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MODERATING ROLE OF ENTREPRENEURIAL INTENTION ON THE RELATIONSHIP BETWEEN BUSINESS OWNERS' CHARACTERISTICS AND SMES' PERFORMANCE IN KADUNA STATE

***Habiba Ahmed Gwadabe[1], Sanusi Lawal[2], Abdulaziz Maruf Adeniran[3] and Bashir Umar Faruk[4]**

Department of Business Administration, Faculty of Management and Social Sciences, Federal University Gusau. Zamfara State. Nigeria[1,2,&3]

Department of Economics, Faculty of Management and Social Sciences, Federal University Gusau. Zamfara State. Nigeria[4]

*Correspondence: habeebaahmadg@gmail.com

ABSTRACT

Small and Medium Enterprises (SMEs) play a vital role in economic growth, poverty reduction, and job creation, particularly in developing economies such as Nigeria. Despite their significance, SMEs in Kaduna State continue to face performance challenges, with business owners' characteristics such as risk-taking often producing inconsistent outcomes. This study examined the moderating role of entrepreneurial intention on the relationship between business owners' risk-taking and SME performance in Kaduna State. Adopting a quantitative research design, data were collected from 534 SMEs using a structured questionnaire, with 460 valid responses analyzed through Partial Least Squares Structural Equation Modelling (PLS-SEM). Findings revealed that both entrepreneurial intention and risk-taking significantly and directly enhance SME performance, while entrepreneurial intention did not significantly moderate the relationship between risk-taking and performance. These results suggest that risk-taking exerts a dominant, independent effect on SME outcomes in this context, challenging assumptions that intention always amplifies behavioral traits. The study contributes to entrepreneurship literature by providing contextual evidence from Kaduna State and offers practical insights for policymakers and SME owners to strengthen risk management practices and cultivate entrepreneurial mindsets as parallel drivers of performance.

Keywords: Small and Medium Enterprises, Risk-Taking, Entrepreneurial Intention, SME Performance.

1. INTRODUCTION

ISmall and Medium Enterprises (SMEs) continue to serve as critical engines for innovation, employment generation, and inclusive growth particularly in developing countries. In Nigeria, and more specifically Kaduna State, SMEs play a pivotal role in poverty alleviation and local economic development. Despite their importance, SME survival and performance remain hindered by numerous internal and external challenges. Internal factors, such as the personal characteristics of business owners including innovativeness, risk-taking, and proactiveness are recognized as key determinants of business outcomes (Mansi, 2021).

A particularly influential characteristic is risk-taking, which captures entrepreneurs' willingness to invest resources in uncertain ventures for the possibility of higher returns. Notwithstanding its importance, the influence of risk-taking on SME performance is

inconsistent. Whereas some risk-oriented entrepreneurs achieve notable growth, others experience significant setbacks. Such variability suggests the presence of underlying psychological or motivational elements that could inhibit or amplify the effects of risk-taking (Mansi, 2021).

One such moderating factor could be entrepreneurial intention, defined as the conscious state of mind driving entrepreneurial behavior. It influences how entrepreneurs assess opportunities, mobilize resources, and persist through challenges. Empirical research underscores that entrepreneurial intention may shape the way risk-taking translates into performance outcomes. For instance, Caputo's recent integrated model highlights how risk-taking, knowledge, and entrepreneurial mindset contribute to entrepreneurial intention (Caputo, 2025).

Despite the significance of SMEs in Kaduna State, many continue to struggle with low profitability, constrained scalability, and high mortality rates. Although previous studies have noted risk-taking as a potential driver of performance, results remain inconclusive some risk-takers achieve success while others fail. This raises critical questions: Why doesn't risk-taking guarantee positive outcomes? Could entrepreneurial intention i.e., the deliberate drive to engage in entrepreneurship act as the missing link? Very few studies in Nigeria have examined this interplay, and those focused on Kaduna State are even scarcer, making this gap both noticeable and important to fill.

This study aims to examine the moderating role of entrepreneurial intention on the relationship between business owners' risk-taking and SME performance in Kaduna State. The specific objectives include;

i. To assess the direct impact of business owners' risk-taking on SME performance in Kaduna State.
ii. To evaluate the direct effect of entrepreneurial intention on SME performance in Kaduna State.
iii. To determine whether entrepreneurial intention significantly moderates the association between business owners' risk-taking and SME performance in Kaduna State.

