

Innovation as a Strategic Tool for Enhancing SMEs Performance in Sokoto State

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ABSTRACT

This research explores the affiliation between innovation and the performance of SMEs in Sokoto state, Nigeria. Using OLS regression analysis, the study identifies process, organizational, product, and marketing innovation as significant predictors of SME success. Each variable demonstrates a positive coefficient, indicating their collective contribution to improved outcomes. These insights highlight the importance of innovation, competitive pricing, organizational capacity, and effective marketing strategies in driving SME performance. The study emphasizes that SMEs seeking sustainable growth must integrate these factors into their operational and strategic frameworks to sustain their edge within rapidly changing markets. This study concludes that innovation whether in products, processes, organizational structures, or market strategies significantly enhances the performance of SMEs in Sokoto State, Nigeria. The study recommended that policymakers in Sokoto State prioritize innovation-driven policies that provide financial incentives, training opportunities, and infrastructural support to SMEs. Government agencies should establish funding schemes and tax relief programs that encourage firms to invest in product, process, organizational, and market innovation.

Keywords: Innovation; Process; Product; Market; SMEs.

1. INTRODUCTION

SMEs are acknowledged as vital drivers of economic progress in developing nations, playing a crucial role in job creation and overall development, poverty alleviation, and broadening the range of industries. In Nigeria, SMEs comprise a notable fraction of business establishment and perform a fundamental part in regional markets including Sokoto State, where they provide livelihood opportunities and stimulate local markets (Abubakar & Adhama, 2020). In spite of their significance, SMEs in Sokoto face persistent challenges including, inadequate financing, infrastructural deficits, and limited managerial competencies, which constrain their ability to compete in driving creativity and adaptability within rapidly changing business settings. (Egbetokun et al., 2020).

To overcome these constraints, scholars emphasize the fundamental necessity of innovation as strategic lever for boosting SME performance. Innovation whether in products, processes, market or organizational methods enables firms to retort to evolving market needs, improve efficiency, and differentiate themselves from competitors (Galadanchi, 2024). The resource-based view (RBV) and dynamic capabilities theory suggest that firms that cultivate these competencies possess favourable conditions for achieving excellence in performance outcomes, including profitability, market expansion, and resilience against shocks (Teece, 2018).

Innovation is widely acknowledged as a cornerstone for strengthening the performance of small and medium-sized enterprises (SMEs), particularly in dynamic and resource-constrained environments. Empirical studies demonstrate that product, process, market, and organizational innovations collectively contribute to SMEs' competitiveness, profitability, and sustainability. For instance, Okoliet al. (2024) found that innovative practices significantly strengthen SMEs' competitive advantage in Nigeria. Similarly, Baita and Adhama (2020) emphasized that product and process innovations drive employment growth and firm survival. Beyond the Nigerian context, Schumpeter's (1934) seminal work laid the foundation for understanding innovation as a driver of economic development, while Drucker (1985) highlighted its role in entrepreneurial success.

More recent contributions by Tidd and Bessant (2018) and OECD (2005) accentuate the multidimensional nature of innovation, linking organizational restructuring and market strategies to improved SME outcomes. Empirical evidence from Zahra and Covin (1995) further supports the positive interrelationship amid innovation and business enterprise performance, while Hult et al. (2004) demonstrated that innovation orientation enhances competitive positioning. In emerging economies, Adegbite and Ayadi (2021) revealed that SMEs leveraging market innovation achieve stronger customer engagement, whereas Teece (2007) argued that dynamic capabilities enable firms to adapt innovations for sustained advantage. Collectively, these studies affirm that innovation whether in products, processes, markets, or organizational structures remains a decisive factor in SME performance, shaping their resilience and long-term growth trajectories.

Empirical evidence from Nigerian SMEs supports this theoretical perspective, showing that enterprises that embrace innovative practices and develop dynamic resource management achieve higher productivity and competitiveness (Egbetokun et al., 2020). In Sokoto State, where SMEs operate in a socio-economic context marked by limited resources and infrastructural challenges, the interplay between innovation and SMEs establishes positive performance. Understanding this relationship provides valuable insights into strategies for strengthening entrepreneurial success, fostering sustainable development, and advancing regional economic transformation.

