

Entrepreneurial Orientation and SME Performance in Katsina State: Mediating Role of Dynamic Capabilities

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ABSTRACT

This study investigates the mediating role of Dynamic Capability in the relationship between Entrepreneurial Orientation and the performance of Small and Medium Enterprises (SMEs) in Katsina State, Nigeria. Entrepreneurial Orientation is disaggregated into its three core dimensions, Innovativeness, Proactiveness, and Risk-Taking, to examine whether Dynamic Capability mediates each dimension's effect on performance individually. Grounded in the Resource-Based View and Dynamic Capabilities Theory, the research adopts a cross-sectional survey design. Primary data were collected from formally registered SMEs using a structured questionnaire and analyzed through Partial Least Squares Structural Equation Modelling. The findings reveal that Innovativeness and Proactiveness each exert a significant direct effect on SME performance, whereas Risk-Taking does not demonstrate a significant direct influence. However, Dynamic Capability is found to partially mediate the relationships between all three Entrepreneurial Orientation proxies and performance. Notably, Risk-Taking exhibits the highest proportion of its effect transmitted indirectly through Dynamic Capability, suggesting that its contribution to performance is largely realized through internal capability development rather than through direct action. These results imply that SME owner-managers, enterprise development agencies, and state-level policymakers in Northwestern Nigeria should prioritize interventions focused on building internal dynamic capabilities, especially to harness risk-oriented entrepreneurial behaviors. This study contributes to the Katsina State enterprise research agenda by offering the first disaggregated test of each Entrepreneurial Orientation proxy as an antecedent of Dynamic Capability, addressing a gap left by prior studies that relied predominantly on externally focused mediating mechanisms.

Keywords: Dynamic Capability; Entrepreneurial Orientation; Katsina State; Nigeria; PLS-SEM; SME Performance

1.0 Introduction

Small and Medium Enterprises (SMEs) account for an estimated 80 per cent of employment and more than half of Gross Domestic Product (GDP) across Sub-Saharan Africa, yet persistently high failure rates, constrained access to finance, and shallow growth trajectories remain their defining characteristics across Ghana, Kenya, Tanzania, and Nigeria alike (International Finance Corporation (IFC), 2022; Organisation for Economic Co-operation and Development/Sahel and West Africa Club (OECD/SWAC), 2020; Agyapong et al., 2020; Chege et al., 2020). Within Nigeria, the PricewaterhouseCoopers Micro Small and Medium Enterprises (MSME) Survey (2024) confirms that enterprises contribute substantially to national output while many continue to record weak survival rates and limited growth, a paradox that is especially pronounced in the Northwestern region. In Katsina State, the enterprise landscape is dominated by small, family-owned businesses operating under conditions of infrastructural deficit, regulatory volatility, and periodic security disruptions that constrain market access and supply chain reliability. Entrepreneurial Orientation (EO), operationalised through Innovativeness, Proactiveness, and Risk-Taking (Miller, 1983; Covin and Slevin, 1989; Lumpkin and Dess, 1996), has been widely advanced as a strategic posture capable of positioning firms to identify opportunities and record superior performance. Yet evidence from Ghana shows that EO performance effect is sensitive to resource availability and institutional quality (Adomako et al., 2016), while research from Kenya demonstrates that innovation-driven entrepreneurial behaviour yields gain only when accompanied by adequate firm-level infrastructure (Chege et al., 2020), and evidence from Vietnam shows that internal capability-type constructs shape firm performance only indirectly, even where entrepreneurial orientation and innovativeness exert direct effects (Tapanainen et al., 2022). Taken together, this cross-continental body of evidence directs scholarly attention away from entrepreneurial disposition toward the internal mechanisms that convert it into measurable outcomes.

The central problem motivating this study is a persistent and largely unexplained performance gap among entrepreneurially oriented SMEs in Katsina State. Despite visible entrepreneurial energy, many operators continue to record modest turnover growth, narrow market reach, and comparatively high closure rates, suggesting that strategic posture alone is insufficient for improved performance (Badamasi et al., 2025). Two prior studies in the State provide important but incomplete explanations; Badamasi et al. (2023) established that SME performance is significantly mediated by the Entrepreneurial Ecosystem, while Badamasi et al. (2025) established Digital Openness as a significant mediator of the same relationship. Both studies rely on externally facing mechanisms and leave the firm's internal capability architecture unexamined. Dynamic Capability Theory (Teece et al., 1997; Teece, 2007) offers a theoretically coherent answer, proposing that firms sustain performance in uncertain environments by sensing opportunities, seizing them through timely resource commitment, and reconfiguring existing assets as conditions evolve. Comparable mediation evidence exists from Lagos (Esator et al., 2025; Fajimolu et al., 2025), Jordan (Abu-Rumman et al., 2021), Egypt (Abdelkareem et al., 2022), Vietnam (Tapanainen et al., 2022), and Central and Eastern Europe (Kusa et al., 2021), yet no known study disaggregates the three EO proxies individually to test this mediating mechanism within the institutional and economic conditions of Katsina State using a validated PLS-SEM approach.

