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EFFECT OF STRATEGIC ENTREPRENEURSHIP ON SMES' PERFORMANCE IN NORTH CENTRAL NIGERIA

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ABSTRACT
Despite the recognized importance of Small and Medium-sized Enterprises (SMEs) to economic growth and employment generation, many SMEs continue to struggle with achieving consistent performance outcomes. This raises the need to understand the strategic entrepreneurial factors that can enhance their success. This study examined the effects of innovativeness, proactiveness, and risk-taking on the performance of SMEs in North-Central Nigeria. The study employed a survey research design with a sample size of 398 SME owners and managers, using a structured five-point Likert scale questionnaire for data collection. Data analysis was carried out using Partial Least Squares Structural Equation Modeling (PLS-SEM). The findings revealed that innovativeness and risk-taking significantly and positively influenced SME performance, while proactiveness did not show a statistically significant effect. These results indicate that SMEs that cultivate innovative practices and engage in calculated risk-taking are more likely to achieve superior performance. The study recommends that SME operators strengthen their innovation capacity, invest in creative business processes, and adopt well-evaluated risk strategies. Furthermore, policymakers and business development agencies should provide supportive frameworks such as innovation funding, training, and advisory services to help SMEs in North-Central Nigeria enhance competitiveness and achieve sustainable growth.
Keywords: Innovativeness, Risk-Taking, Proactiveness, SMEs Performance.

Introduction

Small and Medium-sized Enterprises (SMEs) are widely recognized as critical drivers of economic growth, employment generation, and innovation across both developed and developing economies (World Bank, 2020). They constitute a substantial proportion of business activities globally and contribute significantly to national output and social stability. In this context, strategic entrepreneurship defined as the integration of opportunity-seeking behaviors with advantage-seeking actions has emerged as a key framework for enhancing SME competitiveness and long-term sustainability (Bolarinwa & Yusuf, 2019; Adeoye & Elegunde, 2021). By fostering innovativeness, proactiveness, and effective market positioning, strategic entrepreneurship enables firms to adapt to dynamic environments, exploit emerging opportunities, and sustain superior performance.

At the global and African levels, empirical evidence suggests that SMEs that adopt strategic entrepreneurship practices tend to achieve higher productivity, innovation, and survival rates (Garba, 2024; Yeboah & Antwi, 2023). However, SMEs in developing economies, particularly in Africa, continue to face structural constraints such as weak infrastructure, limited access to finance, and inadequate managerial capabilities, which hinder the effective application of these strategic dimensions (David & Olatunji, 2023; Elumelu, 2022). In Nigeria, despite the significant contribution of SMEs to employment and economic development, many enterprises struggle with low innovativeness, poor market orientation, and weak strategic alignment, thereby limiting their competitiveness in an increasingly volatile business environment (Bassey & Odu, 2022).

The situation is more pronounced in North-Central Nigeria, where SMEs operate under challenging conditions characterized by infrastructural deficits, policy inconsistencies, and limited access to capital (Chukwudi et al., 2020; Lawson & Griggs, 2020). Although the region possesses considerable economic potential, many SMEs are unable to effectively deploy key strategic entrepreneurship dimensions such as innovativeness, proactiveness, and risk-taking to enhance their performance. This has resulted in a persistent gap between the expected and actual performance outcomes of SMEs, as firms often lack the strategic capabilities required to respond proactively to market changes, exploit opportunities, and achieve sustainable growth.

Despite growing scholarly attention to strategic entrepreneurship, existing empirical studies in Nigeria have largely examined its dimensions in isolation, with limited focus on their combined or interactive effects on SME performance (Oba, 2021; Okon, 2022). Furthermore, there is a paucity of context-specific evidence from North-Central Nigeria that holistically evaluates how multiple strategic entrepreneurship variables jointly influence firm performance in resource-constrained environments (Ibrahim, 2024). This gap underscores the need for an integrated investigation into the effect of strategic entrepreneurship on SME performance in the region. Accordingly, this study seeks to examine how key dimensions of strategic entrepreneurship collectively shape SME performance in North-Central Nigeria, with a view to providing evidence-based insights for policy formulation and entrepreneurial practice.

Statement of Hypotheses

In line with the study, the following hypotheses were stated in null form:

H_{o1}: Innovativeness has no significant effect on SMEs' performance in North Central Nigeria.
H_{o2}: Risk-taking has no significant effect on SMEs' performance in North Central Nigeria.
H_{o3}: Proactiveness has no significant effect on SMEs' performance in North Central Nigeria.

