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EFFECT OF MANAGERIAL COMPETENCY AS A MODERATOR OF INNOVATIVENESS, RISK-TAKING AND SMEs PERFORMANCE IN NORTHEAST NIGERIA

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Abstract

The study investigated the moderating effect of managerial competency on the relationship between entrepreneurial innovativeness, risk-taking and SME performance in North East, Nigeria. The study is grounded in social capital theory which provides a framework for understanding how SMEs can harness stakeholder networks to drive innovation, performance, and growth. The study adopted a quantitative survey design, guided by the positivist research paradigm where data were collected through a structured questionnaire from SME owners in Northeast Nigeria. The population of this study is 4,644,200 (SMEDAN, 2021) *with a sample of 400 calculated using taro Yamane formular. The study distributed 400 questionnaires, 323 were retrieved, representing a response rate of 80.74%, stratified sampling technique was used. The data analysis was conducted using PLS-SEM in testing the hypotheses under consideration. The study concluded that innovativeness positively impacts SME performance, enabling firms to improve competitiveness and sustainability; risk-taking enhances SME performance by helping firms identify opportunities and drive innovation. In addition, managerial competency strengthens the effects of innovativeness and risk-taking on SME performance, highlighting its importance in translating entrepreneurial activities into results. The study recommends that SME owners should prioritize innovation, embrace calculated risk-taking, and enhance managerial competencies to drive business growth and improve performance; government and policymakers should provide targeted support through training programs, financial incentives, and infrastructure development to strengthen SME innovation, risk management, and leadership capacity. Future researchers should examine additional factors influencing SME performance, employing longitudinal and comparative studies to evaluate the long-term effects of innovation, risk-taking, and managerial competencies.*

Key words: Managerial Competency, Entrepreneurial Innovativeness, Risk-Taking and SMEs Performance.

Introduction

Small and medium-scale enterprises (SMEs) are essential drivers of economic development in both developed and developing economies. In advanced countries such as the United Kingdom, the United States, and Canada, SMEs represent over 90% of all business establishments, reflecting their central role in private sector growth, innovation, competitiveness, and economic resilience (Ingbedion, 2022). Similarly, in developing economies such as Nigeria, India, and Brazil, SMEs serve as the backbone of economic activity by generating employment, promoting entrepreneurship, creating wealth, and contributing to poverty reduction (Kiiru et al., 2023; Abbas et al., 2019; Chung et al., 2020). Beyond their economic contributions, SMEs also support social development by strengthening communities and fostering sustainable growth through innovation and adaptability.

Empirical studies consistently highlight the importance of managerial competency in improving SME performance. For instance, Umar et al. (2018) found that entrepreneurial competencies significantly enhance business success, with product and process innovation partially mediating this relationship, showing that innovation strengthens the impact of managerial skills. Similarly, Tehseen et al. (2019) reported that entrepreneurial competencies drive SME growth, especially when supported by strong network competence, emphasizing the value of external relationships in business success. In the same vein, Ng et al. (2020) showed that entrepreneurship, leadership, and technical skills improve financial performance when

combined with innovativeness, indicating that competencies are more effective when paired with innovation. Extending this perspective, Kim (2021) found that technological capability mediates the relationship between entrepreneurial competencies and SME performance in Korea, particularly in the IT and software sector, highlighting the importance of digital skills in modern business environments. Likewise, Harini et al. (2020) emphasized that combining creativity and innovation with effective market strategies enhances SME competitiveness in Indonesia's digital economy. Similarly, Lee et al. (2019) demonstrated that innovation financing strengthens technological capability and improves non-financial performance in Korean SMEs, further confirming the critical role of innovation and managerial competence in driving sustainable SME performance.

Problem statement

Small and medium-sized enterprises (SMEs) are key drivers of economic growth and job creation in North-Eastern Nigeria; however, their performance remains relatively weak, with evidence indicating that about 80% of MSMEs in Nigeria fail within the first five years of operation (SMEDAN & NBS, 2017). This high failure rate reflects persistent difficulties in sustaining growth and survival beyond the early stages of business development. The situation is further worsened by both external and internal factors. Externally, insecurity, poor infrastructure, and limited access to markets continue to restrict business operations and reduce expansion opportunities in the region. Internally, many SMEs face weak managerial capacity, low levels of innovation, and poor risk-taking behaviour, which negatively affect decision-making, technology adoption, and competitiveness. As a result, these combined challenges limit the ability of SMEs to effectively utilize their resources for improved performance. Therefore, it is important to examine how innovativeness, risk-taking, and managerial competency interact to influence SME performance in the specific context of North-Eastern Nigeria.

Objective of the study

The main objective is to investigate effect of managerial competency as a moderator of innovativeness, risk-taking and SME performance in Northeast Nigeria. The specific objectives are to:

i. examine the effect of innovativeness on SME performance in Northeast Nigeria.
ii. examine the effect of risk-taking on SME performance in Northeast Nigeria.
iii. examine the moderating effect of managerial competency on the causal relationship between innovativeness and SME performance in Northeast Nigeria.
iv. examine the moderating effect of managerial competency on the causal relationship between risk-taking and SME performance in Northeast Nigeria.

Hypothesis of the study

$H0_1$: Innovativeness competency does not have significant effect on SMEs performance in Northeast Nigeria.

$H0_2$: Risk-taking competency does not have significant effect on SMEs performance in Northeast Nigeria.

$H0_3$: Managerial competency does not have a causal effect on the relationship between innovativeness and SME performance in Northeast Nigeria.

$H0_4$: Managerial competency does not have a causal effect on the relationship between risk-taking and SME performance in Northeast Nigeria.

Literature Review

SME performance

Kiguru, Senelwa, and Njeru (2024) conceptualize SME performance as measurable outcomes of business success, including sales growth, profitability, and workforce expansion, which are shaped by proactive strategies and effective organizational capabilities. Similarly, Abodunde (2025) highlights the influence of entrepreneurial innovativeness, proactiveness, and external networks on these outcomes. Moreover, Loan et al. (2023) emphasize that entrepreneurial orientation, owner capacity, human resources, social capital, and supportive policies affect profitability, growth, and operational effectiveness. In addition, Brownhilder and van Zyl (2017) focus on employment, sales, and asset growth, finding that proactive innovation positively drives performance. Likewise, Ayepa et al. (2019) and Uchena et al. (2021) define SME performance in terms of growth, sustainability, and competitiveness, underscoring the importance of innovativeness, resource utilization, and internal organizational capabilities. Based on the above definitions, it can be seen the current study deduced that SME performance reflects the measurable results that demonstrate a firm's overall success, including its growth, profitability, competitiveness, sustainability, and capacity to expand operations and employment over time.

Innovativeness

Abdul (2019) defines innovation as SME owner-managers' ability to create and apply new ideas,

products, or processes to enhance competitiveness and survival. Similarly, Kurniawan et al. (2018) view it as implementing new ideas to improve competitiveness and address operational challenges, while Rahaman et al. (2021) emphasize developing and executing novel ideas to boost performance and competitive advantage. Shirokova et al. (2025) conceptualize innovativeness as transforming knowledge and learning into new products, services, or processes, and Abodunde (2025) highlights its combination with proactiveness to enhance SME performance. Likewise, Loan et al. (2023) note that entrepreneurial innovativeness positively influences the performance of women-owned SMEs. It can be seen that the current study define innovativeness is the ability of SME owner-managers to generate and implement new ideas, products, or processes that strengthen competitiveness and enhance business performance.

Risk-Taking

Ernest and Sule (2020) define risk-taking as SMEs' willingness to pursue initiatives with uncertain outcomes for potential gains. Similarly, Ibidunni, Ogundana, and Okonkwo (2022) describe it as an entrepreneurial competency that enables owners to seize opportunities under uncertainty and enhance innovation. In addition, Dada, Adegbuyi, and Ogbari (2023) emphasize acting despite potential failure to drive entrepreneurial success. Likewise, Skandalis and Skandali (2025) and Caputo, Nguyen, and Delladio (2025) link risk-taking to opportunity recognition and self-efficacy. Furthermore, Linton (2019) highlights that it involves pursuing new ideas while developing the capacity to manage and mitigate risks strategically. Based on the above, it can be seen that risk-taking refers to the readiness of SME owners to engage in uncertain ventures, accept possible failure, and pursue opportunities that can lead to innovation and improved business performance.