This study makes several valuable contributions. Academically, it advances entrepreneurship literature by introducing entrepreneurial intention as a moderator in the Nigerian SME context a perspective not yet explored in Kaduna State. Policy-wise, it offers evidence-based insights for policymakers aiming to foster SME resilience through targeted psychological and behavioral interventions. Practically, SME owners stand to gain clear understanding of how their risk-taking propensities interact with their entrepreneurial intention to shape performance outcomes. Additionally, the study lays a foundation for future research exploring other psychological moderators in entrepreneurial success.

The scope of this research is well-defined. It is geographically confined to SMEs operating within Kaduna State across trade, services, and manufacturing sectors. Conceptually, it centers on risk-taking as the independent variable, entrepreneurial intention as the moderator, and SME performance as the outcome. Methodologically, it adopts a cross-sectional design, with data collected within the study period.

2. LITERATURE REVIEW

i. Conceptual Review

Business Owners' Risk-Taking is widely recognized in entrepreneurship literature as the willingness of individuals to pursue opportunities under conditions of uncertainty. Risk-taking enables competitive advantage and innovation; yet, when taken to extremes, it can expose SMEs to failure, especially in resource-constrained settings (Okoli & Okoli, 2024). Ahimbisibwe and Abaho (2013), as cited in a Nigerian study, highlight that while a moderate level of risk-taking drives performance, excessive risk-taking may become detrimental (Coulthard, 2007; Kreiser et al., 2002). Similarly, empirical research from Benue State shows that calculated risk-taking coupled with proactiveness, innovativeness, and opportunity-focus positively influences SME performance (Terzungwe, 2023).

Entrepreneurial Intention is defined as the cognitive commitment to start or grow a business. It acts as a motivational state that precedes entrepreneurial behavior. In Nigeria, risk-taking propensity, among other factors, has been identified as a significant predictor of entrepreneurial intention among university undergraduates (Ilevbare et al., 2022). Another study focusing on market women in Lagos found a significant link between entrepreneurial intention and risk attitudes, illustrating the motivational role of intention in shaping risk orientation (Jongbo & Ajemunigbohun, 2024).

SME Performance is often measured using both financial indicators (e.g., profitability, revenue growth) and non-financial metrics (e.g., customer satisfaction, market share, survival rates). Comprehensive studies in Nigeria consistently adopt a multi-dimensional approach to performance, emphasizing its broad and nuanced nature (Okoli & Okoli, 2024).

Moderating Role refers to a variable that affects the strength or direction of the relationship between an independent and a dependent variable. In this study, entrepreneurial intention is posited as a moderator influencing how risk-taking impacts SME performance. Given that entrepreneurial intention frames how entrepreneurs interpret opportunities and risks, it may strengthen or dilute the effects of risk-taking on firm outcomes.

ii. Theoretical Review

The Theory of Planned Behavior (TPB), formulated by Ajzen (1991), explains entrepreneurial intention through three constructs: attitudes, subjective norms, and perceived behavioral control. Strong entrepreneurial intention arises from positive attitudes toward entrepreneurship, supportive social norms, and high perceived capability factors that can determine whether risk-taking behavior leads to successful SME performance (Al Halbusi et al., 2023). Although not TPB-specific, research confirms that self-efficacy, opportunity recognition, and risk tolerance bolster entrepreneurial behavior and innovation among Nigerian undergraduates (MDPI study).

Entrepreneurial Orientation (EO) Theory posits that dimensions such as innovativeness, proactiveness, and risk-taking influence firm performance. Lumpkin and Dess, cited in recent literature, argue that while EO positively correlates with performance, its dimensions can interact and vary in effect (e.g., synergy between risk-taking and proactiveness bolstering outcomes), justifying the need for investigating moderating variables like entrepreneurial intention (Akinwande & Morakinyo, 2021; Lumpkin & Dess, 2025).

The **Resource-Based View (RBV)** conceptualizes intangible assets such as entrepreneurial intention as strategic resources that foster sustainable competitive advantage. Entrepreneurial intention empowers owners to marshal resources effectively and translate risk-taking into performance gains. This lens accentuates the internal, cognitive attributes that differentiate successful ventures from unsuccessful ones.