Literature Review

Strategic Entrepreneurship

Strategic entrepreneurship is the integration of entrepreneurial dynamism with strategic intent, combining opportunity-seeking and advantage-seeking behaviors to drive firm performance. It is defined as the alignment of entrepreneurial exploration with strategic exploitation to create wealth and sustain competitive advantage (Hitt et al., 2018). Similarly, Kuratko and Audretsch (2018) emphasize that it involves both discovering new opportunities and effectively leveraging existing resources. This dual approach enables firms to move beyond reactive strategies and proactively shape market conditions, highlighting the importance of balancing innovation with strategic discipline for long-term success.

Further perspectives stress that strategic entrepreneurship is a deliberate and structured process rather than a spontaneous activity. Rezaei and Ortt (2018) underscore the role of strategic vision, resource orchestration, and risk management, while Groen et al. (2019) highlight the disciplined use of innovation and competitive tactics to achieve sustainable performance. In addition, Meyer et al. (2019) and Hughes et al. (2020) emphasize the need for flexibility and coherent planning, ensuring alignment between short-term actions and long-term goals. Overall, strategic entrepreneurship is a continuous, adaptive process that integrates creativity, strategic foresight, and efficient resource utilization, making it particularly essential for SMEs operating in dynamic and resource-constrained environments.

Innovativeness

Innovativeness is a multidimensional construct that reflects a firm's capacity, willingness, and strategic orientation toward generating and applying new ideas, processes, or products to achieve competitive advantage. Garcia and Calantone (2018) defined innovativeness as both the ability and readiness to create or adopt novel ideas, while Wang and Dass (2018) viewed it as a sustained commitment to invention and experimentation embedded within the firm's strategic processes. Tsai and Wang (2019) further emphasized that innovativeness encompasses both incremental improvements and radical innovations, highlighting that continuous learning and knowledge transformation are central to maintaining market relevance.

From a strategic perspective, innovativeness is a deliberate and structured organizational effort rather than a spontaneous activity. Kafouros et al. (2019) associated innovativeness with managerial decisions to invest in creativity and research and development to enhance competitive advantage, while Alegre and Chiva (2020) stressed the importance of an enabling organizational culture that supports experimentation, learning, and openness to change. Such an environment encourages calculated risk-taking and creative problem-solving, demonstrating that innovativeness is a strategically cultivated capability driven by leadership commitment, resource investment, and a supportive organizational culture for sustained performance.

Risk-Taking

Risk-taking is a fundamental dimension of entrepreneurship that drives innovation, transformation, and competitive renewal. It is defined as the deliberate willingness of firms to commit significant resources to opportunities with uncertain outcomes, guided by calculated decision-making rather than reckless actions (Lumpkin & Dess, 2019). Firms that exhibit risk-taking behavior carefully balance potential returns against possible losses, using experience, data, and strategic foresight to navigate uncertainty. Similarly, Covin and Wales (2018) view risk-taking as a firm's readiness to pursue bold initiatives in unpredictable environments, positioning it as a strategic mechanism for exploiting emerging opportunities and sustaining competitive advantage.

From a broader perspective, risk-taking reflects a proactive and strategic posture that challenges the status quo and embraces uncertainty as a pathway to growth. Tajeddini and Mueller (2019) associated risk-taking with innovation and disruption, where firms accept setbacks as part of learning and value creation. Pérez-López et al. (2019) highlighted its role in market expansion and the introduction of new products in uncertain environments, while Kreiser et al. (2020) emphasize that risk-taking depends on a firm's tolerance for losses, financial capacity, and leadership orientation. Overall, risk-taking is a disciplined and context-driven behavior that enables firms to adapt to changing markets, capitalize on opportunities, and achieve long-term sustainability.

Proactiveness

Proactiveness is a forward-looking, action-oriented behavior that enables firms to anticipate and shape environmental changes rather than merely react to them. It is defined as a firm's tendency to act in anticipation of future demands, emphasizing initiative and early response to market opportunities (Lumpkin & Dess, 2019). Proactive firms continuously scan their environment to identify emerging opportunities and capitalize on unmet needs ahead of competitors (Hughes & Morgaz, 2019). This capability allows them to influence market dynamics, secure first-mover advantages, and pursue innovative activities such as entering new markets, adopting digital solutions, and exploring new business models (Tang et al., 2020).

From a strategic standpoint, proactiveness involves foresight, speed, and decisive action in shaping competitive outcomes. Sinha and Srivastava (2020) highlighted its role in implementing strategies ahead of competitors, while Gupta et al. (2021) describe proactive firms as market leaders that create and redefine consumer preferences. Baker and Welter (2021) further emphasized that proactiveness requires continuous anticipation of change, resource realignment, and strategic adaptation. Overall, proactiveness is a deliberate and future-oriented capability that integrates anticipation, initiative, and strategic execution, enabling firms particularly SMEs to remain competitive and resilient in dynamic business environments.