Managerial Competency

Managerial competence is widely recognized as a key determinant of SME survival and performance. Tehseen (2015) defines it as a combination of innovation, leadership, and social network competencies that enable business owners to identify opportunities, lead effectively, and utilize networks for sustained business success. In a similar view, Nur Hidayah and Rodiah (2022) describe competence as the underlying attributes that enable individuals to achieve effective or superior job performance, emphasizing the importance of strong managerial and conceptual skills in fast-changing SME environments where quick and informed decision-making is essential. Furthermore, Pertheban et al. (2023) highlight managerial adaptability as a critical aspect of competence, noting that the ability to adjust strategies and decisions in response to changing business conditions enhances competitiveness and resilience. Likewise, Ali and Li (2021) conceptualize managerial competence as a blend of financial literacy and networking skills, both of which are essential for improving SME financial performance. Overall, these perspectives suggest that managerial competence reflects the ability of SME owners to lead effectively, make sound decisions, and apply managerial, financial, and relational skills to achieve sustainable business success.

Empirical review

Innovativeness and SME performance

Ismail (2022) examined the mediating role of entrepreneurial innovations in the relationship between entrepreneurs' competencies and SME sustainability in Tanzania. The study used a cross-sectional survey of 384 SMEs and structural equation modeling (SEM). The study found that competencies positively influence innovations, which in turn enhance sustainability, with innovations partially mediating the relationship, highlighting the importance of developing innovative capabilities and providing competence-based training for long-term growth. Compared to the current study, the reviewed article considered entrepreneurial innovation as mediator not as an independent variable, and the study was conducted in Tanzania and not in North East Nigeria. Based on the repor, it can be seen that the reviewed study revealed that entrepreneurial competencies significantly influence SME sustainability through the mediating role of entrepreneurial innovation among SMEs in Tanzania. While the study contributes to the understanding of entrepreneurial behaviour and business sustainability, it focused primarily on mediation effects and a different geographical context. In contrast, the current study investigates the moderating role of managerial competency in the relationship between innovativeness, risk-taking, and SME performance among SME owners in North-Eastern Nigeria. Therefore, the study differs in terms of its variables, conceptual framework, and study setting, thereby addressing an important gap in the existing literature.

In addition, the study conducted Ali and Iskandar (2016) examined how business innovation capability, entrepreneurial competencies, and quality management influence the performance of Malaysian SMEs in the Klang Valley. Using a survey of 50 respondents and analyzing data with SPSS (correlation, regression, and reliability tests), the study found that business innovation capability and quality management positively impact SME performance. The study highlights that understanding and developing entrepreneurial

competencies can further enhance organizational performance by enabling SMEs to respond effectively to opportunities and market demands. The study contributes to the literature by emphasizing the importance of combining innovation, quality management, and entrepreneurial skills to improve SME outcomes, and it offers practical guidance for SME managers seeking to strengthen performance. While the research provides useful insights into factors affecting SME performance, its small sample size and limited geographic scope reduce generalizability.

Both studies examine SME performance but differ in focus and approach. The reviewed study found that business innovation capability, entrepreneurial competencies, and quality management significantly influence SME performance in Malaysia using correlation and regression analysis. In contrast, the current study investigates managerial competency as a moderator in the relationship between innovativeness, risk-taking, and SME performance among SMEs in North-Eastern Nigeria, using a larger sample and PLS-SEM. Overall, the current study extends the literature by shifting from direct effects to a moderating framework within a different context.

Ayepa et al. (2019) conducted a study in Ghana to examine how innovativeness and resource utilisation influence the growth of small enterprises. The researchers adopted a descriptive survey design and collected data from 302 SMEs using structured questionnaires, which were analysed with multiple regression analysis. Their findings showed that innovativeness has a positive and significant effect on the sustainable growth of small enterprises, indicating that innovation-driven strategies play an important role in firm development. The study focused specifically on innovativeness, resource utilisation, and enterprise growth, based on responses from SME owners and managers. However, it is limited by its reliance on self-reported data, which may introduce bias, and its cross-sectional design, which does not allow for causal interpretation. In addition, its narrow focus on only two variables overlooks other important determinants of SME growth, while the Ghanaian context limits the generalisability of the findings to other environments.

Ali et al. (2020) investigated the relationship between innovation capabilities and SME performance, focusing on Chinese manufacturing enterprises. The study adopted a qualitative research approach and collected data through in-depth interviews with eight SME owners and managers. The findings revealed that product and marketing innovation capabilities significantly improve financial performance, while process and organisational innovation mainly enhance operational efficiency. The study also identified key determinants of innovation capability, including resource availability, entrepreneurial orientation, knowledge development, and external networking. In addition, it highlighted several contextual factors such as firm size, managerial experience, market dynamism, and cooperation strategies that influence how innovation affects performance. Overall, the study concluded that innovation capability is multidimensional and its impact on SME performance depends on both internal resources and external environmental conditions. The study shows clear gaps. It focuses only on innovation capability without breaking it into key drivers like innovativeness and risk-taking, and it does not consider managerial competency as a moderating factor. Methodologically, the small qualitative sample limits how far the findings can be generalised or tested statistically. It also lacks the use of more advanced analytical tools like PLS-SEM that are better suited for complex relationships. In addition, because it was carried out in Chinese manufacturing firms, its findings may not fully apply to SMEs in North-Eastern Nigeria due to different economic and business environments.

Herlinawati and Machmud (2020) analyzed the effect of innovation on SME business performance in the manufacturing sector of West Java, Indonesia. The study adopted an explanatory quantitative survey design with data collected from 346 SMEs selected from a population of 231,181 enterprises. Structural Equation Modeling (SEM) was used for data analysis. The results indicated that innovation has a positive and significant effect on business performance. Specifically, product innovation, process innovation, and distribution innovation were identified as key contributors to improved SME performance. The study concluded that enhancing innovation capacity is essential for improving competitiveness and performance of SMEs in emerging markets. Based on the report, it is evident that the reviewed study conceptually, it focused only on innovation as a single construct, without separating it into key dimensions such as innovativeness and risk-taking or considering managerial competency as a moderating variable. Methodologically, although it used a relatively strong quantitative design, its scope was limited to a specific context and did not explore more complex moderating relationships. Contextually, the study was conducted in West Java, Indonesia, which limits the applicability of its findings to SMEs in North-Eastern Nigeria due to differing economic and business environments.

Onogwu and Sule (2020) examined the influence of innovation on the performance of small and medium-scale enterprises in Kogi State, Nigeria. The study adopted a survey research design and collected data from a sample of 384 SMEs, which were analysed using descriptive statistics and multiple regression analysis. The findings revealed that product innovation has a strong and significant positive effect on SME sales growth, while market and process innovations showed relatively weak linear effects. The study concluded that innovation plays a critical role in SME survival and growth, although its impact varies depending on the type of innovation adopted. Based on this, the study recommended that SME owners should prioritise market-oriented innovation strategies to improve performance outcomes. Based on the report, the comparison shows clear gaps in the existing study. It treated innovation as a single construct without separating it into key dimensions like innovativeness and risk-taking, and it did not consider the moderating role of managerial competency. Methodologically and analytically, the use of descriptive statistics and multiple regression limited the ability to examine more complex relationships and interaction effects. In addition, the study was limited to SMEs in Kogi State, Nigeria, which makes its findings less applicable to SMEs in North-Eastern Nigeria due to differences in economic and business environments.

Risk-taking and SME performance

Ključnikov et al. (2016) studied SMEs in the Czech Republic and looked at how risk-taking, competitive aggressiveness, and strategic management affect performance. They used a survey design and collected data from 412 SME owners, which were analyzed using multiple regression. The study treated these three factors as predictors of SME performance. The results showed that all of them had a positive and significant impact on SME performance. Based on the report, it is evident that the reviewed study on SMEs show that performance is influenced by a mix of strategic and entrepreneurial factors. For example, research in the Czech Republic found that risk-taking, competitive aggressiveness, and strategic management significantly affect SME performance using survey data and multiple regression analysis. However, this study mainly focused on competitive and strategic drivers within a European context. In contrast, the current study shifts attention to SMEs in North-Eastern Nigeria and focuses on entrepreneurial factors such as innovativeness and risk-taking, while also introducing managerial competency as a moderating variable. It further strengthens the analysis by using stratified random sampling and PLS-SEM to better capture the relationships among variables and test moderating effects.

Caputo et al. (2025) examined how external factors, personality traits, the Theory of Planned Behavior, and Social Cognitive Theory influence entrepreneurial intention in Taiwan. The study focused on risk-taking, entrepreneurial knowledge, mindset, and cognitive antecedents as key factors, using a cross-sectional design with 422 respondents and analyzing the data with PLS-SEM. In addition, the findings show that risk-taking improves opportunity recognition and strengthens entrepreneurial self-efficacy, while entrepreneurial knowledge increases entrepreneurial intention through cognitive pathways. Overall, the study highlights that both cognitive and behavioral factors shape entrepreneurial intention and provides guidance for policymakers and educators on entrepreneurship development. Based on the report, it is evident that the reviewed study in entrepreneurship often examine how factors such as risk-taking, entrepreneurial knowledge, and mindset influence entrepreneurial intention, as shown in research from Taiwan using cross-sectional surveys and PLS-SEM, but these studies largely focus on intention rather than actual business performance. In contrast, the current study focuses on SMEs in North-Eastern Nigeria and shifts the emphasis to performance outcomes, examining innovativeness and risk-taking as predictors while introducing managerial competency as a moderating variable. It also adopts stratified sampling and PLS-SEM to provide a more robust analysis of SME performance.

