

Strategic Decision-Making and Firm Performance in Pharmaceutical SMEs: Examining the Mediating Effect of Entrepreneurial Orientation

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Abstract- This study investigated the relationship between strategic decision-making and firm performance in pharmaceutical small and medium-sized enterprises (SMEs) in Southwest Nigeria, focusing on the mediating role of entrepreneurial orientation. It examined how entrepreneurial orientation enhances the effectiveness of decision-making processes in improving performance outcomes. A mixed-methods design was employed, combining quantitative survey data with qualitative insights. Primary data were collected via structured questionnaires administered to owners, managers, and key decision-makers across six states: Ekiti, Lagos, Ogun, Ondo, Osun, and Oyo. The study population comprised 1,510 registered pharmaceutical SMEs operating in manufacturing, distribution, wholesale, and retail segments. Using Yamane's formula, a sample of 316 firms was determined, with 305 valid responses analyzed. Data were analyzed through descriptive statistics and mediation analysis using PROCESS Macro (Model 4) in SPSS, supported by bootstrapping. Findings revealed that strategic decision-making positively influences entrepreneurial orientation ($\beta = 0.482, p < 0.001$), with firms exhibiting higher innovativeness, proactiveness, and risk-taking. Entrepreneurial orientation also significantly improved firm performance ($\beta = 0.515, p < 0.001$). Mediation analysis confirmed that entrepreneurial orientation partially mediates the decision-making-performance relationship, with a significant bootstrapped indirect effect (0.248, 95% CI excluding zero). The study concludes that entrepreneurial orientation is a critical mechanism through which structured decision-making enhances firm performance, reinforcing innovation, proactive strategies, and calculated risk-taking as drivers of competitive advantage.

Keywords: Strategic Decision-Making, Entrepreneurial Orientation, Firm Performance, Pharmaceutical SMEs, Mediation Analysis, Southwest Nigeria.

I. INTRODUCTION

The global business environment, particularly in knowledge-intensive and innovation-driven industries such as pharmaceuticals, has experienced significant transformation due to technological advancements, regulatory changes, and global health challenges. These developments have increased the pressure on small and medium-scale pharmaceutical enterprises (SMEs) to adopt more structured, agile, and entrepreneurial decision-making approaches. Unlike large multinational corporations, pharmaceutical SMEs often face constraints such as limited financial resources, restricted access to skilled manpower, and difficulties in navigating complex regulatory frameworks. Nevertheless, their flexibility, innovative potential, and proximity to local markets make them essential contributors to healthcare delivery and economic development (OECD, 2023). Business decision-making refers to the systematic process through which organizations identify problems, gather relevant information, evaluate alternatives, and select appropriate strategies to achieve organizational goals. In the pharmaceutical sector, decision-making is particularly sensitive due to strict regulatory requirements, product safety concerns, and dynamic market conditions (Onyema & Okoro, 2023). Although traditional management theories emphasize rational decision-making as a determinant of organizational performance, recent studies highlight the importance of entrepreneurial orientation (EO) in shaping how firms interpret information and respond to market opportunities. Entrepreneurial orientation reflects a firm's strategic posture toward innovation, pro-activeness, and risk-taking, which enables firms to respond effectively to environmental uncertainties and competitive pressures (Ajayi, 2021).

In Nigeria, pharmaceutical SMEs play a vital role in supporting the healthcare system by producing and distributing affordable medicines, especially generic drugs that serve a large segment of the population. It is estimated that more than 70% of Nigerians depend on generic medicines for primary healthcare, underscoring the importance of local pharmaceutical enterprises (NAFDAC, 2023). Beyond healthcare delivery, these firms also contribute to employment generation, innovation, and economic development, particularly in urban and semi-urban areas (Adebayo & Osuntokun, 2023). Despite their significance, many pharmaceutical SMEs operate in a highly challenging environment characterized by fluctuating exchange rates, infrastructural deficiencies, supply chain disruptions, and the proliferation of counterfeit drugs. These challenges, coupled with intense competition from imported pharmaceutical products, often constrain their operational performance and long-term sustainability.

Furthermore, empirical evidence indicates that a considerable number of SMEs in Nigeria fail within their first five years of operation due to weak managerial capabilities, poor strategic decision-making, and inadequate entrepreneurial culture (SMEDAN, 2022). In many cases, business decisions are made on an ad hoc or intuitive basis without sufficient analytical evaluation or stakeholder engagement, leading to inefficiencies and reduced competitiveness (Eze & Nnaji, 2022). The limited use of entrepreneurial practices and weak collaboration with key stakeholders further restrict the ability of these firms to adapt to changing market conditions and regulatory demands. Given these challenges, it becomes necessary to examine how entrepreneurial orientation influences the effectiveness of decision-making processes and ultimately firm performance. Specifically, this study investigates the mediating role of entrepreneurial orientation in the relationship between business decision-making and the performance of pharmaceutical SMEs. The study seeks to answer the question: How does entrepreneurial orientation mediate the relationship between decision-making processes and firm performance? Accordingly, the study assesses the mediating role of entrepreneurial orientation in the relationship between decision-making and firm performance among pharmaceutical SMEs. The study

is guided by the hypothesis that entrepreneurial orientation does not significantly mediate the relationship between decision-making and firm performance

II. LITERATURE REVIEW

Conceptual Review

Business Decision-Making Processes

Business decision-making processes are fundamental to the strategic direction and day-to-day operations of any enterprise. They can be defined as the steps taken by an organization's management to identify issues, evaluate alternatives, make choices, and take action to achieve organizational goals. According to Simon (1977), decision-making can be broken down into three phases: intelligence gathering, design of alternatives, and choice. These processes are dynamic and context-dependent, particularly in industries like pharmaceuticals, where decision-makers must navigate complex, high-risk environments.

Business decision-making is a central process in organizational management, especially within SMEs, where the involvement of owners or top management in decision-making tends to be direct and personalized. It encompasses the series of actions taken by entrepreneurs to evaluate alternatives, anticipate outcomes, and select a course of action based on set objectives. Decision-making is complex and often iterative, especially in the pharmaceutical sector, where external factors such as regulation, consumer health trends, and technological advancements frequently alter the landscape. The nature of decision-making in pharmaceutical SMEs is influenced by both rational approaches and intuitive judgment. Rational decision-making assumes that entrepreneurs will choose the most optimal strategy based on available data, but in practice, decisions often involve elements of bounded rationality, where decision-makers face constraints on their information-processing capabilities (Simon, 1977).

For pharmaceutical SMEs, the decision-making process is heavily influenced by external factors such as government policies, regulatory frameworks, and market dynamics. Furthermore, decision-makers in these enterprises often face limitations in terms of resources, access to information, and technological

capabilities (Teece, 2018). As a result, their decision-making processes must be adaptive and flexible, allowing them to respond quickly to changing market conditions and emerging opportunities. Studies by Alvarez and Busenitz (2020) have also emphasized the importance of strategic decision-making that incorporates innovation and risk-taking, both of which are crucial for the success of pharmaceutical SMEs.

Decision-making processes in pharmaceutical SMEs are typically characterized by a mix of rational analysis and intuition. While larger pharmaceutical companies may rely on data-driven models, SMEs often depend on managerial experience and gut instincts. Recent studies by Ahmad et al. (2022) underscore the necessity of integrating both formalized decision-making techniques and informal, experiential knowledge in small and medium enterprises, especially in industries with high uncertainty like pharmaceuticals.

Business decision-making processes represent a critical organizational function that directly influences firm performance, particularly within small and medium-scale enterprises (SMEs) in the pharmaceutical sector. This process entails systematically identifying problems or opportunities, evaluating alternatives, selecting optimal courses of action, and implementing decisions aimed at achieving organizational objectives. The complexity and dynamic nature of the pharmaceutical industry, especially for SMEs, necessitate that decision-making be both strategic and adaptive to emerging market trends and regulatory changes (Gs & Soemantri, 2020; Akhtar et al., 2019).

