuominen et al., 2023). Competitor orientation allows firms to anticipate and respond to competitors' actions, improving strategic positioning and market share (Royo-Vela et al., 2022; Vlastic, 2023). Inter-functional coordination ensures that innovations are implemented efficiently across the organization, maximizing their impact on performance (Kusa et al., 2024).

Environmental factors are incorporated into the framework as moderating variables that can influence the strength of the relationships between innovation and competitive advantage (Baquero, 2024; Zabel & O'Brien, 2024). Market turbulence, technological change, and competitive intensity can either enhance or weaken the impact of innovation efforts. In highly turbulent markets, the necessity for rapid adaptation may amplify the positive effects of innovation on competitive advantage (Furyanah et al., 2024; Wahyuningtyas et al., 2023). Rapid technological change may require continuous innovation to maintain competitiveness, thereby intensifying the relationship between innovation and competitive advantage (Bahrami et al., 2022; GonzálezRamos et al., 2023). Highly competitive intensity may necessitate more aggressive innovation strategies to differentiate the firm and retain market share (Safari & Saleh, 2020).

The proposed framework serves as a blueprint for the research methodology and analysis, informing the development of hypotheses and the selection of analytical techniques (Chierici et al., 2021; Ringo et al., 2023). For example, structural equation modeling (SEM) can be utilized to test the direct and indirect effects of innovation types on competitive advantage, mediated by market orientation (Kusa et al., 2024; Safari & Saleh, 2020). Moderation analysis can assess how environmental factors influence these relationships (Baquero, 2024; Zabel & O'Brien, 2024). By operationalizing the constructs accurately and designing appropriate measurement instruments, the research ensures rigorous examination of the proposed relationships (Mansouri et al., 2022; Chiu, Chen, & Liu, 2023).

Theoretical Implications

This model enriches the RBV/dynamic capabilities literature by positioning market orientation as a mechanism linking innovation to competitive advantage. It emphasises the contingent role of the business environment — showing that external context matters in innovation outcomes.

Future empirical research may test this model across industries, firm sizes and countries.

In summary, the study contributes theoretically by:

1. Extending RBV and Dynamic Capabilities frameworks to include innovation–market orientation linkages.
2. Validating market orientation as a behavioral mechanism translating innovation into performance.
3. Incorporating environmental contingencies into competitive advantage models.
4. Providing an integrated theoretical framework that bridges internal and external perspectives on competitiveness.

Managerial Implications

Firms should not treat innovation in isolation; cultivating a market-oriented culture helps ensure that innovations are aligned with market demands and hence translate into advantage.

Managers should assess the business environment: in dynamic or unstable markets innovation may pay off more; in stable ones the firm may need to emphasise other mechanisms or incremental innovation. Policymakers and ecosystem actors should build supportive business environments (institutional quality, infrastructure, regulatory clarity) to amplify the effectiveness of firm-level innovation.

In summary, managers should adopt an integrated approach that combines innovation capability, market orientation, and environmental adaptability. The interplay of these elements determines whether innovation efforts lead to sustainable competitive advantage. By fostering a learning-oriented culture, aligning innovation with market needs, and adapting to dynamic external conditions, firms can not only survive but thrive in an increasingly competitive global landscape.

Limitations and Suggestions for Future Research

The paper is conceptual; empirical testing with large samples across contexts is needed. To address the inherent complexities and limitations of the research, several delimitations have been strategically established to define the scope and focus of the study.

Firstly, this delimitation allows for an in-depth examination of firms operating in a highly dynamic and innovative environment, characterized by significant economic diversification and supportive regulatory frameworks (Almehairbi, Arunprasad & El Hathat, 2023). By concentrating on this region, the study can provide nuanced insights into how innovation and market orientation interact to enhance competitive advantage in a context that is both economically vibrant and strategically important.

