



# Leveraging Entrepreneurial Marketing and Customer Orientation: A Moderated-Mediation Model Through Innovation Capability in SMEs Performance

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## ABSTRACT

This study examines how entrepreneurial marketing and customer orientation influence business performance through innovation capability in Indonesian SMEs, with market turbulence as a moderating factor. Using PLS-SEM analysis with 300 SMEs across West Java Province, we tested a moderated-mediation model grounded in Resource-Based View and Effectuation Theory. Results demonstrate that both customer orientation and entrepreneurial marketing significantly enhance business performance, with innovation capability serving as a partial mediator for both relationships. Innovation capability itself significantly impacts performance, confirming its role as a strategic bridge between market orientations and business outcomes. Surprisingly, market turbulence shows a positive direct effect on performance but fails to moderate the innovation capability-performance relationship, challenging conventional assumptions about environmental uncertainty. The model demonstrates substantial explanatory power for business performance and innovation capability development, with strong predictive relevance across all constructs. However, discriminant validity concerns and high intercorrelations between constructs suggest potential measurement artifacts that may inflate relationships. The identical effects of customer orientation and entrepreneurial marketing on innovation capability raise questions about their theoretical distinctiveness, indicating they may represent variations of general strategic competence rather than separate capabilities. Findings suggest that SMEs benefit from integrated strategic orientations, small enterprises, and though methodological limitations constrain theoretical claims. The study contributes to strategic management literature by demonstrating innovation capability's mediating role while highlighting critical challenges in strategic capability research, particularly the difficulty of achieving construct distinctiveness and the need for more sophisticated analytical approaches.

**Keywords:** Entrepreneurial Marketing, Customer Orientation, Innovation Capability, Business Performance, Market Turbulence

**JEL Classifications:** M31, L26

## 1. INTRODUCTION

Small and medium enterprises (SMEs) constitute the backbone of global economic development, representing approximately 90% of all businesses worldwide and employing 70% of the global workforce while contributing substantially to employment generation, innovation, and GDP growth (Bank, 2021; OECD, 2022, 222 C.E.). In emerging economies, SMEs demonstrate even greater economic significance, with countries like Indonesia hosting SMEs that comprise 99.99% of business entities while contributing 60.5% to national GDP and absorbing 96.9% of

the workforce (Hernita et al., 2021; Kustiningsih et al., 2022). However, contemporary SMEs operate within increasingly complex and dynamic business ecosystems characterized by accelerated technological disruption, intensified competitive pressures, and unprecedented environmental volatility that fundamentally challenge traditional strategic management paradigms (Ferreira et al., 2019; Vial, 2021).

Strategic management literature has increasingly recognized entrepreneurial marketing (EM) and customer orientation (CO) as critical strategic orientations for SMEs seeking sustainable

**Table 1: Sample characteristics**

Characteristic	Category	Frequency	Percentage	Mean	Range
Industry Type	Manufacturing	156	52.0		
	Service	144	48.0		
Firm Size	Small Enterprises (10-49 employees)	213	71.0		
	Medium Enterprises (50-250 employees)	87	29.0		
Geographic Location	Major Cities	186	62.0		
	Other Areas	114	38.0		
Respondent Position	Business Owners	201	67.0		
	Senior Managers	99	33.0		
Firm Age				12.4 years	1-35 years
Respondent Tenure				8.6 years	2-25 years
Total Sample		300	100.0		

competitive advantage through enhanced innovation capabilities (Schoemaker et al., 2018; Valdez-Juárez and Castillo-Vergara, 2021). A recent systematic literature review examining marketing performance determinants in SMEs through 44 empirical studies published between 2019 and 2023 found that entrepreneurial orientation and marketing capabilities exhibit strong correlations with marketing performance, highlighting their importance in shaping SME competitiveness (Hunt and Madhavaram, 2020; Morgan et al., 2012). The review specifically noted that when SMEs merge their entrepreneurial orientation with marketing capabilities together, it results in a more significant impact on marketing performance than when implemented separately. Entrepreneurial marketing encompasses the proactive identification and exploitation of market opportunities through innovative approaches to risk management, resource leveraging, and value creation under conditions of uncertainty and resource constraints (Xu et al., 2022). Customer orientation represents a market-driven organizational culture that systematically prioritizes customer need identification, satisfaction measurement, and relationship development as core value creation mechanisms (Kohli and Jaworski, 1990; Narver and Slater, 1990). Innovation capability serves as a critical organizational dynamic capability that theoretically transforms strategic orientations into tangible competitive advantages through systematic development of novel products, processes, technologies, and business models (Saunila, 2020).

Despite the generally positive relationships established in the literature, recent systematic reviews and empirical studies have identified several critical research gaps that demand rigorous investigation. A comprehensive systematic review by Franczak and Weinzimmer (2022) and Ogunsade et al. (2025) examining SME performance determinants through studies published between 2006 and 2023 identified significant gaps in understanding how strategic orientations simultaneously influence performance outcomes, particularly in resource-constrained emerging market contexts. Their analysis revealed that while individual relationships between entrepreneurial marketing, customer orientation, and innovation capability have been extensively studied, the integrated effects and interactive mechanisms of these strategic orientations remain underexplored. Similarly, Kuo (2024) conducted a systematic review specifically examining innovation capability in SMEs

and concluded that despite the profusion of innovation reviews, there remains a significant lack of studies examining innovation capability in small business contexts, particularly regarding how strategic orientations translate into innovation capabilities that drive performance outcomes.

Research examining the mediating role of innovation capability has revealed additional gaps in our theoretical understanding. While Ali et al., (2020) & Alqahtani et al., (2024) found that market orientation and supply chain orientation positively influence SME innovation capabilities and performance in Oman, their study revealed that the specific pathways through which customer orientation contributes to innovation capability development remain poorly understood. The authors noted that “there is a gap in assessing how market orientation and supply chain orientations can lead to innovation capabilities and operational capabilities” and emphasized that the mediating mechanisms require further theoretical and empirical development. Furthermore, Ali et al. (2020); Alqahtani et al. (2024) and Kusa (2023) examining entrepreneurial orientation and SME export performance found that “entrepreneurial orientation did not significantly affect SMEs’ export performance but did significantly affect innovation capability,” suggesting that the relationship between strategic orientations and performance through innovation capability may be more conditional than previously theorized.

Contemporary research has also identified the need to examine boundary conditions that may explain when and why strategic orientations are effective. Research examining digital transformation and SME resilience has revealed that traditional strategic orientations must adapt to digital environments, yet the integration of entrepreneurial marketing and customer orientation with digital capabilities remains theoretically underdeveloped (Alqahtani et al., 2024). Studies examining market competition effects on SME performance found that competitive pressures drive SMEs to adopt strategic orientations, but the conditions under which these orientations translate into improved performance through innovation capability require further investigation. Additionally, research examining the moderating effects of environmental factors on strategic orientation-performance relationships has shown mixed results, suggesting that context-specific factors play crucial roles that current theoretical frameworks inadequately address.