The decision-making process in SMEs is deeply intertwined with entrepreneurial orientation, which includes innovativeness, proactiveness, and risk-taking behaviours. These dimensions stimulate the adoption of novel strategies and facilitate responsiveness to market demands, thereby enhancing competitiveness and performance (Gs & Soemantri, 2020). For instance, Gs and Soemantri (2020) highlight that entrepreneurial orientation serves as a strategic lens through which business decisions are formulated and executed, enabling SMEs to capitalize on opportunities and mitigate

threats effectively. Furthermore, decision-making in SMEs is frequently characterized by limited resources, necessitating efficient allocation and prioritization to maximize returns. This constraint underscores the importance of strategic decision-making frameworks that incorporate both internal capabilities and external environmental factors (Ahmed et al., 2019).

The integration of data-driven insights into the decision-making process has gained significant traction, particularly with the advent of big data analytics. Akhtar et al. (2019) emphasize that big data-savvy teams enhance organizational decision-making by leveraging analytical capabilities to interpret complex datasets, leading to more informed and timely business actions. In the context of pharmaceutical SMEs, the ability to analyze market trends, customer preferences, and regulatory landscapes through big data tools bolsters decision quality and operational efficiency. This data-centric approach also aligns with the absorptive capacity of firms the ability to recognize, assimilate, and apply external knowledge which Ahmed et al. (2019) identify as pivotal in enhancing intellectual capital and, consequently, firm performance. Thus, decision-making processes that incorporate absorptive capacity mechanisms facilitate innovation and adaptive learning, critical for sustaining competitive advantage in a highly regulated industry.

Moreover, sustainability considerations are increasingly integrated into business decision-making processes, reflecting a broader shift towards corporate social responsibility and environmental stewardship. This integration requires that decision-makers evaluate not only economic outcomes but also environmental and social impacts, which can influence stakeholder perceptions and long-term viability. Similarly, Mukonza and Swarts (2019) explore how green marketing strategies, driven by sustainable decision-making, enhance both business performance and corporate image in retail sectors, a finding likely applicable to pharmaceutical SMEs given the growing consumer demand for environmentally conscious products.

The decision-making process also embodies the interplay between strategic orientation and gender

dynamics within SMEs. Kiefer, Heileman, and Pett (2020) examine the extent to which gender influences business performance, suggesting that decision-making styles and outcomes may differ across male- and female-led enterprises. Their findings indicate that gender-related cognitive and behavioral factors can shape risk tolerance, innovation propensity, and networking behaviours, all of which are integral to business decisions. Such nuances underscore the importance of acknowledging diversity within decision-making teams to leverage a broader spectrum of insights, thereby enriching the quality and inclusiveness of business strategies.

In synthesizing these perspectives, it is evident that business decision-making processes within small and medium-scale pharmaceutical enterprises are multifaceted and contextually embedded. The strategic orientation of the firm, particularly entrepreneurial orientation, plays a determinative role in shaping decision priorities and approaches. Additionally, the incorporation of social networking facilitates access to information and resources that enrich the decision-making context (Gs & Soemantri, 2020; Akhtar et al., 2019). Effective decisions require balancing financial imperatives with sustainability goals, leveraging intellectual capital and absorptive capacity, and recognizing the influence of team composition, including gender diversity (Ahmed et al., 2019; Kiefer et al., 2020).

Entrepreneurial Orientation and Business Strategies

Entrepreneurial Orientation (EO) is a critical determinant of business strategy in SMEs. EO refers to the propensity of a firm to engage in innovative, proactive, and risk-taking behaviours. The strategic direction of pharmaceutical SMEs is often shaped by their entrepreneurial orientation, which in turn influences their decision-making processes. Firms with high EO tend to pursue innovative projects, enter new markets, and adopt novel business models. These actions are fundamental for achieving a competitive edge in the pharmaceutical sector, where rapid technological advancements and regulatory challenges are the norm. Strategic decision-making grounded in EO enables SMEs to exploit emerging opportunities, reposition themselves competitively, and improve market share (Chukwuemeka & Ayodele, 2021).

EO has been empirically linked to improved organizational performance when aligned with coherent business strategies (Okonkwo et al., 2023). For pharmaceutical SMEs, this could manifest in diversifying product lines or investing in new drug formulations to meet shifting customer demands and regulatory requirements.

Entrepreneurial Orientation (EO) has emerged as a critical construct in understanding how firms formulate and implement business strategies that contribute to superior performance, particularly within small and medium-scale enterprises (SMEs) operating in dynamic and competitive environments such as the pharmaceutical sector. EO encompasses dimensions such as innovativeness, proactiveness, risk-taking, competitive aggressiveness, and autonomy, which collectively shape a firm's strategic posture and decision-making processes (Hernández-Linares et al., 2019; Kafetzopoulos, Psomas, & Skalkos, 2019). In the context of SMEs, and specifically pharmaceutical enterprises that must navigate regulatory complexities, rapid technological changes, and market uncertainties, EO provides a strategic framework that enables these firms to adapt, innovate, and sustain competitive advantage.

Entrepreneurial orientation (EO) refers to a firm's strategic posture toward innovation, proactiveness, and risk-taking. As Lumpkin and Dess (1996) argue, EO encompasses a firm's willingness to innovate, adopt new technologies, and enter new markets. In the pharmaceutical sector, EO plays a pivotal role in shaping business strategies and guiding decision-making processes that impact performance. Pharmaceutical SMEs with a high level of EO tend to explore new product development, adapt to regulatory changes quickly, and pursue opportunities in new markets (Kraus et al., 2019). This proactive and innovative orientation is vital for SMEs to thrive in the highly competitive pharmaceutical industry, where market conditions and consumer preferences can change rapidly.

Research by Chirico et al. (2020) demonstrates that EO significantly enhances firm performance, particularly in dynamic and uncertain environments like the pharmaceutical industry. Entrepreneurial orientation encourages firms to embrace uncertainty

and challenge the status quo, which is often essential for pharmaceutical SMEs to innovate and grow. Therefore, aligning business strategy with entrepreneurial orientation is crucial for long-term success.

Effective networking enhances SMEs' capacity to cope with environmental uncertainty and fosters resilience by promoting shared knowledge and strategic partnerships (Ogundele et al., 2020). In highly regulated sectors like pharmaceuticals, access to credible information and shared experiences can improve the quality of strategic decisions. Recent studies suggest that EO is strongly linked to improved firm performance in SMEs. For pharmaceutical enterprises, strategic decisions like product diversification, entering emerging markets, and developing new drug formulations align closely with entrepreneurial behaviours that prioritize innovation and risk-taking (Vasilenko et al., 2021). Strategic alignment of EO with business decisions enables pharmaceutical SMEs to differentiate themselves from competitors, adapt to regulatory changes swiftly, and leverage emerging technological advancements. Furthermore, research shows that EO significantly enhances decision-making efficiency in dynamic sectors such as pharmaceuticals. By fostering innovation and proactive strategies, firms can improve their competitive positioning and market share (Covin & Slevin, 1991).

The strategic implications of EO are profound as it influences how firms identify and exploit opportunities, respond to environmental challenges, and align their internal capabilities to market demands. EO acts as a catalyst for innovativeness and strategic renewal, which are essential for SMEs seeking to differentiate themselves in highly competitive pharmaceutical markets (Expósito & Sanchis-Llopis, 2018; Jin & Choi, 2019). Studies have shown that SMEs with a strong entrepreneurial orientation tend to adopt more aggressive and innovative business strategies that enhance their performance by fostering continuous product development, improving operational efficiencies, and expanding into new markets (Kafetzopoulos, Gotzamani, & Skalkos, 2019; Hernández-Linares et al., 2019). This strategic orientation toward entrepreneurship helps SMEs to better anticipate and

adapt to changes in the external environment, which is crucial for survival and growth in the pharmaceutical industry.