SMEs Performance

Firm performance is a multidimensional concept that reflects an organization's ability to achieve its objectives, though scholars differ in how it is assessed. Hanson et al. (2016) view firm performance from an investor-centric perspective, emphasizing value creation and the firm's capacity to enhance shareholder wealth. In contrast, Fazlollahi and Franke (2018) defined it in terms of measurable outcomes, focusing on how well organizations achieve their predefined strategic and operational goals. These perspectives highlight that performance can be evaluated either through value creation for investors or through the attainment of organizational targets.

Within the SME context, firm performance extends beyond financial outcomes to include strategic and operational dimensions. Agburu et al. (2017) described SME performance as the ability to achieve short-term financial results while pursuing long-term objectives such as innovation and competitive positioning. Similarly, Ormazabal et al. (2018) emphasized resource efficiency and strategic strength, while Lebans and Euske (2016) presented performance as a combination of financial and non-financial indicators. Overall, firm performance is a holistic construct encompassing financial success, operational efficiency, strategic positioning, and long-term sustainability.

Empirical Review

Innovativeness and SMEs' Performance

Falahat et al. (2018) examined the effect of innovativeness on SME performance in Malaysia using SEM-PLS on data from 450 wholesale/retail SMEs. The findings showed that

innovativeness significantly improved non-financial performance, business growth, and competitive positioning, but had no significant effect on financial performance. Similarly, Anwar (2018), in a study of 303 manufacturing SMEs in Pakistan, found that business model innovation had a positive and significant impact on overall performance. The study further revealed that innovativeness and proactiveness significantly influenced SME performance, while risk-taking did not, and that technology orientation mediated only the relationship between innovativeness and performance. These studies highlight the importance of innovativeness in driving SME success, although their findings may not be directly applicable to the North-Central Nigerian context.

In another study, Rahaman et al. (2021) investigated the combined effects of innovativeness, proactiveness, and risk-taking on SME performance in Bangladesh using hierarchical regression analysis on data from 250 SME owners. The results indicated that all three variables significantly influenced performance, although the use of a non-probability sample limits generalizability. In Nigeria, Onyenma (2019) found that innovativeness significantly enhanced SME performance in Rivers and Bayelsa States, particularly in areas such as customer satisfaction, business growth, and social performance. The study recommended the adoption of continuous innovation practices, including regular SWOT analysis. However, despite these insights, there remains limited empirical evidence focusing specifically on the combined effects of these variables in North-Central Nigeria.

Risk-Taking and SME Performance

Sirivanh et al. (2014) examined the effect of entrepreneurial orientation on SME growth using SEM on data from 331 firms using SEM on data from 331 firms and found a significant positive relationship between risk-taking and competitiveness, although concerns about sample size and non-probability sampling limit generalizability. Similarly, Olotu et al. (2023) reported that risk-taking significantly improved SME performance in Kwara State, indicating that firms willing to invest in uncertain opportunities achieved higher growth and profitability. In contrast, Ibrahim and Abu (2020), in a comparative study of Malaysia and Nigeria, found that although risk-taking had a positive coefficient, its effect on performance was not statistically significant, suggesting that risk-taking alone may not guarantee improved outcomes without complementary strategic capabilities.

Further evidence from Rahaman et al. (2021), based on SMEs in Bangladesh, revealed that risk-taking, alongside innovativeness and proactiveness, had a significant positive influence on SME performance using hierarchical regression analysis. Despite these findings, limitations such as non-probability sampling and small sample sizes reduce the generalizability of the results. Overall, while existing studies provide mixed but generally supportive evidence on the role of risk-taking in enhancing SME performance, most are context-specific and conducted outside North-Central Nigeria, indicating a gap in localized empirical evidence relevant to the present study.

Proactiveness and SMEs' Performance

Hossain and Asheq (2019) found that proactiveness significantly enhances SME performance in Bangladesh, showing that firms that anticipate market changes and act ahead of competitors achieve better outcomes than reactive ones. Similarly, Hamilton (2020) reported a positive and significant relationship between proactiveness and SME performance in Rivers and Bayelsa States, with improvements observed in customer satisfaction, growth, and social performance. Essien et al. (2020) also established that proactive SMEs in Lagos and Port Harcourt recorded higher profitability and market expansion, particularly through early product introduction and market entry. These studies collectively emphasize that proactiveness enables SMEs to gain first-mover advantages and improve performance. In another context, Naldi and Davidsson (2021)

found through a longitudinal study in Sweden that proactiveness significantly drives sales growth among SMEs, regardless of ownership structure. Despite these consistent findings, most studies are context-specific, conducted outside North-Central Nigeria, or limited by methodological differences such as the use of regression instead of advanced techniques like PLS-SEM. This limits their generalizability to the present study area, highlighting a gap for context-specific empirical evidence on the role of proactiveness in SME performance in North-Central Nigeria.