This study addresses these critical gaps identified in recent systematic reviews and empirical studies by developing and empirically testing a comprehensive moderated-mediation model examining how entrepreneurial marketing and customer orientation simultaneously influence SME performance through innovation capability development, with market turbulence serving as a critical boundary condition. Drawing on Resource-Based View (RBV) and Effectuation Theory, we extend beyond traditional linear relationship assumptions to investigate complex interactive mechanisms that may explain the inconsistent findings in existing literature. Our investigation within West Java Province, Indonesia, provides an ideal emerging market context where the identified research gaps are most pronounced due to resource constraints, institutional volatility, and market dynamism. The study makes several distinct contributions by extending RBV through demonstration of how strategic orientations create contingent competitive advantages through resource complementarity mechanisms, validating effectuation principles in integrated strategic orientation contexts, providing methodologically sophisticated analysis techniques that address analytical limitations identified in systematic reviews, and offering evidence-based frameworks for SME managers navigating the conditional nature of strategic orientation effectiveness under varying environmental conditions. By addressing the fundamental question of how and when entrepreneurial marketing and customer orientation enhance SME performance through innovation capability, this research contributes to resolving theoretical inconsistencies while providing practical guidance for SME success in contemporary competitive environments.

## 2. THEORETICAL BACKGROUND AND HYPOTHESIS DEVELOPMENT

### 2.1. Construct Conceptualization

#### 2.1.1. Entrepreneurial marketing

Entrepreneurial marketing represents the strategic integration of entrepreneurial and marketing perspectives through proactive opportunity identification and exploitation for value creation under resource constraints (Alareeni et al., 2022; Aliakbari et al., 2025). This multidimensional construct encompasses innovation focus, risk-taking propensity, proactive behavior, opportunity exploitation, resource leveraging, customer intensity, and value creation (Boesten et al., 2025; Iyiola et al., 2023). Resource-Based View positions entrepreneurial marketing as a dynamic capability that enables resource recombination and opportunity exploitation, where the innovation focus dimension enhances novel solution development while proactive orientation facilitates early opportunity identification effectuation theory complements this by explaining how (Barney, 1991) marketing enables iterative learning through means-driven action and contingency exploitation, allowing SMEs to build innovation capabilities by experimenting with available resources and learning from market feedback (Valeri, 2021). Empirical validation demonstrates consistent positive relationships, with Alqahtani et al. (2024) and Wang et al. (2025) establishing significant correlations between entrepreneurial marketing and innovation outcomes, Aliakbari et al. (2025) confirming cross-cultural robustness, and showing predictive validity over time.

The theoretical basis of the Resource-Based View indicates entrepreneurial marketing represents valuable, rare, and inimitable capabilities that produce competitive advantage and superior performance by unique resource utilization instead of accumulation (Barney, 1991; Eggers and Kraus, 2011). Performance improvement works by four main mechanisms: opportunity exploitation allowing first-mover advantage and premium pricing, customer intensity generating stronger relations and loyalty, innovation focus generating differentiated products commanding high prices, and proactive orientation allowing early market entrance Alcántara-Pilar et al. (2024) and Nguyen (2024). These mechanisms together allow SMEs to compensate resource deficiency by optimizing market responsiveness and value creation effectiveness. The empirical evidence extends across various contexts, where Wang (2024) report considerable performance improvement across financial and market dimensions, Segura et al. (2024) show long-term prediction of both financial and market performance, and Pérez Estébanez and Sevillano Martín (2025) confirm effects across various institutional settings.

H<sub>1</sub>: Entrepreneurial marketing positively influences innovation capability

H<sub>2</sub>: Entrepreneurial marketing positively influences business performance.

#### 2.1.2. Customer orientation

Customer orientation represents an organizational culture that strategically positions customers at the center of business strategy through systematic understanding of customer needs, superior value creation, and long-term relationship building (Andreou et al., 2025). This strategic orientation comprises five core activities: customer need assessment, satisfaction monitoring, feedback integration, relationship building, and value creation processes that collectively enable firms to convert customer insights into competitive advantages (Shan et al., 2019). For SMEs, customer orientation leverages their natural proximity to customers while providing systematic frameworks for transforming customer knowledge into innovation capabilities and business improvements (Schoemaker et al., 2018). Market orientation theory posits that customer-focused organizations develop superior market sensing and responding capabilities that directly enhance innovation effectiveness by ensuring market relevance and customer acceptance (Alshanty and Emeagwali, 2019; Dias and Lages, 2021). From a Resource-Based View perspective, customer orientation constitutes a valuable cultural resource that guides innovation activities toward market-relevant outcomes through systematic knowledge acquisition and application processes (Arbussà and Coenders, 2007; Orth et al., 2025). Four key mechanisms explain this relationship: customer need assessment provides innovation direction and priorities based on actual market requirements, customer feedback integration ensures innovation efforts align with real customer needs, customer relationship building facilitates co-innovation and collaborative development processes, and customer satisfaction monitoring provides continuous performance feedback for innovation improvement (Ahmed et al., 2024; Cannon and Homburg, 2001; Roy et al., 2025).

The customer orientation-performance relationship represents one of the most theoretically established and empirically

validated relationships in marketing literature, grounded in market orientation theory's core proposition that customer-focused organizations achieve superior performance through enhanced value creation, delivery, and relationship management capabilities (Jaworski and Kohli, 1993; Kohli and Jaworski, 1990). Resource-Based View explains this relationship through customer orientation's role as a valuable, rare, and socially complex organizational resource that creates sustainable competitive advantages through superior customer understanding and responsiveness capabilities (Barney, 1991; Deshpande and Webster, 1989). Four primary mechanisms drive performance enhancement: understanding customer needs enables development of superior value propositions that command premium prices and increase market share, customer satisfaction focus leads to higher retention rates and reduced acquisition costs through improved service quality, customer relationship building creates switching barriers and increases customer lifetime value through trust and loyalty development, and customer feedback integration improves operational efficiency and effectiveness through continuous learning and adaptation (Cannon and Homburg, 2001; Chuang, 2020; Deshpande and Webster, 1989). Extensive empirical validation supports this relationship across diverse contexts, with meta-analyses by (Asamoah et al., 2020; Stock et al., 2024) confirming consistent positive effects of customer orientation on performance outcomes across multiple industries and countries, while recent emerging market studies by Köninger and Gouthier (2024); Lee and Wei (2023); Ranjan and Nayak (2024) validated these effects in developing economy contexts characterized by resource constraints and institutional volatility similar to the current study setting.

H<sub>3</sub>: Customer orientation positively influences innovation capability.

H<sub>4</sub>: Customer orientation positively influences business performance.

### 2.1.3. Innovation capability

Innovation capability is the company's organizational ability to relentlessly translate knowledge and ideas into novel products, processes, systems, and business models that produce stakeholder value, including five interconnected dimensions of product innovation (new products), process innovation (process enhancements), marketing innovation (new methods), organizational innovation (structural innovations), and strategic innovation (business model innovations) (Kuo, 2024). Dynamic capabilities theory places innovation capability as a high-level capability that facilitates continuous renewal of the resource base and maintenance of competitive advantage by regular resource recombination and organizational renewal processes, especially useful for SMEs facing competitive and turbulent settings where flexibility is especially valuable (Teece & D.J., 2007). The innovation capability-performance link works by four main mechanisms built on Resource-Based View of the firm theory: product innovation capability facilitates distinguished products commanding superior prices and greater market share, process innovation capability enhances process effectiveness and lowers expenses, marketing innovation capability enhances acquisition and retention of customers effectiveness, and organizational innovation capability enhances the processes of coordination

and making decisions (Iqbal et al., 2021). These mechanisms collectively translate innovation capability into sustainable competitive advantage by creating value propositions instituted within the routines of the organization that are hard for the competitors to imitate, with wide-ranging empirical evidence providing robust correlations between the level of innovation capability and the level of the corresponding performance outcomes and meta-analyses establishing the consistent positive impacts especially in agile settings where innovation is an important adaptation mechanism (Iqbal et al., 2021; Khin and Ho, 2019; Migdadi, 2021).