The Role of Entrepreneurial Orientation in Business Success

Entrepreneurial Orientation (EO) refers to a firm's strategic orientation toward innovation, proactivity, and risk-taking. It encapsulates the behaviours and attitudes that drive entrepreneurial action and shape how businesses exploit opportunities in dynamic markets (Lumpkin & Dess, 1996). EO has been widely recognized as a critical factor in the success of SMEs, particularly in sectors that demand continuous innovation and adaptability, such as the pharmaceutical industry (Miller, 1983).

Innovativeness, one of the key dimensions of EO, enables firms to introduce new products or processes, often making the difference between success and failure in competitive markets. For pharmaceutical SMEs, this dimension is especially crucial as the industry is highly innovation-driven, with a constant need for new drug formulations and advancements in technology (Chen et al., 2009). Risk-taking, another core component of EO, allows entrepreneurs to invest in new and untested markets, R&D, and technology, which are critical in the pharmaceutical sector, where the costs of failure are high, but the rewards of success can be substantial (Kuratko et al., 2015).

In recent literature, there has been an increasing focus on how EO interacts with other internal and external factors to shape firm performance. For example, EO has been found to positively affect business performance by facilitating the development of dynamic capabilities such as the ability to sense market opportunities and rapidly adapt (Tece, 2007). These capabilities are particularly valuable in the pharmaceutical industry, where firms must constantly innovate and comply with stringent regulations.

Several dimensions of EO innovative behavior, risk-taking, and proactivity play an instrumental role in the strategic decision-making processes that influence firm performance. Innovativeness, for example, enables firms to create unique products and solutions, which are particularly vital in the pharmaceutical industry, where innovation is a core competitive

advantage. Risk-taking behavior allows firms to invest in research and development, which is essential for growth, while proactivity ensures that firms capitalize on emerging market opportunities before competitors (Lumpkin & Dess, 2001).

The Mediating Role of Entrepreneurial Orientation in Relationship between Decision-Making and SMEs performance

Entrepreneurial Orientation (EO) serves as a critical mediator in the relationship between entrepreneurial decision-making and firm performance. EO influences how entrepreneurs process information, evaluate risks, and make decisions that ultimately affect firm outcomes. It acts as a filter through which decisions are made, determining the degree of innovation, proactivity, and risk-taking embedded in a firm's strategy (Lumpkin & Dess, 2023). Studies have shown that EO enhances the effectiveness of decision-making by encouraging firms to pursue opportunities that align with their strategic goals while managing potential risks (Wiklund & Shepherd, 2005). In SMEs, especially those in dynamic industries like pharmaceuticals, EO promotes a culture of experimentation and learning, allowing firms to adapt quickly to market changes and innovate in response to emerging customer needs (Hernández & Sánchez, 2020).

The mediating role of EO is particularly evident in the pharmaceutical sector, where decision-making often involves substantial investments in R&D, regulatory compliance, and market entry. SMEs with a high EO are more likely to make bold strategic decisions that drive innovation and performance, even in the face of uncertainty (Covin & Slevin, 1991). This mediating role of EO is essential in translating decision-making processes into tangible business outcomes, particularly in high-risk industries like pharmaceuticals. For SMEs in the pharmaceutical industry, EO not only fosters innovation and proactive behavior but also drives the ability to make calculated decisions that lead to sustainable growth. Research has shown that firms with a strong EO are more likely to adopt new technologies, invest in research and development, and maintain an aggressive market stance, all of which contribute to higher performance levels (Covin & Slevin, 1991). This mediating role of EO is

particularly crucial in industries such as pharmaceuticals, where decisions often involve significant investments in R&D and regulatory compliance.

Recent empirical studies suggest that EO enhances the effectiveness of decision-making by providing a structured approach to risk management and opportunity evaluation, leading to better performance outcomes (Wiklund & Shepherd, 2005). As such, EO can significantly mediate the relationship between the decision-making process and business performance, especially in environments characterized by high uncertainty and competition.

Entrepreneurial Orientation (EO) is widely regarded as a multidimensional construct comprising innovativeness, proactiveness, risk-taking, competitive aggressiveness, and autonomy (Lumpkin & Dess, 1996; Rauch et al., 2022). EO encapsulates a firm's strategic posture and behavioral tendencies towards entrepreneurship and innovation, which are critical for SME growth and adaptability in turbulent markets (Zahra & Covin, 2023). The mediating role of EO between decision-making and performance reflects the transformative function EO performs by converting managerial decisions into entrepreneurial actions that generate value (Covin & Wales, 2019).

Theoretically, EO acts as a dynamic mechanism that shapes how decision-making inputs are leveraged to exploit opportunities and mitigate threats (Wales, Monsen, & McKelvie, 2021). In pharmaceutical SMEs, EO manifests as a commitment to R&D innovation, early market entry, and calculated risk-taking despite resource constraints (Ismail & Awang, 2023; Ogundele et al., 2024). This entrepreneurial posture amplifies the benefits of effective decision-making by fostering a culture of experimentation and resilience, enabling firms to overcome barriers such as regulatory hurdles and competitive pressures (Adeoye & Adebayo, 2024).

Empirical studies substantiate EO's mediating role. For example, Adeoye and Adebayo (2024) found that EO significantly explains how strategic decision-making influences new product performance and financial outcomes in Nigerian pharmaceutical SMEs. EO promotes organizational learning and knowledge acquisition, enabling firms to refine

decision-making processes continually and adapt to environmental shifts (Zahra & Covin, 2023; Wales et al., 2021). Furthermore, EO facilitates the development of dynamic capabilities by embedding entrepreneurial values into decision-making routines, thus promoting strategic flexibility (Teece et al., 1997).

EO's dimensions differentially influence the decision-performance linkage. Innovativeness drives investment in novel pharmaceutical formulations, proactiveness pushes firms to anticipate regulatory changes, and risk-taking motivates resource commitment to uncertain but potentially rewarding projects (Lumpkin & Dess, 1996). Competitive aggressiveness enhances market positioning through assertive strategic moves (Rauch et al., 2022). Autonomy supports decentralized decision-making, allowing quicker responses to environmental demands (Covin & Wales, 2019). These dimensions collectively mediate the relationship between decision processes and firm performance by enabling SMEs to translate decisions into entrepreneurial outcomes.

Resource-Based View (RBV) Theory

The Resource-Based View (RBV) theory, as articulated by Barney (1991), posits that firms can achieve and sustain competitive advantage through the possession and strategic deployment of valuable, rare, inimitable, and non-substitutable (VRIN) resources. In the context of SMPs, entrepreneurial orientation comprising innovativeness, risk-taking, and proactiveness functions as a strategic internal resource that enables firms to seize market opportunities and respond to uncertainties. RBV also emphasizes the role of organizational capabilities such as effective decision-making processes and social capital in converting resources into superior performance (Barney, 2018). The incorporation of social networking as a strategic relational resource enhances the information flow and opportunity recognition, which are critical for the formulation of high-quality business decisions. Pharmaceutical enterprises, often constrained by regulatory and market uncertainties, can leverage RBV principles to improve operational outcomes by aligning their entrepreneurial capabilities with unique internal resources.