Theoretical Framework

Dynamic Capabilities Theory

Dynamic Capabilities Theory (DCT), introduced by Teece et al. (1997) and further developed by Teece (2007), explains how firms achieve superior performance in dynamic environments by building, integrating, and reconfiguring their resources. The theory emphasizes three core capabilities: sensing opportunities and threats, seizing them through strategic investments, and reconfiguring resources to sustain competitive advantage. Unlike traditional views that focus on static resource possession, DCT highlights the importance of higher-order capabilities that enable firms to continuously adapt, innovate, and respond effectively to changing market conditions. Subsequent scholars expanded the theory by linking it to organizational processes such as learning, knowledge creation, and strategic renewal (Eisenhardt & Martin, 2000; Zahra et al., 2006). Empirical evidence suggests that dynamic capabilities enhance firm performance, particularly in highly uncertain environments, although critiques note challenges in measurement and conceptual clarity (Barreto, 2010; Schilke, 2014). In the context of SMEs in North-Central Nigeria, DCT implies that firms can improve performance by strengthening their ability to sense market changes, seize opportunities through innovation and strategic action, and reconfigure resources to remain competitive. This makes the theory particularly relevant for explaining how strategic entrepreneurship dimensions such as innovativeness, proactiveness, and risk-taking drive sustained SME performance in turbulent environments.

Methodology

This study adopts a survey research design, which is aimed at systematically collecting and describing data to capture the characteristics and features of a specific population. The target respondents are owner-managers of small and medium enterprises (SMEs), who are considered well-positioned to provide accurate and relevant information related to the study variables. The study population comprises all registered SMEs located in North-Central Nigeria. According to the Small and Medium Enterprises Development Agency of Nigeria (SMEDAN) and the National Bureau of Statistics (NBS, 2021), there are approximately 130,862 SMEs operating within the region, as detailed in Table 1.

Table 1 Number of SMEs per state and FCT

S/No	State	Number of SMEs
1.	Kwara	25,356
2.	Kogi	12,517
3.	Benue	14,851
4.	Federal Capital Territory (FCT)	22,861
5.	Niger	23,197
6	Plateau	21,352
7	Nasarawa	10,728
	Total	**130,862**

Source: NBS/SMEDAN Survey Report, 2021

For this study, the minimum sample size was determined using the Taro Yamane formula as developed by Yamane (1967):

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

Where:

n = sample size; N = population; e = degree of error expected.
With a degree of error expected at 0.05 and a population of 130,862, the sample size is computed below:

$$n = \frac{130{,}862}{1 + 130{,}862\ (0.05)^2}$$

$$n = \frac{130{,}862}{1 + 130{,}862\ (0.0025)}$$

$$n = \frac{130{,}862}{1 + 327.2}$$

$$n = \frac{130{,}862}{427.2}$$

$$n = \approx 306$$

Whilst the calculated sample size using the Taro Yamane formula is estimated as 306, Israel (2013), averred that there is a need to increase such calculated sample size by 30% to account for those who cannot be contacted. Therefore, the sample size is thus = 306 + (30%) 92 = 398. As such, 398 represents the study sample size, which served as the number of questionnaire copies that were distributed. More so, this sample suffices to optimally predict or investigate the characteristics of the population under study. The sampling technique employed for the research is purposive sampling. However, to provide equal allocation according to the respective population size, Bouley's proportional allocation formula was adopted:

$$nk = \frac{nNk}{N}$$

Where:
nk = number allocated category
n = total sample size
Nk = total population of each category
N = study population
Applying the formula, we have:

