

COMPETITIVE ADVANTAGE AS A MEDIATING MECHANISM IN THE RELATIONSHIP BETWEEN ENTREPRENEURIAL ORIENTATION AND SME PERFORMANCE: EVIDENCE FROM NORTH-WEST NIGERIA

¹Aburrahman Muhammad Tanko, & ²Prof. Rahilahtu Ahmad Muhammad

Department of Business Management, Faculty of Management Sciences, Kaduna State University, Kaduna-North, Kaduna State, Nigeria

Abstract

Small and medium-sized enterprises (SMEs) are major contributors to economic growth, employment, and innovation. However, SMEs in emerging economies continue to face significant performance challenges due to resource constraints, institutional weaknesses, and increasing market competition. Although entrepreneurial orientation (EO) has been recognised as an important driver of firm performance, the mechanisms through which its dimensions influence performance remain insufficiently understood. Drawing on the Resource-Based View (RBV) and Contingency Theory, this study examines the mediating role of competitive advantage in the relationship between the five dimensions of entrepreneurial orientation and SME performance among registered SMEs in North-West Nigeria. Entrepreneurial orientation was conceptualised as a multidimensional construct comprising risk-taking, innovativeness, proactiveness, competitive aggressiveness, and autonomy. Using a quantitative cross-sectional research design, data were collected from SME owners and managers and analysed using Partial Least Squares Structural Equation Modelling (PLS-SEM). The findings indicate that risk-taking, innovativeness, proactiveness, and competitive aggressiveness have significant positive direct effects on SME performance, whereas autonomy has no significant direct effect. The results further reveal that competitive advantage significantly mediates the relationships between risk-taking, innovativeness, and autonomy and SME performance but does not significantly mediate the relationships involving proactiveness and competitive aggressiveness. These findings demonstrate that only selected entrepreneurial orientation dimensions enhance SME performance through the development of competitive advantage. The study contributes to entrepreneurship literature by extending the Resource-Based View through the integration of competitive advantage as a strategic mechanism linking specific entrepreneurial orientation dimensions to organisational performance in an emerging economy. The findings also provide practical insights for SME owners, managers, and policymakers by highlighting the importance of strengthening entrepreneurial capabilities that foster sustainable competitive advantage and improve long-term organisational performance.

Keywords: Competitive advantage, Entrepreneurial orientation, PLS-SEM; Nigeria. Resource-Based View, SME performance

Introduction

Small and medium-sized enterprises (SMEs) are widely recognized as the backbone of economic development because of their significant contributions to employment generation,

innovation, industrialization, poverty reduction, and economic diversification (Organisation for Economic Co-operation and Development [OECD], 2019; World Bank, 2020; Nguyen et al., 2022). Globally, SMEs account for more than 90% of business establishments and over half of total employment, making them central to sustainable economic growth. In developing countries, where unemployment and poverty remain persistent challenges, SMEs play an even more strategic role by promoting entrepreneurship, stimulating local production, and creating employment opportunities that foster inclusive economic development (Dana & Dana, 2021; Nguyen et al., 2022).

In Nigeria, SMEs are regarded as key drivers of economic transformation through their contributions to gross domestic product, job creation, innovation, and regional development (Isichei et al., 2019; Olubiyi et al., 2019; Otache & Usman, 2024). To enhance their competitiveness, government agencies such as the Small and Medium Enterprises Development Agency of Nigeria (SMEDAN) and the Bank of Industry have introduced various support programmes. Despite these interventions, many Nigerian SMEs continue to experience low productivity, weak competitiveness, limited innovation capability, and high business failure rates (Dana & Dana, 2021; Morris, 2020; Otache & Usman, 2024). These challenges are particularly evident in North-West Nigeria, where firms face infrastructural deficiencies, limited access to finance, technological constraints, security concerns, and increasing market competition (Otache & Usman, 2024; Raza et al., 2023). Such conditions suggest that improving SME performance requires not only external support but also the development of internal strategic capabilities that enable firms to exploit opportunities and adapt to dynamic business environments.

Among the strategic capabilities widely discussed in entrepreneurship literature is entrepreneurial orientation (EO). Entrepreneurial orientation reflects a firm's strategic posture toward entrepreneurial activities and is characterized by innovativeness, risk-taking, proactiveness, competitive aggressiveness, and autonomy (Miller, 1983; Lumpkin & Dess, 1996). Rather than representing isolated entrepreneurial actions, EO embodies an organizational philosophy that shapes strategic decision-making, resource allocation, and competitive behaviour (Covin & Slevin, 1989; Hughes & Morgan, 2007). Firms with strong entrepreneurial orientation are generally more capable of introducing innovative products, identifying emerging market opportunities, responding proactively to environmental changes, and strengthening their long-term competitiveness (Rauch et al., 2009; Wales et al., 2023). Consequently, entrepreneurial orientation has consistently been associated with improved organizational performance, customer responsiveness, and innovation capability (Basco et al., 2020; Clark et al., 2024; Henryanto et al., 2025).

Despite extensive empirical attention, the relationship between entrepreneurial orientation and firm performance remains inconclusive. While numerous studies report positive associations (Rauch et al., 2009; Wales et al., 2013; Covin et al., 2020), others reveal weak, insignificant, or context-dependent relationships (Hilmersson et al., 2021; Raza et al., 2023). These inconsistencies suggest that entrepreneurial orientation does not automatically translate into superior organizational performance. Instead, entrepreneurial behaviours appear to create strategic capabilities that subsequently enhance firm performance (Barney, 1991; Teece et al., 1997). Consequently, recent entrepreneurship research has shifted from examining whether entrepreneurial orientation improves performance to understanding the mechanisms through which it generates organizational value (Covin et al., 2020; Clark et al., 2024).

Competitive advantage has emerged as one of the most important mechanisms explaining this relationship. According to Porter (1985), competitive advantage enables firms to create superior value through differentiation or cost leadership, while the Resource-Based View argues that sustainable advantage arises from valuable, rare, inimitable, and non-substitutable resources and capabilities (Barney, 1991). Entrepreneurially oriented firms are more likely to develop such capabilities through innovation, opportunity recognition, calculated risk-taking, competitive responsiveness, and autonomous decision-making (Lumpkin & Dess, 1996; Hughes & Morgan, 2007). These behaviours enhance product differentiation, customer responsiveness, operational efficiency, and market positioning, which ultimately improve organizational performance (Isichei, et al., 2019; Wales, et al., 2023).

Although competitive advantage has been widely acknowledged as a strategic capability, empirical evidence regarding its mediating role remains limited. Most previous studies have concentrated on the direct relationship between entrepreneurial orientation and firm performance (Rauch et al., 2009; Wales et al., 2013; Covin et al., 2020), while relatively few have investigated how entrepreneurial orientation is translated into improved performance through competitive advantage (Akingbade & Temitayo, 2024; Ogundare et al., 2024). This gap is particularly evident in developing economies, where institutional weaknesses, resource constraints, and environmental uncertainty may significantly influence the effectiveness of entrepreneurial strategies (Dana & Dana, 2021; Morris, 2020).