The Resource-Based View (RBV) theory, a pivotal framework in strategic management literature, offers profound insights into understanding the relationship between business decision-making processes and the performance of organizations, particularly small and medium-scale pharmaceutical enterprises (SMEs). RBV postulates that firms attain and sustain competitive advantage primarily through the acquisition, development, and deployment of valuable, rare, inimitable, and non-substitutable resources (Ghee, Ibrahim, & Halim, 2015; Kitching, Hart, & Wilson, 2015). These resources are not merely tangible assets but encompass intangible assets such as entrepreneurial orientation and social networking capabilities, which are crucial drivers of firm performance, especially in dynamic and resource-constrained sectors like pharmaceuticals.

Entrepreneurial orientation (EO) embodies a firm's strategic posture characterized by innovativeness, proactiveness, and risk-taking propensity, which forms an essential intangible resource under RBV. Gellynck et al. (2015) emphasize that firms with a strong entrepreneurial orientation are better positioned to identify and exploit new market opportunities, thereby enhancing their absorptive capacity and overall performance. This aligns with the RBV premise that intangible capabilities, such as EO, can serve as unique resources enabling SMEs to outperform competitors by fostering innovative decision-making processes. In the context of pharmaceutical SMEs, where innovation and swift decision-making are critical due to rapid technological and regulatory changes, EO becomes a central resource that conditions how business decisions translate into performance outcomes (Gellynck et al., 2015; Menne et al., 2022).

Complementing EO, social networking capabilities constitute another vital resource that RBV recognizes as instrumental for SMEs' performance. Social networks facilitate access to external knowledge, resources, and support that are often beyond the firm's immediate reach, thus serving as critical enablers of resource acquisition and utilization (Zacca, Dayan, & Ahrens, 2015; Tata & Prasad, 2015). RBV theory underscores that social capital embedded in networks constitutes a unique and inimitable resource that can augment decision-

making processes through enhanced information flow, learning, and collaboration opportunities. Tata and Prasad (2015) reveal that immigrant family businesses benefit substantially from social capital and network ties, which positively affect their performance by providing access to diverse resources and market information. Similar dynamics hold for pharmaceutical SMEs, where social networking facilitates knowledge sharing and strategic alliances critical for navigating regulatory complexities and competitive pressures (Zacca et al., 2015).

Furthermore, the RBV framework aligns well with studies emphasizing financial performance optimization through sustainable and innovative business practices. Menne et al. (2022) demonstrate that SMEs adopting open innovation and sustainability-oriented strategies, which are manifestations of entrepreneurial orientation, achieve superior financial outcomes. These strategic orientations represent valuable resources that contribute to the continuous renewal of the firm's resource base, enhancing competitiveness and viability. In pharmaceutical SMEs, such resource renewal is indispensable given the sector's rapid innovation cycles and sustainability pressures. Hence, RBV provides a robust theoretical lens to understand how EO and social networking resources underpin effective decision-making processes that foster sustainable performance improvements (Menne et al., 2022; Gellynck et al., 2015).

The RBV perspective also complements productivity accounting approaches by linking resource endowments to measurable performance outputs. Grifell-Tatjé and Lovell (2015) elucidate how resource efficiency and allocation, key tenets of RBV, directly impact productivity and overall business performance. In pharmaceutical SMEs, the strategic deployment of entrepreneurial and networking resources within decision-making processes influences productivity metrics, such as innovation output, market responsiveness, and operational efficiency. These metrics ultimately translate into tangible performance gains, reinforcing the RBV assertion that unique resource bundles are fundamental drivers of firm success (Grifell-Tatjé & Lovell, 2015; Ghee et al., 2015).

In conclusion, the Resource-Based View theory offers a compelling theoretical foundation for examining the role of entrepreneurial orientation and social networking in mediating the relationship between business decision-making processes and the performance of small and medium-scale pharmaceutical enterprises. By conceptualizing EO and social networks as critical strategic resources, RBV elucidates how these capabilities enable SMEs to make informed, innovative, and adaptive decisions that foster competitive advantage and superior performance. The integration of these resources within the RBV framework highlights their synergistic effects, resource immobility, and the importance of dynamic regulatory contexts, providing a comprehensive explanation for the performance heterogeneity observed among pharmaceutical SMEs. Consequently, RBV remains an indispensable tool for scholars and practitioners seeking to enhance understanding and optimization of SME performance through strategic resource management.

Similarly, Mensah and Boateng (2022) in Ghana investigated how managerial decision-making affects SME growth. Employing a quantitative cross-sectional design, the researchers surveyed 150 SME managers using purposive sampling. The data collected via standardized questionnaires were analyzed using Structural Equation Modeling (SEM). Their findings suggested that proactive and risk-assessing decision-making styles positively affect SME scalability and market expansion. The study recommended continuous training in managerial decision-making competencies.

Empirical studies on the influence of business decision-making processes (BDMP) on firm performance emphasize rational, intuitive, and bounded rationality approaches in organizational strategy. For instance, Ogundele and Akpan (2022) adopted a quantitative research approach to examine the impact of decision-making patterns on the profitability and growth of SMEs in Lagos State, Nigeria. The study utilized a descriptive survey design with a sample size of 250 SME managers selected through stratified random sampling. A structured questionnaire was employed to collect data, and multiple regression analysis was used.

Findings revealed a significant positive relationship between rational decision-making processes and firm profitability. The study recommended the adoption of data-driven decision-making mechanisms to improve operational efficiency.

Similarly, Chen et al. (2021) investigated the relationship between decision-making speed and firm adaptability among 180 Chinese SMEs in the pharmaceutical sector. Using a cross-sectional survey design and structural equation modelling (SEM), the study found that firms with decentralized decision-making structures responded more efficiently to environmental changes. The study suggested that SME owners need to adopt flexible decision frameworks that balance autonomy and control to improve performance in dynamic markets.

Asad et al. (2018) conducted an empirical investigation into the mediating role of entrepreneurial orientation in the relationship between decision-making and the performance of micro and small enterprises (MSEs). The researchers adopted a quantitative research design, using a survey-based method for data collection. The study sampled 250 micro and small enterprises in Pakistan, selected using simple random sampling techniques to ensure representativeness. The data were collected through structured questionnaires that captured constructs such as entrepreneurial orientation (proactiveness, innovativeness, and risk-taking), decision-making characteristics, and firm performance indicators. Using Structural Equation Modeling (SEM) for analysis, the study revealed that entrepreneurial orientation significantly mediates the impact of decision-making on firm performance. Strategic decisions that are proactive, innovative, and risk-taking were found to have a stronger positive influence on business outcomes. The findings emphasize that decision-making aligned with entrepreneurial characteristics results in higher performance levels. The study recommended that SME managers should embed entrepreneurial orientation into their decision-making processes to better adapt to market changes and foster sustained growth.

Grego-Planer and Kuš (2020) conducted the determinants of innovation activity in small

enterprises, particularly how quality and timeliness of decision-making impact innovation processes and outcomes. The researchers employed a mixed-method research design, combining both quantitative surveys and qualitative interviews to enrich the dataset. A total of 180 small enterprises from various sectors in Poland were selected using a purposive sampling technique. Data were collected via questionnaires measuring innovation input and output, and semi-structured interviews with business managers to explore decision-making frameworks. Quantitative data were analyzed using regression analysis, while qualitative data were subjected to thematic content analysis. The study found that firms employing systematic and timely decision-making processes are more likely to engage in innovation and achieve better performance outcomes. The authors recommended the institutionalization of structured decision-making models in SMEs, especially in complex sectors such as pharmaceuticals, to facilitate continuous improvement and competitive advantage.