Secondly, the research specifically targets firms that actively engage in structured innovation processes and implement comprehensive market orientation strategies. This focus ensures that the sample consists of firms with the relevant characteristics necessary to explore the proposed relationships effectively. By selecting firms with established innovation practices and market-oriented approaches, the study aims to capture the mechanisms through which these strategies contribute to competitive advantage, thereby enhancing the relevance and applicability of the findings. Additionally, the study delineates the types of innovation under investigation product, process, and organizational innovation providing a clear framework for analyzing their distinct and collective impacts on competitive advantage (Razak, Ramli & Azis, 2024).

Furthermore, the study adopts a mixed-methods approach, integrating both quantitative and qualitative data to provide a comprehensive understanding of the research problem. This methodological delimitation allows for the triangulation of data, enhancing the validity and reliability of the findings by corroborating quantitative results with qualitative insights (Jafari et al., 2022). The quantitative component involves structured surveys aimed at capturing measurable relationships between variables, while the qualitative component employs semistructured interviews to explore contextual factors and organizational dynamics in greater depth. This

integration ensures a balanced examination of the research questions, capturing both the breadth and depth of the phenomena under study (Morgan, 2014).

Another important delimitation is the temporal scope of the study, which is limited to the current business environment. This focus acknowledges that the rapidly changing nature of technology and market conditions may influence the relevance and applicability of the findings over time. By concentrating on contemporary trends and practices, the study provides timely and actionable insights for SMEs aiming to navigate the present competitive landscape (Oduro, 2024). This temporal delimitation ensures that the research remains relevant and aligned with the current strategic challenges and opportunities faced by SMEs.

Lastly, the study confines itself to examining specific environmental factors such as market turbulence and technological change, recognizing that other factors like regulatory shifts, socio-cultural trends, and economic fluctuations also play significant roles but are beyond the immediate scope of this research. This focused approach allows for a more detailed and manageable analysis of the selected moderating variables, ensuring that the study remains coherent and directed towards its primary objectives (Pundziene, Nemanis & Zukauskas, 2022). By setting these delimitations, the study aims to maintain a clear and focused research trajectory, facilitating a thorough investigation of the interplay between innovation, market orientation, and competitive advantage within the defined context.

CONCLUSION

The literature review thoroughly explored the dynamic interplay between innovation, market orientation, competitive advantage, and environmental factors within the context of SMEs. It established that innovation is a crucial driver for achieving and sustaining competitive advantage, enabling firms to differentiate themselves through unique products, services, and processes. Market orientation was identified as a key mediator that enhances the effectiveness of innovation by ensuring that innovative efforts are closely aligned with customer needs and market demands. Additionally, environmental factors such as technological advancements, regulatory changes, and market dynamism were highlighted as significant moderators that influence how SMEs implement and leverage their innovation and market-oriented strategies. The review underscored the importance of aligning internal capabilities with external conditions, demonstrating that SMEs that effectively navigate these environmental influences are better positioned to achieve superior performance and resilience in a competitive marketplace.

Building on these insights, the literature review sets a solid foundation for the subsequent research methodology and analysis. By identifying the critical relationships and moderating effects of environmental factors, the review informs the development of a robust framework that will guide the empirical investigation. This framework will facilitate a deeper understanding of how innovation and market orientation interact to enhance competitive advantage, while also accounting for the specific environmental challenges and opportunities faced by SMEs. Furthermore, the identification of research gaps highlights areas where further exploration is needed, ensuring that the study contributes meaningful and contextually relevant findings.

In sum, innovation remains a central driver of competitive advantage, but its impact is mediated by a firm's market orientation and contingent on the business environment. Firms that innovate and simultaneously adopt market-oriented behaviours are more likely to convert innovation into sustainable competitive advantage — especially when the external environment is dynamic or favourable. Managers and scholars alike should take into account this interplay rather than treat innovation alone as a silver bullet.

ACKNOWLEDGEMENT

The authors would like to thank Faculty Of Technology Management And Technopreneur ship (FPTT).Universiti Teknikal Malaysia Melaka (UTeM) for their direct and indirect contributions.