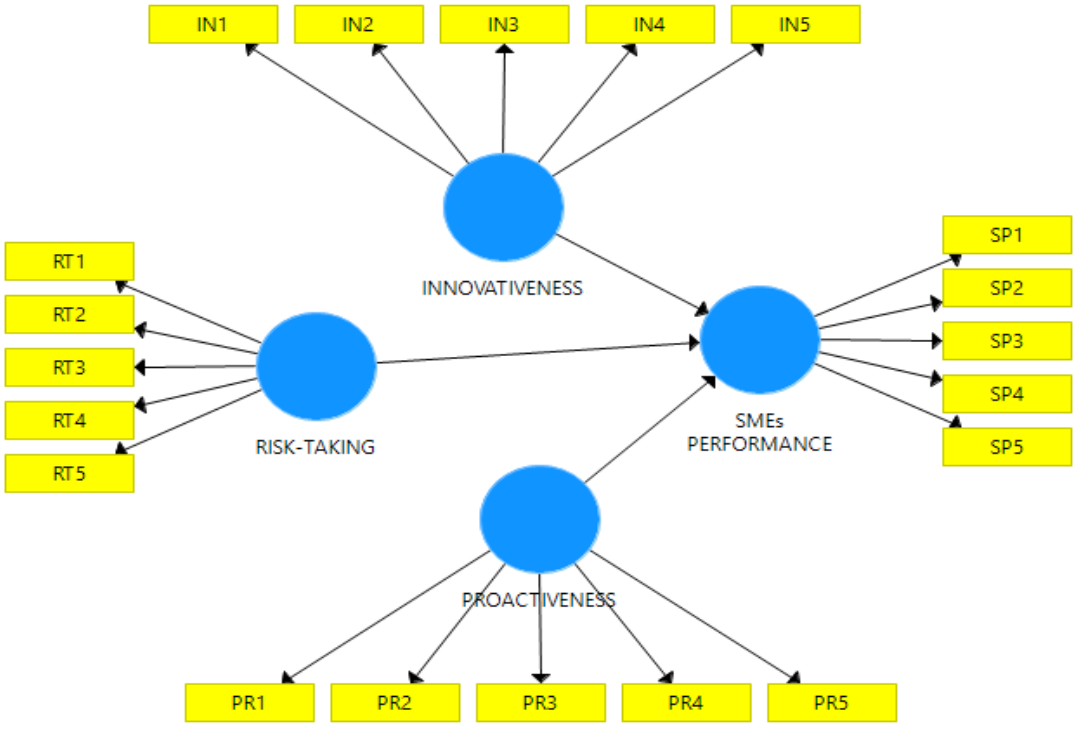
Table 2: Sample of Selected SMEs (owners/managers) according to state

S/N	State	Number of SMEs	Sample size
1	Kwara	25,356	25,356*398/130,862= 76
2	Kogi	12,517	12,517*398/130,862= 38
3	Benue	14,851	14,851*398/130,862= 45
4	Federal Capital Territory	22,861	22,861*398/130,862= 70
5	Niger	23,197	23,197*398/130,862= 71
6	Plateau	21,352	21,352*398/130,862= 65
7	Nasarawa	10,728	10,728*398/130,862= 33
8	**Total**	**130,862**	398

Source: Field Survey, 2025

The study utilized a structured five-point Likert scale questionnaire, incorporating items adapted from Sari and Susilowati (2023) to collect data via research assistants. Employing purposive sampling, the approach targeted SME owners and managers as the most relevant informants during the data-gathering phase.. The analysis was conducted using Partial Least Squares Structural Equation Modelling (PLS-SEM), which evaluated both the measurement and structural models. This methodology enabled a comprehensive assessment of the research hypotheses and the interrelationships within the study framework, ensuring the examination of the theoretical constructs and their connections.

Figure 1: Theoretical model of the Study



Result and Discussion

The Measurement Model

When assessing the measurement model, the outer loadings are evaluated first. According to Hair et al. (2017), loadings greater than 0.70 are generally considered acceptable, as they indicate that the construct explains more than 50% of the variance in the indicator, thereby demonstrating sufficient item reliability.