In another study, by Skandalis and Skandali (2025) developed an integrated model to examine how individual cognition, digital capability, and platform-related risk influence digital entrepreneurial intention. Using survey data from 428 Greek SME owner-managers and analyzing it with PLS-SEM, the findings show that entrepreneurial self-efficacy, financial risk tolerance, digital literacy, and perceived platform affordances positively affect digital entrepreneurial intention, while perceived platform risk has a negative effect and weakens the influence of self-efficacy. Based on the report, the study was conducted in Greek and was based on intention rather than behaviour.

Based on the report, it is evident that the reviewed study In another study, by Skandalis and Skandali (2025) developed an integrated model to examine how individual cognition, digital capability, and platform-related risk influence digital entrepreneurial intention. In

contrast, the current study carried out the investigation on managerial competency as moderating of innovativeness, risk-taking and SMEs' performance, with a focus on SME owners from trading, agriculture, and manufacturing sectors in North-Eastern Nigeria. In contrast, current study used innovativeness and risk-taking as the independent variables and the SMEs' performance as the dependent variable; and managerial competency as the moderating variable. Based on the report, it is evident that the reviewed study Using survey data from 428 Greek SME owner-managers and analyzing it with PLS-SEM. Whereas, the current study used a descriptive survey design, with a sample of 400 SME owners, and employed a stratified random sampling technique. Data will be collected through a structured questionnaire and analysed using PLS-SEM.

Adim and Poi (2019) examined the effect of entrepreneurial risk-taking on the performance of women entrepreneurs in Rivers State, Nigeria. The study adopted a cross-sectional survey design and selected respondents through simple random sampling from a population of 329 women entrepreneurs listed in the 2018 directory of the Rivers State Ministries of Women Affairs and Commerce and Industry. Although a sample size of 181 was determined using the Taro Yamane formula, only 153 responses were analysed. Data were analysed using descriptive statistics and Spearman's rank correlation. The findings revealed a significant positive relationship between risk-taking and entrepreneurial performance, including outcomes such as household income and job creation. The study concluded that risk-taking enhances business success and recommended that women entrepreneurs should strengthen their risk-taking orientation to improve performance. **Moreover, i**t can be seen that the study on SMEs in Nigeria have generally shown that entrepreneurial risk-taking is linked to performance, often within specific groups such as women entrepreneurs. For example, a study in Rivers State found a relationship between risk-taking and performance using survey data and simple correlation methods, but it was limited to a single predictor and a narrow population. In contrast, the current study broadens the scope by focusing on SME owners in trading, agriculture, and manufacturing sectors in North-Eastern Nigeria. It examines both innovativeness and risk-taking as predictors of performance and introduces managerial competency as a moderating variable. It also improves the methodology by using a larger sample, stratified sampling, and PLS-SEM for a more detailed analysis of the relationships among the variables.

Adoga et al. (2024) examined the effect of entrepreneurial risk-taking ability on the performance of selected small and medium enterprises (SMEs) in Akwa Ibom State, Nigeria. The study adopted a survey research design and utilized both primary and secondary data, with a sample size of 384 respondents determined using the Topman formula for unknown populations. Data were collected through structured questionnaires using a convenience sampling technique and analyzed to determine the relationship between entrepreneurial risk-taking and SME performance. The findings revealed that entrepreneurial risk-taking significantly enhances the performance of SMEs, particularly in dynamic business environments where uncertainty is high. The study concluded that calculated risk-taking plays a crucial role in strategic decision-making and recommended that SME managers should actively embrace risk-oriented strategies when exploring new business opportunities in order to improve overall organizational performance. Based on the report, it is evident that the reviewed study Studies on SMEs in Nigeria have mostly looked at risk-taking as something that directly affects performance. For instance, work from Akwa Ibom State shows that risk-taking is linked to how well SMEs perform, usually based on survey data and convenience sampling. But a lot of these studies stop there and don't include other factors like innovativeness or managerial competency. This study goes further by looking at both innovativeness and risk-taking together, and also testing whether managerial competency changes how these factors affect SME performance. It also uses a more structured sampling method and applies PLS-SEM for analysis to get stronger results.

Baba and Thiong'o (2019) investigated the relationship between risk-taking and the performance of small and medium enterprises (SMEs) in Plateau State, Nigeria. The study adopted a descriptive research design and targeted a population of 3,120 SMEs, from which a sample size of 354 was determined using the Yamane (1967) formula. Data were collected through structured questionnaires and analysed using both descriptive and inferential statistics, including correlation and regression analysis, to examine the relationship between risk-taking and SME performance. The findings showed a generally positive perception of risk-taking among respondents, with a mean score of 3.68 and a standard deviation of 1.30, indicating moderate variability in responses. Overall, the study concluded that risk-taking has a positive influence on SME performance and recommended that SMEs should invest strategically in

new products, technologies, markets, and services while maintaining a bold and innovative mindset to enhance competitiveness and achieve sustainable growth. Based on the report, it is evident that the reviewed study examined how risk-taking affects SME performance in Plateau State, Nigeria. In contrast, the current study looks at how managerial competency affects the relationship between innovativeness, risk-taking, and SME performance among SME owners in North-Eastern Nigeria. The two studies also differ in their scope, sampling method, and data analysis approach. Overall, the current study builds on the earlier work by adding managerial competency and a broader set of factors to better explain SME performance.

Managerial Competency and Performance of Small and Medium Enterprises

Brandi and Megan (2023) examined the effect of managerial competencies on profitability and customer base growth among Ghanaian entrepreneurs using data from 145 respondents analyzed with multiple regression. Their findings revealed that managerial competency significantly improved profitability; however, it had a negative effect on customer base growth. Nevertheless, the study is constrained by its reliance on multiple regression, which limits the ability to model complex relationships among variables and highlights the need for more robust analytical techniques such as PLS-SEM, as adopted in the current study. Furthermore, the study was conducted in Ghana, rather than North East Nigeria, thereby creating a contextual gap and limiting the applicability of its findings to the Nigerian SME environment. Based on the report, it is evident that the reviewed study examined the effect of managerial competencies on profitability and customer base growth among Ghanaian. In contrast, the current study carried out the investigation on managerial competency as moderating of innovativeness, risk-taking and SMEs' performance, with a focus on SME owners from trading, agriculture, and manufacturing sectors in North-Eastern Nigeria. Based on the report, it is evident that the reviewed study focused on managerial competency as a direct predictor of profitability and customer base growth; however, it did not include innovativeness and risk-taking, nor did it examine managerial competency as a moderating variable. In addition, it relied on a relatively small sample size and used multiple regression analysis, which limits the depth and generalisability of its findings. In contrast, the current study broadens the model by incorporating innovativeness and risk-taking as independent variables, SMEs' performance as the dependent variable, and managerial competency as a moderating variable. Furthermore, it strengthens the methodology by using a larger sample of 400 SME owners, applying stratified random sampling to improve representativeness, and adopting PLS-SEM, which is more appropriate for analysing complex variable relationships.

Similarly, a study conducted by Bright and Hamilton (2023) in the United Kingdom examined the effect of managerial competency, measured through strategic adaptability and foresight, on SME performance. The study adopted a mixed-methods approach with a sample of 150 SMEs, collecting data through questionnaires and analyzing it using regression techniques. The findings revealed a negative and significant relationship, suggesting that higher levels of managerial competency were associated with lower SME performance. As reported, it can be evident that although the reviewed study utitised mixed method as approach, the use of regression analysis rather than PLS-SEM reduces the robustness of the analysis. Beside the study was conducted in the United Kingdom rather than North East Nigeria. The reviewed study has notable gaps in conceptual, contextual, methodological, and analytical areas. Conceptually, it did not consider managerial competency as a moderating variable in explaining the relationship between innovativeness, risk-taking, and SMEs' performance. Contextually, the study was not conducted in North-Eastern Nigeria and did not capture differences across key SME sectors such as trading, agriculture, and manufacturing. Methodologically, it relied on a relatively small sample size and a mixed-methods approach, while analytically it used basic regression techniques instead of more advanced methods like PLS-SEM, which limits its ability to effectively analyse complex relationships among variables.