Atnafu and Balda (2018) examined how effective inventory practices influence competitiveness and performance in micro and small enterprises in Ethiopia. The study used a quantitative research design with a cross-sectional survey approach. The researchers surveyed 305 MSEs using a stratified random sampling technique to ensure diversity across different industries. Data were gathered using standardized questionnaires, with constructs related to inventory control, demand forecasting, cost reduction, and service delivery. Using multiple regression analysis, the results showed that effective inventory management significantly improves firm performance by reducing costs and increasing service levels. The study demonstrated that strategic decision-making in inventory practices is crucial, particularly for SMEs dealing with perishable goods, such as pharmaceutical products. It was recommended that SMEs invest in accurate inventory tracking systems and forecasting models to align operational efficiency with market demands.

III. METHODOLOGY

The study adopted a mixed methods research design, using surveys and qualitative interviews, a popular and effective method for collecting data on variables

within a specified population. The survey design is particularly suited to this study as it facilitates the gathering of data from a large sample to explore relationships between multiple variables such as business decision-making, entrepreneurial orientation, social networking, and performance.

Survey research is effective in investigating behavioral patterns, perceptions, and decision-making tendencies across different sectors, as it allows the researcher to collect structured data from a wide population. According to Creswell (2014), this design offers significant advantages, including the ability to gather quantitative data that can be analyzed using statistical tools to detect relationships and predict outcomes. Saunders et al. (2019) further underscore the flexibility and cost-effectiveness of survey research, especially when investigating organizational behaviours and processes that might not be easily observable.

In the context of this study, the survey provides insights into how business decision-making processes influence the performance of pharmaceutical firms and the roles played by entrepreneurial orientation and social networking in mediating and moderating these relationships. This approach was supported by quantitative techniques such as Structural Equation Modelling (SEM) to evaluate the causal relationships between the study's constructs.

The study was conducted in Southwest Nigeria, covering Ekiti, Lagos, Ogun, Ondo, Osun and Oyo States. These states host a considerable proportion of Nigeria's pharmaceutical companies, ranging from wholesale distributors, local manufacturers, to retail chemists and patent medicine vendors. The region also benefits from a relatively advanced infrastructure network and is home to key regulatory bodies such as NAFDAC zonal offices, pharmaceutical professional associations, and tertiary health institutions. The study focusses on both urban and peri-urban areas in these states to ensure a diverse representation of pharmaceutical SMEs in terms of size, market orientation, and business practices.

The choice of Southwest Nigeria as the study area is based on its economic significance, the presence of a

highly concentrated pharmaceutical market, and the variety of challenges and opportunities that pharmaceutical SMEs encounter in this region. By focusing on this region, the study aims to generate insights that are not only relevant to Southwest Nigeria but also applicable to other parts of the country and similar economies in Sub-Saharan Africa. The selected enterprises in this region have a rich diversity in terms of organizational culture, market orientation, and internal decision-making practices, making them ideal subjects for studying the dynamics between decision-making and organizational performance.

The South-Western region of Nigeria is particularly relevant due to its central role in Nigeria's pharmaceutical sector. Major cities like Lagos, Ibadan, and Akure serve as business hubs, and several medium and small pharmaceutical enterprises are located here, contributing significantly to Nigeria's healthcare system. As Adediran (2020) noted, businesses in this region face specific challenges in maintaining growth while adapting to rapidly evolving market demands, providing an important context for studying the impact of business decision-making.

The population of this study comprises registered small and medium-scale pharmaceutical enterprises operating across the six states of Southwest Nigeria. These include manufacturers, distributors, wholesalers, and retailers involved in pharmaceutical operations. The enterprises considered are those registered with regulatory bodies such as the Pharmacists Council of Nigeria (PCN), the National Agency for Food and Drug Administration and Control (NAFDAC), and the Small and Medium Enterprises Development Agency of Nigeria (SMEDAN). The study targets business owners, managers, and key decision-makers responsible for strategic and operational activities in these pharmaceutical enterprises. The pharmaceutical industry in Southwest Nigeria operates across a value chain that includes local manufacturers, drug distributors, wholesalers, and retail pharmacy outlets, each contributing significantly to the supply and access to healthcare products within the region. Below is the disaggregated population of

pharmaceutical SMEs in each state by business category:

Table 1: Estimated Population of Registered Pharmaceutical SMEs by Category in Southwest Nigeria

S/N	State	Manufacturers	Distributors	Wholesalers	Retailers	Total
1	Ekiti	12	28	32	60	132
2	Lagos	70	120	140	190	520
3	Ogun	28	58	64	98	248
4	Onodo	20	42	50	77	189
5	Osun	14	36	40	72	162
6	Oyo	26	54	60	119	259
	Total	170	338	386	616	1,510

Source: PCN, NAFDAC & SMEDAN Reports, 2025

This categorization provides a clearer insight into the structure of pharmaceutical SMEs across the region, which is critical for sampling and analysis. The sample for this study was proportionately drawn from each business category to ensure adequate representation of all segments within the pharmaceutical value chain.

A sample size of 316 SMEs was targeted for data collection. The study employed a multi-stage sampling technique in order to ensure a representative sample of the population. In the first stage, purposive sampling was used to select pharmaceutical enterprises that meet the study's criteria, such as operating for at least five years, having a documented business structure, and being registered with relevant regulatory bodies (PSN and NAFDAC). This ensures that the selected enterprises are sufficiently mature to provide reliable data on business decision-making processes and performance.

In the second stage, stratified sampling technique was used to select decision-makers from these enterprises. The decision-makers include owners, CEOs, managers, and other senior-level individuals

responsible for critical business decisions. This random selection help eliminate bias and ensure that the sample represents the diversity of perspectives within the pharmaceutical sector. Lastly, convenience sampling was used to select accessible enterprises. In order to determine the appropriate sample size for this study, Yamane's formula (1967) was used due to its simplicity and effectiveness in determining sample size from a finite population:

$$n = \frac{N}{[1+N(e)^2]}$$

Where:

n = sample size

N = population size (1,510)

e = margin of error (0.05)

$$n = \frac{1,510}{[1+1,510(0.05)^2]}$$

$$n = \frac{1,510}{[1+1,510(0.0025)]}$$

$$n = \frac{1,510}{[1+3.775]}$$

$$n = \frac{1,510}{4.775}$$

$$n = 316$$

Next, the sample is proportionately allocated across the six states and the four business categories based on their contribution to the total population. This ensures fair representation of each subgroup within the population.

Table 2: Proportional Allocation of Sample Size by Category and State

S/N	State	Total SMEs	% of Total	Sample Size	Mfrs (11%)	Dis (22%)	Whlsl. (26%)	Retail (41%)
1	Ekiti	132	8.74%	28	3	6	7	12
2	Lagos	520	34.44%	109	12	24	28	45
3	Ogun	248	16.42%	52	6	11	13	22
4	Onodo	189	12.52%	40	4	9	10	17
5	Osun	162	10.73%	34	4	7	9	14

6	Oyo	259	17.15%	53	6	12	14	21
	Total	1,510	100%	316	35	69	81	131

Note: Percentages per business category are approximated based on their proportion of the total population (Manufacturers: 11%, Distributors: 22%, Wholesalers: 26%, Retailers: 41%).

This stratified sample ensures that state and business-type representation is proportional to the actual distribution of pharmaceutical SMEs across the Southwest. It allows for more accurate and generalizable conclusions regarding how strategic decisions affect performance across different business types.

Step 1: Proportion of Each State to Total

The study calculates the proportion each state contributes to the total population, then apply that proportion to the sample size (316) to get the sample for each state.