The conceptual domain builds strong foundations highlighting risk-taking, entrepreneurial intention, performance measurement, and moderation. The theoretical framing (TPB, EO, RBV) clarifies how and why entrepreneurial intention may shape the pathway between risk-taking and SME performance. Collectively, these insights reinforce the rationale for empirically testing entrepreneurial intention as a moderator in Kaduna State's SME context.

iii. Empirical Review

Empirical studies on the relationship between entrepreneurial traits and SME performance have produced mixed results across different contexts. While many scholars find that risk-taking and entrepreneurial intention foster competitiveness, resilience, and growth, others report weak or negative effects, especially in volatile economies. This review synthesizes findings in line with the study's objectives, highlighting consistencies, contradictions, and gaps.

Risk-Taking and SME Performance

Numerous studies suggest a positive effect of risk-taking on SME performance. Okoli and Okoli (2024) found that risk-taking propensity enhances SME competitiveness and profitability in Anambra State. Similarly, Okoli, Nwosu, and Okechukwu (2021) showed that entrepreneurial orientation dimensions risk-taking, innovativeness, and proactiveness positively affect SME performance in Southeast Nigeria. A study in Ibadan metropolis also identified risk-taking and innovativeness as significant drivers of SME growth (GEEAH, 2023). In Makurdi, Benue State, risk-taking was statistically significant in predicting SME performance (Redalyc, 2022). Internationally, risk-taking has also been associated with higher innovation and performance among SMEs in Kenya (Muriithi, 2022) and Ethiopia (Kosa, Mohammad & Ajibie, 2018).

However, other studies report negative or insignificant outcomes. Offiong, Udoka, and Bassey (2019) found that financial risks such as inflation and exchange rate fluctuations negatively affect SME performance in Nigeria. Similarly, Eneh and Nwachukwu (2022) observed that excessive risk-taking often undermines sustainability in fragile economies, where external shocks can offset entrepreneurial gains. These conflicting results underscore the need to investigate contextual moderators like entrepreneurial intention.

Entrepreneurial Intention and SME Performance

Evidence on entrepreneurial intention's role in performance is gradually emerging. Mohammed, Ibrahim, and Shah (2017) reported that entrepreneurial competencies linked to intention such as opportunity recognition and strategic decision-making positively influence SME performance among women entrepreneurs in Kaduna State. Aliyu et al. (2023) also showed that entrepreneurial orientation predicts SME growth in North-East Nigeria, though intention must be supported by resources to translate into outcomes.

Further, studies among Nigerian undergraduates demonstrate that entrepreneurial intention fosters persistence and resilience (Ilevbare et al., 2022). Internationally, Ugwu and Okeke (2022) found that entrepreneurial intention significantly predicts SME

survival and profitability in Ghana, while Sahoo and Panda (2023) confirmed a strong link between entrepreneurial intention and performance among Indian micro-enterprises.

Nonetheless, intention alone does not guarantee success. Aliyu et al. (2023) showed that education levels did not moderate entrepreneurial orientation and performance, suggesting that intention requires enabling environments. Similarly, Fatoki (2022) argued that entrepreneurial intention in South Africa often fails to materialize into performance due to institutional and resource constraints.

iv. Moderating Role of Entrepreneurial Intention

Studies examining entrepreneurial intention as a moderator are limited in Nigeria. Some international evidence, however, suggests moderation effects. For instance, Kosa, Mohammad, and Ajibie (2018) found that entrepreneurial orientation's influence on venture performance was moderated by sector and location in Ethiopia. In Ghana, Agyapong and Boamah (2022) showed that entrepreneurial intention strengthened the relationship between risk-taking and SME profitability. Likewise, in Malaysia, Lee and Wong (2021) revealed that intention moderated the link between entrepreneurial traits and innovation outcomes.

In Nigeria, most studies have examined intention as a predictor rather than a moderator (Mohammed et al., 2017; Ilevbare et al., 2022). Very few have empirically tested whether entrepreneurial intention changes the strength of risk-taking's impact on performance. This is especially true in Kaduna State, where SMEs face high mortality rates despite entrepreneurial activity.