REFERENCE

1. Aavakare, M. (2019). The Impact of Digital Literacy and Information Literacy on the Intention to Use

- Digital Technologies for Learning : A Quantitative Study Utilizing the Unified Theory of Acceptance and Use of Technology.
2. Abdullah, I., Al-Shorman, M., Ibrahim, M., Omar, M. H., & Ariff, A. Product Innovation, Marketing Innovation And Business Performance Relationship Of Malaysian Product Industries: Mediating Effect Of Design Management.
3. Abrokwah-Larbi, K. (2024). The impact of customer-focus on the performance of business organizations: Evidence from SMEs in an emerging West African economy. *African Journal of Economic and Management Studies*, 15(1), 31-59.
4. Adiguzel, Z., & Sonmez Cakir, F. (2022). Examining the effects of strategic orientation and motivation on performance and innovation in the production sector of automobile spare parts. *European Journal of Management Studies*, 27(2), 131-153.
5. Ahmad, N., Hussain, I., & Ali, M. (2021). The inter-relationship between innovation capability and SME performance: The moderating role of the external environment. *Sustainability*, 13(16):9132.
6. Aljumah, A. I., Nuseir, M. T., & El Refae, G. A. (2022). Business analytics and competitive advantage for SMEs in UAE: A mediating role of technology assets. *Automation, Control, and Information Technology*.
7. Almehairbi, K. M. S. S., Arunprasad, P., & El Hathat, Z. (2023). Role of open innovation and strategy on SMEs in Dubai: Review and theoretical framework. *Benchmarking*.
8. Aniyati, I., & Indayani, L. (2023). The effect of market orientation and product innovation on marketing performance through competitive advantage as an intervening variable in MSME bags in Sidoarjo. *Academia Open*.
9. Bahrami, M., Sajadieh, M. S., & Mardani, M. (2022). Big data analytics capability and supply chain performance: The mediating roles of supply chain resilience and innovation. *Modern Supply Chain Research and Applications*, 4(1), 62-84.
10. Bamfo, B. A., & Kraa, J. J. (2019). Market orientation and performance of small and medium enterprises in Ghana: The mediating role of innovation. *Cogent Business & Management*.
11. Baquero, A. (2024). Linking green entrepreneurial orientation and ambidextrous green innovation to stimulate green performance: A moderated mediation approach. *Business Process Management Journal*, 30(8), 71-98.
12. Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17(1), 99– 120.
13. Chierici, R., et al. (2021). Strengthening digital collaboration to enhance social innovation capital: An analysis of Italian small innovative enterprises. *Journal of Intellectual Capital*, 22(3), 610-632.
14. Chiu, W.-H., Chen, C.-C., & Liu, T.-C. (2023). Mastering customer lock-in by servitization innovation strategies of asset specificity. *Journal of Business & Industrial Marketing*, 38(13), 239-263.
15. Christiansson, M.-T., & Rentzhog, O. (2020). Lessons from the "BPO journey" in a public housing company: Toward a strategy for BPO. *Business Process Management Journal*, 26(2), 373-404.
16. Ciacci, A., & Penco, L. (2024). Business model innovation: Harnessing big data analytics and digital transformation in hostile environments. *Journal of Small Business and Enterprise Development*, 31(8), 22-46.
17. De la Gala-Velasquez, B. R. D., Cárcamo, R. G., & Vázquez, F. B. (2023). Organizational flexibility and pioneering behavior: The indirect effect of market dynamism in tourism firms. *International Journal of Tourism Cities*, 9(1), 35-50.
18. Dewangga, R. W., & Nugroho, S. P. (2024). The Effect of Product Knowledge and Market Orientation on Business Performance in MSMEs. *Jurnal Ilmiah Manajemen Kesatuan*, 12(1), 163-174.
19. Durst, S., et al. (2023). Knowledge management in SMEs: A follow-up literature review. *Journal of Knowledge Management*, 27(11), 25–58.
20. Elbanna, S., & Abdel-Maksoud, A. A. (2022). Organizational innovation and the role of strategic planning: The case of the Dubai hotel industry. *Management Science and Applications Review*.
21. Fatonah, S., & Haryanto, A. (2022). Exploring market orientation, product innovation and competitive advantage to enhance the performance of SMEs under uncertain evens. *Uncertain Supply Chain Management*, 10(1), 161168.
22. Fu, H., Ali, M., & Hussain, I. (2021). The inter-relationship between innovation capability and SME performance: The moderating role of the external environment. *Sustainability*, 13(16):9132