Another limitation concerns the conceptualization of entrepreneurial orientation. While Miller (1983) proposed a three-dimensional construct comprising innovativeness, risk-taking, and proactiveness, Lumpkin and Dess (1996) expanded the concept to include competitive aggressiveness and autonomy. Nevertheless, many empirical studies continue to operationalize entrepreneurial orientation either as a single composite construct or focus only on its traditional dimensions. Such an approach may obscure the distinct contributions of individual entrepreneurial behaviours, as each dimension may influence organizational performance through different strategic mechanisms (Hughes & Morgan, 2007; Lomberg et al., 2017).

Methodologically, much of the earlier research relied on conventional regression techniques that were limited in examining complex mediation relationships among latent constructs. The increasing application of Partial Least Squares Structural Equation Modelling (PLS-SEM) provides a more robust analytical framework for simultaneously assessing measurement reliability, construct validity, structural relationships, and indirect effects (Hair et al., 2022). Accordingly, the use of PLS-SEM offers greater analytical precision for investigating the mechanisms through which entrepreneurial orientation influences SME performance.

Drawing on the Resource-Based View (Barney, 1991) and Contingency Theory (Donaldson, 2001), this study proposes that entrepreneurial orientation enhances SME performance through the development of competitive advantage. While the Resource-Based View explains how entrepreneurial capabilities create valuable and sustainable competitive positions, Contingency Theory suggests that the effectiveness of these capabilities depends on their alignment with environmental conditions. Consequently, entrepreneurial orientation is expected to improve SME performance when it enables firms to develop competitive advantages that strengthen market positioning, customer value, and organizational adaptability.

This study therefore examines the mediating role of competitive advantage in the relationship between the five dimensions of entrepreneurial orientation—risk-taking, innovativeness, proactiveness, competitive aggressiveness, and autonomy—and SME performance among registered SMEs in North-West Nigeria. By examining entrepreneurial orientation as a multidimensional construct and competitive advantage as the underlying strategic mechanism, the study provides a more comprehensive explanation of how entrepreneurial behaviours are translated into superior organizational performance within an emerging economy.

The study contributes to entrepreneurship and strategic management literature in three important ways. First, it extends the Resource-Based View by demonstrating how entrepreneurial orientation creates organizational value through competitive advantage rather than through direct effects alone. Second, it provides empirical evidence on the independent contributions of the five dimensions of entrepreneurial orientation to SME performance. Third, it enriches the limited evidence from developing economies by focusing on SMEs operating in North-West Nigeria, thereby offering practical insights for SME owners, managers, policymakers, and development agencies seeking to strengthen enterprise competitiveness and sustainable performance.

Literature Review

Theoretical Foundation

This study is anchored on the Resource-Based View (RBV) and Contingency Theory, both of which provide complementary explanations for how entrepreneurial orientation enhances SME performance through competitive advantage. The Resource-Based View, developed by Barney (1991), posits that firms achieve sustainable competitive advantage when they possess valuable, rare, inimitable, and non-substitutable (VRIN) resources and capabilities. Unlike external market-based perspectives that attribute firm success primarily to industry structure, RBV emphasizes internal organizational resources as the principal determinants of competitive performance (Barney, 1991; Peteraf, 1993). These resources include tangible assets, intangible assets, organizational routines, managerial competencies, innovation capabilities, and strategic knowledge that collectively enable firms to outperform competitors (Wernerfelt, 1984; Barney, 1991).

Within entrepreneurship research, entrepreneurial orientation has increasingly been conceptualized as a strategic organizational capability rather than merely a behavioural disposition (Covin & Slevin, 1989; Lumpkin & Dess, 1996; Wales et al., 2013). Entrepreneurially oriented firms consistently invest in innovation, proactively identify emerging opportunities, undertake calculated risks, challenge competitors aggressively, and empower employees to pursue entrepreneurial initiatives (Miller, 1983; Hughes & Morgan, 2007). These behaviours facilitate the development of organizational capabilities that improve product differentiation, operational efficiency, customer responsiveness, and market adaptability, thereby strengthening competitive advantage and enhancing organizational performance (Barney, 1991; Teece et al., 1997; Basco et al., 2020).

However, RBV alone does not fully explain why entrepreneurial orientation produces different performance outcomes across firms operating under different environmental conditions. This limitation is addressed by Contingency Theory, which argues that organizational effectiveness depends on the alignment between internal capabilities and

external environmental conditions (Lawrence & Lorsch, 1967; Donaldson, 2001). According to Contingency Theory, no single organizational strategy guarantees superior performance across all contexts because environmental uncertainty, market dynamism, technological change, and institutional conditions influence the effectiveness of strategic decisions (Donaldson, 2001). Consequently, entrepreneurial orientation is expected to improve organizational performance only when entrepreneurial capabilities are effectively aligned with environmental demands and translated into competitive advantages that competitors cannot easily imitate.

The integration of RBV and Contingency Theory therefore provides a comprehensive theoretical explanation for the present study. While RBV explains how entrepreneurial orientation creates valuable organizational capabilities, Contingency Theory explains why the performance implications of these capabilities vary across different institutional and competitive environments. Accordingly, this study proposes that entrepreneurial orientation contributes to SME performance primarily through the development of competitive advantage, particularly within the resource-constrained and highly competitive environment characterizing SMEs in North-West Nigeria.

Entrepreneurial Orientation and SME Performance

Entrepreneurial orientation (EO) remains one of the most influential constructs in entrepreneurship and strategic management research because it captures the strategic behaviours through which firms identify opportunities, exploit emerging markets, and respond to environmental uncertainty (Covin & Slevin, 1989; Lumpkin & Dess, 1996; Wales et al., 2013). Since Miller (1983) first conceptualized entrepreneurial firms as organizations characterized by innovativeness, proactiveness, and risk-taking, the construct has evolved into a multidimensional strategic orientation that also incorporates competitive aggressiveness and autonomy (Lumpkin & Dess, 1996).

Entrepreneurially oriented firms generally exhibit greater flexibility, stronger innovation capability, faster decision-making, and superior opportunity recognition than conservative firms (Rauch et al., 2009; Basco et al., 2020). These characteristics enable firms to introduce new products, develop innovative processes, anticipate customer needs, and respond proactively to environmental changes before competitors. Consequently, entrepreneurial orientation has frequently been associated with superior organizational performance across different industrial sectors and national contexts (Rauch et al., 2009; Wales et al., 2013).

Nevertheless, empirical findings remain inconsistent. While numerous studies report positive relationships between entrepreneurial orientation and firm performance (Isichei et al., 2019; Basco et al., 2020; Clark et al., 2024), others report insignificant or context-dependent relationships (Hilmersson et al., 2021; Raza et al., 2023). These inconsistencies suggest that entrepreneurial orientation does not directly improve organizational performance but rather enhances internal strategic capabilities that subsequently generate competitive advantage and superior performance outcomes (Barney, 1991; Covin et al., 2020).

Consequently, examining the individual dimensions of entrepreneurial orientation provides greater insight into the strategic mechanisms through which entrepreneurial behaviours influence organizational performance.

Risk-Taking and SME Performance

Risk-taking represents a firm's willingness to commit substantial organizational resources to projects characterized by uncertain outcomes but potentially high returns (Miller, 1983; Lumpkin & Dess, 1996). Entrepreneurially oriented firms generally exhibit greater tolerance for uncertainty because they recognize that innovation, market expansion, and strategic renewal inherently involve calculated risks (Kreiser et al., 2022; Wales et al., 2023).