Likewise, in Bangladesh, the study conducted by Sakib et al. (2022) examined the impact of entrepreneurial competencies on SME performance using data from 115 entrepreneurs and analyzed it with PLS-SEM. The study found that organizing and leading, learning, relationship, and commitment competencies positively influence SME performance, whereas strategic and opportunity competencies had no significant effect. The findings provide insights for policymakers and highlight the importance of designing targeted entrepreneurship training programs to strengthen competencies that drive SME success in developing country contexts.

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competencies on SME performance. In contrast, the current study carried out the investigation on managerial competency as moderating of innovativeness, risk-taking and SMEs' performance, with a focus on SME owners from trading, agriculture, and manufacturing sectors in North-Eastern Nigeria. Based on the report, it is evident that the reviewed study In contrast, current study used innovativeness and risk-taking as the independent variables and the SMEs' performance as the dependent variable; and managerial competency as the moderating variable. Based on the report, it is evident that the reviewed study
Whereas, the current study used a descriptive survey design, with a sample of 400 SME owners, and employed a stratified random sampling technique. Data will be collected through a structured questionnaire and analysed using PLS-SEM.

Again, in Malaysia another study carried out by Umar et al. (2018) investigated the influence of entrepreneurial competencies and innovation on business success in Malaysian SMEs, examining the mediating role of product and process innovation. The study surveyed 407 SME owners and managers across manufacturing, services, and other sectors using a 72-item questionnaire to measure 12 entrepreneurial competencies, innovation, and business success. Data were analyzed using SPSS and SEM-AMOS. The findings indicate that entrepreneurial competencies positively impact business success, with product and process innovation partially mediating this relationship, highlighting the importance of fostering both competencies and innovation to enhance SME performance. Based on the report, it is evident that the reviewed study examined how entrepreneurial competencies and innovation contribute to business success among SMEs in Malaysia. In comparison, the current study focuses on the moderating role of managerial competency in the relationship between innovativeness, risk-taking, and SME performance among business owners in North-Eastern Nigeria. These differences in setting, variables, and research focus show that the current study contributes to the literature by providing evidence from a different context and offering insights into the role of managerial competency in enhancing SME performance.

Theoretical Framework

Social Capital Theory, developed by Bourdieu (1986), Coleman (1988), and Putnam (1993), explains how relationships and networks serve as valuable resources that enhance organizational performance. The theory assumes that firms benefit from their social ties through access to information, knowledge, finance, trust, and collaborative support. In the context of SMEs, networks built with customers, suppliers, competitors, and research institutions provide important channels for acquiring resources that stimulate innovation and support business growth. For example, Ibrahim and Abu (2020) argue that social capital enables SMEs to access essential human, financial, material, and informational resources that improve performance, while Han et al. (2019) emphasize that strong stakeholder relationships promote expansion and sustainability. Similarly, Hao and Song (2016) maintain that such networks encourage collaboration, innovativeness, and proactive entrepreneurial behaviour, and Kusumawardhani (2013) further notes that external relationships facilitate the development of innovative products and services. Overall, the theory suggests that SMEs can enhance innovativeness, strengthen risk taking behaviour, and improve performance by effectively leveraging their social networks. However, although Social Capital Theory is highly relevant, it has certain limitations, particularly in explaining how firms convert external resources into performance outcomes. On one hand, it highlights how trust, cooperation, and information sharing reduce uncertainty and support entrepreneurial actions such as innovativeness and risk taking by providing access to opportunities and resources. On the other hand, it places less emphasis on internal managerial capabilities that determine how effectively these resources are utilized. This is where managerial competency becomes critical in the present study. Specifically, managerial competency moderates the relationship between innovativeness, risk taking, and SME performance by influencing how external resources are identified, interpreted, and transformed into strategic outcomes. While social capital provides access to valuable opportunities, it is managerial competence that ensures these opportunities are effectively exploited through sound decision making, coordination, and implementation. Therefore, higher managerial competency strengthens the positive relationship between innovativeness, risk taking, and SME performance.

The Dynamic Capability Theory, developed by David J. Teece, Gary Pisano, and Amy Shuen (Teece, Pisano & Shuen, 1997), explains that firms sustain competitive advantage by continuously integrating, building, and reconfiguring their internal and external competencies in response to changing and uncertain environmental conditions. The theory is grounded on the assumption that the business environment is dynamic and unpredictable, that organizational resources and capabilities are not fixed but can be developed and renewed over time, and that firms differ in their ability

to sense opportunities and threats, seize such opportunities, and reconfigure their resource base to maintain competitiveness. Its key strength lies in its strong explanatory power for understanding firm adaptability, innovation, and sustained performance in turbulent environments, extending the Resource-Based View (RBV) by shifting attention from static resource ownership to dynamic processes of change. However, the theory has been critiqued for its conceptual ambiguity, difficulties in empirical operationalization, and the challenge of clearly distinguishing dynamic capabilities from routine operational capabilities. Despite these limitations, it remains a widely applied framework for explaining strategic renewal and organizational learning in dynamic contexts (Teece, 2007) In relation to this study, the theory provides a relevant lens for explaining how SMEs' innovativeness and risk-taking influence performance outcomes. Innovativeness reflects the ability of SMEs to generate and implement new ideas, products, and processes, while risk-taking reflects their willingness to commit resources to uncertain but potentially rewarding opportunities. From a dynamic capability perspective, both innovativeness and risk-taking enhance a firm's ability to sense and seize opportunities in volatile environments, thereby improving performance. However, the extent to which these strategic orientations translate into performance gains depends on managerial competency. Managerial competency moderates this relationship by shaping how effectively opportunities are identified, how decisions are made, how resources are allocated, and how internal processes are reconfigured. Accordingly, SMEs with higher managerial competency are better positioned to convert innovativeness and risk-taking into sustained competitive advantage and improved performance.

According to Jay Barney (1991) and Birger Wernerfelt (1984), the Resource-Based View (RBV) explains that sustained competitive advantage is achieved when firms possess and effectively utilize resources and capabilities that are valuable, rare, inimitable, and non-substitutable (VRIN). The theory is grounded on the assumption that firms operating within the same industry are heterogeneous in their resource endowments, that these resources may be tangible or intangible, and that they are relatively immobile across firms, thereby making imitation difficult and enabling persistent differences in performance. Its major strength lies in its strong explanation of performance differences among firms based on internal resource configurations, particularly intangible assets such as knowledge, skills, and organizational culture, which are difficult for competitors to replicate and sustain over time. However, RBV has been criticized for its relatively static orientation, limited consideration of environmental dynamism, and challenges associated with the identification and empirical measurement of VRIN resources, as well as its limited explanation of how firms develop, renew, and reconfigure resources in changing environments. In the context of this study, RBV offers a relevant framework for explaining how SMEs' innovativeness and risk-taking translate into improved performance through the effective deployment of internal resources and capabilities. Innovativeness reflects the firm's ability to generate and implement new ideas, products, and processes, while risk-taking represents the willingness to commit resources to uncertain but potentially rewarding opportunities. From an RBV perspective, these strategic orientations constitute valuable internal capabilities that can enhance firm performance when appropriately harnessed. However, their effectiveness is not automatic; it depends on the quality of managerial competency within the firm. Managerial competency therefore acts as a moderating factor that determines how efficiently resources are identified, coordinated, and applied. In this way, SMEs with higher managerial competency are better able to transform innovativeness and risk-taking into superior performance and sustained competitive advantage.

Methodology

This study adopted a survey research design to examine the moderating effect of managerial competency in the relationship between innovativeness, risk-taking, and the performance of small and medium-sized enterprises (SMEs). Guided by the positivist research paradigm, data were collected through a structured questionnaire administered to SME owners in Northeast Nigeria. The target population of this study is 4,644,200 (SMEDAN, 2021), with a sample of 400 determined using taro Yamane formular. The study distributed 400 questionnaires, 323 were retrieved, representing a response rate of 80.74%, stratified sampling technique was used. Similarly, the questionnaire rated on a 5-point Likert scale from 1 (strongly disagree) to 5 (strongly agree). Measurement items were adapted from previous empirical studies (Kiiru et al., 2023; Mburu et al., 2021; Chung et al., 2020). The data analysis was conducted using PLS-SEM in testing the hypotheses under consideration.

Data analysis and presentation

Measurement Model

The measurement model was evaluated first by examining indicator reliability, internal consistency reliability, convergent validity, and discriminant validity.

Indicator Reliability

Indicator reliability was confirmed in Table 1 and Figure 1, as all standardized outer loadings exceeded the 0.70 threshold. In particular, innovativeness and risk taking recorded strong loadings above 0.79, while managerial competency exceeded 0.80 and SME performance surpassed 0.91, indicating that all indicators were adequate.