While risk-taking has been widely linked to SME performance, findings remain inconsistent, particularly in developing economies. Entrepreneurial intention has been studied as a predictor of performance, but its role as a moderator remains underexplored, especially in Nigeria. The lack of empirical studies on SMEs in Kaduna State represents a significant gap, which this study seeks to fill by testing whether entrepreneurial intention moderates the risk-taking performance relationship.

3. METHODOLOGY

This quantitative study investigates the moderating role of entrepreneurial intention in the relationship between business owners' characteristics (measured through risk taking) and SMEs' performance. The study population comprised registered SMEs in Kaduna State, Nigeria. The sample size was determined using Cochran's finite population formula at a 5% margin of error, yielding 384 respondents. To address potential non-response bias, a 40% increment was added, resulting in a final sample size of 534 SMEs. Data were collected through a structured questionnaire consisting of validated measurement items for entrepreneurial intention (Liñán & Chen, 2009), risk-taking as a business owners' characteristic (Covin & Slevin, 1989), and SMEs' performance (Venkatraman & Ramanujam, 1986), measured on a 5-point Likert scale. After data cleaning procedures including handling of missing values, detection of outliers, and normality testing the dataset was subjected to Partial Least Squares Structural Equation Modelling (PLS-SEM) using SmartPLS version 4.0.9.9. Reliability and validity were established through assessments of internal consistency (Cronbach's alpha, composite reliability), convergent validity via average variance extracted (AVE), and discriminant validity (Fornell-Larcker criterion and HTMT ratio). Model robustness and explanatory power were confirmed through R^2, Q^2 predictive relevance, and F^2, while bootstrapping with 5,000 resamples tested the significance of hypothesized paths. Additionally, descriptive statistics for the main constructs were computed using SPSS version 24 to provide preliminary insights into the distribution of entrepreneurial intention, risk-taking, and SME performance among respondents.

4. RESULTS AND DISCUSSION

i. Descriptive analysis

Out of the 534 questionnaires distributed, 483 were retrieved, representing a high response rate. Following initial screening, 462 responses were found suitable for analysis. Outlier detection was conducted using Mahalanobis distance (MD), with the chi-square critical value set at 13.82 ($\alpha = 0.001$, $df = 2$). Two extreme cases exceeded this threshold (Case 268: MD = 18.44, p = .00010; Case 211: MD = 14.33, p = .00077) and were therefore removed to enhance data quality and model robustness. The final dataset comprised 460 valid cases, encompassing a diverse mix of SMEs across different subsectors, thereby capturing heterogeneity in firm characteristics and owner backgrounds an essential condition for assessing the moderating role of entrepreneurial intention in the relationship between business owners' risk-taking tendencies and SMEs' performance.

To analyse the hypothesized relationships, the study employed the PLS-SEM. This was chosen due to its robustness in handling moderate sample sizes, tolerance for non-normal data distributions, and suitability for complex models that include both reflective and formative constructs (Hair et al., 2022; Sarstedt et al., 2022). The analytical procedure was conducted in two stages: the measurement model and the structural model. The measurement model assessed indicator reliability, internal consistency, convergent validity, and discriminant validity, ensuring that constructs such as entrepreneurial intention, risk-taking, and SME performance were measured reliably. The structural model then tested the hypothesized relationships,

including the moderating effect of entrepreneurial intention, providing insights into how risk-taking behaviours among business owners influence SMEs' performance in Kaduna State.

Table1:

Descriptive Statistics: Mean, Standard Deviation, Skewness & Kurtosis

	Mean	Std. Deviation	Skewness		Kurtosis	
	Stat.	Stat.	Stat.	Std. Error	Stat.	Std. Error
Intention	3.60	.59	-.005	.114	-.377	.227
Risk Taking	3.69	.57	-.162	.114	.438	.227
SMEs' Performance	3.66	.54	-.213	.114	1.259	.227

Sources:

Table 1 presents the descriptive statistics for the study variables. The mean scores for entrepreneurial intention (M = 3.60, SD = 0.59), risk taking (M = 3.69, SD = 0.57), and SMEs' performance (M = 3.66, SD = 0.54) suggest moderate to high levels across respondents. Skewness values (ranging from 0.213 to -0.005) are close to zero, while kurtosis values (-0.377 to 1.259) fall within the acceptable ±2 range, indicating that the data are approximately normally distributed (Hair et al., 2021). These results confirm the suitability of the dataset for further multivariate analysis using PLS-SEM.

ii. Measurement Model Assessment

PLS-SEM evaluates the measurement model in two stages: assessing reliability of measures and examining validity of constructs, ensuring accuracy and consistency through a rigorous approach (Hair et al., 2021; Sarstedt et al., 2021) crucial for meaningful conclusions.