Strategic risk-taking enables firms to enter new markets, invest in technological innovation, develop new products, and exploit emerging business opportunities before competitors (Putniņš & Sauka, 2019; Clark et al., 2024). These strategic investments often improve organizational learning, strengthen market positioning, and enhance long-term competitiveness. Accordingly, numerous empirical studies have reported positive associations between risk-taking and firm performance (Anderson & Eshima, 2013; Isichei et al., 2019; Astuti et al., 2024).

However, excessive risk-taking may expose firms to financial losses, resource depletion, and operational instability, particularly in highly uncertain environments (Kreiser et al., 2022). Consequently, the performance implications of risk-taking depend largely on managerial capability, environmental conditions, and effective strategic decision-making.

Based on the Resource-Based View, firms capable of undertaking calculated risks develop valuable organizational capabilities that strengthen competitiveness and improve organizational performance.

H1: Risk-taking has a significant positive effect on SME performance.

Innovativeness and SME Performance

Innovativeness is widely regarded as the cornerstone of entrepreneurial orientation because it reflects a firm's willingness to generate, adopt, and implement new ideas, products, services, technologies, and business processes that create customer value and enhance organizational competitiveness (Miller, 1983; Lumpkin & Dess, 1996). Within the entrepreneurship literature, innovativeness extends beyond technological advancement to encompass organizational learning, experimentation, creativity, and continuous improvement in products, services, and managerial practices (Damanpour, 1991; Kuratko, 2021; Clark et al., 2024).

The Resource-Based View suggests that innovation represents a strategic capability capable of generating sustainable competitive advantage because innovative firms develop unique products, processes, and organizational routines that are difficult for competitors to imitate (Barney, 1991; Teece, et al., 1997). Through continuous innovation, firms improve operational efficiency, differentiate their offerings, respond more effectively to changing customer preferences, and adapt more rapidly to dynamic market environments (Ng et al., 2012; Chelliah, et al., 2022; Astuti, et al., 2024).

Empirical evidence consistently demonstrates that innovativeness contributes positively to organizational performance. Innovative firms generally report higher customer satisfaction, stronger market positioning, greater organizational flexibility, and improved long-term

competitiveness (Isichei et al., 2019; Basco et al., 2020; Henryanto et al., 2025). Innovation also enables SMEs to overcome resource constraints by developing cost-effective production methods, improving service delivery, and identifying new market opportunities that competitors have not yet exploited (Wales, et al., 2023).

However, innovation requires substantial organizational commitment, investment, and managerial support. SMEs operating in resource-constrained environments frequently experience financial, technological, and human capital limitations that restrict innovation activities (Otache & Usman, 2024). Consequently, the performance benefits associated with innovativeness depend not only on the firm's willingness to innovate but also on its ability to successfully commercialize innovations and translate them into competitive advantages (Barney, 1991; Basco et al., 2020).

Despite these challenges, existing evidence overwhelmingly supports innovativeness as one of the strongest predictors of organizational competitiveness and sustainable business performance (Rauch et al., 2009; Isichei et al., 2019; Clark et al., 2024). Accordingly, the present study proposes that SMEs exhibiting higher levels of innovativeness are more likely to achieve superior performance.

H2: Innovativeness has a significant positive effect on SME performance.

Proactiveness and SME Performance

Proactiveness reflects an organization's forward-looking strategic posture and its willingness to anticipate future market trends, identify emerging opportunities, and act before competitors (Lumpkin & Dess, 1996; Rauch et al., 2009). Unlike reactive organizations that respond only after environmental changes occur, proactive firms actively shape market conditions through early opportunity recognition, customer responsiveness, and strategic innovation (Covin & Slevin, 1989; Hughes & Morgan, 2007).

From the perspective of Contingency Theory, proactive behaviour enables organizations to achieve better alignment between internal capabilities and external environmental changes (Donaldson, 2001). Firms capable of anticipating shifts in customer preferences, technological developments, and competitive dynamics are more likely to allocate resources effectively, reduce uncertainty, and exploit emerging opportunities before rivals (Leischnig, 2018; Basco et al., 2020).

Empirical studies generally report positive relationships between proactiveness and organizational performance (Rauch et al., 2009; Isichei et al., 2019). Proactive firms frequently enjoy first-mover advantages, stronger customer relationships, higher innovation success rates, and greater market responsiveness than less proactive competitors (Kallmuenzer & Peters, 2018; Wales et al., 2023). By continuously monitoring market developments and adapting strategic decisions accordingly, proactive firms strengthen their competitive positions and improve organizational performance.

Nevertheless, the effectiveness of proactiveness may vary across industries and institutional environments. Some studies suggest that proactive strategies may generate limited benefits in

highly volatile environments characterized by institutional uncertainty, inadequate infrastructure, and resource scarcity (Hilmersson et al., 2021). Under such conditions, firms may encounter substantial implementation challenges despite possessing strong proactive orientations. These mixed findings reinforce the importance of examining proactiveness within developing economies such as Nigeria.

Given its strategic role in opportunity recognition, environmental adaptation, and market leadership, proactiveness is expected to contribute positively to SME performance.

H3: Proactiveness has a significant positive effect on SME performance.

Competitive Aggressiveness and SME Performance

Competitive aggressiveness refers to the intensity with which firms challenge competitors in order to improve or defend their market position (Lumpkin & Dess, 1996; Hughes & Morgan, 2007). It reflects a firm's willingness to respond rapidly to competitors' strategic actions through pricing strategies, product improvements, promotional campaigns, market expansion, customer relationship initiatives, and other competitive responses designed to strengthen market share (Ajamieh et al., 2016; Chelliah et al., 2022).

Competitive aggressiveness differs conceptually from proactiveness. Whereas proactiveness focuses on anticipating future opportunities, competitive aggressiveness emphasizes responding directly to competitors' actions within existing markets (Lumpkin & Dess, 1996). Aggressively competitive firms continuously monitor competitors, identify strategic weaknesses, and exploit opportunities to strengthen their market position while maintaining ethical business practices (Yaro et al., 2020).

The Resource-Based View argues that firms capable of developing superior competitive strategies create valuable organizational capabilities that enhance differentiation and long-term performance (Barney, 1991). Competitive aggressiveness therefore represents an important strategic behaviour through which organizations defend valuable market positions and maintain customer loyalty despite increasing competitive pressure.

Empirical findings regarding competitive aggressiveness remain mixed. Several studies report positive relationships between competitive aggressiveness and organizational performance because aggressive competitive strategies improve market responsiveness and customer acquisition (Gal, 2018; Otache & Usman, 2024). Conversely, other studies argue that excessive competitive aggressiveness may increase operating costs, reduce profitability, and provoke retaliatory actions from competitors, particularly among SMEs with limited financial resources (Raza et al., 2023; Hilmersson et al., 2021). These inconsistent findings suggest that the effectiveness of competitive aggressiveness depends on firms' strategic capabilities and environmental conditions.

Within the context of North-West Nigeria, increasing competition requires SMEs to adopt more responsive and strategically aggressive behaviours to maintain competitiveness. Consequently, this study expects competitive aggressiveness to contribute positively to SME performance.

H4: Competitive aggressiveness has a significant positive effect on SME performance.