Furthermore, internal consistency reliability was established, as innovativeness and risk taking demonstrated Cronbach's alpha and composite reliability values above 0.90. However, although managerial competency recorded a slightly lower Cronbach's alpha of 0.699, its composite reliability of 0.915 confirms acceptable internal consistency. In addition, SME performance showed excellent reliability, with both Cronbach's alpha and composite reliability values of 0.961. Similarly, convergent validity was supported, as all constructs achieved Average Variance Extracted (AVE) values above the 0.50 threshold. Overall, these findings confirm adequate reliability and construct validity across all measurement scales.

Table 1. Indicator Reliability

Constructs	Indicators	Loadings	AVE	CR	Cronbach Alpha
Innovativeness	INN1	0.849	0.725	0.909	0.905
	INN2	0.847			
	INN3	0.851			
	INN4	0.852			
	INN5	0.858			
Risk Taking	RT1	0.790	0.709	0.911	0.898
	RT2	0.880			
	RT3	0.864			
	RT4	0.859			
	RT5	0.812			
Managerial Competency	MC1	0.834	0.914	0.915	0.699
	MC2	0.803			
	MC3	0.843			
	MC4	0.820			
	MC5	0.851			
	MC6	0.864			
SMEs Performance	SP1	0.913	0.961	0.961	0.864
	SP2	0.936			
	SP3	0.946			
	SP4	0.932			
	SP5	0.920			

Source: SmartPLS (2026).

Discriminant Validity

Discriminant validity was assessed using HTMT ratios and the Fornell-Larcker criterion.

Table 2. HTMT

	INN	MC	RT	SP
INN				
MC	0.520			
RT	0.334	0.341		
SP	0.382	0.508	0.402	

Source: SmartPLS (2026).

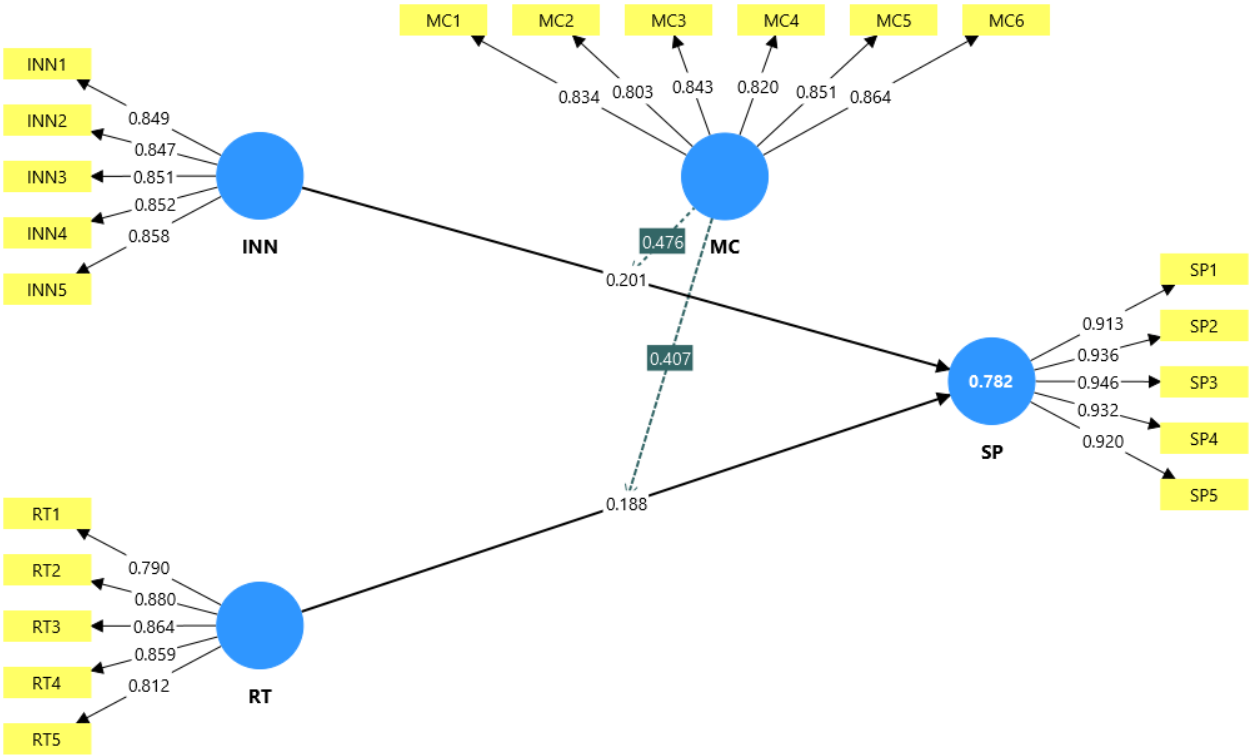
The Heterotrait–Monotrait (HTMT) values ranged from 0.334 to 0.520, which are well below the recommended thresholds of 0.85 and 0.90, indicating that the constructs are clearly distinct from one another. In particular, innovativeness demonstrated adequate discriminant validity from managerial competency (0.520), risk taking (0.334), and SME performance (0.382). Similarly, managerial competency and risk taking also exhibited acceptable levels of distinctiveness, confirming that all constructs are empirically distinct.

Table 3. Fornel-Lacker

	INN	MC	RT	SP
INN	**0.851**			
MC	0.472	**0.836**		
RT	0.306	0.312	**0.842**	
SP	0.358	0.477	0.380	**0.929**

Source: SmartPLS (2026).

The Fornell–Larcker criterion confirmed discriminant validity, as the square roots of the Average Variance Extracted (AVE) for innovativeness (0.851), managerial competency (0.836), risk taking (0.842), and SME performance (0.929) were all higher than their corresponding inter-construct correlations, which ranged from 0.306 to 0.477.



Source: Figure 1. Measurement Model

Structural Model

Table 4. Inner Model Collinearity

	Original sample (O)	Sample mean (M)	2.5%	97.5%
INN -> SP	1.349	1.389	1.222	1.601
MC -> SP	1.360	1.405	1.225	1.634
MC x INN -> SP	1.140	1.182	1.049	1.399

MC x RT -> SP	1.145	1.184	1.051	1.401
RT -> SP	1.164	1.202	1.083	1.367

Source: SmartPLS (2026).

Inner model collinearity was assessed using the variance inflation factor (VIF). The results show that all VIF values ranged from 1.140 to 1.360, which are well below the recommended thresholds of 3.3 and 5.0, indicating that multicollinearity is not a concern in the model. Specifically, the direct predictors of SME performance, innovativeness (1.349), managerial competency (1.360), and risk taking (1.164), exhibit distinct explanatory contributions. In addition, the interaction terms also recorded low VIF values, confirming that the inclusion of moderating effects did not introduce collinearity issues. The consistency between the sample means and confidence intervals with the original estimates further supports the stability of the model diagnostics. Overall, the findings confirm the absence of multicollinearity, thereby allowing for reliable interpretation of the structural path coefficients.

Table 5. Predictive Power R^2 and Predictive Relevance Q^2

	R^2	Q^2	STDEV	T statistics	P values
SP	0.782	0.208	0.039	20.113	0.000

Source: SmartPLS (2026).

The model's predictive power was assessed using the coefficient of determination (R^2) and the Stone Geisser Q^2 statistic for predictive relevance. The R^2 value of 0.782 indicates that 78.2 percent of the variance in SME performance in North East Nigeria is explained by the predictor variables, reflecting strong explanatory power in the regional context. Similarly, the Q^2 value of 0.208 confirms that the model demonstrates adequate predictive relevance for SMEs operating in North East Nigeria. Further statistical evidence (SD = 0.039, t = 20.113, p = 0.000) also shows that the model's predictive performance is statistically significant. Overall, the findings suggest that the model explains a substantial proportion of the variation in SME performance in North East Nigeria and exhibits strong predictive capability, thereby confirming the robustness of the structural model.