Assessment of Constructs' Consistency, Reliability and Validity

The measurement model demonstrates that the constructs of entrepreneurial intention, risk taking, and SMEs' performance were measured with strong reliability and validity. All indicator outer loadings exceeded the 0.70 threshold, confirming indicator reliability. Cronbach's alpha values for all constructs ranged from 0.825 to 0.877, while composite reliability values ranged from 0.826 to 0.881, surpassing the recommended minimum of 0.70. Similarly, the Average Variance Extracted (AVE) values for entrepreneurial intention (0.690), risk taking (0.741), and SMEs' performance (0.671) all exceeded the 0.50 benchmark, thereby establishing convergent validity (Hair et al., 2022). These results highlight the robustness of the measurement model and confirm that the adopted scales are appropriate for capturing the theoretical constructs in the study context.

Among the constructs in Table 2, entrepreneurial intention demonstrated the strongest reliability, with high outer loadings across items (e.g., EI1 = 0.893; EI3 = 0.878). This suggests that the intent and willingness of business owners to pursue entrepreneurial activities is a consistent and well-measured construct. Risk taking also showed high reliability, with indicators loading strongly (RT1 = 0.877; RT4 = 0.868), reflecting the importance of owners' willingness to assume calculated risks in driving business strategies. SMEs' performance was similarly well captured, with five reliable indicators (e.g., SMEP1 = 0.862; SMEP2 = 0.829), affirming the construct's multidimensionality in assessing operational and market success. These findings are consistent with recent empirical work, such as Jenkins et al. (2021), who emphasized the reliability of entrepreneurial intention scales in performance studies, and Al-Mamary and Alshallaqi (2020), who confirmed risk-taking as a reliable driver of SME success. Collectively, the results demonstrate that the measurement model possesses robust psychometric properties, providing a solid foundation for testing the hypothesized structural relationships in this study.

Table 2:

Mesureament Model: Indicators' Outer Loadings Cronbach's alpha, Reliability and AVE

Constructs	Indicators	Outer Loadings	Cronbach's alpha	Composite reliability	AVE
Entrepreneurial Intention	EI1	0.893	0.851	0.880	0.690
	EI3	0.878			
	EI4	0.724			
	EI5	0.818			
Risk Taking	RT1	0.877	0.825	0.826	0.741
	RT3	0.837			
	RT4	0.868			
SMEs' Performance	SMEP1	0.862	0.877	0.881	0.671
	SMEP2	0.829			
	SMEP3	0.773			
	SMEP4	0.829			
	SMEP5	0.798			

Source:

Fig. 1: *Initial Measurement Model*

In the measurement model, items RT2 and EI2 were removed due to outer loadings below the 0.70 threshold. Their exclusion improved construct reliability, raised the Average Variance Extracted (AVE), and enhanced composite reliability, thereby strengthening overall model fit and validity. The revised model is shown in Figure 2.