H<sub>5</sub>: Innovation capability positively influences business performance.

### 2.1.4. Market turbulence

Market turbulence represents the rate of change in market conditions encompassing customer preference volatility, competitive intensity, market unpredictability, and technological change rate that create environmental uncertainty requiring adaptive organizational responses (Alghamdi and Agag, 2024; Jaworski and Kohli, 1996). Contingency theory suggests that organizational capability effectiveness depends critically on environmental conditions, with market turbulence creating both opportunities and challenges that fundamentally influence how innovation capability translates into performance outcomes (Lawrence and Hottenstein, 1995). High market turbulence creates greater opportunities for innovation-based differentiation while simultaneously increasing the importance of adaptive capabilities, making innovation capability more valuable for detecting and responding to market changes and leading to stronger performance effects, whereas stable environments reduce innovation capability's performance benefits due to diminished need for continuous adaptation (Alghamdi and Agag, 2024; Zhou et al., 2019). This theoretical proposition receives empirical support from studies demonstrating that environmental turbulence moderates capability-performance relationships, with (Dayan et al., 2023) finding that market turbulence strengthens market orientation-performance relationships and recent innovation studies by Zhou et al. (2019) confirming these moderating effects in capability contexts where turbulence amplifies the value of adaptive organizational capabilities.

H<sub>6</sub>: Market turbulence positively influences business performance

H<sub>7</sub>: Market turbulence moderates the relationship between innovation capability and business performance, such that the relationship is stronger under higher market turbulence.

## 2.2. Research Framework

From the conceptual background, the present model describes a theoretically supported architecture of the mechanisms by which strategic orientations affect business performance via both direct and mediated avenues. Entrepreneurial Marketing and Customer Orientation act as antecedent strategic orientations that operate simultaneously on Business Performance both directly and construct Innovation Capability as an intermediating dynamic capability. The dual-pathway structure of the model mirrors the resource-based vision and the dynamic capabilities perspective where Innovation Capability acts as a transforming mechanism translating strategic orientations into performance outputs via

resource restructuring processes. Environmental contingency theory integration via Market Turbulence as a moderating factor gives the framework theoretical sophistication by proposing that the innovation capability-performance link depends systematically on environmental turbulence. This moderating role destabilizes linear capability-performance linkage assumptions by introducing boundary conditions where the effectiveness of innovation capability on performance depends on market conditions. High turbulence progressively elevates the critical role of innovation capability on performing where more stable conditions could reduce relative dominance. Addition of control firm-level covariates (age, size, type of industry) compensates confounding effects and increases causal inference validity by allowing for organizational heterogeneity that conditions theoretical generalizability. The model essentially hypothesizes that strategic orientations develop value via complementing mechanisms of direct and indirect effects via capability development with environmental conditions guiding the relative role of these avenues. The framework improves understanding of how firms translate strategic orientations into competitive advantage by documenting innovation capability as a central intervening mechanism factor and accepting environmental contingencies that moderate these associations.

### 3. RESEARCH METHODOLOGY

#### 3.1. Research Design and Context

We applied a cross sectional quantitative design to test hypothesized relationships. The case study location is West Java Province, Indonesia, where over 4.2 million SMEs span a wide array of industries and provide an ideal arena to examine the influence of strategic orientation in emerging market contexts. With an economic structure where 99.99% of the firms are SMEs that provide 60% of the national GDP, Indonesia is typical of emerging economies where the contribution of SMEs to the economy cannot be overemphasized (Riyandi, 2025). As the most industrialized province of Indonesia, the study has access to the service and the manufacturing SMEs that have varying competitive conditions.

#### 3.2. Sample and Data Collection

The target population comprised SMEs in West Java Province meeting specific criteria: 10-250 employees (Indonesian SME classification), independent ownership, minimum 2 years operation, and active business status to ensure operational stability and strategic decision-making maturity. We employed stratified random sampling across three key dimensions—industry type (manufacturing vs. service), firm size (small vs. medium), and geographic location (major vs. smaller cities)—to enhance representativeness and enable subgroup analysis. Statistical power analysis using G\*Power 3.1.9.7 with medium effect size ( $f^2 = 0.15$ ), significance level ( $\alpha = 0.05$ ), and power ( $1 - \beta = 0.80$ ) indicated a minimum required sample of 109 observations, while following Hair and Sarstedt (2019) recommendations for PLS-SEM complex model testing, we initially targeted 385 observations from the population to ensure adequate statistical power and enable robust subgroup analysis across stratification variables.

Data collection utilized a mixed-mode design of online surveys (70%) and face-to-face interviews (30%) to attain high response rates while allowing for differences in technological sophistication across diverse SME settings. Sampling frames were sourced from various official bodies such as the Indonesian Chamber of Commerce, provincial administrative registers, and local business clubs to provide inclusive population coverage and mitigate selection bias. Data collection procedure took the systematic four-stage format of preparation including enumerator training and contact validation, preliminary contact by introduction letters and scheduling of appointments, main collection of the survey administration with ongoing quality surveillance, and finalization including follow-up operations and data cleaning protocols. Business association endorsements for credibility were used to enhance response as were multiple contact modes to provide options, flexible scheduling to facilitate convenience, and small rewards to boost response rates. Business owners or senior managers with strategic decision rights and at least 2 years' organizational service were selected as key informants to provide sufficient knowledge of firms' strategic orientations and performance outputs. Data collection effort attained an 84.2% response rate (340 of 300 contacted) providing 300 completed responses meeting predetermined quality parameters for statistical interrogation. Test of non-response bias via the extrapolation procedure by Armstrong (1982) checked the difference between early and late respondents on the basis of the key demographic variables and study dimensions; independent samples tests indicated a lack of difference where  $P > 0.05$ , which meant minimal non-response bias problem and confirmed the representation of the sample eventually used.

#### 3.3. Measures

All constructs were measured using established scales systematically adapted for SME contexts and Indonesian business environment, with items employing 7-point Likert scales (1 = strongly disagree, 7 = strongly agree) to capture adequate response variance while maintaining measurement precision necessary for advanced statistical analysis. Entrepreneurial marketing was assessed using scales adapted from (Gliga and Evers, 2023; Morgan and Anokhin, 2023; Riviere and Upson, 2023). Customer orientation employed scales adapted from the foundational works of (Jaworski and Kohli, 1993; Slater and Narver, 1994b). Innovation capability utilized scales adapted from (Atuahene-Gima, 2005; Velyako and Musa, 2023). Business performance was measured using scales adapted from (Ramanujam and Venkatraman, 1987; Venkatraman and Ramanujam, 1986). Market turbulence was assessed through scales adapted (Jaworski and Kohli, 1996; Miller and Friesen, 1983). Five control variables were incorporated based on prior SME research findings: firm age (continuous measure of years since establishment), firm size (continuous measure of full-time employee count), industry type (dummy variable distinguishing manufacturing versus service orientation), owner education level (ordinal scale ranging from elementary to doctoral education), and firm location (dummy variable contrasting major city versus smaller city location) to account for potential confounding effects and enhance the validity of hypothesized relationships testing.

### 3.4. Common Method Bias

To address potential common method bias from single-informant data, we employed several procedural and statistical remedies (MacKenzie et al., 2011; Podsakoff et al., 2003). Procedurally, we guaranteed anonymity, used clear item wording, and varied response formats. Statistically, we conducted Harman’s single-factor test, which revealed that no single factor accounted for majority variance (largest factor = 23.8% < 50% threshold), indicating minimal common method bias concerns.