Figure 2: Indicator Outer Loadings

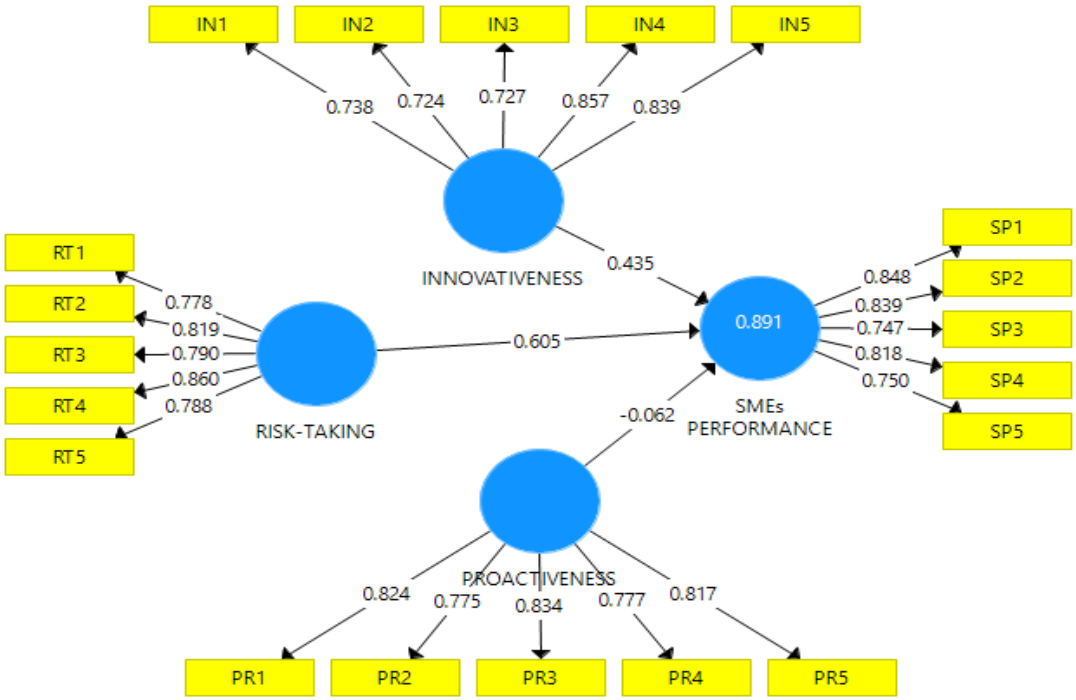


Table 3: Reliability of Study Scale

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
INNOVATIVENESS	**0.838**	**0.865**	**0.885**	**0.607**
PROACTIVENESS	**0.865**	**0.866**	**0.902**	**0.649**
RISK-TAKING	**0.866**	**0.869**	**0.903**	**0.652**
SMEs PERFORMANCE	**0.860**	**0.865**	**0.900**	**0.643**

Source: SmartPLS Output 2025

The study demonstrated strong internal consistency, with composite reliability measures exceeding the recommended threshold of 0.70 (see Table 3), confirming good reliability across the constructs. Additionally, Cronbach's alpha values for all measures surpassed the minimum accepted criterion of 0.70, aligning with the standards proposed by Hair et al. (2017), thereby further validating the reliability of the measurement instruments. Convergent validity was also established, as the average variance extracted (AVE) for all variables exceeded 0.50, indicating that each construct accounted for at least 50% of the variance in its corresponding items and confirming the adequacy of the measures in capturing their intended theoretical concepts.

Table 4: Heterotrait-Monotrait Ratio (HTMT)

	INNOVATIVENESS	PROACTIVENESS	RISK-TAKING	SMEs PERFORMANCE
INNOVATIVENESS				
PROACTIVENESS	**0.667**			
RISK-TAKING	**0.709**	**0.765**		
SMEs PERFORMANCE	**0.575**	0.849	**0.809**	

Source: SmartPLS Output 2025

Table 4 presents the Heterotrait-Monotrait Ratio (HTMT) results, which assess discriminant validity among the study constructs—Innovativeness, Proactiveness, Risk-Taking, and SMEs Performance. According to Hair et al. (2019), HTMT values below 0.85 (or in some cases 0.90) indicate satisfactory discriminant validity, meaning each construct is empirically distinct from the others. The table shows that all HTMT ratios fall below the 0.90 threshold: Innovativeness–Proactiveness (0.667), Innovativeness–Risk-Taking (0.709), Innovativeness–SMEs Performance (0.575), Proactiveness–Risk-Taking (0.765), Proactiveness–SMEs Performance (0.849), and Risk-Taking–SMEs Performance (0.809). These results confirm that the constructs are well-differentiated, implying that the measurement model demonstrates good discriminant validity and that each construct captures a unique dimension of strategic entrepreneurship influencing SME performance.

The Structural Model

In assessing the structural model, the standard assessment procedures were considered, which include the path coefficient, t-values, p-values, and coefficient of determination(R^2). The bootstrapping procedure was conducted using a resample of 5000.