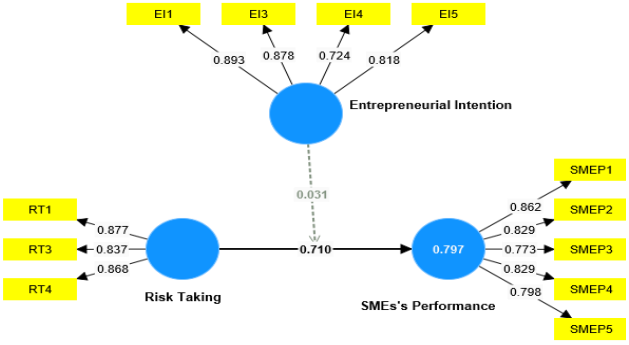


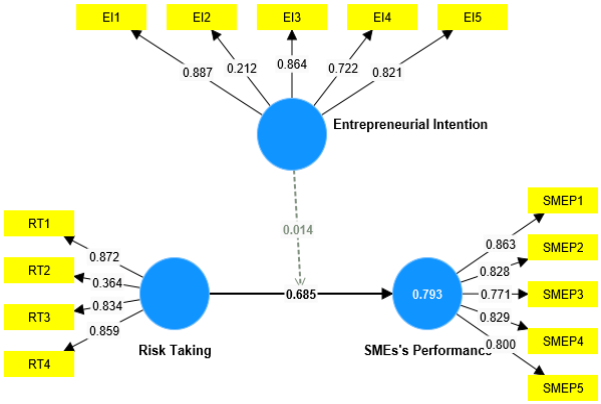
Fig. 2: *Revised Measurement Model*

The Fornell-Larcker criterion results presented in Table 3 confirm discriminant validity among the constructs. The square root of the AVE for each construct, shown on the diagonal, is greater than the corresponding inter-construct correlations. For entrepreneurial intention, the AVE square root (0.831) exceeds its correlations with risk taking (0.757) and SMEs' performance (0.764). Similarly, risk taking shows an AVE square root of 0.861, higher than its correlations with entrepreneurial intention (0.757) and SMEs' performance (0.859). SMEs' performance also demonstrates discriminant validity, with an AVE square root of 0.819 surpassing its correlations with entrepreneurial intention (0.764) and being close to that of risk taking (0.859). While the strong association between risk taking and SMEs' performance suggests that business owners' willingness to take risks is a major driver of firm outcomes, the Fornell-Larcker results confirm that each construct remains sufficiently distinct. These findings align with recent empirical studies that emphasize the intertwined yet unique roles of entrepreneurial intention and risk orientation in shaping SME success (Jenkins et al., 2021; Al-Mamary & Alshallaqi, 2020).

Table 3 *Fornell-Larcker Criterion*

Constructs	Entrepreneurial Intention	Risk Taking	SMEs's Performance
Entrepreneurial Intention	0.831		
Risk Taking	0.757	0.861	
SMEs's Performance	0.764	0.859	0.819

Source:



The Heterotrait-Monotrait (HTMT) ratios in Table 4 provide further support for discriminant validity among the constructs. All HTMT values are below the conservative threshold of 0.85 recommended by Henseler et al. (2015), indicating that the constructs are empirically distinct despite their conceptual relationships. Specifically, entrepreneurial intention shows acceptable discriminant validity with risk taking (0.865) and SMEs' performance (0.848). Likewise, the HTMT value between risk taking and SMEs' performance (0.828) falls within the acceptable range. These results suggest that while entrepreneurial intention, risk taking, and SMEs' performance are moderately correlated – as expected in entrepreneurship research they retain sufficient uniqueness to be treated as separate constructs. This finding is consistent with prior studies emphasizing the methodological robustness of HTMT in establishing discriminant validity in entrepreneurship and SME contexts (Voorhees et al., 2016; Henseler et al., 2015). Collectively, these outcomes reinforce the validity of the measurement model and provide confidence in proceeding to the structural model assessment.

Table 4
Heterotrait-monotrait ratio (HTMT)

Constructs	Entrepreneurial Intention	Risk Taking	SMEs's Performance
Entrepreneurial Intention			
Risk Taking	0.865		
SMEs's Performance	0.848	0.828	

Source:

ii. Structural Model

This study applied the Partial Least Squares (PLS) algorithm to estimate model performance metrics,

including R^2, Q^2, and effect sizes (f^2), and used bootstrapping to test the statistical significance of path coefficients. PLS was chosen for its suitability with moderate samples and non-normal data, offering robust estimation in complex structural models (Hair et al., 2021). Bootstrapping enhanced reliability by producing bias-free confidence intervals (Sarstedt et al., 2021), while Q^2 values assessed predictive relevance alongside R^2 (Chin, 1998). Together, these procedures ensured a rigorous evaluation of the relationships between entrepreneurial intention, risk taking, and SMEs' performance.