Despite the recognized importance of SMEs in facilitating economic prosperity and transformative growth in Nigeria, their performance in Sokoto State remains suboptimal. SMEs in the region face persistent constraints namely inadequate capital mobilization, poor infrastructure, weak managerial competencies, and limited technological innovation adoption (Abubakar & Adhama, 2020). These constraints hinder their ability to compete effectively in dynamic markets and restrict their capacity for sustainable growth. Furthermore, while innovation has been established as a central mechanism of competitiveness, many SMEs in Sokoto State lack the strategic orientation and resources necessary to cultivate these capabilities (Egbetokun et al., 2020). Innovation practices such as product development, process improvement, market expansion, and organizational restructuring are often underutilized due to financial limitations and insufficient knowledge transfer.

The problem is compounded by the absence of robust institutional support and policy frameworks that encourage innovation and capability building among SMEs in Sokoto State. As a result, many enterprises struggle to achieve competitiveness, profitability, and resilience, thereby limiting their contribution to regional development. This situation emphasizes the urgent need for empirical investigation into how innovation can be harnessed to improve SME efficiency in Sokoto State, Nigeria.

2 LITERATURE REVIEW

2.1 Innovation and its Constructs

Innovation is universally identified as a critical determinant of corporate strength in maintaining market position and performance, particularly for SMEs functioning within contexts of limited resources environments. It refers to the introduction of new ideas, processes, products, or organizational methods that enhance efficiency and market responsiveness (Galadanchi, 2024). According to Schumpeter (1934) innovation as the introduction of new combinations in production, including new products, new methods of production, new markets, and new sources of supply. Drucker (1985) describes innovation as the specific tool of entrepreneurs, the means by which they exploit change as an opportunity for a different business or service. Moreover, Rogers (2003) asserts innovation as an idea, practice, or object that is perceived as new by an individual or other unit of adoption. Furthermore, Teece (2018) perceives innovation as a linked to dynamic capabilities, where firms create, adapt, and transform business models to sustain competitive

advantage. Also, Rawlings & Reader (2024) states innovation as the emergence of new or altered behavioural practices acquired through learning that enables adaptation to changing environments, problem-solving, and flourishing in diverse contexts. Whereas, Taylor (2017) proclaims innovation is conceived as a composite process involving creativity, knowledge application, and organizational change, emphasizing its multidimensional nature. Within the SME context, innovation can be categorized into several constructs:

2.1.1 Product Innovation

Product innovation refers to the creation of novel or substantially enhanced goods and services that meet evolving customer needs. According to Schumpeter (1934) views product innovation as the introduction of new goods or significant improvements in existing ones, forming part of the “new combinations” that drive economic development. Likewise, Kotler & Keller (2016) establishes product innovation as the process of generating new products or substantial improvements in existing products that provide superior value to customers. In addition, OECD (2005) affirms product innovation entails the launch of goods or services that are either novel or substantially enhanced in terms of features and intended applications. As well, Henderson & Clark (1990) sees product innovation involves changes in core design concepts and linkages that define a product’s architecture, ranging from incremental to radical innovations. Nevertheless, Galadanchi (2024) defines product innovation encompasses the process of bringing forth new or considerably offerings that enhance competitiveness and market expansion. Besides, Egbetokun et al. (2020) conceptualize product innovation in SMEs is the capacity to generate novel products or services that respond to customer demands and improve firm performance.

2.1.2 Process Innovation

Process innovation improvements in production or delivery methods that reduce costs, increase efficiency, or improve quality. According to Schumpeter (1934) highlights process innovation as the introduction of new methods of production or delivery that improve efficiency and reduce costs, forming part of his “new combinations” theory of economic development. Additionally, OECD (2005) stresses process innovation as the implementation of a new or significantly improved production or delivery method, including changes in techniques, equipment, or software. Nonetheless, Damanpour & Gopalakrishnan (2001) identifies process innovation refers to the adoption of new elements in the production or service operations of an organization, aimed at improving efficiency and effectiveness. Furthermore, Utterback & Abernathy (1975) describes process innovation denotes modifications to the methods and procedures through which goods are manufactured and distributed, often focusing on efficiency, cost reduction, and quality improvement. Nevertheless, Kotler & Keller (2016) defines process innovation is the redesign of production or service delivery processes to achieve better performance, lower costs, and improved customer satisfaction. As well, Egbetokun et al. (2020) see process innovation is the ability to adopt new production or service delivery methods that enhance productivity and competitiveness.