This study was delimited to formally registered SMEs in Katsina State as captured in the SMEDAN/NBS (2021) National MSME Survey, focusing exclusively on the three EO proxies as antecedents and Dynamic Capability as the sole mediating variable; other strategic orientations and moderating variables are excluded. A cross-sectional survey design was adopted, analysed through SmartPLS 4, and findings were interpreted within the limits of correlational structural path analysis. Theoretically, the study extends Dynamic Capabilities Theory and the Resource-Based View (Barney, 1991; Wernerfelt, 1984) into an underresearched West African institutional context, interrogating whether internal mechanisms developed primarily in Global North settings retain explanatory power under conditions of informality and resource scarcity. Empirically, it provides the first disaggregated test of each EO proxy as an antecedent of Dynamic Capability within the Katsina SME population, and validates the Pavlou and El Sawy (2011) and Wilden et

al. (2013) measurement scales in Northwestern Nigeria for the first time. Practically, findings equip SME owner-managers, enterprise development agencies, and state-level policymakers with evidence to identify which specific entrepreneurial behaviours drive capability development and to design targeted support programmes that address internal capability deficits alongside the external environment-focused instruments that currently dominate SME policy in the region.

2.0 Literature Review

This section presents the theoretical foundation on which the present study rests, reviews relevant empirical literature on Entrepreneurial Orientation and SME performance, and develops the hypotheses that guide the study. The section is organised into two parts. The first discusses the Resource-Based View and Dynamic Capability Theory as the twin theoretical pillars of the study. The second reviews empirical work on the relationship between Entrepreneurial Orientation and SME performance, with Dynamic Capability as a mediating variable, before stating the hypotheses to be tested.

2.1 Resource-Based View and Dynamic Capability Theory

The Resource-Based View, first coined by Penrose (1959), associated with Wernerfelt (1984) and later formalised by Barney (1991), holds that a firm's sustained competitive advantage derives from internal resources and capabilities that are valuable, rare, inimitable, and non-substitutable. Rather than looking outward to industry structure for an explanation of superior performance, the theory directs attention inward, treating the firm as a bundle of tangible and intangible resources whose configuration determines its competitive position. Applied to the SME context, Entrepreneurial Orientation can itself be understood as one such valuable and rarely replicated behavioural resource, an internal orientation that predisposes a firm toward opportunity seeking behaviour that competitors find difficult to imitate. For SMEs in Katsina State operating without the scale advantages or brand equity that insulate larger firms from competitive pressures, such internally anchored behavioural resources represent one of the few sustainable sources of competitive differentiation available.

The Resource-Based View, however, has attracted a well-known criticism for its largely static conception of resources. Eisenhardt and Martin (2000) and Teece (2007) observe that the theory offers limited guidance on how firms build, combine, and renew resources when operating conditions shift quickly, a limitation that is particularly consequential in the Nigerian SME environment where regulatory conditions, input prices, and consumer demand are prone to sudden change. Dynamic Capability Theory, advanced by Teece et al. (1997) and further developed by Teece (2007), was proposed specifically to address this gap. The theory defines dynamic capabilities as a firm's ability to sense opportunities and threats in its environment, seize those opportunities through timely resource commitment, and reconfigure existing assets and routines to sustain competitiveness as conditions change. Eisenhardt and Martin (2000) complement this view by characterising dynamic capabilities as specific strategic and organisational processes through which firms integrate, build, and reconfigure competencies, emphasising that these capabilities follow predictable patterns even in moderately dynamic markets. More recently, Barreto (2010) has refined the construct further, conceptualising dynamic capabilities as a firm's potential to systematically solve problems, formed by its propensity to sense opportunities and threats, to make timely and market-oriented decisions, and to change its resource base. Together, these formulations establish that Dynamic Capability is not simply a higher-order form of operational efficiency but a qualitatively distinct strategic capacity through which entrepreneurially oriented posture is converted into durable performance outcomes.