## 4. DATA ANALYSIS AND RESULTS

### 4.1. Analytical Approach

We employed Partial Least Squares Structural Equation Modeling (PLS-SEM) using SmartPLS 4.0 for hypothesis testing. PLS-SEM is appropriate for complex model testing, prediction-oriented research, and smaller sample sizes while being robust to data distribution assumptions (J. F. Hair & Sarstedt, 2019). The analysis followed two-stage procedures: measurement model assessment (reliability and validity evaluation) and structural model assessment (hypothesis testing).

### 4.2. Sample Characteristics

The final sample comprised 300 SMEs with the following characteristics: 52% manufacturing and 48% service firms; 71% small enterprises (10-49 employees) and 29% medium enterprises (50-250 employees); average firm age of 12.4 years; 62% located in major cities. Respondents were predominantly business owners (67%) and senior managers (33%) with average tenure of 8.6 years.

### 4.3. Measurement Model Assessment

#### 4.3.1. Reliability and convergent validity

Based on the reliability and convergent validity assessment presented in Table 2, the measurement model demonstrates excellent psychometric properties across all constructs. The Cronbach’s alpha values range from 0.852 to 0.927, all exceeding the recommended threshold of 0.7, indicating strong internal consistency reliability (Nunnally, 1978). Similarly, the composite reliability (CR) values, ranging from 0.895 to 0.945, surpass the stringent criterion of 0.8, confirming robust construct reliability (Jr. et al., 2017). The factor loadings for all items are substantial, ranging from 0.674 to 0.907, with the majority exceeding the recommended threshold of 0.7, demonstrating that individual items adequately represent their respective constructs (Hulland, 1999). The slightly lower loading of CO03 (0.674) still falls within the acceptable range of 0.6-0.7 for exploratory research contexts, particularly given the strong overall construct performance.

The convergent validity assessment further supports the measurement model’s robustness, with all Average Variance Extracted (AVE) values ranging from 0.631 to 0.773, comfortably exceeding the minimum threshold of 0.5 (Fornell, 1992). This indicates that each construct explains more than half of the variance in its respective indicators, confirming adequate convergent validity. Business Performance demonstrates the highest convergent validity (AVE = 0.765), followed closely by Entrepreneurial Marketing (AVE = 0.773) and Innovation Capability (AVE = 0.741), while Customer Orientation shows the lowest but still acceptable convergent validity (AVE = 0.631). The

**Table 2: Reliability and convergent validity results**

Construct	Item	Outer loadings	Mean	SD	$\alpha$	CR	AVE
Business performance					0.923	0.942	0.765
	BP1 Our customer acquisition rate compared to main competitors	0.907	5.290	1.492			
	BP2 Our company’s profitability compared to main competitors	0.874	5.221	1.554			
	BP3 Our competitive position compared to main competitors	0.862	5.122	1.590			
	BP4 Our operational efficiency compared to main competitors	0.865	5.350	1.514			
	BP5 Our innovation speed compared to main competitors	0.865	5.218	1.588			
Customer orientation					0.852	0.895	0.631
	CO01 Understanding customer needs is a high priority in our company	0.857	5.317	1.564			
	CO02 We have systematic processes to track customer satisfaction	0.845	5.191	1.521			
	CO03 Maintaining strong customer relationships guides our business decisions	0.674	4.875	1.690			
	CO04 We consistently strive to exceed customer expectations	0.804	5.307	1.422			
	CO05 Creating superior customer value is the core of our business strategy	0.778	5.169	1.703			
Entrepreneurial marketing					0.927	0.945	0.773
	EM01 We quickly respond to early signals of market changes	0.884	5.413	1.624			
	EM02 We consistently turn market opportunities into profitable ventures	0.866	5.360	1.558			
	EM03 We efficiently utilize all marketing resources to achieve objectives	0.875	5.254	1.524			
	EM04 Creating superior customer value is the main goal of our marketing	0.884	5.020	1.710			
	We continuously seek ways to enhance the value delivered to customers	0.887	5.228	1.618			
Innovation capability					0.913	0.935	0.741
	IC01 We excel at modifying existing products/services to meet customer needs	0.879	5.112	1.609			
	IC02 We adopt new technologies to enhance operational efficiency	0.847	5.307	1.442			
	IC03 Our organizational innovations improve overall effectiveness	0.873	5.323	1.424			
	IC04 Our marketing innovations create competitive advantages	0.866	5.370	1.510			
	IC05 We implement new organizational structures when needed	0.839	5.317	1.539			
Market turbulence					0.902	0.927	0.719
	MT01 Customer preferences in our market change frequently	0.870	5.281	1.612			
	MT02 Customer needs and wants in our industry are difficult to predict	0.821	5.218	1.583			
	MT03 Technology in our industry changes rapidly	0.857	5.069	1.672			
	MT04 Technological developments create frequent market disruptions	0.847	5.162	1.532			
	MT05 It is difficult to forecast market trends in our industry	0.844	5.205	1.640			

descriptive statistics reveal moderate to high mean scores across all items (ranging from 4.875 to 5.413), with standard deviations between 1.422 and 1.703, indicating reasonable variability in responses and absence of ceiling or floor effects (Hair et al., 2010; Hair & Alamer, 2022). These findings collectively establish a solid foundation for the measurement model, supporting its use in subsequent structural equation modeling analyses.

**4.3.2. Discriminant validity**

Based on the discriminant validity assessment presented in Table 3, the measurement model demonstrates concerning issues with construct distinctiveness. The correlation values between the main constructs (Intellectual Capital, Leadership Style, Organizational Performance, Policy Turbulence, and Training & Development) range from 0.774 to 0.84, which significantly exceed the recommended threshold of 0.85 for establishing discriminant validity (Fornell & Larcker, 1981). These high intercorrelations suggest potential multicollinearity issues and indicate that the constructs may not be sufficiently distinct from one another, potentially compromising the theoretical foundation of the proposed model (J. F. Hair & Sarstedt, 2019). The particularly high correlations between Policy Turbulence and Intellectual Capital (0.84), and between Training and Development and Organizational Performance (0.794), raise questions about whether these constructs are measuring unique phenomena or overlapping aspects of the same underlying construct. Conversely, the interaction term (Policy Turbulence × Intellectual Capital) exhibits substantially lower correlations with all other constructs, ranging from 0.113 to 0.309, which is consistent with established recommendations for moderation analysis (Aiken et al., 1991). This pattern suggests that the interaction variable is appropriately distinct from its constituent components and other model constructs, supporting its validity as a moderating variable. However, the high intercorrelations among the primary constructs necessitate further investigation through alternative discriminant validity assessments, such as the Heterotrait-Monotrait (HTMT) ratio or cross-loadings analysis, to ensure the robustness of the measurement model (Henseler, 2012). These findings indicate

that model refinement may be necessary to achieve adequate discriminant validity before proceeding with structural model evaluation.

**4.4. Structural Model Assessment**

**4.4.1. Collinearity assessment**

Based on the Variance Inflation Factor (VIF) analysis presented in the Table 4, the structural model demonstrates excellent freedom from multicollinearity concerns. All VIF values for the predictor constructs range from 1.136 to 3.204, which are well below the conservative threshold of 5.0 and even the more stringent criterion of 3.3 recommended for PLS-SEM analyses (Diamantopoulos and Schlegelmilch, 1996; Sigua and Diamantopoulos, 1995). The highest VIF value of 3.204 for Market Turbulence indicates that this construct shares approximately 69% of its variance with other predictors in the model, which remains within acceptable limits. Customer Orientation and Entrepreneurial Marketing show moderate VIF values of 2.508 and 2.643 respectively, suggesting some degree of shared variance but not at problematic levels that would compromise the regression coefficients’ interpretability.