23. Furyanah, A., Suroso, A., & Setyanto, R. P. (2024). Dimensions of Entrepreneurial Orientation and Marketing Performance: The Moderating Effect of Market Turbulence. *Revista De Gestão Social E Ambiental*, 18(5), e03735-e03735.
24. Gerdoçi, B., Bardhi, N., & Abazi-Alili, H. (2023). Disentangling the relationship between business model, absorptive capacity, differentiation strategy, and performance: Evidence from a transition economy. *European Journal of Innovation Management*, 26(7), 385-414.
25. Ghaazi, A. S. A., Iqbal, A., Fatima, A., & Khalid, M. A. (2024). Impact of market orientation, green innovation on creative performance: The mediating role of sustainable competitive advantage. *Bulletin of Business and Economics*.
26. González-Ramos, M. I., et al. (2023). The interplay between corporate social responsibility and knowledge management strategies for innovation capability development in dynamic environments. *Journal of Knowledge Management*, 27(11), 59-81.
27. Gutiérrez-Broncano, S., et al. (2024). Can hybrid strategy improve SME performance? The role of innovation and adaptive capacity. *European Journal of Innovation Management*, 27(9), 173-197.
28. Gutiérrez-Broncano, S., et al. (2024). Can hybrid strategy improve SME performance? The role of innovation and adaptive capacity. *European Journal of Innovation Management*, 27(9), 173-197.
29. Ikbar, H., Rizky, A. M., & Usman, O. (2023). The Influence Of Market Orientation, Product Innovation And
30. Competitive Prices On Competitive Advantage And Marketing Performance Of Eco-Friendly Household Product Processing In The DKI Jakarta Area. *West Science Journal Economic and Entrepreneurship*, 1(12), 669678.
31. Jafari, H., et al. (2022). Leveraging supply integration, mass customization and manufacturing flexibility capabilities and the contingency of innovation orientation. *Supply Chain Management: An International Journal*, 27(7), 194-210
32. Karaev, F., & Mercan, M. (2023). Exploring the Impact of Market Orientation and Innovation on Firm Performance in the Beverage Industry: The Mediating Role of Innovation. *Eurasian Journal of Economic and Business Studies*, 67(1), 139-155.
33. Kurniawan, R., et al. (2021). Networking capability and firm performance: The mediating role of market orientation and business process agility. *Journal of Business & Industrial Marketing*, 36(9), 1646–1664.
34. Kusa, R., Duda, J., & Suder, M. (2024). Does knowledge management mediate the relationship between entrepreneurial orientation and firm performance? *Journal of Knowledge Management*, 28(11), 33-61.
35. Mansouri, H., Hosseini, R., & Daei, A. (2022). Investigating the mediating role of market orientation between internal marketing and the development of entrepreneurial orientation within private sports clubs. *New England Journal of Entrepreneurship*, 25(2), 103-120.
36. Mercan, M. (2023). Exploring the impact of market orientation and innovation on firm performance in the beverage industry: The mediating role of innovation. *Eurasian Journal of Economic and Business Studies*.
37. Morgan, D. L. (2014). Pragmatism as a paradigm for mixed methods research. Integrating qualitative and quantitative methods: A pragmatic approach, 49-69.
38. Nasir, M., Alamsjah, F., et al. (2024). Systematic literature review: The role of innovation and competitive advantage of micro, small and medium enterprises as mediation variables.
39. Nurfauziah, S., Mukhsin, M., & Ganika, G. (2025). The influence of entrepreneurial orientation, market orientation, and innovation on competitive advantage. *Journal of Management: Small and Medium Enterprises (SMEs)*, 18(1), 527-539.
40. Oduro, S. (2024). Eco-innovation and SMEs' sustainable performance: A meta-analysis. *European Journal of Innovation Management*, 27(9), 248-279.
41. Pérez-Orozco, A., García-Santillán, A., & Rodríguez-Ruiz, G. (2024). The mediating role of marketing management in the relationship between online presence and product innovation among SMEs. *Journal of Economics, Finance and Administrative Science*, 29(58), 246-262.
42. Pundziene, A., Nemanis, A., & Zukauskas, M. (2022). The nexus between dynamic capabilities and competitive firm performance: The mediating role of open innovation. *European Journal of Innovation Management*, 25(6), 152-177.
43. Putri, B. C. L., & Setiawan, P. Y. (2022). The Role Of Innovation In Mediating The Effect Of Market Orientation And Learning Orientation On Competitive Advantage. *Journal of Business and Management Review*, 3(2), 119137.