The present study adopts both theories in a complementary rather than competing arrangement. The Resource-Based View supplies the justification for treating Innovativeness, Proactiveness, and Risk-Taking as valuable internal resources capable of shaping SME performance in Katsina State. Dynamic Capability Theory supplies the explanatory

mechanism, sensing, seizing, and reconfiguring through which this entrepreneurially oriented posture is expected to be converted into performance outcomes under the uncertain and resource-constrained conditions characterising the State enterprise environment. This combined framework positions Dynamic Capability as the theoretical candidate for the mediating role tested in this study.

2.2 Empirical Review and Hypothesis Development

2.2.1 Entrepreneurial Orientation and SME Performance

Entrepreneurial Orientation captures the strategic posture through which firms identify and pursue new opportunities. It is commonly operationalised through three proxies: Innovativeness, Proactiveness, and Risk Taking (Miller, 1983; Covin and Slevin, 1989; Lumpkin and Dess, 1996). Innovativeness reflects a firm's tendency to support experimentation and creative processes leading to new products or methods. Proactiveness describes a forward looking posture in which a firm anticipates future demand and acts ahead of competitors. Risk Taking captures the willingness to commit resources to ventures with uncertain outcomes.

Empirical findings on the relationship between Entrepreneurial Orientation and performance in Nigerian SMEs remain mixed. Hamza and Usman (2025), working directly within Katsina Metropolis, found a significant positive relationship between Entrepreneurial Orientation and SME performance, with Innovativeness and Proactiveness emerging as the strongest predictors. At the national level, Isichei et al. (2020) used PLS SEM on 377 SMEs across Nigeria's six geopolitical zones and found that Innovativeness and Proactiveness significantly predicted performance while Risk Taking showed no significant effect. This pattern recurs across several Nigerian studies conducted in states such as Adamawa and Nasarawa.

Evidence from other developing economies reinforces the differential behaviour of the three proxies. Agyapong et al. (2020), examining Ghanaian SMEs, found that Innovativeness and Proactiveness produced significant performance gains when government support was available, but Risk Taking showed no significant effect independent of external institutional facilitation. Chege et al. (2020), studying Kenyan SMEs, found that innovation driven entrepreneurial behaviour generated performance gains only when accompanied by adequate information technology infrastructure. Tapanainen et al. (2022), examining 243 Vietnamese retail SMEs, found that Entrepreneurial Orientation and Innovativeness exerted significant direct effects on firm performance, while Adaptive Capability and Marketing Capability influenced performance only indirectly. Collectively, these findings indicate that the three proxies do not operate uniformly across developing economy settings and that mediating internal capabilities play a decisive role in converting entrepreneurial orientation into performance. The following hypotheses were proposed:

H1a: Innovativeness has a significant positive effect on SME performance in Katsina State.

H1b: Proactiveness has a significant positive effect on SME performance in Katsina State.

H1c: Risk Taking has a significant positive effect on SME performance in Katsina State.

2.2.2 Dynamic Capability as a Mediating Variable

Two prior studies in Katsina established mediation as the appropriate analytical framework for explaining how firm and environment level factors translate into SME performance. Badamasi et al. (2023) found that the Entrepreneurial Ecosystem significantly mediates the relationship between business environment factors and SME performance, while Badamasi et al. (2025) identified Digital Openness as a significant mediator of the same relationship. The present study extends this mediation logic inward, positioning Dynamic Capability as an internal firm level mechanism and shifting explanatory focus toward the SME's own capacity to sense, seize, and reconfigure resources.

Drawing on Teece (2007), Dynamic Capability is conceptualised here as the firm level ability to detect emerging opportunities within the entrepreneurial disposition of the SME, mobilise resources to act on them, and adjust internal routines accordingly. Evidence from Nigeria supports this mediating role. Esator et al. (2025), studying MSMEs in Lagos State, found that dynamic capabilities encompassing sensing, seizing, reconfiguring, and threat management significantly enhanced performance. Fajimolu et al. (2025) found that Dynamic Capability partially mediated the relationship between Entrepreneurial Orientation and firm internationalisation among indigenous Nigerian firms.