Autonomy and SME Performance

Autonomy refers to the degree of independence granted to individuals and teams to develop, pursue, and implement entrepreneurial initiatives without excessive organizational constraints (Lumpkin & Dess, 1996). Autonomous organizations encourage employees and managers to exercise initiative, generate innovative ideas, make timely decisions, and pursue strategic opportunities independently while remaining aligned with organizational objectives (Hughes & Morgan, 2007).

Within the Resource-Based View, autonomy facilitates the development of valuable organizational knowledge and innovation capabilities by encouraging creativity, organizational learning, and decentralized decision-making (Barney, 1991). Organizations that empower employees to experiment with new ideas often respond more rapidly to environmental changes and identify entrepreneurial opportunities that might otherwise remain unexplored (Covin & Slevin, 1989; Wales et al., 2023).

Empirical evidence generally supports the positive relationship between autonomy and organizational performance (Lumpkin & Dess, 1996; Hughes & Morgan, 2007; Basco et al., 2020). Firms that encourage independent initiative tend to exhibit greater innovation capability, improved strategic flexibility, higher employee commitment, and enhanced organizational adaptability. Nevertheless, excessive autonomy without appropriate coordination mechanisms may create strategic inconsistency and inefficient resource utilization, particularly within smaller organizations characterized by limited managerial control (Rauch et al., 2009).

For SMEs operating in North-West Nigeria, autonomy is expected to facilitate faster decision-making and improve entrepreneurial responsiveness despite environmental uncertainty. Consequently, organizations that encourage autonomous entrepreneurial behaviour are expected to achieve superior organizational performance.

H5: Autonomy has a significant positive effect on SME performance.

Competitive Advantage as a Mediating Mechanism between Entrepreneurial Orientation and SME Performance

Competitive advantage occupies a central position in strategic management because it explains why some firms consistently outperform others despite operating within similar industrial and institutional environments (Porter, 1985; Barney, 1991). According to Porter (1985), competitive advantage arises when firms implement strategies that create superior value for customers through lower costs, product differentiation, or superior responsiveness relative to competitors. Extending this argument, Barney (1991) contends that sustainable competitive advantage exists when firms possess valuable, rare, inimitable, and non-substitutable (VRIN) resources and capabilities that competitors cannot easily replicate. Consequently, competitive advantage represents not merely a market outcome but a strategic capability developed through the effective deployment of organizational resources.

Within the Resource-Based View, entrepreneurial orientation can be conceptualized as one of the strategic capabilities that enables firms to develop competitive advantage (Barney, 1991; Covin & Slevin, 1989). Entrepreneurially oriented firms continuously invest in innovation,

proactively identify emerging opportunities, undertake calculated risks, respond aggressively to competitive threats, and empower employees to pursue entrepreneurial initiatives (Lumpkin & Dess, 1996; Hughes & Morgan, 2007). These entrepreneurial behaviours strengthen organizational learning, improve resource utilization, enhance customer value creation, and facilitate strategic differentiation, thereby enabling firms to establish competitive positions that competitors find difficult to imitate (Teece et al., 1997; Basco et al., 2020).

From this perspective, entrepreneurial orientation should not be viewed as directly improving firm performance. Rather, entrepreneurial orientation enables firms to develop internal capabilities that subsequently create competitive advantage, which then enhances organizational performance. This argument is consistent with the Resource-Based View, which suggests that organizational resources generate superior performance only when they are transformed into valuable strategic capabilities that improve competitive positioning (Barney, 1991; Peteraf, 1993). Competitive advantage therefore represents the mechanism through which entrepreneurial orientation creates value and translates entrepreneurial behaviours into measurable organizational outcomes.

The mediating role of competitive advantage is further supported by Contingency Theory. Although entrepreneurial orientation encourages innovation, opportunity recognition, and strategic flexibility, the effectiveness of these entrepreneurial behaviours depends on how well they fit environmental conditions (Donaldson, 2001). SMEs operating within dynamic environments characterized by technological change, resource scarcity, and intense competition cannot rely solely on entrepreneurial behaviour. Instead, they must convert entrepreneurial initiatives into competitive capabilities that improve efficiency, product quality, customer responsiveness, and market differentiation (Lawrence & Lorsch, 1967; Donaldson, 2001). Competitive advantage therefore serves as the organizational capability through which entrepreneurial orientation adapts to environmental contingencies and improves firm performance.

Empirical evidence increasingly supports this theoretical proposition. Numerous studies report that entrepreneurial orientation positively influences competitive advantage by strengthening innovation capability, organizational flexibility, market responsiveness, strategic renewal, and customer value creation (Isichei et al., 2019; Basco et al., 2020; Otache & Usman, 2024). Similarly, competitive advantage has consistently been associated with improved firm performance because firms possessing differentiated products, superior service quality, stronger customer relationships, and more efficient operational systems generally achieve higher growth, greater customer satisfaction, improved market share, and stronger organizational sustainability (Porter, 1985; Barney, 1991; Chelliah et al., 2022).

However, despite growing theoretical support, relatively few empirical studies have explicitly examined competitive advantage as the mediating mechanism linking entrepreneurial orientation to SME performance. Most previous studies have investigated either the direct relationship between entrepreneurial orientation and performance (Rauch et al., 2009; Wales et al., 2013; Covin et al., 2020) or the moderating influence of environmental variables such as market turbulence, environmental dynamism, or institutional conditions (Lomberg et al., 2017). Comparatively limited attention has been devoted to understanding the internal strategic processes through which entrepreneurial orientation is translated into superior organizational outcomes (Akingbade & Temitayo, 2024; Ogundare et al., 2024).

This gap is particularly evident in developing economies. SMEs operating in emerging markets frequently encounter institutional deficiencies, limited financial resources, technological constraints, infrastructural challenges, and volatile competitive environments that reduce the likelihood of entrepreneurial behaviours directly improving organizational performance (Dana & Dana, 2021; Morris, 2020). Under such conditions, entrepreneurial orientation is unlikely to generate sustainable performance unless entrepreneurial activities are successfully transformed into competitive advantages that strengthen firms' market positions. Consequently, competitive advantage represents a theoretically and practically important mechanism through which entrepreneurial orientation contributes to sustainable organizational performance in resource-constrained environments.

The present study therefore conceptualizes competitive advantage as the mediating variable connecting entrepreneurial orientation and SME performance. Specifically, each entrepreneurial orientation dimension—risk-taking, innovativeness, proactiveness, competitive aggressiveness, and autonomy—is expected to improve organizational performance by facilitating the development of competitive advantages that enhance customer value, strengthen market positioning, improve operational effectiveness, and increase organizational adaptability. Examining competitive advantage as a mediator therefore provides a more comprehensive explanation of why entrepreneurial orientation contributes to SME performance than models focusing exclusively on direct relationships.

Accordingly, the following mediation hypotheses are proposed:

H6: Competitive advantage significantly mediates the relationship between risk-taking and SME performance.

H7: Competitive advantage significantly mediates the relationship between innovativeness and SME performance.