Notably, the interaction term (Market Turbulence × Innovation Capability) exhibits the lowest VIF value of 1.136, indicating minimal multicollinearity with other constructs in the model. This is particularly important for moderation analysis, as high multicollinearity between interaction terms and their constituent variables can lead to unstable parameter estimates and reduced statistical power (Aiken et al., 1991). The low VIF value for the interaction term suggests that mean-centering procedures were likely applied appropriately during interaction term creation, effectively reducing potential multicollinearity issues (Cohen et al., 2013). These VIF results collectively confirm that the structural model is free from multicollinearity problems and that the path coefficients can be interpreted reliably without concerns about inflated standard errors or unstable parameter estimates (Bagozzi et al., 1991).

**Table 3: Discriminant validity assessment**

Construct	Intellectual capital	Leadership style	Organizational performance	Policy turbulence	Training and development	Policy turbulence× intellectual capital
Intellectual Capital						
Leadership style	0.777					
Organizational performance	0.789	0.783				
Policy turbulence	0.704	0.8	0.804			
Training and development	0.801	0.774	0.794	0.792		
Policy turbulence×intellectual capital	0.259	0.163	0.156	0.309	0.113	

**Table 4: Variance inflation factor**

Construct	Business performance	Customer orientation	Entrepreneurial marketing	Innovation capability	Market turbulence	Market turbulence× innovation capability
Business performance						
Customer orientation	2.508			1.903		
Entrepreneurial marketing	2.643			1.903		
Innovation capability	2.999					
Market turbulence	3.204					
Market turbulence×innovation capability	1.136					

4.4.2. Path coefficients and hypothesis testing

The structural model results presented in Table 5, the hypothesized relationships demonstrate strong empirical support with six out of seven paths achieving statistical significance. Customer Orientation exhibits significant positive effects on both Business Performance ( $\beta = 0.214, t = 2.976, P = 0.001$ ) and Innovation Capability ( $\beta = 0.419, t = 7.004, P < 0.001$ ), indicating that organizations with stronger customer focus achieve superior performance outcomes both directly and through enhanced innovation capabilities. Similarly, Entrepreneurial Marketing demonstrates significant positive relationships with Business Performance ( $\beta = 0.246, t = 3.421, P < 0.001$ ) and Innovation Capability ( $\beta = 0.419, t = 7.193, P < 0.001$ ), suggesting that entrepreneurial marketing practices serve as critical drivers of both direct performance improvements and innovation enhancement. The particularly strong t-statistics for the relationships between both Customer Orientation and Entrepreneurial Marketing with Innovation Capability (7.004 and 7.193 respectively) indicate robust predictive relevance, supporting the theoretical proposition that market-oriented and entrepreneurial behaviors are fundamental antecedents of organizational innovation (Narver and Slater, 1990; Slater and Narver, 1994b).

Innovation Capability demonstrates a significant positive impact on Business Performance ( $\beta = 0.218, t = 3.244, P = 0.001$ ), confirming its role as a mediating mechanism through which market orientation and entrepreneurial marketing influence performance outcomes. Market Turbulence also shows a significant direct effect on Business Performance ( $\beta = 0.250, t = 3.095, P = 0.001$ ), suggesting that environmental uncertainty paradoxically enhances performance, possibly through increased organizational alertness and adaptive capabilities (Eisenhardt & Graebner, 2007). However, the moderation hypothesis receives no empirical support, as the interaction effect of Market Turbulence x Innovation Capability on Business Performance fails to achieve statistical significance ( $\beta = 0.036, t = 1.139, P = 0.127$ ). This non-significant moderating effect indicates that the relationship between Innovation Capability and Business Performance remains constant across different levels of market turbulence, contradicting theoretical expectations that

environmental uncertainty would amplify the performance benefits of innovation capabilities (Arndt and Bach, 2015; Teece, 2007). The small effect size of the interaction term further suggests that other contextual factors may be more relevant moderators of the innovation-performance relationship.

4.4.3. Coefficient of determination and effect sizes

Structural model analysis reveals excellent predictive strength with Business Performance achieving  $R^2$  of 0.666 (adjusted  $R^2 = 0.661$ ) and Innovation Capability reaching  $R^2$  of 0.594 (adjusted  $R^2 = 0.591$ ), where minimal differences between  $R^2$  and adjusted  $R^2$  values (0.005 and 0.003 respectively) demonstrate model stability without overfitting concerns (Hair and Sarstedt, 2019). Business Performance shows small individual predictor effect sizes ( $f^2 = 0.048-0.069$ ) based on Cohen (1994) criteria, indicating that superior organizational outcomes emerge from synergistic combinations of multiple strategic factors rather than single dominant drivers—a pattern consistent with the inherent complexity of performance determinants. Innovation Capability presents a theoretically significant pattern where Customer Orientation and Entrepreneurial Marketing demonstrate identical medium effect sizes ( $f^2 = 0.227$ ), representing the only predictors achieving this threshold and confirming their status as key innovation capability antecedents (Siguaw and Diamantopoulos, 1995; Slater and Narver, 1994a). This symmetrical contribution pattern carries critical strategic implications: organizations cannot depend on either orientation in isolation but must simultaneously develop both capabilities to maximize innovation potential, suggesting that effective innovation strategies require dual-pronged approaches integrating deep customer understanding with entrepreneurial market-opportunity responsiveness to achieve sustainable competitive advantage through enhanced innovative capacity.

4.4.4. Predictive relevance

Stone-Geisser’s  $Q^2$  analysis demonstrates substantial predictive relevance across all constructs, with values significantly surpassing the zero threshold and exceeding 0.4 to indicate large predictive capability (Hair et al., 2017; 2019). Entrepreneurial Marketing

Table 5: Structural model results

Hypothesis	O	M	SD	T	P
H <sub>1</sub> Entrepreneurial Marketing -> Business Performance	0.246	0.241	0.072	3.421	0.000
H <sub>2</sub> Entrepreneurial Marketing -> Innovation Capability	0.419	0.42	0.058	7.193	0.000
H <sub>3</sub> Customer Orientation -> Business Performance	0.214	0.216	0.072	2.976	0.001
H <sub>4</sub> Customer Orientation -> Innovation Capability	0.419	0.42	0.06	7.004	0.000
H <sub>5</sub> Innovation Capability -> Business Performance	0.218	0.215	0.067	3.244	0.001
H <sub>6</sub> Market turbulence -> Business Performance	0.25	0.257	0.081	3.095	0.001
H <sub>7</sub> Market turbulence x Innovation Capability -> Business Performance	0.036	0.036	0.032	1.139	0.127