International evidence reinforces the same mechanism. Abu Rumman et al. (2021) demonstrated significant mediation by Dynamic Capability in Jordanian SMEs. Abdelkareem et al. (2022) established a similar mediating role in Egyptian SMEs. Tapanainen et al. (2022), studying Vietnamese retail SMEs, found that capability-type constructs such as Adaptive Capability and Marketing Capability affected performance only indirectly, even as Entrepreneurial Orientation and Innovativeness retained significant direct effects. Kusa et al. (2021), examining Central and Eastern European economies with transitional institutional environments, found that sensing and reconfiguring dimensions produced the strongest mediating effects. Collectively, this evidence positions Dynamic Capability as the internal mechanism through which entrepreneurially oriented behaviour converts into performance outcomes (Badamsi & Saba, 2024). What remains untested is whether this mechanism holds when the three proxies of Entrepreneurial Orientation are examined individually under the specific institutional conditions of Katsina State using a validated PLS SEM approach. The following hypotheses were therefore proposed:

H2a: Dynamic Capability significantly mediates the relationship between Innovativeness and SME performance in Katsina State.

H2b: Dynamic Capability significantly mediates the relationship between Proactiveness and SME performance in Katsina State.

H2c: Dynamic Capability significantly mediates the relationship between Risk Taking and SME performance in Katsina State.

3.0 Methodology

This study adopts a quantitative, cross-sectional survey design consistent with prior research conducted in Katsina State (Badamasi et al., 2023, 2024, 2025). The design is appropriate for testing hypothesized relationships among Innovativeness, Proactiveness, Risk-Taking, Dynamic Capability, and SME performance at a single time point using Partial Least Squares Structural Equation Modelling (Hair et al., 2019; Ringle et al., 2024). The target population comprises 1,355 registered small and medium enterprises in Katsina State, drawn from the SMEDAN/NBS (2021) National MSME Survey's state-level disaggregation. This frame includes 1,256 small enterprises and 99 medium enterprises, matching the sampling frame used in earlier studies (Badamasi et al., 2023, 2025). Krejcie and Morgan's (1970) table yielded a minimum sample of 300 firms at a 95 percent confidence level, the figure was increased to 400 to accommodate non-response bias issue that very common in survey research (Hair et al., 2019). Stratified random sampling by location and firm size ensures adequate representation of SMEs across the state.

Data were collected through a structured questionnaire administered to SME owners and managers. All constructs were measured using five-point Likert scales anchored at 1 (Strongly Disagree) and 5 (Strongly Agree). In-person delivery was employed to improve response rates and clarify items where necessary. Innovativeness, Proactiveness, and Risk-Taking were measured using the established scale of Covin and Slevin (1989). Dynamic Capability items were drawn from Pavlou and El Sawy (2011) and Wilden et al. (2013). SME performance was assessed through subjective indicators of growth, market share, profitability, and efficiency, consistent with prior Katsina-based studies (Badamasi et al., 2023, 2025). All measures were adapted to reflect the operating context of SMEs in Katsina State. Common method

bias was evaluated using Harman's single-factor test alongside procedural remedies recommended by Podsakoff et al. (2003).

Content validity was established through expert review of all instrument items. A pilot study involving 30 firms tested internal consistency, with Cronbach's alpha exceeding the 0.70 threshold recommended by Nunnally (1978). For the main study, Composite Reliability, Rho-A, and Average Variance Extracted assessed reliability and convergent validity, while the Heterotrait-Monotrait ratio of correlations tested discriminant validity (Henseler et al., 2015). Data analysis followed the two-stage approach of Anderson and Gerbing (1988), implemented in SmartPLS 4. The measurement model was evaluated according to the criteria described above. The structural model was assessed through path coefficients, coefficient of determination (R^2), predictive relevance (Q^2), and effect size (f^2) as outlined by Hair et al. (2019). Bootstrapping with 5,000 resamples tested the significance of direct and indirect paths (Preacher & Hayes, 2008). The Variance Accounted For criterion determined the mediating role of Dynamic Capability in the relationship between entrepreneurial orientation dimensions and SME performance.

4.0 Results and Discussion

The empirical analysis proceeded in two sequential stages consistent with the established two-step analytical protocol for Partial Least Squares Structural Equation Modelling (PLS-SEM) as recommended by Hair et al. (2019): first, the measurement (outer) model was rigorously evaluated to confirm psychometric adequacy, and subsequently, the structural (inner) model was examined to test the hypothesised direct and mediated relationships. All analyses were performed using SmartPLS 4 (Ringle et al., 2024). Of the 400 questionnaires distributed across formally registered SMEs in Katsina State, 312 usable responses were retrieved, representing an effective response rate of 78%.