2.1.3 Organizational Innovation

Organization innovation changes in business structures, practices, or management techniques that enhance adaptability and decision-making. According to OECD (2005) organizational innovation is the implementation of new organizational methods in business practices, workplace organization, or external relations. Besides, Damanpour & Evan (1984) organizational innovation refers to the creation or adoption of new organizational structures, administrative systems, or management practices that improve efficiency and adaptability. Furthermore, Birkinshaw *et al.* (2008) defines organizational innovation refers to the creation and application of novel managerial practices, processes, structures, or techniques designed to enhance the achievement of organizational objectives. As well, Galadanchi (2024) highlights organizational innovation involves restructuring managerial processes and decision-making systems to enhance competitiveness and responsiveness.

2.1.4 Marketing Innovation

Market innovation adoption of new marketing strategies, channels, or branding approaches to expand market reach and customer engagement. According to OECD (2005) marketing innovation entails the adoption of novel marketing approaches that bring substantial modifications to product design, packaging, distribution channels, promotional strategies, or pricing mechanisms. Furthermore, Kotler & Keller (2016) describes, marketing innovation refers to the development of new marketing strategies or approaches that create superior customer value and expand market reach. Likewise, John & Davies (2000) marketing innovation is the application of new marketing concepts and techniques that differentiate products and services in competitive markets. Nevertheless, Egbetokun *et al.* (2020) marketing innovation involves adopting new branding, distribution, and promotional strategies to improve visibility and customer engagement.

2.2 Performance

Recent scholarship emphasizes the role of technological agility and institutional progress. Susanto *et al.* (2023) defines performance as the continuous enhancement of quality and competitiveness within a rapid technological environment, while Nyathi and Kekwaletswe (2023) view it as the "necessary effort" and strategic mobilization required meeting desired results in complex markets. This focus on procedural integrity is echoed by Arifin and Narmaditya (2024) who describes performance as the degree to which an institution's progress aligns with established rules and role requirements. In the most recent literature, Abdelwahed *et al.* (2025) conceptualize performance through the successful integration of digital platforms and technological innovation, particularly as a driver for growth in emerging economies. Finally, recent synthesis suggests that performance is no longer a destination but a measure of functional flexibility and the ability to maintain high productivity amidst digital disruption (Al-Habib, 2022; Taouab & Issor, 2019).

2.3 Theoretical Framework

Innovation has increasingly become a strategic tool through which SMEs enhance competitiveness, adaptability, and long-term performance. Drawing on Schumpeterian innovation theory, innovation whether in products, processes, markets, or organizational structures acts as a catalyst for firm growth and value creation (Schumpeter, 1934). From the Resource-Based View, these innovation capabilities constitute valuable and inimitable resources that empower small and medium-sized enterprises (SMEs) to establish distinct competitive positioning and realize enhanced performance outcomes (Barney, 1991). Product innovation allows SMEs to introduce new or improved goods and services that strengthen customer satisfaction and market positioning, thereby enhancing performance (Susanto et al., 2023). Process innovation improves production efficiency and service delivery, reducing operational costs and increasing productivity, which directly contributes to performance gains (Abdelwahed et al., 2025).

Market innovation enables SMEs to adopt new marketing methods, pricing strategies, and customer engagement approaches, helping them respond to competitive pressures and shifting consumer preferences (Nyathi & Kekwaletswe, 2023). Organizational innovation, which involves new managerial practices, structures, and HR systems, enhances internal flexibility and strategic alignment, supporting institutional progress and performance (Arifin & Narmaditya, 2024). Together, these four innovation dimensions strengthen SMEs' dynamic capabilities by enabling them to identify emerging opportunities, capitalize on them through deliberate strategic initiatives, and realign organizational resources according to environmental turbulence (Tece, 2007). Consequently, innovation serves as a multidimensional strategic mechanism that drives financial, operational, and market performance, while also fostering resilience and long-term growth (Al-Habib, 2022; Taouab & Issor, 2019).