Figure 3: Estimated Path Model

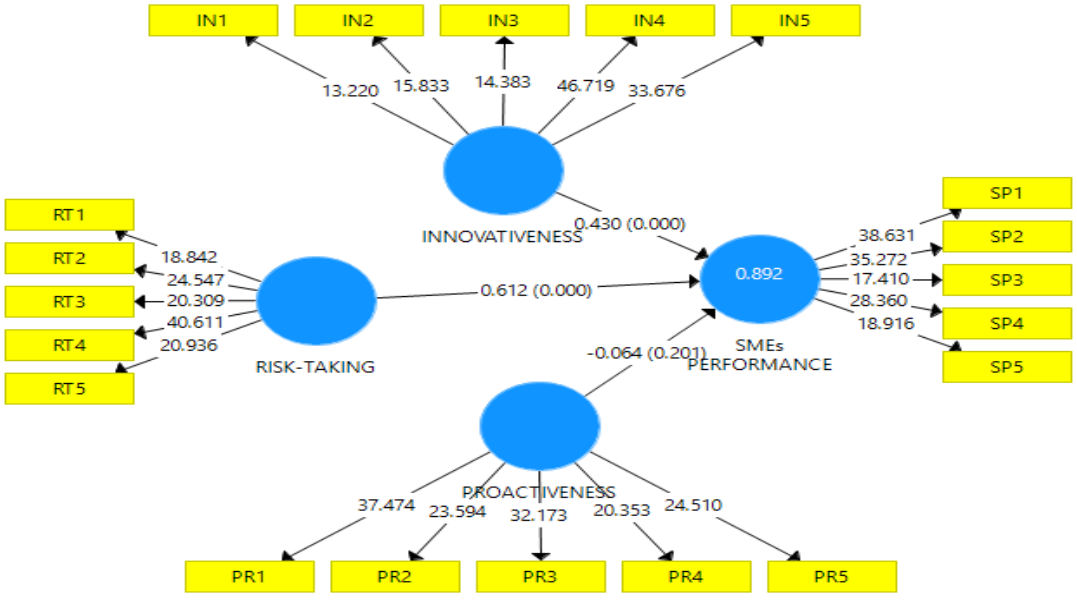


Table 5: Path Coefficient

	Path coefficient Beta**	T Statistics	P Values	Decision	F^2
Innovativeness -> SMEs' Performance	0.430	9.571	**0.000**	Rejected	**0.457**
Proactiveness -> SMEs' Performance	-0.064	1.280	**0.201**	Accepted	**0.008**
Risk-Taking -> SMEs' Performance	0.612	12.264	**0.000**	Rejected	**0.659**

Source : SmartPLS Output 2025

Test of Hypotheses

Hypothesis One (Ho_1): Innovativeness has no significant effect on SMEs' performance in North Central Nigeria.

The result in Table 5 shows that innovativeness has a path coefficient (β) of 0.430, a t-statistic of 9.571, and a p-value of 0.000, which is below the 0.05 significance threshold. This indicates that innovativeness has a positive and statistically significant effect on SMEs' performance. Consequently, the null hypothesis (Ho_1) is rejected, implying that as SMEs in North Central Nigeria become more innovative by introducing new products, processes, or business models their performance improves significantly. The f^2 value of 0.457 also indicates a moderate to strong effect size, meaning that innovativeness contributes substantially to explaining variations in SME performance across the region.

Hypothesis Two (Ho_2): Risk-taking has no significant effect on SMEs' performance in North Central Nigeria.

The path coefficient for risk-taking is 0.612, with a t-statistic of 12.264 and a p-value of 0.000, which is also below 0.05. This confirms that risk-taking exerts a positive and statistically significant effect on SMEs' performance. Therefore, the null hypothesis (Ho_2) is rejected. This finding suggests that SMEs that are willing to engage in calculated risks tend to achieve better performance outcomes. The f^2 value of 0.659 indicates a large effect size, demonstrating that risk-taking is the most influential predictor among the variables examined, signifying its crucial role in driving competitive advantage and firm growth.

Hypothesis Three (Ho_3): Proactiveness has no significant effect on SMEs' performance in North Central Nigeria.

The results reveal that proactiveness has a negative but statistically insignificant relationship with SME performance, as shown by a path coefficient (β) of -0.064, a t-statistic of 1.280, and a p-value of 0.201, which exceeds the 0.05 significance level. Consequently, the null hypothesis (Ho_3) is accepted, indicating that proactiveness does not significantly influence the performance of SMEs in North Central Nigeria. The f^2 value of 0.008 suggests a negligible effect size. This outcome implies that while proactive behavior is theoretically beneficial, it may not yield immediate performance benefits in this context, possibly due to environmental constraints, limited resources, or high market uncertainty faced by SMEs in the region.

Table 6: R^2 and Predictive Relevance

	R^2	Q^2 (=1-SSE/SSO)
SMEs Performance	0.892	0.563

Source : SmartPLS Output 2025

Table 6 presents the coefficient of determination (R^2) and predictive relevance (Q^2) for SMEs performance. The R^2 value of 0.892 indicates that the study variables together explain approximately 89.2% of the variance in SMEs performance, which reflects a substantial level of explanatory power. Additionally, the Q^2 value of 0.563, which is well above the threshold of 0.00, demonstrates strong predictive relevance of the model, confirming that the exogenous constructs Innovativeness, Risk-Taking and Proactiveness provide meaningful predictive power for the endogenous construct of SMEs performance.