4.1 Assessment of the Measurement Model

4.1.1 Indicator Reliability, Construct Reliability, and Convergent Validity

Measurement quality was evaluated through four sequential criteria: (i) indicator (outer) loadings for individual item reliability; (ii) Cronbach's Alpha (α) and Dijkstra-Henseler's rho (ρ_a) for internal consistency reliability; (iii) Composite Reliability (ρ_c) for construct-level reliability; and (iv) Average Variance Extracted (AVE) for convergent validity. As summarised in Table 1, all indicator loadings exceeded the widely accepted threshold of 0.708 (Hair et al., 2019), confirming that each item explains more than 50% of its construct's variance. All constructs returned α , ρ_a , and ρ_c values above the minimum threshold of 0.70, and all AVE values surpassed 0.50, collectively establishing satisfactory convergent validity.

Table 1: Measurement Model – Indicator Loadings, Construct Reliability, and Convergent Validity

Construct / Indicator	Item Loading	α	ρ_a	ρ_c	AVE
Innovativeness (INN)		.826	.831	.896	.742
INN1	.854				
INN2	.868				
INN3	.862				
Proactiveness (PRO)		.804	.809	.884	.718
PRO1	.841				
PRO2	.855				
PRO3	.846				
Risk-Taking (RKT)		.788	.793	.876	.702
RKT1	.829				
RKT2	.845				
RKT3	.839				
Dynamic Capability (DC)		.912	.918	.925	.584
<i>Sensing (SEN1–SEN4)</i>	.762–.811				
<i>Seizing (SEI1–SEI4)</i>	.751–.805				
<i>Reconfiguring (REC1–REC5)</i>	.740–.798				
SME Performance (PERF)		.928	.932	.938	.556
<i>Sales Growth (SLG1–SLG3)</i>	.738–.789				
<i>Market Share (MSH1–MSH3)</i>	.722–.775				
<i>Profitability (PRF1–PRF3)</i>	.745–.802				
<i>Operational Efficiency (OPE1–OPE4)</i>	.715–.781				

Note: All item loadings > 0.708; α = Cronbach's Alpha; ρ_a = Dijkstra-Henseler's Rho; ρ_c = Composite Reliability; AVE = Average Variance Extracted. Threshold criteria: loadings > 0.708; α , ρ_a , ρ_c > 0.70; AVE > 0.50.

4.1.2 Discriminant Validity

Discriminant validity, defined as the extent to which each construct is empirically distinct from all other constructs in the model, was assessed using the Heterotrait-Monotrait (HTMT) ratio of correlations (Henseler et al., 2015), which is preferred over the traditional Fornell-Larcker criterion due to its superior sensitivity in detecting discriminant validity deficiencies. As presented in Table 2, all HTMT values fell below the conservative threshold of 0.85, with the highest observed value being 0.755 (DC-PERF), which nonetheless satisfies the criterion comfortably. These results confirm that all five constructs maintain adequate distinctiveness from one another and that the measurement model is free from problematic construct overlap.

Table 2: Discriminant Validity – Heterotrait-Monotrait (HTMT) Ratio Matrix

Construct	INN	PRO	RKT	DC	PERF
Innovativeness (INN)	–				
Proactiveness (PRO)	.612	–			
Risk-Taking (RKT)	.544	.489	–		
Dynamic Capability (DC)	.671	.634	.512	–	
SME Performance (PERF)	.705	.688	.476	.755	–

Note: HTMT values below the diagonal. Threshold: HTMT < 0.85 (conservative) or < 0.90 (liberal). All values satisfy the 0.85 criterion. A diagonal entry indicates the construct's self-correlation and is not reported.

4.2 Assessment of the Structural Model

Following satisfactory measurement model validation, the structural model was assessed to examine the predictive power and significance of the hypothesised pathways. A bias-corrected and accelerated (BCa) bootstrapping procedure with 5,000 resamples was conducted at a 95% confidence interval, as recommended by Hair et al. (2019) for robust inference in PLS-SEM.

Predictive Power (R^2): The endogenous construct Dynamic Capability achieved an R^2 of 0.524, indicating that the three Entrepreneurial Orientation proxies (Innovativeness, Proactiveness, and Risk-Taking) collectively account for 52.4% of the variance in Dynamic Capability. SME Performance achieved an R^2 of 0.641, demonstrating that the combined model explains 64.1% of total performance variance, a result classified as substantial by Hair et al. (2019).

Predictive Relevance (Q^2): Blindfolding analysis (omission distance $D = 7$) yielded Q^2 values of 0.298 for Dynamic Capability and 0.351 for SME Performance. Both values substantially exceed zero, confirming that the structural model possesses strong out-of-sample predictive relevance for both endogenous constructs, as assessed through the blindfolding procedure in SmartPLS 4 (Ringle et al., 2024).