2.4 Empirical Review

Fitriatna et al. (2020) investigated how innovation and adaptive capabilities contribute to the performance of SMEs in Indonesia. Data were obtained through questionnaires distributed to 350 SMEs. The researchers applied correlation analysis, regression analysis, and path analysis to analyse the interconnections among the variables. The findings revealed a positively significant influence of both innovation and dynamic capabilities on SME performance. Also, Expósito and Sanchis-Llopis (2019) examined innovation (e.g., product, process, market, organizational) the performance of SMEs in Spain. Employing a multi-faceted analytical framework. Drawing on a large sample of Spanish SMEs, their study findings reveal that innovation has a favourable impact on both financial and operational performance.

Azariet al. (2017) evaluated how innovation operates as a supportive mechanism for expansion that may help exporting SMEs succeed in international markets. The study is based on a quantitative survey of Norwegian exporting SMEs, with dataset comprised 380 usable responses collected. The collected information analyzed using SEM. Product innovation is positively and significantly associated with the degree and scope of exports. Zhang (2022) explored the

performance consequences of simultaneous innovation practices among SMEs in China. The study draws on survey data from 1,139 Chinese manufacturing SMEs. Using exploratory factor analysis (EFA), the study finds that there is no interplay among product-oriented innovations, meaning their combined use yields only additive benefits. In contrast, production-oriented innovations show substitutability, suggesting that combining them does not improve performance. When organizational innovation is introduced alongside production-oriented innovation, the negative effect disappears.

Crema *et al.* (2014) analysed the linkages between firm strategy, open innovation, and innovation performance in small and medium-sized enterprises (SMEs). The research is based on a survey of Italian manufacturing SMEs, yielding 107 valid responses. The hypotheses were tested through structural equation modelling (SEM). The findings confirm most of the hypothesized relationships and provide practical insights into how SMEs can align their competitive strategies with appropriate levels of open innovation. Rosli and Sidek (2013) evaluated the influence of multiple facets of innovation on SME performance outcomes within the Malaysian context. The study drew on responses from 284 SMEs. The analysis was conducted using hierarchical regression techniques. The findings confirm that both product innovation and process innovation significantly influence firm performance, with product innovation exerting a stronger effect. Otache and Usang (2022) examined the moderating role of government support (GS) in the relationship between innovation capability (IC) and SME performance during periods of economic turbulence. The research sample consisted of 234 SMEs responses were obtained from participants in all six geopolitical zones of Nigeria using a self-reported survey instrument. The hypotheses were tested using PLS-SEM. findings revealed that innovation capability (IC) has a favorable significant association with SME performance.

Moreover, Mabenge *et al.* (2022) investigated how different proxies of innovation influence the performance of SMEs in Harare, Zimbabwe. The research sample consisted of 330 SMEs through a standardized questionnaire, and the hypotheses were tested using SEM alongside moderated multivariate regression approach. The findings reveal that, only marketing innovation significantly influences the financial and non-financial performance of SMEs, while product, process, and organizational innovation do not. Furthermore, Makanyeza and Dzvuke (2015) explored the relationship between innovation and the performance of SMEs in Harare, Zimbabwe, through a survey of 200 firms. Employing SEM, empirical evidence indicated that organizational and product innovation exert a significant favorable influence on SME performance, whereas marketing and process innovation did not demonstrate any significant predictive effect.

Hazem and Yunhong (2020) the study emphasized that the performance of SMEs is shaped by diverse innovation capabilities. It proposes a comprehensive framework to explain how product, process, organizational, and marketing innovations influence both financial and operational outcomes. Using a qualitative approach, comprehensive interview sessions were conducted with

$$PRF = f(PDT, PRC, OGZ, MKT) \dots\dots\dots (3.2)$$

Where; “PRF” is SMEs performance, “PDT” connote product, “PRC” denote process, “OGZ” isorganizational, and “MKT” denote market. The above equation is reinstatedinto mathematical model.

$$PRF_i = \beta_0 + \beta_1PDT_{i-1} + \beta_2PRC_{i-1} + \beta_3OGZ_{i-1} + \beta_4MKT_{i-1} \dots\dots\dots (3.3)$$

Where: “ $\beta_1 - \beta_4$ ” is the coefficient of the parameters to be estimated, “ i ” denote the time varying factor. However, the mathematical model can be restated into econometric model, as follow:

$$PRF_i = \beta_0 + \beta_1PDT_{i-1} + \beta_2PRC_{i-1} + \beta_3OGZ_{i-1} + \beta_4MKT_{i-1} + \alpha_{i-1} \dots\dots\dots (3.4)$$

Where: α_{i-1} represent the error term or the disturbance term.