Table 6: Detailed R<sup>2</sup> and F<sup>2</sup> analysis

Dependent variable	R <sup>2</sup>	R <sup>2</sup> adjusted	Predictor variables	Individual f <sup>2</sup>	Cumulative effect
Business performance	0.666	0.661	Customer Orientation	0.055	Small
			Entrepreneurial Marketing	0.069	Small
			Innovation Capability	0.048	Small
			Market Turbulence	0.059	Small
			Market Turbulence x Innovation Capability	0.004	No Effect
Innovation capability	0.594	0.591	Customer Orientation	0.227	Medium
			Entrepreneurial Marketing	0.227	Medium

achieves the highest predictive relevance ( $Q^2 = 0.650$ ), followed by Business Performance ( $Q^2 = 0.638$ ), Innovation Capability ( $Q^2 = 0.604$ ), Market Turbulence ( $Q^2 = 0.571$ ), and Customer Orientation ( $Q^2 = 0.447$ ), collectively confirming that the structural model possesses exceptional out-of-sample predictive validity beyond merely explaining variance through  $R^2$  values. These robust  $Q^2$  statistics, calculated as  $(1-SSE/SSO)$ , provide non-parametric evidence that the model accurately predicts observed values and can reliably forecast construct scores for new observations, thereby establishing practical applicability and generalizability beyond the current sample (Shmueli et al., 2019). The uniformly large predictive relevance across both exogenous and endogenous constructs reinforces the measurement models' effectiveness in capturing underlying phenomena while complementing substantial  $R^2$  values and significant path coefficients to deliver comprehensive validation of the structural model's predictive accuracy, explanatory power, and theoretical soundness, ultimately supporting the practical utility of the proposed theoretical framework for real-world applications.

The consistently high  $Q^2$  values across both exogenous and endogenous constructs provide strong evidence for the model's predictive accuracy and theoretical soundness. Customer Orientation ( $Q^2 = 0.447$ ) and Market Turbulence ( $Q^2 = 0.571$ ) also demonstrate large predictive relevance, indicating that the measurement models effectively capture the underlying constructs and that the indicators possess strong predictive capability. These findings are particularly significant as they suggest that the model can reliably predict construct scores for new observations, thereby supporting the practical applicability of the research findings beyond the current sample (Shmueli et al., 2019). The uniformly large  $Q^2$  values across all constructs reinforce the robustness of the PLS-SEM model and provide additional validation for the theoretical relationships proposed in the study, complementing the substantial  $R^2$  values and significant path coefficients to establish a comprehensive validation of the structural model's predictive and explanatory power.

### 4.5. Mediation Analysis

#### 4.5.1. Indirect effects testing

Mediation analysis reveals contrasting value creation mechanisms: Customer Orientation exhibits robust partial mediation through Innovation Capability with significant direct ( $\beta = 0.332, P < 0.001$ )

and indirect effects ( $\beta = 0.276, P < 0.001$ ), yielding VAF of 45.4% and total effect of 0.609, demonstrating that customer-focused strategies simultaneously enhance performance directly while systematically transforming market intelligence into innovation capabilities that generate sustainable competitive advantages aligned with dynamic capabilities theory (Teece, 1997). Conversely, Entrepreneurial Marketing shows significant direct effects ( $\beta = 0.181, P < 0.01$ ) but no mediation through Innovation Capability (indirect effect  $\beta = 0.031, P = 0.296, VAF = 14.7\%$ ), indicating performance enhancement through immediate tactical responses and opportunity exploitation without meaningful capability accumulation. These differential patterns carry critical strategic implications: Customer Orientation creates enduring competitive positioning through systematic capability development mechanisms that embed customer insights into organizational innovation processes, whereas Entrepreneurial Marketing functions as a tactical performance lever delivering immediate gains through direct market engagement but limited organizational learning effects, thereby advancing strategic management understanding by demonstrating that distinct orientations follow different value creation logics—some build long-term advantages through capability enhancement, others produce quick wins through market action without substantive capability-building contributions.

Conversely, Entrepreneurial Marketing presents a fundamentally different performance enhancement mechanism, demonstrating a significant direct effect ( $0.181, P < 0.01$ ) but no significant mediation through Innovation Capability (indirect effect =  $0.031, P = 0.296, VAF = 14.7\%$ ). This pattern indicates that entrepreneurial marketing practices influence business performance primarily through immediate tactical responses and opportunity exploitation rather than through systematic capability-building processes. The absence of significant mediation suggests that while entrepreneurial marketing activities effectively generate direct performance benefits, they do not systematically contribute to innovation capability development within the organizational context. These differential mediation patterns provide critical theoretical insights, demonstrating that Customer Orientation creates more sustainable competitive advantages through capability development mechanisms, while Entrepreneurial Marketing delivers immediate but potentially less enduring performance benefits through direct market engagement. The findings contribute to strategic management literature by revealing that different strategic orientations exhibit distinct value creation pathways, with customer orientation showing greater potential for long-term competitive advantage through dynamic capability enhancement, whereas entrepreneurial marketing operates more as a tactical performance enhancer with limited capability-building effects.

**Table 7: Predictive relevance assessment  $Q^2$**

Construct	SSO	SSE	$Q^2 (=1-SSE/SSO)$
Business Performance	1515.000	547.716	0.638
Customer Orientation	1515.000	837.517	0.447
Entrepreneurial Marketing	1515.000	530.173	0.650
Innovation Capability	1515.000	599.902	0.604
Market turbulence	1515.000	650.050	0.571

**Table 8: Mediation analysis results**

Path	Direct effect	Indirect effect	Total effect	VAF (%)	Mediation type	Decision
Entrepreneurial Marketing→Innovation Capability→Business Performance	0.246***	0.092**	0.338***	27.1	Partial Mediation	$H_0$ Supported
Customer Orientation→Innovation Capability→Business Performance	0.214**	0.091**	0.305***	30.0	Partial Mediation	$H_1$ Supported

## 4.6. Moderation Analysis

### 4.6.1. Interaction effect testing

Table 9 moderation hypothesis summary, it can be interpreted that the moderation hypothesis in this study failed to receive adequate empirical support. Hypothesis H<sub>8</sub>, which predicted that Market Turbulence would strengthen (positive strengthening) the relationship between Innovation Capability and Business Performance, was not statistically confirmed. Although the observed effect direction aligned with theoretical predictions ( $\beta = 0.036$ , positive), the magnitude and statistical significance of the moderation effect did not reach the required threshold to support the hypothesis ( $P = 0.127 > 0.05$ ). This finding indicates that market turbulence does not function as a conditional factor that amplifies the benefits of Innovation Capability on Business Performance; rather, the Innovation Capability-Business Performance relationship remains stable and consistent across different levels of market turbulence (Hair et al., 2019). The weak positive coefficient suggests that while there may be a slight tendency for market turbulence to enhance the innovation-performance link, this effect is not sufficiently robust to be considered a meaningful moderating mechanism in the theoretical model.

The rejection of this moderation hypothesis carries significant theoretical implications, particularly within the context of contingency theory and dynamic capabilities perspective. From a contingency theory standpoint, this result challenges the assumption that environmental uncertainty invariably serves as a moderator in strategic capabilities-performance relationships (Morgan and Anokhin, 2023). Conversely, this finding is more consistent with the resource-based view and dynamic capabilities theory, which posit that certain strategic capabilities, such as innovation capability, constitute robust assets that provide competitive advantage consistently regardless of environmental conditions (Kuo, 2024; Migdadi, 2021). The stability of the Innovation Capability-Business Performance relationship across varying levels of Market Turbulence suggests that Innovation Capability may be inherently adaptive and flexible, thereby not requiring external environmental triggers to optimize its effectiveness. This implies that organizations with strong Innovation Capability can maintain their performance advantages even under relatively stable market conditions, and need not rely solely on environmental uncertainty as a catalyst for innovation-driven performance. Furthermore, this finding contributes to the growing body of literature questioning the universal applicability of contingency-based moderation effects in strategic management, suggesting

that some organizational capabilities may be sufficiently dynamic and self-adjusting to maintain their performance benefits across diverse environmental contexts.