4.2.1 Hypothesis Testing: Direct Effects (H1a–H1c)

Table 3 presents the path coefficients, bootstrapped standard errors, t-statistics, p-values, and 95% confidence intervals for the three hypothesised direct effects of EO proxies on SME Performance.

Table 3: Structural Model Results – Direct Effects

H	Path	β	M	SE	t	P	95% CI	Decision
H1a	INN → PERF	.285	.283	.069	4.120	<.001	[0.151, 0.421]	Supported
H1b	PRO → PERF	.231	.229	.063	3.654	<.001	[0.108, 0.354]	Supported
H1c	RKT → PERF	.085	.089	.074	1.142	.254	[-0.059, 0.232]	Not Supported

Note: β = standardised path coefficient; M = bootstrap sample mean; SE = standard error; t = t-statistic ($|t| > 1.96$ significant at $p < .05$; $|t| > 2.576$ at $p < .01$); 95% CI = bias-corrected and accelerated confidence interval; ns = non-significant.

H1a: Innovativeness exerts a significant and positive direct effect on SME Performance ($\beta = 0.285$, $t = 4.120$, $p < .001$, 95% CI [0.151, 0.421]), providing strong support for Hypothesis 1a.

H1b: Proactiveness similarly demonstrates a significant positive direct effect on SME Performance ($\beta = 0.231$, $t = 3.654$, $p < .001$, 95% CI [0.108, 0.354]), supporting Hypothesis 1b.

H1c: Risk-Taking does not exert a statistically significant direct effect on SME Performance ($\beta = 0.085$, $t = 1.142$, $p = .254$, 95% CI [-0.059, 0.232]). The confidence interval encompasses zero, further corroborating the absence of a direct effect. Hypothesis 1c is therefore not supported in its direct form; however, the mediating role of Dynamic Capability is evaluated in Section 4.2.2.

4.2.2 Hypothesis Testing: Mediating Effects (H2a–H2c)

Mediation was assessed following the bootstrapping-based indirect effects approach recommended by Preacher and Hayes (2008) and applied within the PLS-SEM framework by Hair et al. (2019). The Variance Accounted For (VAF) statistic was computed to classify mediation type:

$$\text{VAF} = \text{Indirect Effect} / \text{Total Effect where Total Effect} = \text{Direct Effect} + \text{Indirect Effect}$$

A VAF below 20% indicates no mediation, between 20% and 80% indicates partial mediation, and above 80% indicates full mediation (Hair et al., 2019). Table 4 summarises the mediation results.

Table 4: Structural Model Results – Mediating Effects of Dynamic Capability

H	Indirect Path	β (Ind.)	t	p	95% Boot CI	β (Direct)	β (Total)	VAF (%)	Mediation Type
H2a	INN $\rightarrow$ DC $\rightarrow$ PERF	.142	3.521	<.001	[0.063, 0.221]	.285	.427	33.25%	Partial
H2b	PRO $\rightarrow$ DC $\rightarrow$ PERF	.126	3.104	.002	[0.047, 0.205]	.231	.357	35.29%	Partial
H2c	RKT $\rightarrow$ DC $\rightarrow$ PERF	.155	3.892	<.001	[0.077, 0.233]	.085 (ns)	.240	64.58%	Partial

Note: β (Ind.) = indirect path coefficient; β (Direct) = direct path coefficient; β (Total) = total effect; VAF = Variance Accounted For; ns = non-significant direct effect; Boot CI = bias-corrected and accelerated bootstrapped confidence interval (5,000 resamples). Mediation classification follows Hair et al. (2019): VAF 20–80% = partial; VAF > 80% = full.

H2a: Dynamic Capability significantly mediates the Innovativeness-Performance relationship ($\beta_{\text{indirect}} = 0.142$, $t = 3.521$, $p < .001$, 95% CI [0.063, 0.221]). With the direct path remaining significant ($\beta = 0.285$, $p < .001$) and a VAF of 33.25%, the mediation is classified as complementary partial mediation. Hypothesis 2a is supported.

H2b: Dynamic Capability significantly mediates the Proactiveness-Performance relationship ($\beta_{\text{indirect}} = 0.126$, $t = 3.104$, $p = .002$, 95% CI [0.047, 0.205]). With the direct path retaining significance ($\beta = 0.231$, $p < .001$) and a VAF of 35.29%, complementary partial mediation is confirmed. Hypothesis 2b is supported.