Discussion of findings

The findings of the present study reveal that innovativeness and risk-taking significantly influence SMEs' performance, while proactiveness does not, a pattern that aligns with some prior studies and diverges from others. Regarding innovativeness, the result supports the findings of Falahat et al. (2018), Anwar (2018), Rahaman et al. (2021), and Onyenma (2019), who all found a positive and significant relationship between innovativeness and SME performance across diverse contexts such as Malaysia, Pakistan, Bangladesh, and Nigeria. These studies consistently emphasize that innovation enhances non-financial and competitive performance, fosters growth, and improves customer satisfaction. However, Falahat et al. (2018) noted that innovation may not always immediately translate into financial gains—suggesting that contextual factors, such as market maturity and resource availability, mediate outcomes. Similarly, the present study's significant result for innovativeness aligns with these prior works, reinforcing the notion that creative problem-solving, product differentiation, and technological adaptation are essential levers for performance improvement among SMEs in North-Central Nigeria.

The study's finding that risk-taking has a positive and significant effect on SMEs' performance is also consistent with the works of Olotu et al. (2023), Sirivanh et al. (2014), and Rahaman et al. (2021), who all reported significant associations between risk-taking and performance in Nigeria and other developing contexts. These studies collectively demonstrate that SMEs willing to engage in calculated risks—such as entering new markets or investing in uncertain ventures—tend to achieve higher growth and competitiveness. Conversely, Ibrahim and Abu (2020) observed that while risk-taking behaviors exist among SMEs in Malaysia and Nigeria, their effect on performance was statistically insignificant, highlighting that the benefits of risk-taking may depend on how effectively firms combine it with other strategic capabilities such as innovation and market knowledge. Thus, the present study's result reinforces the argument that risk-taking, when properly managed and aligned with firm strengths, remains a critical determinant of SME success in volatile business environments like North-Central Nigeria.

In contrast, the finding that proactiveness does not significantly affect SMEs' performance diverges from earlier studies such as Hossain and Asheq (2019), Hamilton (2020), Essien et al. (2020), and Naldi and Davidsson (2021), all of which reported positive and significant relationships between proactiveness and SME performance. These prior studies argued that anticipating market changes, seizing emerging opportunities, and acting ahead of competitors enhance business growth, customer satisfaction, and profitability. However, the present study's insignificant result suggests that while proactiveness is conceptually valuable, its benefits may not manifest uniformly across contexts. Environmental instability, limited market intelligence, and infrastructural deficiencies in North-Central Nigeria may weaken the effectiveness of proactive strategies. Hence, the inconsistency between the present and previous studies likely reflects contextual constraints and resource limitations that inhibit SMEs in the region from translating proactive intentions into tangible performance outcomes.

Conclusion

This study examined the effect of innovativeness, risk-taking, and proactiveness on the performance of Small and Medium-sized Enterprises (SMEs) in North-Central Nigeria using Partial Least Squares Structural Equation Modeling (PLS-SEM). The results revealed that innovativeness and risk-taking have significant positive effects on SME performance, whereas proactiveness does not exhibit a significant influence. These findings underscore that SMEs in the region derive performance advantages primarily from their ability to develop and implement new ideas, products, and processes, as well as from their willingness to engage in calculated risks that open new market opportunities. However, the insignificant impact of proactiveness suggests that, although anticipation and initiative are theoretically beneficial, external environmental factors such as infrastructural deficiencies, market unpredictability, and limited access to timely market information may hinder proactive strategies from translating into measurable performance gains. The study concludes that a combination of innovative capability and strategic risk-taking remains central to enhancing the competitiveness and sustainability of SMEs in North-Central Nigeria.

Recommendations

Based on the findings, the study recommends that:

i. SME owners and managers should intentionally cultivate a culture of innovation by encouraging creativity, investing in research and development (R&D), and adopting new technologies that improve operational efficiency and customer satisfaction. This will not only enhance competitiveness but also promote long-term performance stability.

ii. Secondly, SMEs should embrace calculated risk-taking by pursuing new opportunities backed by adequate market research, scenario analysis, and financial risk management. Government agencies, financial institutions, and entrepreneurship development programs should provide supportive mechanisms such as risk-sharing schemes, innovation grants, and managerial training to help SMEs manage uncertainty effectively.

iii. Thirdly, since proactiveness did not significantly influence performance, policy makers and business support organizations should build institutional frameworks that enhance market information systems and forecasting capacity, enabling SMEs to act more effectively on emerging trends. Strengthening these areas will position SMEs in North-Central Nigeria to achieve sustained growth, competitiveness, and economic resilience.

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