Table 6. Direct effect

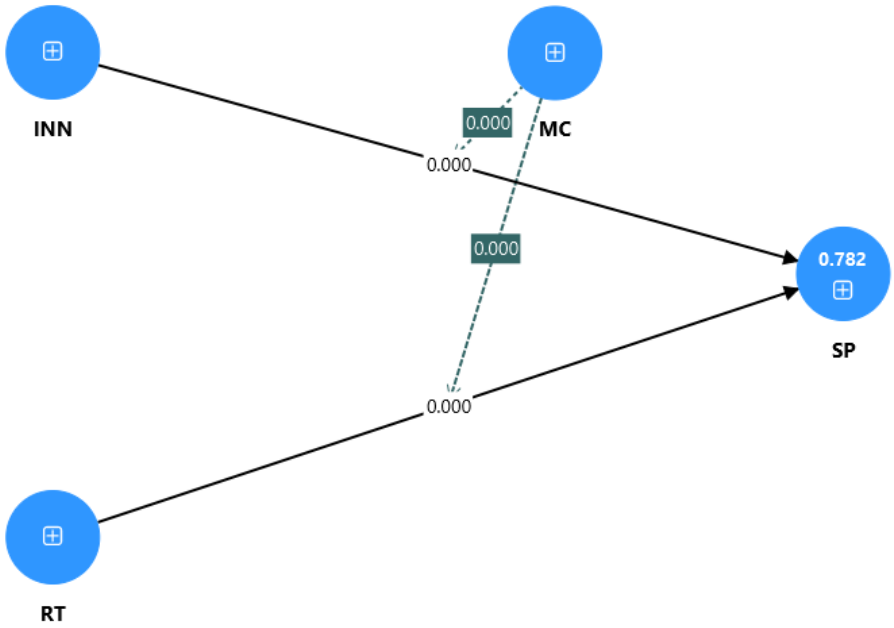
Relationships	β	STDEV	T values	P values	Decision
INN -> SP	0.201	0.047	4.287	0.000	Supported
RT -> SP	0.188	0.049	3.827	0.000	Supported

The results of the hypothesis testing indicate that all the proposed relationships in the model are statistically significant. The first hypothesis reveals that innovativeness has a positive and significant effect on SME performance, with a path coefficient of 0.201, t-value of 4.287, and p-value of 0.000, indicating that higher levels of innovativeness enhance performance outcomes. Similarly, the second hypothesis confirms that risk taking has a positive and significant effect on SME performance in North East Nigeria, with a coefficient of 0.188, t-value of 3.827, and p-value of 0.000, suggesting that greater willingness to take risks contributes to improved SME performance.

Table 7. Indirect effect

Relationships	β	STDEV	T values	P values	Decision
MC x INN -> SP	0.476	0.063	7.554	0.000	Supported
MC x RT -> SP	0.407	0.054	7.559	0.000	Supported

The moderation results show that managerial competency significantly strengthens the relationship between innovativeness and SME performance (β = 0.476, t = 7.554, p = 0.000). Similarly, managerial competency significantly enhances the relationship between risk taking and SME performance (β = 0.407, t = 7.559, p = 0.000). Overall, the findings indicate that innovativeness and risk taking positively and significantly influence SME performance; however, these effects are more pronounced when managerial competency is high, thereby confirming its critical moderating role in strengthening the entrepreneurial orientation and SME performance relationship.



5.1.1 Discussion of Findings

The first hypothesis (H01) stated that innovativeness does not have a significant effect on SME performance. However, the result of the analysis led to the rejection of H01, indicating that innovativeness has a positive and significant effect on SME performance in Northeast Nigeria. This implies that SMEs with higher levels of innovativeness tend to achieve better performance outcomes, including improved competitiveness, adaptability, and growth. This finding is consistent with Byukusenge et al. (2021), who established that innovation significantly enhances SME performance, particularly when supported by managerial competencies. In a similar vein, Uchena et al. (2021) found that innovativeness and proactiveness jointly improve SME performance and entrepreneurial behavior, while Ayepa et al. (2019) confirmed that innovativeness contributes to the sustainable growth of small enterprises. Furthermore, Sakib et al. (2022) emphasized that entrepreneurial competencies such as learning ability, networking, and commitment strengthen innovation outcomes and performance in SMEs. Ng et al. (2020) and Lee et al. (2019) also highlighted that combining innovativeness with leadership capability, technical expertise, and innovation financing enhances both financial and non-financial performance outcomes. In addition, Harini et al. (2020) stressed that creativity and innovation embedded in human resource practices promote sustainability and competitiveness, particularly in dynamic and digital markets. However, this finding contrasts with Ernest and Sule (2020), who argued that product innovation alone is the primary driver of SME performance, suggesting that broader forms of innovativeness may be more relevant in the current context. It also differs from Bright and Hamilton (2023), who reported a negative association between managerial competencies and SME performance, reflecting the contextual variability of innovation outcomes. Overall, the evidence confirms that innovativeness remains a critical determinant of SME performance, although its impact is influenced by environmental and managerial conditions.

The second hypothesis (H02) proposed that risk-taking does not have a significant effect on SME performance. The result, however, led to the rejection of H02, indicating that risk-taking has a significant and positive effect on SME performance in Northeast Nigeria. This relationship, supported by a path coefficient of 0.188, t-value of 3.827, and p-value of 0.000, suggests that SMEs that engage in calculated risk-taking are more likely to identify opportunities, innovate, and improve performance outcomes. This finding is consistent with Dada et al. (2023), who describe risk-taking as a strategic entrepreneurial behavior that enables firms to

pursue opportunities despite uncertainty. Similarly, Caputo et al. (2025) emphasize that entrepreneurial risk-taking enhances opportunity recognition and strengthens entrepreneurial self-efficacy. Linton (2019) further supports this view by arguing that risk-taking involves balancing opportunity pursuit with risk management, which ultimately improves performance outcomes. In addition, Ključnikov et al. (2016) found that risk-taking significantly enhances SME performance by enabling firms to innovate and achieve competitive advantage in dynamic markets. Collectively, these findings suggest that risk-taking, when carefully managed, is a valuable driver of SME performance.

Regarding the moderating effect of managerial competency on the relationship between innovativeness and SME performance, the findings indicate that managerial competency significantly strengthens this relationship in Northeast Nigeria. This implies that innovativeness yields stronger performance outcomes when supported by effective managerial skills such as planning, coordination, and strategic decision-making. This result aligns with Wahyuni and Sara (2020), who found that entrepreneurial and learning orientations improve SME performance indirectly through competence and innovation. Similarly, Umar et al. (2018) reported that entrepreneurial competencies enhance SME success, with innovation partially mediating the relationship. Tehseen et al. (2019) also demonstrated that entrepreneurial competencies improve SME growth when supported by strong network capabilities. In the same direction, Ismail (2022) found that innovation mediates the relationship between entrepreneurial competencies and SME sustainability, emphasizing the importance of competence-driven innovation. Kim (2021) further showed that technological capability enhances the impact of entrepreneurial competencies on SME performance, while Al Koliby et al. (2024) confirmed that competencies strengthen both innovation and sustainability outcomes. Ali and Iskandar (2016) also supported this relationship by highlighting the combined role of innovation and managerial competence in driving SME performance. Moreover, Anoke et al. (2022) explicitly found that managerial competency positively moderates the relationship between innovation and SME performance. However, this finding contrasts with Hussain et al. (2022), who reported that entrepreneurial competencies do not always significantly moderate performance relationships, particularly in digital adoption contexts. Ndzana et al. (2021) also noted that the effectiveness of innovation varies depending on whether it is technological or non-technological, reinforcing the contextual nature of these relationships. Overall, the findings confirm that managerial competency is a critical enhancer of innovativeness in driving SME performance.

Finally, the moderating effect of managerial competency on the relationship between risk-taking and SME performance shows that managerial competency significantly strengthens this relationship. This indicates that risk-taking alone is not sufficient; rather, its effectiveness depends on the presence of strong managerial capabilities that guide decision-making and risk evaluation. This finding is consistent with Caputo et al. (2025), who emphasized that entrepreneurial outcomes are shaped by the interaction between risk-taking behavior and managerial knowledge. Similarly, Skandalis and Skandali (2025) found that entrepreneurial skills and capabilities amplify the benefits of risk-taking despite inherent uncertainties. Dada et al. (2023) also support this view by highlighting that opportunity-seeking behavior is more effective when supported by managerial competence. However, this finding contrasts with Panjaitan et al. (2021), who argued that risk-taking improves performance only when combined with internal capabilities such as knowledge sharing and innovation, suggesting that the moderating role of managerial competency may vary depending on contextual and organizational factors.

Conclusion

The following conclusions were made:

i. Innovativeness plays a crucial role in enhancing SME performance by fostering the development of new ideas, improving processes, and sustaining competitiveness in dynamic business environments in Northeast Nigeria.
ii. Risk-taking positively impacts SME performance, as entrepreneurs who engage in calculated risks are better equipped to identify opportunities, drive innovation, and achieve business growth in Northeast Nigeria.
iii. Managerial competency strengthens the effects of both innovativeness and risk-taking on SME performance, highlighting the importance of managerial skills in translating entrepreneurial initiatives into measurable business outcomes in Northeast Nigeria.

Recommendations

The study recommends that SME owners focus on fostering innovation and embracing calculated risk-taking to generate new ideas, improve processes, and maintain competitiveness, while also strengthening

managerial competencies to ensure that entrepreneurial initiatives are effectively translated into measurable business performance. It further recommends that government and policymakers provide targeted support for SMEs through capacity-building programmes, financial incentives, and infrastructural development that enhance innovation, encourage responsible risk-taking, and strengthen managerial capabilities, thereby promoting sustainable business growth. In addition, future research should examine additional determinants of SME performance and adopt longitudinal and comparative research designs to provide a deeper and more comprehensive understanding of their effects on growth and sustainability.