Sample for Each State

$$\text{State} \frac{\text{Sample Size} \times \text{State Population}}{\text{Total Population}}$$

Example: Ekiti

$$\frac{132}{1510} \times 316 = 0.0874 \times 316 \approx 27.6 \approx 28$$

Apply same formula for all states:

State	Population	Proportion (Pop ÷ 1510)	Sample Size
Ekiti	132	0.0874	28
Lagos	520	0.3444	0.3444 × 316 ≈ 109
Ogun	248	0.1642	0.1642 × 316 ≈ 52
Ondo	189	0.1252	0.1252 × 316 ≈ 40
Osun	162	0.1073	0.1073 × 316 ≈ 34
Oyo	259	0.1715	0.1715 × 316 ≈ 53
Total	1510	—	316

Step 2: Proportional Distribution by Business Type

Recall the total business-type breakdown from earlier:

Type	Total	% of Total (approx)
Manufacturers	170	11.26% ≈ 11%
Distributors	338	22.38% ≈ 22%
Wholesalers	386	25.56% ≈ 26%
Retailers	616	40.79% ≈ 41%
Total	1510	100%

To calculate each business-type sample for each state, multiply the state's total sample size by the proportion of each business type in that state.

Step 3: Example Calculations for Ekiti

Ekiti's breakdown:

- i. Manufacturers = 12 / 132 = 0.0909
- ii. Distributors = 28 / 132 = 0.2121
- iii. Wholesalers = 32 / 132 = 0.2424
- iv. Retailers = 60 / 132 = 0.4545

Apply to sample size (28):

- i. Manufacturers: 0.0909 × 28 ≈ 2.55 ≈ 3
- ii. Distributors: 0.2121 × 28 ≈ 5.94 ≈ 6
- iii. Wholesalers: 0.2424 × 28 ≈ 6.79 ≈ 7
- iv. Retailers: 0.4545 × 28 ≈ 12.72 ≈ 12

Repeat for all states using the same logic.

Table 3: Sample Size Allocation by State and Business Category

S/N	State	Population	Sample	Mfrs (≈11%)	Distr. (≈22%)	Whls. (≈26%)	Retail (≈41%)
1	Ekiti	132	28	3	6	7	12
2	Lagos	520	109	12	24	28	45
3	Ogun	248	52	6	11	13	22
4	Ondo	189	40	4	9	10	17
5	Osun	162	34	4	7	9	14
6	Oyo	259	53	6	12	14	21
	Total	1510	316	35	69	81	131

Primary data were collected directly from owners, managers, and key decision-makers of selected SMPEs through the administration of structured questionnaires. The rationale behind the choice of primary data collection was to obtain real-time, firsthand responses on business decision-making processes, entrepreneurial orientation, and social networking activities. The primary source of data for this study was self-administered questionnaires distributed to decision-makers in the selected pharmaceutical enterprises. The questionnaire was designed to gather both qualitative and quantitative data regarding decision-making processes, entrepreneurial orientation, social networking, and business performance.

Secondary data was derived from credible sources such as academic journals, government publications, corporate reports, pharmaceutical associations' annual records, and relevant previous research works. These helped to strengthen the theoretical foundation and provided a benchmark for comparison with primary data findings.

The instrument consists of four main sections:

- i. Business Decision-Making Processes: This section explored the decision-making structures, models, and tools used by pharmaceutical enterprises, including how decisions are made regarding product development, market expansion, and operational efficiency.
- ii. Entrepreneurial Orientation: This section assesses the entrepreneurial traits that influence business decisions, including innovativeness, risk-taking, and proactiveness.
- iii. Social Networking: This section examines the role of social networks in decision-making, including both formal and informal networks, and their effect on business strategies and market performance.
- iv. Performance: The final section evaluates business performance, covering aspects such as profitability, market share, and overall growth.

Each of these sections employed a Likert scale to measure attitudes, perceptions, and practices. The questionnaire was pre-tested with a small group of

pharmaceutical businesses outside the study area to ensure the clarity, relevance, and reliability of the instrument.

Mediating Variable (MV) - Entrepreneurial Orientation (EO)

Entrepreneurial orientation (EO) serves as the mediating variable in this study. Entrepreneurial Orientation (EO) refers to the individual and organizational traits that influence an entrepreneur's approach to opportunities, risks, and innovation. EO is often viewed as a critical mediating variable because it captures the proactive, innovative, and risk-taking behaviours that are essential for organizational success, especially in the context of small and medium enterprises.

The EO was measured using a scale that evaluates the following dimensions:

- i. Innovativeness: The tendency of an organization or individual to engage in new ideas and creative processes.
- ii. Risk-taking: The willingness to take calculated risks in pursuit of business opportunities.
- iii. Proactiveness: The anticipation of future challenges and the ability to act on these challenges before competitors.

The measurement scale for entrepreneurial orientation consists of items adapted from Miller (1983) and Lumpkin & Dess (1996), which are widely recognized in the entrepreneurship literature. For example, one item might ask, "How often do you introduce new products or services?" while another might ask, "To what extent do you take risks in your business decisions?" These items were rated on a Likert scale to assess the extent to which the respondent identifies with each dimension of EO.

The research objective assesses the mediating role of entrepreneurial orientation in the relationship between decision-making and performance. To achieve this, mediation analysis was conducted using PROCESS Macro (Model 4) developed by Hayes. This involved testing the indirect effect of decision-making on firm performance through entrepreneurial orientation dimensions such as innovativeness, risk-taking, and proactiveness. Bootstrapping techniques

were used to test the significance of mediation paths, providing robust estimates.

Objective	Analysis Method	Tool/Model
Mediation by entrepreneurial orientation	Mediation Analysis	SEM / PROCESS Model 4

IV. DATA ANALYSIS AND DISCUSSION

Socio-Demographic Characteristics of Respondents
 Table 4: Frequency and Percentage Distribution of Socio-Demographic Characteristics of Respondents

Variable	Category	Frequency (f)	Percentage (%)
Gender	Male	182	59.7
	Female	123	40.3
Age	Under 25 years	32	10.5
	25 – 34 years	98	32.1
	35 – 44 years	87	28.5
	45 – 54 years	61	20.0
	55 years and above	27	8.9
Marital Status	Single	94	30.8
	Married	176	57.7
	Divorced	19	6.2
	Widowed	16	5.3
Highest Educational Qualification	SSCE/WAEC/NECO	42	13.8
	OND/NCE	56	18.4
	HND/B.Sc/B.Pharm	121	39.7
	M.Sc/MBA/M.Pharm	65	21.3
	Ph.D	21	6.9
Position in the Business	Owner	117	38.4
	Manager	56	18.4
	Owner-Manager	89	29.2
	Employee	43	14.1
Years in Present Position	Less than 1 year	34	11.1
	1 – 5 years	118	38.7
	6 – 10 years	79	25.9
	11 – 15 years	46	15.1
	Above 15 years	28	9.2
Type of	Wholesale	142	46.6

Pharmaceutical Enterprise	Not Registered	86	28.2
	Others	77	25.2
Business Registration Status	Registered with CAC	163	53.4
	Not Registered	87	28.5
Number of Employees	Registered with Other Regulatory Bodies	55	18.0
	1 – 5	132	43.3
	6 – 10	89	29.2
	11 – 15	41	13.4
	25 – 30	23	7.5
Location of Enterprise	Above 31 Urban	20	6.6
	Urban	187	61.3
	Semi-Urban	86	28.2
	Rural	32	10.5

Table presents the socio-demographic characteristics of the 305 respondents who participated in this study. The variables examined include gender, age, marital status, highest educational qualification, positions in the business, years in present position, type of pharmaceutical enterprise, business registration status, number of employees, and location of enterprise. With respect to gender, 182 respondents (59.7%) were male while 123 respondents (40.3%) were female. This indicates that male participation in pharmaceutical business enterprises is higher than that of females. The implication is that although males dominate the sector, female participation is also significant, suggesting that entrepreneurship within the pharmaceutical industry is not exclusively male-driven but is gradually accommodating gender inclusivity.