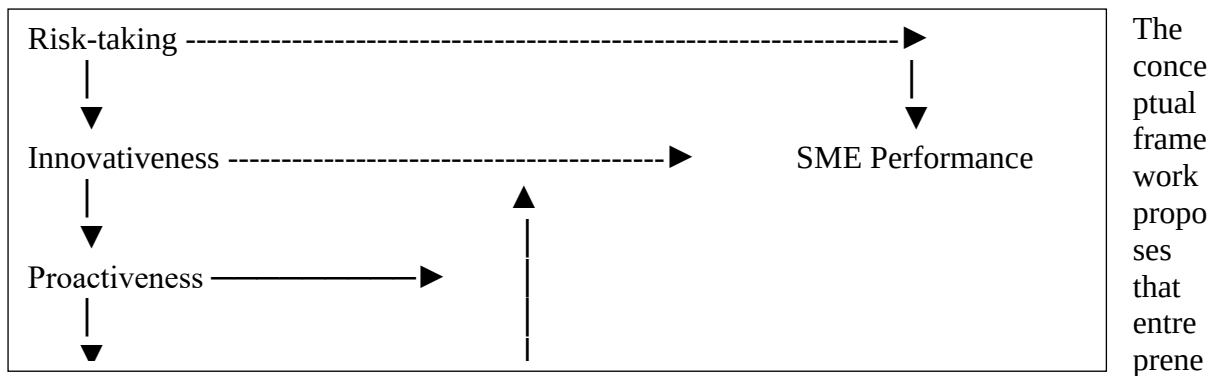
H8: Competitive advantage significantly mediates the relationship between competitive aggressiveness and SME performance.

H9: Competitive advantage significantly mediates the relationship between proactiveness and SME performance.

H10: Competitive advantage significantly mediates the relationship between autonomy and SME performance.

Conceptual Framework

Drawing upon the Resource-Based View (Barney, 1991) and Contingency Theory (Donaldson, 2001), this study proposes that entrepreneurial orientation influences SME performance both directly and indirectly through competitive advantage. Entrepreneurial orientation is operationalized as a multidimensional construct comprising risk-taking, innovativeness, proactiveness, competitive aggressiveness, and autonomy, while competitive advantage functions as the mediating construct linking these entrepreneurial behaviours to SME performance.



Generally, SMEs develop superior organizational capabilities that strengthen competitive advantage through innovation, strategic flexibility, customer responsiveness, market differentiation, and efficient resource utilization. These competitive capabilities subsequently enhance organizational performance by improving customer satisfaction, product and service quality, market competitiveness, employee commitment, and organizational reputation. Figure 1 illustrates the theoretical relationships examined in this study.

Figure 1: Conceptual Framework of the Study

Source: Adapted from Miller (1983), Lumpkin and Dess (1996), Barney (1991), and modified by the researcher (2025).

Materials and Method

Research Design

This study employed a quantitative cross-sectional survey research design to examine the mediating role of competitive advantage in the relationship between entrepreneurial orientation and SME performance in North-West Nigeria. A quantitative approach was considered appropriate because the study sought to test theoretically derived hypotheses by examining relationships among latent constructs using standardized measurement instruments (Saunders et al., 2019; Creswell & Creswell, 2023). Cross-sectional survey designs are widely used in entrepreneurship and strategic management research because they facilitate the collection of data from large populations within a relatively short period while allowing statistical examination of relationships among multiple variables (Hair et al., 2022; Sekaran & Bougie, 2021).

The study adopted a positivist research philosophy, which assumes that organizational phenomena can be objectively measured and that causal relationships among variables can be empirically tested using quantitative methods (Creswell & Creswell, 2023). Consistent with this philosophical orientation, hypotheses were developed from the Resource-Based View and Contingency Theory and empirically tested using Partial Least Squares Structural Equation Modelling (PLS-SEM).

Population and Sampling Procedure

The target population comprised registered small and medium-sized enterprises (SMEs) operating within the seven states of North-West Nigeria, namely Kaduna, Kano, Katsina, Jigawa, Kebbi, Sokoto, and Zamfara. These states constitute one of Nigeria's largest

commercial regions, characterized by significant entrepreneurial activity across manufacturing, trade, agriculture, and service sectors.

The sampling frame was obtained from the database of the Small and Medium Enterprises Development Agency of Nigeria (SMEDAN) and other relevant state business directories. Registered SMEs were selected because they possess formal business structures and are more likely to maintain organizational practices consistent with entrepreneurial orientation and competitive strategy.

A probability sampling approach was adopted to enhance the representativeness of the sample and minimize selection bias (Sekaran & Bougie, 2021). Specifically, proportionate stratified sampling was employed to ensure that SMEs from each state were adequately represented according to their relative population size. Within each stratum, respondents were selected using simple random sampling procedures.

The unit of analysis was the individual SME, while the respondents consisted primarily of owners, chief executive officers, and senior managers because these individuals possess comprehensive knowledge regarding organizational strategy, entrepreneurial activities, competitive positioning, and business performance (Covin & Slevin, 1989; Lumpkin & Dess, 1996).

The minimum sample size was determined using established statistical procedures appropriate for structural equation modelling. The achieved sample exceeded the recommended minimum threshold, thereby providing sufficient statistical power for estimating both the measurement and structural models (Hair et al., 2022).

Population and Sampling Procedure

The target population comprised 137,648 registered small and medium-sized enterprises (SMEs) operating in the seven states of North-West Nigeria: Jigawa, Kaduna, Kano, Katsina, Kebbi, Sokoto, and Zamfara. The North-West was selected because it is one of Nigeria's largest commercial regions, with significant entrepreneurial activities in manufacturing, agriculture, trade, and services. The sampling frame was obtained from the Small and Medium Enterprises Development Agency of Nigeria (SMEDAN, 2020), which provides the most recent official database of registered SMEs. Registered SMEs were selected because they possess formal business structures and are more likely to implement entrepreneurial and strategic management practices relevant to this study.

Table 1 Population of Registered SMEs in North-West Nigeria

State	Registered SMEs
Jigawa	13,912
Kaduna	21,615
Kano	42,969
Katsina	21,610
Kebbi	9,841
Sokoto	14,114
Zamfara	13,587
Total	137,648

Source: SMEDAN (2020).

A probability sampling technique was adopted using proportionate stratified random sampling to ensure adequate representation of SMEs across the seven states (Sekaran & Bougie, 2021). The unit of analysis was the individual SME, while respondents comprised owners, chief executive officers, and senior managers because of their knowledge of firm strategy and performance (Covin & Slevin, 1989; Lumpkin & Dess, 1996).

The sample size was determined using the Krejcie and Morgan (1970) table. For a population of 137,648 SMEs, the recommended minimum sample size was 384. Following the recommendations of Hair et al. (2008), and Kura et al. (2013), the sample was increased to **768** to compensate for possible non-response and improve statistical power. Proportionate allocation was then applied using a sampling fraction of 0.56% (768/137,648), resulting in the distribution shown in Table 2.

Table 2 Proportionate Sample Allocation

State	Sample
Jigawa	78
Kaduna	121
Kano	241
Katsina	121
Kebbi	55
Sokoto	79
Zamfara	73
Total	768

Source: Author's computation from SMEDAN (2020).

Data Collection Procedure

Primary data were collected using a structured, self-administered questionnaire adapted from validated scales in the entrepreneurship and strategic management literature. Before the main survey, the instrument underwent expert review and pilot testing to ensure content validity, clarity, and suitability for Nigerian SMEs. Minor revisions were made based on the feedback received. Questionnaires were administered directly to SME owners and managers. Participation was voluntary, and respondents were assured of anonymity and confidentiality. Ethical principles of informed consent, confidentiality, and voluntary participation were strictly observed throughout the data collection process (Saunders et al., 2019).