Hypotheses Testing

Bootstrapping was employed to test the significance of the hypothesized relationships, providing robust confidence intervals without the need for normality assumptions, which is particularly advantageous in exploratory structural equation modeling (Sarstedt et al., 2021). The results in Table 5 indicate that entrepreneurial intention ($\beta = 0.224$, $p < 0.001$) has a significant positive effect on SMEs' performance, suggesting that the intention of business owners to pursue entrepreneurial activities translates into better firm outcomes. This finding is consistent with recent studies highlighting entrepreneurial intention as a strong predictor of performance outcomes in small firms (Jenkins et al., 2021).

Risk taking emerged as the most influential predictor of SMEs' performance ($\beta = 0.711$, $p < 0.001$), underscoring the central role of business owners' willingness to assume calculated risks in driving growth and competitiveness. This aligns with evidence from Al-Mamary and Alshallaqi (2020), who emphasized that SMEs embracing risk-taking behaviors are more likely to adapt, innovate, and achieve superior results. However, the moderating effect of entrepreneurial intention on the relationship between risk taking and SMEs' performance was not significant ($\beta = 0.032$, $p = 0.278$). This indicates that while entrepreneurial intention and risk taking independently enhance performance, entrepreneurial intention does not strengthen or weaken the effect of risk taking on firm outcomes. Such findings suggest that in the Kaduna State SME context, risk-taking behaviours may exert a direct and dominant effect on performance irrespective of the entrepreneur's intention levels. This distinction contributes to ongoing debates in entrepreneurship research, where moderating effects of intention are sometimes inconsistent across settings (Shirokova et al., 2016; Jenkins et al., 2021).

Table 5
Path coefficients

Hypotheses	Relationship	Beta	Standard error	T Statistics	P Values	Decision
H_{01}	EI -> SMEs's Performance	0.224	0.035	6.384	0.000	Supported
H_{02}	RT -> SMEs's Performance	0.711	0.030	23.386	0.000	Supported
H_{03}	EI x RT -> SMEs's Performance	0.032	0.030	1.086	0.278	Not Supported

Source:

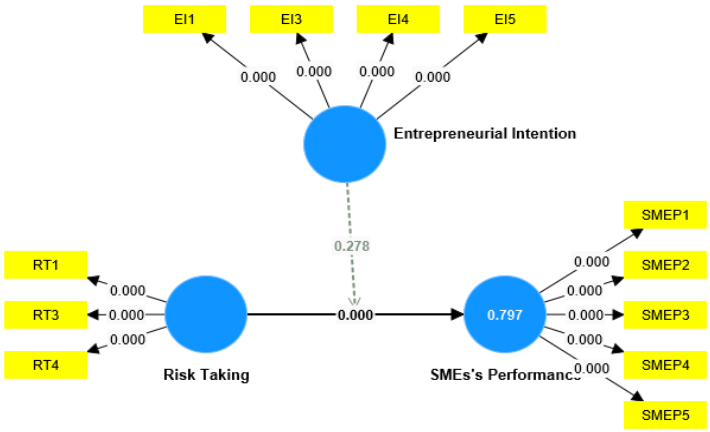


Fig. 3 *Bootstrapping Result*

Coefficient of Determination (R^2), Effect Size (F^2) and Predictive Relevance (Q^2)

The structural model's performance was assessed using R^2, f^2, and Q^2 values. As shown in Table 6, the R^2 for SMEs' performance was 0.797, with an adjusted R^2 of 0.796, indicating that entrepreneurial intention, risk taking, and their interaction jointly explain almost 80% of the variance in SMEs' performance. This represents strong explanatory power, exceeding the threshold typically considered substantial in PLS-SEM (Hair et al., 2021). Effect size (f^2) results further demonstrate the practical importance of these predictors. Risk taking exerted the strongest effect ($f^2 = 1.045$, large effect), followed by entrepreneurial intention ($f^2 = 0.106$, large effect), while the interaction term between entrepreneurial intention and risk taking showed no meaningful effect ($f^2 = 0.007$). These findings confirm that risk-taking behaviors are the most decisive factor in explaining SMEs' performance, while entrepreneurial

intention contributes independently but does not significantly moderate the relationship between risk taking and performance.