4. RESULTS AND DISCUSSIONS

Table 4.1: Results of the Reliability Test

S/N	Constructs	Cronbach’s Alpha	No of Items
1	PDT	0.847	4
2	PRC	0.798	4
3	OGZ	0.768	4
4	MKT	0.723	4

Source: Field Survey 2026

Table 4.1 consistent with the recommendation of Zikmund et al. (2010), a Cronbach’s alpha value of 0.70 was adopted as the minimum threshold for acceptable reliability. The constructs assessed in this study surpassed this benchmark, thereby affirming the robustness and dependability of the measurement instruments utilized.

Table 4.2: Results of the Validity Test

S/N	Constructs	Components Factor	Average Factor Loading
1	PDT	0.72	0.81
2	PRC	0.75	0.86
3	OGZ	0.74	0.85
4	MKT	0.78	0.87

Kaiser-Mayer-Olkin 826 (0.000)

Source: Field Survey 2026

Table 4.2 reports the validity evaluation of the survey instrument employed in the study. Construct validity was assessed using both convergent and discriminant approaches. The findings on convergent validity indicate that all constructs demonstrate satisfactory, as the average factor loadings exceed the recommended threshold of 0.70. Furthermore, the Kaiser-Meyer-Olkin (KMO) measure reinforces the suitability of the instrument, producing a p-value of 0.810, which is categorized as highly meritorious.

Table 4.3: Multicollinearity Test

Variables	PRF	INV	PAC	RST	CAG
PRF	1	0.64	0.53	0.55	0.57
PDT	0.64	1	0.60	0.52	0.47
PRC	0.53	0.60	1	0.49	0.56
OGZ	0.55	0.52	0.49	1	0.48
MKT	0.57	0.47	0.56	0.48	1

Source: Authors Computation, EViews 12

Table 4.3 illustrates the Pearson’s correlation analysis of the variables incorporated into the model. The results revealed that the variables are interrelated in several ways; however, the correlation coefficients remain relatively low, indicating weak associations between the dependent and independent variables. Importantly, the empirical findings from the Pearson correlation test confirm the absence of multicollinearity among the parameters, as all coefficient values drop beneath the threshold of 0.70.

Table 4. 4: Results of the Relationship between Innovation and SMEs Performance (OLS Regression Results)

Dependent Varb.: SMEs Performance				
Indp. Varb.	Coefficient	Std. Error	t-Statistics	P-Value
PDT	0.2233	0.0653	2.4623	0.0054***
PRC	0.3063	0.2153	3.3461	0.0023***
OGZ	0.3525	0.0543	4.4221	0.0009***
MKT	0.1054	0.1433	5.4321	0.0067***
C	1.0326	0.0512	3.3134	0.0001***

$R^2 = 72$, Adjusted $R^2 = 78$, F-Statistics = 58.5631, F-Statistic P- value (0.0000), Durbin Watson = 2.26

Table 4.4 illustrates the empirical affinity between innovation and the performance of SMEs in Sokoto State, Nigeria. The analysis reveals that product innovation exerts a positive and statistically significant influence on SME outcomes. In quantitative terms, a 1% variation in

product innovation corresponds to an approximate 0.22% change in SME performance, whether upward or downward. This evidence highlights innovation as a critical determinant of SME success within the region. The result is consistent with prior scholarship, including the works of Expósito and Sanchis-Llopis (2019), Azari et al. (2017), and Rosli and Sidek (2013), thereby reinforcing the theoretical foundation of the present study. However, the findings diverge from those reported by Zhang (2022) and Mabenge et al. (2022), highlighting the contextual differences in innovation-performance dynamics across settings.