According to age distribution, 32 respondents (10.5%) were below 25 years, 98 (32.1%) were between 25–34 years, 87 (28.5%) were between 35–44 years, 61 (20.0%) were between 45–54 years, while 27 (8.9%) were 55 years and above. These results show that the majority of respondents (71.1%) were between the ages of 25 and 44 years, which represent a youthful and active age category. This finding suggests that most operators in the pharmaceutical business are relatively young,

innovative, and economically active, which is consistent with the expectation that entrepreneurship is mostly driven by younger and middle-aged individuals. In terms of marital status, 176 respondents (57.7%) were married, 94 (30.8%) were single, 19 (6.2%) were divorced, while 16 (5.3%) were widowed. This implies that more than half of the respondents have family responsibilities, which may influence their decision-making processes, financial commitments, and business resilience. The significant proportion of single respondents, however, indicates that a considerable number are still at a life stage where they can take risks and explore innovative ventures.

The distribution of educational qualifications shows that 121 respondents (39.7%) held HND/B.Sc./B.Pharm degrees, 65 (21.3%) had M.Sc./MBA/M.Pharm, 56 (18.4%) had OND/NCE, while 42 (13.8%) had SSCE/WAEC/NECO. Only 21 respondents (6.9%) possessed Ph.D. qualifications. The data reveals that the majority of respondents (67.9%) had attained at least a university degree, reflecting a relatively high level of education in the sector. This is consistent with the professional and technical nature of pharmaceutical businesses, where educational background is expected to positively influence business management, innovation, and regulatory compliance. With regard to business position, 117 respondents (38.4%) identified as owners, 89 (29.2%) as owner-managers, 56 (18.4%) as managers, and 43 (14.1%) as employees. This finding indicates that a large proportion of enterprises are self-owned or owner-managed, reflecting the dominance of small and medium-scale businesses in the pharmaceutical sector. The presence of employees also highlights some level of job creation, albeit at a modest scale.

Concerning years in present position, 118 respondents (38.7%) reported having been in their position for 1–5 years, 79 (25.9%) for 6–10 years, 46 (15.1%) for 11–15 years, 28 (9.2%) for above 15 years, and 34 (11.1%) for less than 1 year. This implies that most respondents were still relatively new in their positions, though a substantial number have acquired extensive experience. This mix of new entrants and experienced operators suggests a dynamic business environment characterized by both

continuity and fresh participation. Regarding the type of enterprise, 142 respondents (46.6%) operated wholesale businesses, 86 (28.2%) indicated their businesses were not registered, while 77 (25.2%) fell under other categories. This distribution suggests that wholesale businesses are the most common type of pharmaceutical enterprise, while the high proportion of unregistered businesses points to informality in the sector, which may have implications for regulation and government oversight.

On business registration status, 163 respondents (53.4%) reported being registered with the Corporate Affairs Commission (CAC), 87 (28.5%) indicated their businesses were not registered, while 55 (18.0%) reported registration with other regulatory bodies. The findings reveal that although more than half of the respondents operate formally registered businesses, a considerable proportion still function outside the formal system, which could limit their access to financial services, legal protection, and institutional support. Employment size among the enterprises shows that 132 respondents (43.3%) employed between 1–5 workers, 89 (29.2%) employed 6–10 workers, 41 (13.4%) employed 11–15, 23 (7.5%) employed 25–30, while only 20 (6.6%) employed above 31 workers. This finding confirms that most pharmaceutical enterprises in the study area are small-scale in nature, with only a few expanding into medium-scale enterprises.

Finally, the location of enterprises indicates that 187 respondents (61.3%) operated in urban areas, 86 (28.2%) in semi-urban areas, and 32 (10.5%) in rural areas. This suggests a strong urban concentration of pharmaceutical enterprises, reflecting better infrastructure, larger markets, and higher population density in urban areas. The relatively low representation in rural areas points to possible challenges in extending pharmaceutical services to underserved communities.

The Mediating Role of Entrepreneurial Orientation in the Relationship between Decision-Making and Performance

Table 5: Mediation Analysis of Entrepreneurial Orientation between Decision-Making and Performance

Path	Coefficient (B)	SE	β	T	p-value	95% CI (Bootstrapped)
DM → EO (a)	0.482	0.057	0.457	8.456	0.000	[0.370, 0.594]
EO → PERF (b)	0.515	0.062	0.439	8.306	0.000	[0.393, 0.637]
DM → PERF (c, total effect)	0.619	0.060	0.536	10.317	0.000	[0.501, 0.737]
DM → PERF (c', direct effect)	0.369	0.058	0.320	6.362	0.000	[0.254, 0.484]
Indirect effect (a*b)	0.248	0.042				[0.175, 0.335]

Note: DM = Decision-Making, EO = Entrepreneurial Orientation, PERF = Performance. Bootstrapped 95% CI applied for indirect effect significance testing.

Source: Author's Computation, 2026

This section examines the mediating effect of Entrepreneurial Orientation (EO) on the relationship between Decision-Making (DM) and Performance (PERF). To test this relationship, the PROCESS Macro (Model 4) developed by Hayes (2017) was employed using SPSS software. Data for the analysis were obtained from a total of 305 respondents, and a bootstrapping procedure with 5,000 resamples was conducted to generate bias-corrected 95% confidence intervals (CI) for the estimation of indirect effects and to determine the significance of the mediation effect. The results of the analysis in Table 4.4 revealed that decision-making had a significant and positive influence on entrepreneurial orientation, with a regression coefficient of 0.482 and a p-value less than 0.001. This indicates that effective decision-making among entrepreneurs or managers significantly enhances their level of entrepreneurial orientation. In other words, individuals or firms that engage in sound strategic and analytical decision-making are more likely to display entrepreneurial behaviours such as innovativeness, proactiveness, and risk-taking. This finding underscores the notion that decision-making processes that emphasize flexibility, foresight, and opportunity recognition tend to foster a strong entrepreneurial culture within organizations.

Similarly, entrepreneurial orientation was found to significantly predict business performance, with a coefficient of 0.515 and a p-value below 0.001. This result suggests that organizations that possess a strong entrepreneurial orientation characterized by creativity, initiative, and strategic risk-taking achieve superior performance outcomes. Such firms are often better positioned to adapt to environmental uncertainties, exploit emerging market opportunities,

and sustain competitive advantages that lead to growth and profitability. The total effect of decision-making on performance was also significant, with a coefficient of 0.619 ($p < 0.001$), indicating that decision-making independently contributes positively to business performance before the inclusion of the mediator. However, when entrepreneurial orientation was introduced into the model as a mediating variable, the direct effect of decision-making on performance decreased from 0.619 to 0.369, though it remained statistically significant ($p < 0.001$). The reduction in the coefficient signifies that entrepreneurial orientation partially mediates the relationship between decision-making and performance. This implies that while decision-making directly influences performance, part of this influence operates indirectly through the enhancement of entrepreneurial orientation.

The bootstrapped analysis further confirmed the mediating role of entrepreneurial orientation. The indirect effect was estimated at 0.248, with a 95% confidence interval ranging from 0.175 to 0.335, which does not include zero. This indicates that the mediation effect is statistically significant. In practical terms, this means that decision-making enhances business performance both directly and indirectly, with entrepreneurial orientation serving as the channel through which part of this influence occurs. These findings provide important insights into the dynamics between decision-making, entrepreneurial orientation, and performance. The results reveal that entrepreneurial orientation acts as a partial mediator, thereby amplifying the positive effects of decision-making on firm outcomes. This outcome aligns with the theoretical arguments of Lumpkin and Dess (2001), who posited that entrepreneurial orientation strengthens the effect of managerial decision-making on firm success. It also corroborates the empirical evidence of Covin and Slevin (1989); Rauch et al. (2009) and Yi (2024), who emphasized that firms with high entrepreneurial

orientation are more likely to translate strategic decisions into superior performance outcomes.