Limitations of the study

This study has a few limitations that should be noted.

a. In this study, the key limitation is that PLS-SEM is mainly prediction-oriented and offers limited support for causal inference. Moreover, it is also sensitive to model specification and depends on the quality of the measurement model, which may affect the accuracy of the results.
b. In this study, the reliance on obtained responses may introduce non-response bias, which could affect the representativeness and generalizability of the findings.
c. In regard to the findings of the study being statistically significant, they have limitations, including moderate effect sizes, limited variables, a cross-sectional design, context specificity, and potential bias from self-reported data.

Suggestions for further study

Based on limitations of this study, the following suggestions are proposed:

i. The study suggests that future studies should consider using complementary analytical methods, such as covariance-based SEM or longitudinal designs, to strengthen causal inference. The future researchers should also ensure careful model specification and improve measurement models to enhance the accuracy and reliability of the results.

ii. The study suggests that the future studies should enhance response rates through follow-ups and incentives, assess the extent of non-response bias, and use larger, more diverse samples to improve representativeness and generalizability.

iii. The study suggests that the future studies should include additional variables, use longitudinal designs to strengthen causal inference, test findings across different contexts, and apply multiple data sources to reduce bias and improve robustness

References

Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. Strategic Management Journal, 18(7), 509–533.

Teece, D. J. (2007). Explicating dynamic capabilities: The nature and microfoundations of (sustainable) enterprise performance. Strategic Management Journal, 28(13), 1319–1350.

Barney, J. (1991). Firm resources and sustained competitive advantage. Journal of Management, 17(1), 99–120.

Wernerfelt, B. (1984). A resource-based view of the firm. Strategic Management Journal, 5(2), 171–180.

Onogwu, E. E., & Sule, J. A. G. (2020). Influence of innovation on the performance of small and medium-scale enterprises in Kogi State. Journal of Asian Business Strategy, 10(1), 122–130.

Herlinawati, E., & Machmud, A. (2020). The effect of innovation on increasing business performance of SMEs in Indonesia. WSEAS Transactions on Business and Economics, 17(7), 51–57.

Ali, H., Hao, Y., & Aijuan, C. (2020). Innovation capabilities and small and medium enterprises' performance: An exploratory study. Journal of Asian Finance, Economics and Business, 7(10), 959–968. https://doi.org/10.13106/jafeb.2020.vol7.no10.959

Ayepa, N. A., Boohene, R., & Mensah, M. S. B. (2019). Effects of innovativeness and firm resources on the growth of small enterprises in the Ga South Municipality in Ghana. *Ghana Journal of Development Studies, 16*(1), 1-21. http://dx.doi.org/10.4314/gjds.v16i1.1

Adim, C. V., & Poi, G. (2019). Entrepreneurial Risk-Taking and Performance of Women Entrepreneurs in Rivers State, Nigeria. *International Academy Journal of Management, Marketing and Entrepreneurial Studies, 8*(3), 93–106.

Adoga, G. U., Inyang, A. A., Jonah, J. F., & Udoh, I.-U. E. (2024). *Assessing Entrepreneurial Risk-Taking Ability on the Performance of Select Small and Medium Enterprises (SMEs) in Akwa Ibom State, Nigeria*. *World Journal of Entrepreneurial Development Studies, 9*(3), 48–59. https://doi.org/10.56201/wjeds.v9.no3.2024.pg48.59

Baba, S., & Thiong'o, M. N. (2019). Risk taking and the performance of small and medium enterprises in Nigeria. *International Journal of Research and Innovation in Social Science, 3*(6), 573–579.

Adim, C. V., & Poi, G. (2019). Entrepreneurial Risk-Taking and Performance of Women Entrepreneurs in Rivers State, Nigeria. *International Academy Journal of Management, Marketing and Entrepreneurial Studies, 8*(3), 93–106.

Adoga, G. U., Inyang, A. A., Jonah, J. F., & Udoh, I.-U. E. (2024). *Assessing Entrepreneurial Risk-Taking Ability on the Performance of Select Small and Medium Enterprises (SMEs) in Akwa Ibom State, Nigeria*. *World Journal of Entrepreneurial Development Studies, 9*(3), 48–59. https://doi.org/10.56201/wjeds.v9.no3.2024.pg48.59

Baba, S., & Thiong'o, M. N. (2019). Risk taking and the performance of small and medium enterprises in Nigeria. *nternational Journal of Research and Innovation in Social Science, 3*(6), 573–579.

Abbas, J., Raza, S., Nurunnabi, M., Minai, M. S., & Bano, S. (2019). The impact of entrepreneurial business networks on firms' performance through the mediating role of dynamic capabilities. *Sustainability, 11*(11), 3006. https://doi.org/10.3390/su11113006

Abdul, R. O. (2019). *Effect of Entrepreneurial Competencies on the Survival of Small and Medium Enterprises in Kenya* (Unpublished master's thesis). Jomo Kenyatta University of Agriculture and Technology, College of Human Resource Development.

Abodunde, S. M. (2025). Mediating Role of Network Ties in the Relationship Between Innovativeness, Proactiveness, and SMEs' Performance. *Journal of Economics, Management & Business Administration, 4*(1), 22–34. https://journals.airsd.org/index.php/jemba/article/view/511

Al Koliby, I. S. M., Abdullah, H. H., & Mohd Suki, N. (2024). Linking Entrepreneurial Competencies, Innovation, and Sustainable Performance of Manufacturing SMEs. *Asia-Pacific Journal of Business Administration, 16*(1), 21–40.

Ali, H., & Li, Y. (2021). Financial Literacy, Network Competency, and SMEs Financial Performance: The Moderating Role of Market Orientation. *Journal of Asian Finance, Economics and Business, 8*(10), 341–352.

Ali, K. A. M., & Iskandar, N. I. N. (2016). The Effect of Business Innovation Capability, Entrepreneurial Competencies, and Quality Management Towards the Performance of Malaysian SMEs. *International Journal of Business, Economics and Law, 10*(2), 7–13. https://ijbel.com/wp-content/uploads/2016/09/K10_58.pdf

Ayepa, N. A., Boohene, R., & Mensah, M. S. B. (2019). Effects of Innovativeness and Firm Resources on the Growth of Small Enterprises in the Ga South Municipality in Ghana. *Ghana Journal of Development Studies, 16*(1), 1–21. http://dx.doi.org/10.4314/gjds.v16i1.1

Brandi, B., & Megan, M. (2023). Decision-making Competencies and their Impact on Profitability and Customer Base Growth in Ghanaian Entrepreneurs: A Quantitative Analysis. *International Journal of Entrepreneurial Behavior & Research, 29*(2), 234–250. https://doi.org/10.1108/IJEBR-02-2023-0156

Bright, B., & Hamilton, H. (2023). Strategic Adaptability and Foresight in UK SMEs: A Mixed-Methods Approach to Post-Pandemic Resilience. *Journal of Small Business Management, 61*(1), 45–63. https://doi.org/10.1080/00472778.2023.1851234

Brownhilder, N. N., & van Zyl, J. (2017). Entrepreneurial orientation and its impact on firm growth among SMEs in South Africa. *Problems and Perspectives in Management, 15*(3), 166–178. https://doi.org/10.21511/ppm.15(3). 2017.14

Caputo, A., Nguyen, V. H. A., & Delladio, S. (2025). Risk-taking, Knowledge, and Mindset: Unpacking the Antecedents of Entrepreneurial Intention. *International Entrepreneurship and Management Journal, 21*, 48. https://doi.org/10.1007/s11365-024-01064-3

Chung, H. F. L., Yen, D. A., & Wang, C. L. (2020). The Contingent Effect of Social Networking Ties on Asian Immigrant Enterprises' Innovation. *Industrial Marketing Management, 88*, 414–425. https://doi.org/10.1016/j.indmarman.2019.04.011

Dada, A. E., Adegbuyi, O. A., & Ogbari, M. E. (2023). Investigating the Influence of Entrepreneurial Behaviour and Innovation Among Undergraduate Students of Selected Universities in Southwest Nigeria. *Administrative Sciences, 13*(9), 192. https://doi.org/10.3390/admsci13090192