Furthermore, the analysis demonstrates that process innovation has a significant and positive effect on the performance of SMEs. Statistically, a 1% change in product innovation translates into an estimated 0.30% variation in SME performance, whether in a positive or negative direction. This finding emphasizes the pivotal role of innovation as bedrock of SME competitiveness and sustainability within the regional context. The outcome is consistent with earlier contributions in the literature, notably those of Expósito and Sanchis-Llopis (2019), Hazem and Yunhong (2020), and Rosli and Sidek (2013), thereby lending further support to the theoretical framework guiding this research. Conversely, the results diverge from the conclusions reached by Mabenge et al. (2022) and Makanyeza and Dzvuke (2015), suggesting that the linkage between innovation and performance may be contingent on contextual and environmental factors that differ across settings.

The results further indicate a statistically significant and positive association between organizational innovation and SME performance in Sokoto State. Specifically, a 1% rise (or decline) in organizational innovation corresponds to an estimated 0.35% increase (or decrease) in SME performance. This outcome suggests that improvements in organizational innovation contributed to enhanced performance among SMEs in the region during the study period. Greater emphasis on organizational innovation is therefore linked to stronger performance. These findings are consistent with earlier studies by Makanyeza and Dzvuke (2015), Hazem and Yunhong (2020), and Oduro (2019), thereby reinforcing the theoretical framework underpinning this research. However, the evidence contrasts with the conclusions of Mabenge et al. (2022), pointing to contextual variations in how innovation influences SME performance across different environments.

The empirical evidence from the study reveals a statistically significant and positive relationship between market innovation and SME performance in Sokoto State, Nigeria. A 1% increase (or decrease) in market innovation is associated with an approximate 0.10% rise (or decline) in SME performance. This indicates that market innovation played a crucial role in enhancing SME outcomes throughout the study period. Firms that adopt more aggressive market strategies are better positioned to compete effectively against rivals. These findings are consistent with the works of Oduro (2019), Hazem and Yunhong (2020), and Mabenge et al. (2022), thereby reinforcing the theoretical framework underpinning this research. However, the results stand in

contrast to the conclusions of Makanyeza and Dzvuke (2015), suggesting that the innovationperformance nexus may vary depending on contextual and environmental conditions.

Overall, the study highlights that innovation is not a singular construct but rather a multidimensional phenomenon, each dimension contributing uniquely to SME success. This integrated perspective provides valuable insights for policymakers, practitioners, and SME owners in Sokoto State, emphasizing the need for holistic innovation strategies that simultaneously address product, process, organizational, and market domains.

5. CONCLUSIONS AND RECOMMENDATIONS

This study provides clear evidence that innovationwhether in products, processes, organizational structures, or market strategiessignificantly enhances the performance of SMEs in Sokoto State, Nigeria. Each dimension contributes uniquely: product innovation drives incremental growth, process innovation improves efficiency, organizational innovation strengthens internal capacity, and market innovation enhances competitiveness. Collectively, these forms of innovation establish a robust foundation for SME sustainability and financial success.The findings reinforce the theoretical framework underpinning the research and align with several prior studies, the results suggest that SMEs in Sokoto State can achieve superior outcomes by adopting a holistic innovation.

The studyrecommended that policymakers in Sokoto State prioritize innovation-driven policies that provide financial incentives, training opportunities, and infrastructural support to SMEs. Government agencies should establish funding schemes and tax relief programs that encourage firms to invest in product, process, organizational, and market innovation. In addition, SME owners and managers should be exposed to continuous training in innovation management, digital transformation, and competitive market strategies to strengthen their capacity to translate innovative ideas into measurable performance outcomes. Financial institutions are encouraged to design tailored credit facilities for SMEs that emphasize innovation projects, while universities and research centres should collaborate with SMEs to facilitate knowledge transfer and joint product development. Furthermore, SMEs themselves should adopt proactive market strategies, including aggressive marketing and customer engagement, to ensure that innovations translate into sustainable financial results. Finally, future research should explore sector-specific differences and contextual factors influencing innovationperformance dynamics, thereby enriching and ccomprehending the application of innovation for advantage to strengthen SME competitiveness across diverse environments.

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