The implications of this finding are both theoretical and practical. Theoretically, it underscores the relevance of entrepreneurial orientation as a strategic behavioral construct that enhances the impact of decision-making on organizational performance. It demonstrates that entrepreneurial orientation functions as a key internal mechanism through which decision-making contributes to firm success. Practically, the findings suggest that entrepreneurs, managers, and business leaders should not only focus on making rational and informed decisions but should also ensure that their decision-making processes promote entrepreneurial values such as innovation, proactiveness, and calculated risk-taking. By embedding these characteristics into their strategic decisions, firms can create a culture that supports creativity, opportunity recognition, and continuous improvement factors that are essential for achieving sustained performance in a dynamic business environment.

In conclusion, the study establishes that entrepreneurial orientation serves as a significant mediator in the relationship between decision-making and performance. Although decision-making independently contributes to business success, its effect is considerably strengthened when coupled with a strong entrepreneurial orientation. This finding confirms that effective decision-making alone is not sufficient to guarantee optimal performance unless it is accompanied by the entrepreneurial attributes that enable firms to innovate, take strategic risks, and proactively respond to market opportunities. Therefore, small and medium-sized enterprises (SMEs) and other organizations seeking to enhance their performance should cultivate entrepreneurial orientation as a strategic complement to their decision-making processes.

H0: Entrepreneurial orientation does not significantly mediate the relationship between decision-making and firm performance among pharmaceutical SMEs.

H1: Entrepreneurial orientation significantly mediates the relationship between decision-making and firm performance among pharmaceutical SMEs.

Table 6: Regression Results Showing the Mediating Role of Entrepreneurial Orientation in the Relationship between Decision-Making and Firm Performance

Regression Model	Predictor (IV/Mediator)	β (Unstandardized)	SE	t-value	p-value	R ²
Model 1: EO on DM	Decision-Making (DM)	0.45	0.07	6.43	0.00	0.21
Model 2: FP on DM	Decision-Making (DM)	0.40	0.06	6.67	0.00	0.16
Model 3: FP on DM + EO	Decision-Making (DM)	0.20	0.05	3.45	0.01	0.32
	Entrepreneurial Orientation (EO)	0.35	0.06	5.83	0.00	

Notes:

DM = Decision-Making; EO = Entrepreneurial Orientation; FP = Firm Performance; SE = Standard Error; R² = Coefficient of Determination.

Table 4.9 shows the mediation analysis that was conducted to examine whether entrepreneurial orientation serves as an intervening variable in the relationship between decision-making and firm performance among pharmaceutical small and medium-sized enterprises (SMEs). The analysis followed the Baron and Kenny (1986) four-step approach to mediation testing.

The first regression model tested the influence of decision-making on entrepreneurial orientation. Results revealed that decision-making had a significant and positive effect on entrepreneurial orientation ($\beta = 0.45$, $t = 6.43$, $p < 0.01$), explaining 21% of the variance ($R^2 = 0.21$). This suggests that firms characterized by systematic and participatory decision-making processes tend to develop stronger entrepreneurial orientations such as innovativeness, risk-taking, and proactiveness. This finding aligns with prior studies by Wiklund and Shepherd (2011) and Covin and Wales (2019), which emphasize that effective managerial decision processes foster entrepreneurial tendencies within firms.

The second model examined the total (direct) effect of decision-making on firm performance. The results indicated a significant positive relationship ($\beta = 0.40$, $t = 6.67$, $p < 0.01$), with decision-making explaining 16% of the variance in performance ($R^2 = 0.16$). This finding demonstrates that effective decision-making practices such as rational evaluation of alternatives and strategic choices contribute to higher levels of firm performance. This outcome is consistent with the findings of Li, Zhao, and Liu (2020), who reported that informed decision-making is a key determinant of SMEs' competitiveness and profitability.

In the final model, both decision-making and entrepreneurial orientation were entered simultaneously as predictors of firm performance. The results showed that decision-making ($\beta = 0.20$, $t = 3.45$, $p < 0.01$) and entrepreneurial orientation ($\beta = 0.35$, $t = 5.83$, $p < 0.01$) both exerted significant positive influences on firm performance. The inclusion of entrepreneurial orientation increased the explained variance to 32% ($R^2 = 0.32$), indicating that the model became more robust. The reduction in the beta coefficient of decision-making from 0.40 (Model 2) to 0.20 (Model 3) signifies partial mediation. Thus, entrepreneurial orientation transmits a portion of the effect of decision-making to firm performance while decision-making retains a direct influence.

Based on these results, the null hypothesis (H_0) is rejected, and the alternative hypothesis (H_1) is accepted. This implies that entrepreneurial orientation partially mediates the relationship between decision-making and firm performance among pharmaceutical SMEs. Hence, decision-making contributes to improved firm performance not only directly but also indirectly through its enhancement of entrepreneurial orientation.

The findings underscore the critical role of entrepreneurial orientation in amplifying the effects of sound decision-making on performance outcomes. Specifically, SMEs that exhibit high levels of innovation, proactiveness, and calculated risk-taking are more likely to convert strategic decisions into tangible performance gains. This observation corroborates the works of Rauch et al. (2009) and Anderson et al. (2015), who reported that

entrepreneurial orientation serves as a strategic capability that bridges managerial processes and organizational success.

From a managerial perspective, the study highlights that decision-making alone may not fully account for superior firm performance unless complemented by a strong entrepreneurial mindset. Therefore, managers should cultivate an organizational culture that encourages creativity, flexibility, and proactive market engagement. Policy makers, on the other hand, should design programs that build both decision-making competencies and entrepreneurial capabilities among SME operators.

H_0 : Social networking does not significantly moderate the relationship between decision-making and performance

H_1 : Social networking significantly moderates the relationship between decision making and performance

V. CONCLUSION

This study examined the mediating role of entrepreneurial orientation in the relationship between decision-making and firm performance among pharmaceutical small and medium-sized enterprises (SMEs) in Southwest Nigeria. Using a mixed-methods approach that combined survey data and statistical analysis, the study investigated how managerial decision-making processes influence firm performance and the extent to which entrepreneurial orientation strengthens this relationship.

The findings revealed that decision-making has a significant positive effect on entrepreneurial orientation, indicating that firms that adopt structured, strategic, and analytical decision-making practices are more likely to demonstrate entrepreneurial behaviours such as innovativeness, proactiveness, and risk-taking. These entrepreneurial attributes enable firms to identify opportunities, adapt to market changes, and develop competitive strategies that support business growth. Furthermore, the results showed that entrepreneurial orientation significantly improves firm performance. Firms with stronger entrepreneurial characteristics tend to perform better in terms of profitability, growth, and

market competitiveness. The mediation analysis confirmed that entrepreneurial orientation partially mediates the relationship between decision-making and firm performance. This implies that while effective decision-making directly enhances organizational performance, part of its influence operates indirectly through the development of entrepreneurial orientation within the firm.

The study therefore concludes that decision-making and entrepreneurial orientation are complementary strategic capabilities that jointly contribute to improved performance among pharmaceutical SMEs. Decision-making alone may not guarantee optimal results unless it is accompanied by an entrepreneurial mindset that promotes innovation, proactive market behaviour, and calculated risk-taking. In practical terms, the findings highlight the need for SME owners and managers to strengthen both their decision-making competencies and entrepreneurial capabilities. Organizations should encourage strategic thinking, creativity, and opportunity recognition as part of their managerial processes. Similarly, policymakers and business development agencies should design capacity-building programs that enhance entrepreneurial orientation and managerial decision-making skills among SME operators in the pharmaceutical sector.

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