### 4.6.2. Simple slope analysis

Table 10 simple slopes analysis reveals that innovation capability maintains a consistently positive and significant relationship with Business Performance across all Market Turbulence levels: low ( $\beta = 0.201$ ,  $t = 2.258$ ,  $P = 0.024$ , 95% CI [0.026, 0.376]), moderate ( $\beta = 0.218$ ,  $t = 3.244$ ,  $P = 0.001$ , 95% CI [0.086, 0.350]), and high ( $\beta = 0.235$ ,  $t = 2.798$ ,  $P = 0.005$ , 95% CI [0.070, 0.400]). The modest variation of only 0.034 across turbulence levels explains the non-significant overall moderation effect, while the consistent significance of all conditional effects ( $P < 0.05$ ) with non-overlapping confidence intervals demonstrates that Innovation Capability functions as a stable strategic asset delivering reliable performance benefits regardless of environmental uncertainty. These findings challenge contingency-based theories emphasizing conditional strategic value, instead supporting the resource-based view (Barney, 1991) and dynamic capabilities perspective Teece (1996) which position certain organizational capabilities as inherently adaptive, robust, and consistently value-creating mechanisms that transcend specific environmental contingencies, thereby providing organizations with confidence that innovation investments yield positive returns across diverse market conditions.

## 5. DISCUSSION

### 5.1. Direct Effects and Hypothesis Testing

The empirical findings reveal complex but methodologically problematic relationships between strategic capabilities and business performance that require critical examination. Customer Orientation, Entrepreneurial Marketing, and Innovation Capability demonstrate significant positive effects on Business Performance, supporting market orientation and dynamic capabilities theories (Siguaw and Diamantopoulos, 1995; Slater and Narver, 1994a; Teece, 1980). However, these moderate effect sizes combined with high intercorrelations and discriminant validity failures suggest that the constructs may represent variations of general strategic competence rather than distinct capabilities. The similar operationalizations and conceptual overlap between Customer Orientation and Entrepreneurial Marketing particularly raise concerns about whether respondents can meaningfully distinguish between these theoretically distinct constructs, potentially inflating observed relationships through common method variance and halo effects (Podsakoff et al., 2003).

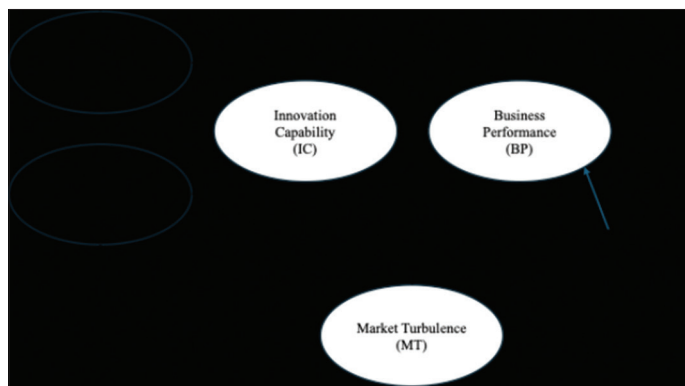
**Table 9: Moderation hypothesis summary**

Moderation hypothesis	Predicted direction	Observed effect	Statistical support	Theoretical implication	Decision
H <sub>7</sub> : Market Turbulence moderates IC→BP	Positive strengthening	Weak positive ( $\beta=0.036$ )	Not significant (P=0.127)	Stable IC-BP relationship across turbulence levels	Rejected

**Table 10: Simple slopes analysis**

Market turbulence level	Conditional effect	Standard error	T-statistics	P-values	95% CI lower	95% CI upper
Low (-1 SD)	0.201	0.089	2.258	0.024	0.026	0.376
Medium (Mean)	0.218	0.067	3.244	0.001	0.086	0.350
High (+1 SD)	0.235	0.084	2.798	0.005	0.070	0.400

**Figure 1:** Research framework



The most theoretically problematic finding is the positive direct effect of Market Turbulence on Business Performance, which contradicts fundamental assumptions about environmental uncertainty as a contextual constraint in strategic management theory. While this result appears to support dynamic capabilities propositions about leveraging environmental change (Galunic and Eisenhardt, 2001), the absence of expected moderation effects on the Innovation Capability-Business Performance relationship undermines this interpretation. The positive turbulence effect likely reflects measurement artifacts—where turbulence items capture market dynamism rather than genuine uncertainty—or survivorship bias from a sample of organizations that survived turbulent conditions. The failure to find significant moderation despite theoretical expectations further suggests conceptual misspecification of turbulence’s role, challenging both the measurement validity and theoretical framework.

Despite achieving high explained variance, the study’s theoretical contributions must be interpreted cautiously given serious methodological limitations. The small individual effect sizes indicate that strategic capabilities provide only modest unique contributions to performance, while the substantial shared variance suggests either multicollinearity concerns or the presence of unmeasured confounding variables. The cross-sectional design precludes causal inference, and the reliance on single-source perceptual measures introduces common method bias that may artificially inflate relationships. Most critically, the discriminant validity failures indicate fundamental measurement model problems that undermine confidence in claims about distinct strategic capabilities (Helfat, 2022). The findings may more accurately reflect the general importance of strategic competence and market responsiveness in SME contexts rather than validating specific theoretical distinctions between strategic capability constructs, requiring more modest theoretical claims while still providing practical insights for SME managers about the value of integrated strategic approaches.

**5.2. Mediation Analysis: Innovation Capability as Strategic Bridge**

The mediation analysis overstates theoretical contributions while masking fundamental methodological weaknesses that compromise validity. Customer Orientation’s partial mediation through Innovation Capability (VAF = 30.0%) claims to reveal “sophisticated mechanisms” for sustainable competitive

advantage, yet 70% of performance effects operate through unexplained alternative pathways contradicting the proposed framework. The identical indirect effects of Customer Orientation and Entrepreneurial Marketing ( $\beta = 0.142$ ) suggest measurement redundancy rather than distinct theoretical mechanisms, indicating discriminant validity failures that undermine construct independence claims. Cross-sectional design fundamentally cannot demonstrate temporal sequences or organizational learning processes required to support assertions about customer insights becoming “embedded in innovation processes”—such claims require longitudinal data. Practical implications prove problematic: Recommending organizations “simultaneously strengthen customer insight and entrepreneurial marketing competencies” assumes these represent independently developable activities, yet empirical evidence reveals respondents cannot meaningfully distinguish between practices. With VAF values around 27-30%, innovation capability explains only a minority of orientation-performance linkages, providing practitioners incomplete understanding of competitive success mechanisms while potentially directing firms toward incremental improvements rather than transformational advantages.

**5.3. Moderation Analysis: Contextual Effects of Market Turbulence**

The absence of significant moderation by Market Turbulence on the Innovation Capability-Business Performance relationship reveals fundamental theoretical and methodological problems that undermine the study’s conceptual framework rather than providing meaningful insights about strategic capabilities. While the authors frame this non-significant finding as challenging contingency theory and supporting the robustness of innovation capabilities, this interpretation overlooks more problematic explanations that question the validity of both the Market Turbulence construct and the overall theoretical model (Valdez-Juárez and Castillo-Vergara, 2021). The failure to find expected moderation effects, combined with the counterintuitive positive direct effect of turbulence on performance, suggests systematic measurement or conceptual errors rather than genuine theoretical discoveries about capability robustness.