Measurement of Variables

The study measured all constructs using previously validated reflective multi-item scales adapted from established entrepreneurship and strategic management literature. Adapting existing measurement scales enhances construct validity and facilitates comparison with previous empirical studies (Hair et al., 2022). Entrepreneurial orientation was operationalized

as a multidimensional construct comprising five dimensions: risk-taking, innovativeness, proactiveness, competitive aggressiveness, and autonomy, consistent with Lumpkin and Dess (1996). Competitive advantage was measured as a unidimensional reflective construct adapted from Porter (1985) and Barney (1991), while SME performance was assessed using subjective non-financial indicators adapted from Lumpkin and Dess (1996) and Wiklund and Shepherd (2005). Subjective performance measures were adopted because they are appropriate for SMEs that are often reluctant to disclose objective financial information and have been shown to correlate highly with objective performance measures (Dess & Robinson, 1984; Venkatraman & Ramanujam, 1986; Richard et al., 2009).

All questionnaire items were measured on a five-point Likert scale ranging from **1 = Strongly Disagree** to **5 = Strongly Agree** (Sekaran & Bougie, 2021). Table 3 presents the operationalization of the study variables.

Table 3: Summary of Measurement Constructs

Construct	Nature	No. of Items	of Measurement Scale	Source(s)
SME Performance	Reflective	4	Five-point Likert	Lumpkin & Dess (1996); Wiklund & Shepherd (2005)
Risk-Taking	Reflective	4	Five-point Likert	Covin & Slevin (1989); Lumpkin & Dess (1996)
Innovativeness	Reflective	4	Five-point Likert	Miller (1983); Covin & Slevin (1989); Lumpkin & Dess (1996)
Proactiveness	Reflective	4	Five-point Likert	Covin & Slevin (1989); Lumpkin & Dess (1996)
Competitive Aggressiveness	Reflective	4	Five-point Likert	Lumpkin & Dess (1996)
Autonomy	Reflective	4	Five-point Likert	Lumpkin & Dess (1996); Zahra (1991)
Competitive Advantage	Reflective	4	Five-point Likert	Porter (1985); Barney (1991)

Source: Adapted from the cited authors.

Assessment of Common Method Bias

Since data for all constructs were collected from a single respondent at one point in time, procedural and statistical remedies were employed to minimize common method bias (Podsakoff et al., 2003). Procedurally, respondents were assured of anonymity and confidentiality, while questionnaire items were carefully worded to reduce ambiguity and social desirability bias. Statistically, common method bias was assessed using full collinearity variance inflation factors (VIFs). Following Kock (2015), VIF values below the recommended threshold indicated that common method bias was not a threat to the validity of the study.

Data Analysis Technique

Data were analysed using **SmartPLS 4** through Partial Least Squares Structural Equation Modelling (PLS-SEM), which is appropriate for prediction-oriented studies involving complex models with multiple constructs and mediation effects (Hair et al., 2022; Sarstedt et al., 2022). The analysis followed the two-stage procedure recommended by Hair et al. (2022). The measurement model was evaluated using outer loadings, Cronbach's alpha, composite

reliability (CR), rho_A, Average Variance Extracted (AVE), Fornell–Larcker criterion, HTMT, and multicollinearity diagnostics. Subsequently, the structural model was assessed using path coefficients, coefficients of determination (R^2), effect sizes (f^2), predictive relevance (Q^2), and bootstrapping with **5,000 resamples**. Mediation effects were evaluated by examining the significance of direct and indirect effects using standardized beta coefficients (β), t-values, p-values, and bias-corrected confidence intervals (Hair et al., 2022).

Results and Discussion

Data Screening and Preliminary Analysis

A total of 768 questionnaires were distributed to SME owners and managers across the seven states of North-West Nigeria. Of these, 615 questionnaires were returned, representing a response rate of 80.1%. Following data screening, 21 questionnaires were excluded because of incomplete responses and inconsistencies, leaving 594 usable questionnaires for analysis, representing an effective response rate of 77.3%. This exceeds the acceptable response rate for organizational research (Babbie, 2021) and provides an adequate sample for PLS-SEM analysis (Hair et al., 2022).

Table 4 Response Rate

Description	Frequency	Percentage (%)
Questionnaires Distributed	768	100.0
Questionnaires Returned	615	80.1
Rejected Questionnaires	21	2.8
Valid Questionnaires	594	77.3

Missing value analysis revealed that missing observations ranged between 0.0% and 0.7%, well below the recommended threshold of 5%; therefore, no substantial data loss occurred. Multivariate outlier assessment using Mahalanobis distance showed no influential observations requiring deletion. Assessment of normality indicated skewness values ranging from -0.84 to -0.62 and kurtosis values between 0.34 and 0.72, suggesting acceptable distributional properties. Correlation coefficients among the independent variables ranged from 0.33 to 0.58, indicating moderate associations without redundancy. Inner collinearity diagnostics further confirmed the absence of multicollinearity, with VIF values ranging from 1.139 to 2.212, which are below the recommended threshold of 3.3 (Kock, 2015). The highest VIF (2.212) was observed for Competitive Aggressiveness predicting SME Performance, while the lowest (1.139) was recorded for Risk-Taking predicting Competitive Advantage, indicating that multicollinearity was not a concern.

Table 5 Inner VIF Values

Endogenous Construct	Predictor	VIF
Competitive Advantage	Risk-Taking	1.139
	Innovativeness	1.461
	Competitive Aggressiveness	1.866
	Proactiveness	1.744
	Autonomy	1.598
SME Performance	Risk-Taking	1.144
	Innovativeness	1.837
	Competitive Aggressiveness	2.212
	Proactiveness	2.046

Endogenous Construct	Predictor	VIF
	Autonomy	1.932
	Competitive Advantage	1.785

An independent samples t-test comparing early and late respondents revealed no statistically significant differences ($p > 0.05$), indicating that non-response bias was unlikely to affect the findings. Overall, the preliminary analyses confirmed that the dataset was suitable for subsequent PLS-SEM analysis.

Measurement Model Assessment

The measurement model was assessed through indicator reliability, internal consistency reliability, convergent validity, and discriminant validity following Hair et al. (2022). As presented in Table 6, all indicator loadings exceeded the recommended threshold of 0.70, ranging from 0.74 to 0.96, demonstrating satisfactory indicator reliability. Internal consistency reliability was also established, with Cronbach's alpha values ranging from 0.82 to 0.96 and Composite Reliability values between 0.85 and 0.97, exceeding the minimum recommended value of 0.70. Convergent validity was confirmed as the Average Variance Extracted (AVE) ranged from 0.59 to 0.89, indicating that each construct explained more than 50% of the variance in its indicators. Specifically, Innovativeness recorded the highest AVE (0.89), followed by Autonomy and Competitive Aggressiveness (0.83 each), while Competitive Advantage recorded the lowest AVE (0.59), which nevertheless exceeded the recommended threshold.