H2c: Dynamic Capability significantly mediates the Risk-Taking-Performance relationship ($\beta_{\text{indirect}} = 0.155$, $t = 3.892$, $p < .001$, 95% CI [0.077, 0.233]). With a VAF of 64.58%, the mediation is classified as partial per the stated 20–80% criterion (Hair et al., 2019), notwithstanding that the direct path (RKT $\rightarrow$ PERF) is not independently significant ($\beta = 0.085$, $p = .254$). This VAF is the highest of the three proxies, indicating that a substantially larger share of the Risk-Taking effect is transmitted through Dynamic Capability than is the case for Innovativeness or Proactiveness. Hypothesis 2c is supported.

4.3 Discussion of Findings

The empirical results are interpreted below in light of extant theoretical frameworks and contextual realities of SME operations in North-Western Nigeria, with particular attention to the unique socio-economic, infrastructural, and security environment of Katsina State.

4.3.1 Direct Effects of Entrepreneurial Orientation Proxies

The direct effects results reveal that the three dimensions of Entrepreneurial Orientation influence SME performance in Katsina State through distinct pathways. Innovativeness exerts a significant positive effect on firm outcomes. Firms introducing new products or operational approaches gain measurable competitive advantages by opening revenue channels, even under severe resource constraints. This aligns with local evidence from Hamza and Usman (2025) and broader Nigerian findings by Isichei et al. (2020). Their work confirms that novelty translates into tangible gains in difficult institutional environments.

Proactiveness also contributes significantly to performance. Enterprises anticipating customer needs and acting ahead of market shifts secure early mover advantages. Covin and Slevin (1989) originally conceptualised this forward looking posture as highly strategic. The present data confirms its practical value in Nigeria. Agyapong et al. (2020) observed a related pattern in Ghana, where proactive firms outperformed reactive counterparts when this posture was supported by adequate government facilitation, underscoring that Proactiveness performance benefit is not entirely resource-independent even where it holds.

Risk taking presents a different reality. Its direct effect on performance is not statistically significant. Katsina State features a highly hostile operating environment marked by infrastructural deficits, currency volatility, and acute security challenges. Committing financial resources amid such extreme uncertainty rarely generates independent performance gains. Without internal structural buffers, unbuffered risk taking simply depletes capital. Isichei et al. (2020) and Agyapong et al. (2020) reached comparable conclusions across sub-Saharan Africa. They found that risk taking fails to directly enhance performance without supportive moderating resources. The subsequent mediation analysis demonstrates how this orientation retains strategic relevance when channelled through Dynamic Capability routines.

4.3.2 Mediating Role of Dynamic Capabilities

The empirical confirmation of the mediation hypotheses establishes dynamic capabilities as the essential mechanism translating entrepreneurial orientations into firm performance within volatile environments. Innovativeness and proactiveness yield direct performance benefits, yet their impact amplifies significantly when channelled through sensing, seizing, and reconfiguring routines. Sensing identifies viable innovations, seizing mobilises capital, and reconfiguring sustains revenue gains. This partial mediation indicates these orientations operate through both direct behavioural and indirect structural channels, extending the framework proposed by Teece (2007) into the northwestern Nigerian context.

The pronounced mediation observed for risk taking, classified as partial under the VAF criterion but with a VAF (64.58%) markedly higher than that of Innovativeness or Proactiveness, represents a central theoretical contribution. Most of the total effect of risk taking on performance transmits through dynamic capabilities, and the direct path is not independently significant. Raw risk taking is a necessary but insufficient condition for success. The impulse to commit resources under uncertainty requires structural intermediation. Sensing grounds decisions in market intelligence, seizing sequences resource commitments, and reconfiguring provides the agility to contain losses. Dynamic capability therefore bridges the gap between entrepreneurial willingness and firm survival.

Tapanainen et al. (2022) did not test Dynamic Capability as a mediator of a Risk-Taking-Performance relationship specifically; in their Vietnamese retail-SME sample, Entrepreneurial Orientation and Innovativeness carried significant direct effects on performance, while capability-type constructs such as Adaptive Capability and Marketing Capability operated only indirectly. The present finding for Risk-Taking runs in the opposite direction from that pattern: where the Vietnamese retail SMEs in that study appear able to convert entrepreneurial disposition into performance with comparatively less dependence on capability-mediation, Risk-Taking in Katsina State shows almost no independent direct effect and is transmitted overwhelmingly through Dynamic Capability. That divergence plausibly reflects

institutional differences. Vietnam's comparatively more developed retail infrastructure and formal business environment may allow entrepreneurial orientation to translate into performance with less reliance on internal capability-building, whereas Katsina State's severe infrastructural deficits and security disruptions make unmediated risk taking unlikely to succeed without such intermediation. The present results suggest that the mediating role of dynamic capability is especially pronounced for Risk-Taking under these conditions of institutional hostility.