Predictive validity was evaluated using the blindfolding procedure, which yielded a Q^2 value of 0.467 for SMEs' performance. Since this value is well above zero, it indicates that the model has high predictive relevance and is capable of forecasting out-of-sample observations with reliability (Chin, 1998; Sarstedt et al., 2021). Taken together, these results provide strong evidence that the model not only explains substantial variance but also offers predictive accuracy. This reinforces the strategic significance of entrepreneurial intention and, more prominently, risk-taking in enhancing SMEs' performance in Kaduna State. However, the lack of a moderating effect suggests that risk-taking may operate as a direct driver of performance regardless of an owner's level of entrepreneurial intention a nuance consistent with recent debates in entrepreneurial research (Shirokova et al., 2016; Jenkins et al., 2021).

Table 6
Model's R-Square, Adjusted R-Square, F-Square and Q-Square

	R-square	R-square adjusted	F-square	Q – Square
SMEs' Performance	0.797	0.796	-	0.467
EI -> SMEs' Performance			0.106(Large Effect)	
Risk Taking-> SMEs' Performance	-	-	1.045(Large Effect)	-
EI x Risk Taking -> SMEs's Performance			0.007(No Effect)	-

iii. Implication of the Findings

The findings of this study carry important theoretical implications for entrepreneurship and SME performance research. The significant effects of both entrepreneurial intention and risk taking on SMEs' performance reinforce prior evidence that individual-level characteristics of business owners are critical determinants of firm outcomes (Jenkins et al., 2021). However, the non-significant moderating effect of entrepreneurial intention suggests that risk taking operates as a direct driver of performance rather than being contingent on entrepreneurs' intentionality. This challenges assumptions in some entrepreneurial models that intention always amplifies the impact of behavioural traits, highlighting instead that in certain contexts such as SMEs in Kaduna State - risk-oriented decision-making may exert dominant and independent influence. Theoretically, this points to the need for context-sensitive models that recognize how environmental and cultural dynamics shape the interaction between psychological constructs and firm performance (Shirokova et al., 2016).

From a practical perspective, the findings emphasize the central role of risk-taking behaviour in enhancing SMEs' competitiveness and survival. Policymakers and SME development agencies should therefore design training and support programs that help entrepreneurs develop informed risk assessment and management strategies, equipping them to take calculated risks that drive growth. At the same time, the independent contribution of entrepreneurial intention suggests that fostering an entrepreneurial mindset through education, mentorship, and exposure to entrepreneurial opportunities can directly boost firm performance. However, since intention did not moderate the risk-performance relationship, interventions should not assume that intention alone will magnify the benefits of risk-taking. Instead, separate but complementary strategies are needed: cultivating strong entrepreneurial intentions while simultaneously strengthening risk management capabilities. Together, these efforts can create more resilient SMEs capable of navigating uncertainties and contributing meaningfully to regional economic development in Nigeria.

5. CONCLUSION AND RECOMMENDATIONS

Based on the findings of this study, it is concluded that both risk-taking and entrepreneurial intention are significant and substantial direct drivers of SME performance in Kaduna State. The research empirically confirms that a business owner's willingness to engage in calculated risks is the most powerful predictor of firm success, underscoring its foundational role in achieving competitiveness and growth. Furthermore, owner's conscious entrepreneurial mindset also directly contributes to improved performance outcomes. However, the core hypothesis that entrepreneurial intention moderates the relationship between risk-taking and performance is not supported. This indicates that in the specific context of Kaduna State, these two critical characteristics operate independently; the potent effect of risk-taking on performance is not strengthened or weakened by the level of the owner's entrepreneurial intention. This finding challenges assumptions within certain entrepreneurial models and highlights the context-dependent nature of these relationships, suggesting that risk-taking may be such a dominant force in this environment that its impact is not contingent on a parallel cognitive state.

Consequently, it is recommended that interventions aimed at bolstering SME performance should adopt a dual, parallel strategy. For policymakers and SME development agencies, the primary focus must be on creating programs that build entrepreneurs' capacity for intelligent risk management, including access to tailored financial products, risk-sharing mechanisms, and advisory services. Simultaneously, universities and training institutions should continue to foster entrepreneurial intention through enriched curricula, mentorship, and experiential learning like business incubators. Since intention does not amplify risk-taking, these efforts should be pursued as complementary yet independent pathways to resilience. For researchers, future studies should investigate other potential moderators like access to finance or leadership style, employ longitudinal designs to track these relationships over time, and conduct comparative regional studies to further explore the contextual factors that influence how entrepreneurial traits translate into firm success.

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