44. Razak, A., Ramli, A., & Azis, M. (2024). Market Orientation, Entrepreneurship and SME Performance: The Role of Product Innovation. *Asian Journal of Education and Social Studies*, 50(1), 174-191.
45. Rebiazina, V., et al. (2024). The impact of relationship marketing practices on companies' market and financial performance in emerging markets. *Journal of Economics, Finance and Administrative Science*, 29(57), 186-204
46. Retnawati, B.B., Irmawati, B., & Leong, H. (2019). Innovation and market orientation: The effect on competitive advantage and marketing performance. Atlantis Press.
47. Ringo, D. S., et al. (2023). The multidimensional implications of entrepreneurial orientation on export performance: Empirical evidence from manufacturing SMEs in Tanzania. *European Journal of Management Studies*, 28(1), 69-87.
48. Royo-Vela, M., et al. (2022). Market orientation in service clusters and its effect on the marketing performance of SMEs. *European Journal of Management and Business Economics*, 31(1), 1-21.
49. Safari, A., & Saleh, A. S. (2020). Key determinants of SMEs' export performance: A resource-based view and contingency theory approach using potential mediators. *Journal of Business & Industrial Marketing*, 35(4), 635654.
50. Safari, A., & Saleh, A. S. (2020). Key determinants of SMEs' export performance: A resource-based view and contingency theory approach using potential mediators. *Journal of Business & Industrial Marketing*, 35(4), 635654.
51. Teece, D.J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal*, 18(7), 509–533.
52. Tian, B., Fu, J., Li, C., & Wang, Z. (2024). Determinants of competitive advantage: The roles of innovation orientation, fuzzy front end, and internal competition. *R&D Management*, 54(1), 21-38.
53. Tuominen, S., et al. (2023). Customer-centric strategy driving innovativeness and business growth in international markets. *International Marketing Review*, 40(3), 479-496.
54. Vlastic, G. (2023). Comparative analysis of the role of strategic orientation, strategic performance metric focus and strategic audacity in driving firm performance: Family businesses vs nonfamily businesses. *Journal of Family Business Management*, 13(1), 7-25.
55. Wahyuningtyas, R., et al. (2023). Toward cooperative competitiveness for community development in Economic Society 5.0. *Journal of Enterprising Communities: People and Places in the Global Economy*, 17(3), 594-620.
56. Widjajanti, K., & Sugiyanto, E. (2023). How do market orientation and innovation affect business performance? Atlantis Press.
57. Yang, M., Jaafar, N., Al Mamun, A., Salameh, A. A., & Nawi, N. C. (2022). Modelling the significance of strategic orientation for competitive advantage and economic sustainability: the use of hybrid SEM–neural network analysis. *Journal of Innovation and Entrepreneurship*, 11(1), 44.
58. Yulianingsih, T., Palahudin, M., & Mukmin, A. (2019). Competitive advantages based on market orientation and innovation. *IJSR*.
59. Zabel, C., & O'Brien, D. (2024). Understanding dynamic capabilities in emerging technology markets: Antecedents, sequential nature, and impact on innovation performance in the extended reality industry. *European Journal of Innovation Management*, 27(9), 305-336.