This research addresses a specific empirical gap regarding Katsina State. Badamasi et al. (2023) demonstrated that external ecosystem factors shape performance, while Badamasi et al. (2025) established digital openness as a mediating mechanism. The present study proves internal operational routines are equally vital. Collectively, these studies form a comprehensive programme covering the external, digital, and internal dimensions of enterprise performance in the region.

5.0 Conclusion, Recommendations, and Limitations

5.1 Conclusion

This study examined the mediating role of Dynamic Capabilities in the relationship between three Entrepreneurial Orientation proxies (Innovativeness, Proactiveness, and Risk-Taking) and SME performance within the North-Western Nigerian context of Katsina State. Drawing on a sample of 312 formally registered SMEs and employing PLS-SEM via SmartPLS 4, the study arrives at three principal empirical conclusions.

First, both Innovativeness and Proactiveness directly and positively enhance SME performance, whereas Risk-Taking, in isolation, does not generate a statistically significant direct performance benefit within the high-hostility operating environment of Katsina State.

Second, Dynamic Capabilities, encompassing Sensing, Seizing, and Reconfiguring sub-routines, partially mediate the performance impacts of both Innovativeness and Proactiveness, amplifying their direct effects through complementary structural mechanisms.

Third, Dynamic Capabilities substantially mediate the relationship between Risk-Taking and SME Performance, accounting for a markedly higher share of the total effect ($VAF = 64.58\%$) than for Innovativeness or Proactiveness, confirming that entrepreneurial willingness to accept strategic uncertainty depends heavily on being channelled through and transformed by well-developed internal operational routines. These findings advance the theoretical understanding of EO-performance dynamics in Sub-Saharan African developing economies and carry direct practical implications for SME practitioners and policymakers in comparable contexts.

5.2 Recommendations

SME managers in Katsina State should move away from intuition driven resource commitments and instead institutionalise structured market sensing protocols. Analysing customer trends and competitor behaviour before making significant risk decisions anchors entrepreneurial action in evidence and prevents capital erosion. Firms must also build reconfiguring capacity. Developing flexible workflows allows rapid shifts in product lines or service delivery models when security or economic disruptions occur.

Enterprise development agencies such as SMEDAN should reorient their support architectures. Moving beyond direct cash disbursement toward structured capacity building in dynamic business planning and environmental scanning will foster enduring sustainability. These agencies should also embed internal capability assessments into eligibility criteria for government support programmes. Rewarding firms that invest in operational resilience creates incentives for broader sector development.

5.3 Theoretical and Methodological Contributions

Theoretically, this research extends the Resource Based View and Dynamic Capabilities Theory into an under researched West African context. Demonstrating that internal capability mechanisms operate effectively in highly informal settings challenges the assumption that these frameworks only apply to resource abundant firms in advanced economies. Methodologically, the study validates established dynamic capabilities measurement scales within the Northwestern Nigerian environment for the first time. Satisfactory reliability metrics confirm their cross contextual applicability. This work also builds on previous regional studies addressing SME performance in Katsina State, extending the covered mechanisms toward internal dynamic capabilities alongside the external and digital mechanisms examined elsewhere in that research programme, subject to verification of the cited prior studies noted in the references.

5.4 Limitations and Directions for Future Research

The reliance on a survey design conducted at a single point in time restricts the ability to draw definitive causal inferences about capability development or performance changes. Capturing data once provides only a static snapshot of firm behaviour. Future investigations would benefit from longitudinal panel designs. Tracking the evolution of dynamic capabilities across multiple periods would clarify how these routines adapt during distinct economic or security cycles.

Geographical boundaries also shape the interpretation of these results. The sampling frame was deliberately restricted to formally registered enterprises in Katsina State to ensure contextual depth. This focus inherently limits generalisability to the wider North West geopolitical zone. Subsequent studies should expand data collection across all seven states in the region. Researchers could then apply multiple group analyses across different institutional contexts and industrial sectors to determine whether the theoretical model holds under varying regional conditions.

Measurement of firm performance presents a final limitation. The study relied on managerial perceptual measures. Such instruments remain standard practice when audited financial records are inaccessible. They are nonetheless vulnerable to common method bias and social desirability effects. Future research should attempt to triangulate survey responses with objective financial data. Incorporating verified accounting records or regulatory filings would strengthen construct validity and provide a more rigorous assessment of actual performance outcomes.

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