Ernest, O. E., & Sule, J. G. (2020). Influence of Innovation on the Performance of Small And Medium-Scale Enterprises in Kogi State. *Journal of Asian Business Strategy, 10*(1), 122–132. https://doi.org/10.18488/journal.1006.2020.101.122.132
Han, M., Lee, S., & Kim, J. (2019). Effectiveness of Diversification Strategies for Ensuring Financial Sustainability of Construction Companies in the Republic of Korea. *Sustainability, 11*(3076), 1–19.
Hao, S., & Song, M. (2016). Technology-driven Strategy And Firm Performance: are Strategic Capabilities Missing Links? *Journal of Business Research, 69*(2), 751–759.
Harini, S., Gemina, D., & Yuningsih, E. (2020). Leveraging SMEs' Performance of Sustainability: Creativity and Innovation Based an HR Competency and Market Potential in the era of IR 4.0. *International Journal of Entrepreneurship, 24*(1), 1–12.
Hussain, A., Akbar, M., Shahzad, A., Poulova, P., Akbar, A., & Hassan, R. (2022). E-commerce and SME Performance: The Moderating Influence of Entrepreneurial Competencies. *Administrative Sciences, 12*(1), 13. https://doi.org/10.3390/admsci12010013
Ibidunni, A. S., Ogundana, O. M., & Okonkwo, A. (2022). Entrepreneurial Competencies and the Performance of Informal SMEs: The Contingent Role of Business Environment. In *Entrepreneurship and the informal sector* (pp. 28–50).
Ibrahim, A. U., & Abu, M. M. (2020). Influence of Entrepreneurial Orientation on Firms' Performance: Evidence From SMEs in Nigeria. *International Journal of Economics and Financial Issues, 10*(2), 99–106.
Inegbedion, H. (2022). Entrepreneurial Design Thinking and Business Success: Empirical Evidence From Nigeria. *Problems and Perspectives in Management, 20*(2), 186–198. https://doi.org/10.21511/ppm.20(2).2022.16
Ismail, I. J. (2022). Entrepreneurs' Competencies and Sustainability of Small and Medium Enterprises in Tanzania: A Mediating Effect of Entrepreneurial Innovations. *Cogent Business & Management, 9*(1), Article 2111036. https://doi.org/10.1080/23311975.2022.2111036
Kiguru, S., Senelwa, W., & Njeru, A. (2024). The Influence of Proactiveness on the Performance of Textile-Based Manufacturing Small Enterprises in Kenya. *Science Journal of Business and Management, 12*(4), 113–127. https://doi.org/10.11648/j.sjbm.20241204.15
Kiiru, D. K., Mukulu, E., & Ngatia, P. (2023). Innovativeness and Performance: Evidence from Kenyan SMEs. *European Journal of Business and Management Research, 8*(2), 113–119. https://doi.org/10.24018/ejbmr.2023.8.2.1810
Kim, S.-S. (2021). The relationship Between Innovation Competence and Performance as an Effect on The Sustainability of SMEs. *Polish Journal of Management Studies, 23*(2), 196–212. https://doi.org/10.17512/pjms.2021.23.2.12
Ključnikov, A., Belás, J., & Smrčka, L. (2016). The Role of Risktaking and Competitive Aggressiveness in Management of SMEs. *Polish Journal of Management Studies, 14*(1), 129–139. https://doi.org/10.17512/pjms.2016.14.1.12
Kurniawan, A. W., Tahir, B., & Pasda, S. (2018). The Influence of Market Orientation, Innovation, and Entrepreneurial Competence on the Competitiveness and Performance of Small and Medium Enterprises of Silk Weaving Industry. *IOSR Journal of Business and Management, 20*(2), 1–9. https://doi.org/10.9790/487X-2002060109
Kusumawardhani, A. (2013). The Role of Entrepreneurial Orientation in Firm Performance: A Study of Indonesian SMEs of the Furniture Industry in Central Java (Unpublished PhD thesis). University of Wollongong.
Lee, J., Lee, C., Kim, J., Kim, S., & Im, H. (2019). An Empirical Study on the Effect of Innovation Financing on Technology Innovation Competency: Business Performance of SMEs in Korea. *Journal of Electronic Commerce in Organizations, 17*(1), 1–15. https://doi.org/10.4018/JECO.2019010101
Linton, G. (2019). Innovativeness, Risk-taking, and Proactiveness in Startups: A case Study and Conceptual Development. *Journal of Global Entrepreneurship Research, 9*(20), 1–21. https://doi.org/10.1186/s40497-019-0147-5
Loan, N. T., Brahmi, M., Nuong, L. T., & Binh, L. T. (2023). Do Innovation and Proactiveness Impact the Business Performance of Women-Owned Small- and Medium-Scale Enterprises in Vietnam? A Study Using the PLS-SEM Approach. *Nurture, 17*(3), 253–271. https://doi.org/10.55951/nurture.v17i3.314
Lumpkin, G. T., & Dess, G. G. (2005). The role of Entrepreneurial Orientation in Stimulating Effective Corporate Entrepreneurship. *The Academy of Management Executive.*
Mburu, R. M., Githira, C., & Kyalo, T. (2021). Proactiveness and Performance of Family-Owned Enterprises in Nairobi County. *The Strategic Journal of Business & Change Management, 8*(2), 86–94.
Ng, H. S., Kee, D. M. H., & Ramayah, T. (2020). Examining the Mediating Role of Innovativeness in the Link Between Core Competencies and SME Performance. *Journal of Small Business and Enterprise Development, 27*(1), 103–129. https://doi.org/10.1108/JSBED-12-2018-0379

Nur Hidayah & Rodiah. (2022). The Effect of Entrepreneurship Competency on the Sustainability of Small and Medium Enterprises (SMEs). *Budapest International Research and Critics Institute Journal (BIRCI-Journal), 5*(2), 16534–16544. https://doi.org/10.33258/birci.v5i2.5569

Panjaitan, H., Cempena, I. B., Trihastuti, A., & Panjaitan, F. A. B. K. (2021). The Effect of Competitive Aggressivenesson Business Performance: A Case Study of Private Universities in Indonesia. *The Journal of Asian Finance, Economics and Business, 8*(4), 875–884.

Pertheban, T. R., Thurasamy, R., Marimuthu, A., Venkatachalam, K. R., Annamalah, S., Paraman, P., & Hoo, W. C. (2023). The Impact of Proactive Resilience Strategies on Organizational Performance: The Role of Ambidextrous and Dynamic Capabilities of SMEs in The Manufacturing Sector. *Sustainability, 15*(16), 12665. https://doi.org/10.3390/su151612665

Rahaman, M. A., Luna, K. F., Ping, Z. L., Islam, M. S., & Karim, M. M. (2021). Do Risk-taking, Innovativeness, and Proactivity Affect Business Performance of SMEs? A case study in Bangladesh. *The Journal of Asian Finance, Economics and Business, 8*(5), 689–695. https://doi.org/10.13106/JAFEB.2021.VOL8.NO5.0689

Sakib, M. N., Rabbani, M. R., Hawaldar, I. T., Jabber, M. A., Hossain, J., & Sahabuddin, M. (2022). Entrepreneurial Competencies and SMEs' Performance in A Developing Economy. *Sustainability, 14*(20), 13643. https://doi.org/10.3390/su142013643

Shirokova, G., Khrabust, K., Fedotova, E., & Solesvik, M. (2025). Proactive Learning Culture and SMEs Performance in A Challenging Environment: The Mediating Role of Innovative Capability. *International Journal of Entrepreneurial Behavior & Research.*

Skandalis, K. S., & Skandali, D. (2025). Digital Transformation and Entrepreneurial Risk-Taking: Navigating Affordance and Apprehension in SME Intentions. *Risks, 13*(9), 177. https://doi.org/10.3390/risks13090177

Tehseen, S., Ahmed, F. U., Qureshi, Z. H., Uddin, M. J., & Ramayah, T. (2019). Entrepreneurial Competencies and SMEs' Growth: The Mediating Role of Network Competence. *Asia Pacific Journal of Business Administration, 11*(1), 2–29. https://doi.org/10.1108/APJBA-05-2018-0084

Uchena, A. C., Joel, A. S., Okeke, M. N., & Ogbuenyi, V. C. (2021). Entrepreneurial Marketing Practicesand Performance of Small and Medium-Scale Enterprises in Nigeria. *Journal of International Relations, Security and Economic Studies, 1*(2), 46–59. https://doi.org/10.36758/jirses/v1n2.2021/5

Umar, A., Omar, C. M. Z. C., Hamzah, M. S. G., & Hashim, A. (2018). The Mediating Effect of Innovation on Entrepreneurial Competencies and Business Success in Malaysian SMEs. *International Business Research, 11*(8), 142–153.

Wahyuni, N. M., & Sara, I. M. (2020). The Effect of Entrepreneurial Orientation Variables on Business Performance in the SME Industry Context. *Journal of Workplace Learning, 32*(1), 35–62. https://doi.org/10.1108/JWL-03-2019-0033