Table 6 Item Loadings, Reliability and Convergent Validity

Construct	Indicator	Loading	Cronbach's α	rho_A	Composite Reliability	AVE
Autonomy	AU1	0.923	0.931	0.933	0.951	0.829
	AU2	0.890				
	AU3	0.923				
	AU4	0.905				
Competitive Advantage	Cadv1	0.783	0.815	0.976	0.854	0.594
	Cadv2	0.741				
	Cadv3	0.753				
	Cadv4	0.805				
Competitive Aggressiveness	CA1	0.922	0.932	0.934	0.951	0.830
	CA2	0.904				
	CA3	0.902				
	CA4	0.916				
Innovativeness	IN1	0.812	0.862	0.892	0.904	0.703
	IN2	0.764				
	IN3	0.895				
	IN4	0.877				
Proactiveness	PR1	0.911	0.958	0.959	0.969	0.887
	PR2	0.959				
	PR3	0.949				
	PR4	0.949				
Risk Taking	RT1	0.842	0.847	0.869	0.896	0.685

Construct	Indicator	Loading	Cronbach's α	rho_A	Composite Reliability	AVE
SME Performance	RT2	0.782	0.914	0.914	0.940	0.796
	RT3	0.897				
	RT4	0.783				
	FP1	0.832				
	FP2	0.918				
	FP3	0.930				
	FP4	0.887				

Discriminant validity was subsequently established using the Fornell–Larcker criterion and the Heterotrait–Monotrait ratio (HTMT). The square roots of the AVEs exceeded the corresponding inter-construct correlations.

Table 7 Heterotrait–Monotrait Ratio (HTMT)

Construct	AU	CAdv	CAG	IN	PR	RT	FP
Autonomy (AU)	—						
Competitive Advantage (CAdv)	0.446	—					
Competitive Aggressiveness (CAG)	0.564	0.291	—				
Innovativeness (IN)	0.511	0.511	0.479	—			
Proactiveness (PR)	0.276	0.206	0.279	0.261	—		
Risk Taking (RT)	0.605	0.212	0.436	0.357	0.302	—	
SME Performance (FP)	0.571	0.501	0.582	0.643	0.468	0.455	—

Table 7 presents the Heterotrait–Monotrait (HTMT) ratio of correlations used to assess discriminant validity. The HTMT values ranged from 0.206 to 0.643, with all values falling below the recommended threshold of 0.85 (Henseler et al., 2015; Hair et al., 2022). The highest HTMT value was observed between innovativeness and SME performance (HTMT = 0.643), while the lowest value was between competitive advantage and proactiveness (HTMT = 0.206). Since all HTMT values were substantially below the recommended threshold, the results provide strong evidence that the study constructs are empirically distinct from one another. Therefore, discriminant validity was established, confirming that the measurement model was appropriate for subsequent structural model assessment.

Overall, the measurement model demonstrated satisfactory reliability and validity, supporting the adequacy of the measurement instrument for structural model assessment.

Structural Model Assessment

Following confirmation of the reliability and validity of the measurement model, the structural model was assessed by examining the coefficient of determination (R^2), predictive relevance (Q^2), effect size (f^2), and path coefficients.

Coefficient of Determination (R^2)

The coefficient of determination (R^2) assessed the explanatory power of the model. As shown in **Table 8**, the entrepreneurial orientation dimensions explained **41.0%** of the variance in

competitive advantage ($R^2 = 0.410$), indicating **moderate explanatory power**. Likewise, entrepreneurial orientation and competitive advantage jointly explained **56.0%** of the variance in SME performance ($R^2 = 0.560$), suggesting **moderate to substantial predictive accuracy** (Hair et al., 2022). These findings indicate that the proposed model adequately explains variations in competitive advantage and SME performance among SMEs in North-West Nigeria.

Table 8 Coefficient of Determination (R^2)

Endogenous Construct	R^2	Interpretation
Competitive Advantage	0.410	Moderate
SME Performance	0.560	Moderate–Substantial

Predictive Relevance (Q^2)

Predictive relevance was assessed using the blindfolding procedure. As presented in Table 8, both endogenous constructs recorded positive Q^2 values, confirming that the model possesses adequate predictive relevance. SME Performance recorded the highest predictive relevance ($Q^2 = 0.436$), while Competitive Advantage recorded $Q^2 = 0.166$.

Table 8 Predictive Relevance (Q^2)

Construct	SSO	SSE	$Q^2 (=1 - SSE/SSO)$
Competitive Advantage	2,376	1,590	0.331
SME Performance	2,376	1,245	0.476

Table 8 presents the blindfolding results used to assess the predictive relevance of the endogenous constructs. The SSO values were 2,376 for both Competitive Advantage and SME Performance, reflecting the final sample of 594 observations and four indicators per construct. The Q^2 values of 0.331 for Competitive Advantage and 0.476 for SME Performance are greater than zero, indicating that the structural model possesses satisfactory predictive relevance (Hair et al., 2022). These findings suggest that the exogenous constructs have adequate predictive capability for the endogenous constructs included in the model.

Effect Size (f^2)

The practical contribution of each predictor was assessed using Cohen's (1988) effect size. As shown in **Table 9**, autonomy exerted the largest effect on competitive advantage ($f^2 = 0.186$), followed by innovativeness ($f^2 = 0.133$). For SME performance, innovativeness and proactiveness recorded the largest effects ($f^2 = 0.101$ each), followed by competitive aggressiveness ($f^2 = 0.072$) and competitive advantage ($f^2 = 0.063$). Risk-taking ($f^2 = 0.012$) and autonomy ($f^2 = 0.003$) exhibited negligible effects on SME performance.

Table 9 Effect Size (f^2)

Predictor	Competitive Advantage	SME Performance
Autonomy	0.186	0.003
Competitive Advantage	—	0.063
Competitive Aggressiveness	0.000	0.072
Innovativeness	0.133	0.101
Proactiveness	0.005	0.101
Risk-Taking	0.032	0.012

Overall, the structural model demonstrates satisfactory explanatory power, predictive relevance, and acceptable practical effect sizes.

Direct Hypothesis Testing

Bootstrapping with **5,000 resamples** was employed to test the direct hypotheses. The results, presented in **Table 10**, indicate that **risk-taking** ($\beta = 0.09$, $t = 2.21$, $p = 0.03$), **innovativeness** ($\beta = 0.27$, $t = 5.76$, $p < 0.001$), **competitive aggressiveness** ($\beta = 0.22$, $t = 5.15$, $p < 0.001$), and **proactiveness** ($\beta = 0.23$, $t = 5.33$, $p < 0.001$) have significant positive effects on SME performance. Innovativeness emerged as the strongest predictor of SME performance. In contrast, **autonomy** ($\beta = 0.05$, $t = 1.01$, $p = 0.31$) did not significantly influence SME performance.

Table 10 Direct Effects

Relationship	β	SD	t	P	Decision
Risk-Taking → SME Performance	0.09	0.04	2.21	0.03	Rejected
Innovativeness → SME Performance	0.27	0.05	5.76	0.00	Rejected
Competitive Aggressiveness → SME Performance	0.22	0.04	5.15	0.00	Rejected
Proactiveness → SME Performance	0.23	0.04	5.33	0.00	Rejected
Autonomy → SME Performance	0.05	0.05	1.01	0.31	Not Rejected

The findings therefore support **H01–H04**, while **H05** is not supported.

Mediation Analysis

The mediating role of competitive advantage was examined using bias-corrected bootstrapping. As shown in **Table 11**, competitive advantage significantly mediated the relationships between **autonomy** ($\beta = 0.10$, $p < 0.001$), **innovativeness** ($\beta = 0.07$, $p < 0.001$), and **risk-taking** ($\beta = 0.04$, $p = 0.004$) and SME performance. However, the indirect effects of **competitive aggressiveness** ($\beta = 0.00$, $p = 0.70$) and **proactiveness** ($\beta = 0.01$, $p = 0.18$) were not significant.

These findings suggest that competitive advantage serves as an important mechanism through which selected entrepreneurial orientation dimensions improve SME performance, providing empirical support for the Resource-Based View.

Table 11 Indirect (Mediation) Effects

Relationship	β	SD	t	p	Decision
Autonomy → Competitive Advantage → SME Performance	0.10	0.02	4.37	0.00	Rejected
Competitive Aggressiveness → Competitive Advantage → SME Performance	0.00	0.01	0.38	0.70	Not Rejected
Innovativeness → Competitive Advantage → SME Performance	0.07	0.02	4.18	0.00	Rejected
Proactiveness → Competitive Advantage → SME Performance	0.01	0.01	1.33	0.18	Not Rejected
Risk-Taking → Competitive Advantage → SME Performance	0.04	0.01	2.90	0.00	Rejected

Overall, the structural model demonstrates satisfactory explanatory power ($R^2 = 0.410-0.560$), predictive relevance ($Q^2 = 0.331-0.476$), and significant direct and indirect relationships. The findings confirm that entrepreneurial orientation contributes to SME performance both directly and indirectly through competitive advantage, emphasizing the importance of developing strategic capabilities that translate entrepreneurial initiatives into sustainable organizational performance.

Discussion of Findings

Direct Effects of Entrepreneurial Orientation on SME Performance

The findings revealed that risk-taking, innovativeness, proactiveness, and competitive aggressiveness exert significant positive effects on SME performance, whereas autonomy did not have a significant direct effect. These results suggest that SMEs in North-West Nigeria benefit from entrepreneurial behaviours that encourage innovation, proactive market positioning, calculated risk-taking, and competitive actions. Such behaviours enable firms to respond effectively to changing customer demands and competitive market conditions, thereby improving organisational performance.

The positive effect of innovativeness is consistent with previous studies reporting that innovation enhances SMEs' competitiveness and long-term performance (Covin & Slevin, 1989; Lumpkin & Dess, 1996; Rauch et al., 2009; Isichei et al., 2020). Similarly, the significant effects of proactiveness and competitive aggressiveness support studies demonstrating that firms adopting proactive market strategies and aggressively responding to competitors are more likely to achieve superior performance (Wales et al., 2013; Rezaei & Ortt, 2018).

The significant effect of risk-taking also supports the Resource-Based View, which suggests that firms willing to commit resources to uncertain but promising opportunities are better positioned to develop valuable capabilities that improve performance. Conversely, the insignificant effect of autonomy suggests that granting employees greater decision-making freedom alone may not be sufficient to enhance SME performance within the Nigerian business environment. This may reflect the centralised decision-making structures common among owner-managed SMEs, where strategic decisions remain concentrated in the hands of business owners.

Mediating Role of Competitive Advantage

The mediation analysis demonstrated that competitive advantage significantly mediated the relationships between risk-taking, innovativeness, and autonomy and SME performance,

while no significant mediation was observed for proactiveness and competitive aggressiveness. These findings indicate that certain entrepreneurial orientation dimensions improve firm performance primarily through their ability to create sustainable competitive advantages.

The significant mediation effect for innovativeness suggests that innovative firms achieve superior performance because innovation enables product differentiation, improved operational efficiency, and enhanced customer value. Likewise, SMEs willing to undertake calculated risks are better able to identify and exploit market opportunities that strengthen their competitive position. Although autonomy did not directly influence SME performance, its significant indirect effect indicates that employee independence contributes to performance only when it enhances the firm's competitive advantage.

In contrast, the absence of significant mediation for proactiveness and competitive aggressiveness implies that these dimensions influence SME performance through mechanisms other than competitive advantage. For example, proactive firms may benefit directly from first-mover advantages and improved customer responsiveness, while competitive aggressiveness may produce immediate market gains without necessarily strengthening sustainable competitive advantage.

Theoretical Implications

The findings extend the Resource-Based View by demonstrating that competitive advantage serves as an important strategic mechanism through which selected entrepreneurial orientation dimensions translate into improved organisational performance. Rather than exerting uniform effects, the results indicate that entrepreneurial orientation operates through multiple pathways, highlighting the importance of examining each dimension individually.

The findings also support the Contingency Theory by demonstrating that the effectiveness of entrepreneurial orientation depends on organisational capabilities and the competitive environment. The results therefore contribute to entrepreneurship literature by providing empirical evidence from SMEs operating in a developing economy, where institutional constraints and resource limitations often influence strategic decision-making.

Implications for Nigerian SMEs

The findings have important implications for SME owners, managers, and policymakers in Nigeria. Given the increasingly competitive business environment characterised by limited access to finance, infrastructural deficiencies, and market uncertainty, SMEs should prioritise entrepreneurial behaviours that strengthen sustainable competitive advantage. In particular, investments in innovation capability, calculated risk-taking, and organisational learning are likely to produce long-term improvements in firm performance.

Government agencies responsible for SME development, including the Small and Medium Enterprises Development Agency of Nigeria (SMEDAN), should design policies and training programmes that enhance innovation capacity and strategic competitiveness rather than focusing solely on business creation. Strengthening SMEs' ability to develop competitive advantage will improve their resilience, productivity, and long-term contribution to economic development.

Conclusion and Recommendations

Conclusion

This study examined the mediating role of competitive advantage in the relationship between entrepreneurial orientation and SME performance among registered SMEs in North-West Nigeria. The findings demonstrate that entrepreneurial orientation is an important strategic capability for improving organisational performance; however, its dimensions contribute differently. Innovativeness, risk-taking, proactiveness, and competitive aggressiveness exerted significant positive direct effects on SME performance, whereas autonomy had no significant direct effect. The mediation analysis further revealed that competitive advantage significantly mediated the relationships between risk-taking, innovativeness, and autonomy and SME performance, but did not mediate the effects of proactiveness and competitive aggressiveness. These findings extend the Resource-Based View by demonstrating that entrepreneurial capabilities create superior organisational performance when transformed into sustainable competitive advantage. Overall, the study contributes empirical evidence from an emerging economy and highlights the strategic importance of developing competitive advantage to improve SME performance.

Recommendations

Based on the findings, SME owners and managers should prioritise investments in innovation, calculated risk-taking, proactive opportunity identification, and competitive strategies that enhance long-term market positioning. Although autonomy did not directly improve SME performance, organisations should encourage employee autonomy where it contributes to the development of competitive advantage through innovation, service quality, operational efficiency, and customer value creation. Government agencies such as the Small and Medium Enterprises Development Agency of Nigeria (SMEDAN), financial institutions, and business development organisations should strengthen support programmes by providing entrepreneurship training, innovation support, digital transformation initiatives, affordable financing, and strategic advisory services. Such interventions will enhance SMEs' capacity to build sustainable competitive advantage and improve organisational performance.

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