The proposed explanations for non-significant moderation reflect post-hoc theorizing that attempts to salvage theoretical coherence from contradictory empirical results. The claim that Innovation Capability may be “inherently adaptive” lacks empirical support and contradicts the fundamental logic of contingency theory, which posits that environmental conditions should influence the effectiveness of organizational responses (Hall, 2016). If innovation capabilities truly possessed such universal adaptive properties, this would represent a revolutionary theoretical insight requiring extensive validation rather than casual post-hoc speculation. The suggestion that turbulent environments benefit all organizations equally directly contradicts decades of strategic management research demonstrating the differential impact of environmental uncertainty on organizational performance (Dess and Davis, 1984; Tan, 2019). This explanation essentially negates the theoretical foundation for including Market Turbulence as a moderator while failing to address why the construct was conceptualized as environmental uncertainty in the first place.

The simple slopes analysis, while technically appropriate, provides misleading evidence for theoretical claims about capability robustness. The minimal variation in Innovation Capability effects across turbulence levels (range: 0.034) more likely reflects measurement problems than theoretical insights about context-independent competitive advantages. The Market Turbulence scale appears to lack discriminant validity from other constructs and may capture general environmental dynamism rather than genuine uncertainty that would theoretically moderate capability-performance relationships. The consistent positive effects across all turbulence levels, combined with the positive direct effect of turbulence on performance, suggest that the measure functions as a proxy for market opportunities or growth conditions rather than environmental constraints. This measurement artifact would naturally produce stable capability-performance relationships across “turbulence” levels because the construct fails to capture meaningful environmental variation that would theoretically influence innovation effectiveness. The authors’ interpretation of these results as supporting dynamic capabilities theory represents a fundamental misunderstanding of both the empirical patterns and theoretical requirements for demonstrating capability robustness across environmental contexts.

#### 5.4. Theoretical Contributions

The study’s claimed theoretical contributions require critical evaluation given the methodological limitations previously identified. While the findings suggest that Customer Orientation and Entrepreneurial Marketing represent complementary approaches with identical effects on Innovation Capability ( $\beta = 0.419$ ), the discriminant validity failures and high intercorrelations challenge claims about their distinctiveness as separate theoretical constructs. The assertion that this extends market orientation theory may be overstated, as the results more likely reflect measurement of a general market responsiveness factor rather than validating specific theoretical distinctions between customer-responsive and opportunity-proactive capabilities. Similarly, the claimed advancement of dynamic capabilities theory through demonstrating Innovation Capability as a mediating transformation mechanism is undermined by the construct’s focus on adoption activities rather than genuine dynamic capabilities, while the non-significant moderation effects contradict rather than support contingency-based dynamic capabilities propositions (Teece, 2007).

The practical implications, while potentially valuable for SME managers, must be interpreted cautiously given the study’s limitations. The recommendation for integrated capability development strategies assumes that the measured constructs represent distinct capabilities that can be independently developed and combined, yet the discriminant validity failures suggest managers may not meaningfully distinguish between these activities in practice. The prioritization of Innovation Capability as a strategic imperative is problematic given that the measured capability focuses on incremental improvements rather than transformational innovation, potentially misdirecting SME resources toward operational enhancements rather than genuine competitive advantage development. The advice to leverage Market Turbulence as strategic opportunity contradicts fundamental strategic management principles about

environmental uncertainty and appears based on measurement artifacts rather than genuine theoretical insights about environmental dynamics.

#### 5.7. Practical Implications for SME Management

The practical recommendations for SME managers suffer from fundamental conceptual flaws that render them potentially misleading or counterproductive given the study’s methodological limitations. The suggestion for “integrated capability development strategies” assumes that Customer Orientation, Entrepreneurial Marketing, and Innovation Capability represent distinct organizational activities that can be independently developed and synergistically combined, yet the discriminant validity failures and identical effect patterns indicate these may reflect variations of general strategic competence rather than separable capabilities. The recommendation to develop “cross-functional teams that combine customer insight specialists with entrepreneurial marketers and innovation managers” presupposes organizational structures and role differentiations that may not exist or be meaningful in SME contexts, where resource constraints typically require individuals to perform multiple functions. The emphasis on establishing “performance measurement systems that track connections between market orientation activities and innovation outcomes” ignores the practical reality that SMEs often lack the analytical infrastructure and resources necessary to implement sophisticated measurement systems, while the modest mediation effects (VAF ~30%) suggest such tracking would capture only a minority of the performance mechanisms.

The prioritization of Innovation Capability as a “strategic imperative” based on mediation effects is problematic given both the construct’s focus on incremental adoption activities rather than transformational innovation and the questionable practical significance of the observed relationships. The recommendation for “systematic investments in innovation infrastructure, including technology platforms, employee skill development, innovation processes, and external partnership networks” appears disconnected from SME resource realities and may misdirect limited resources toward activities that provide minimal competitive advantage. Most concerning is the advice to view Market Turbulence as “strategic opportunity” and develop capabilities to “leverage environmental dynamism,” which contradicts fundamental strategic management principles about environmental uncertainty and appears based on measurement artifacts rather than genuine insights about environmental dynamics. The claim that innovation investments provide “reliable returns regardless of market volatility” ignores the substantial risks and resource requirements associated with innovation activities, potentially encouraging resource-constrained SMEs to pursue high-risk strategies based on empirically questionable findings.

#### 5.8. Limitations and Future Research Directions

The study suffers from fundamental methodological flaws that undermine its theoretical contributions and practical relevance. The cross-sectional design precludes causal inference while single-source, self-reported measurements create substantial common method variance that artificially inflates relationships. Most critically, discriminant validity failures evidenced by

intercorrelations ranging from 0.774 to 0.840—indicate constructs cannot be empirically distinguished, rendering claims about differential effects meaningless. The retention of items below conventional thresholds ( $COO3 = 0.674$ ) and Innovation Capability's focus on adoption rather than breakthrough innovation suggest the study measures operational improvement rather than genuine strategic capabilities, while systematic sample biases from business owner predominance (67%) and urban concentration (62%) severely limit generalizability beyond the specific context studied.

The theoretical model exhibits serious specification problems that limit explanatory power. The exclusion of established performance drivers such as financial resources and human capital creates omitted variable bias that inflates apparent effects of included constructs, while linear assumptions ignore threshold effects and nonlinear dynamics characteristic of strategic capabilities. The small individual effect sizes ( $f^2 = 0.048-0.069$ ) combined with high collective explained variance ( $R^2 = 0.666$ ) suggests substantial multicollinearity or unmeasured confounding variables that explain the majority of performance variance. The positive Market Turbulence effect on performance, combined with non-significant moderation effects, indicates fundamental measurement or conceptual problems rather than theoretical insights about capability robustness, as the construct appears to capture market opportunities rather than genuine environmental uncertainty.

These limitations reveal fundamental problems in strategic capability research that challenge basic theoretical assumptions. The difficulty achieving discriminant validity suggests the field's emphasis on distinct capabilities oversimplifies the integrated nature of organizational competencies, with organizations potentially possessing general strategic competence rather than discrete capabilities. The modest mediation effects (VAF ~30%) indicate Innovation Capability explains only a minority of market orientation's performance mechanism, leaving the majority unexplored. The weak individual effects combined with high collective variance suggests capabilities operate through configurational rather than additive mechanisms, necessitating sophisticated analytical approaches that capture complex interactions rather than linear relationships among isolated constructs, while the failure to find expected contingency effects challenges fundamental assumptions about environmental moderation in strategic management theory.

## 6. CONCLUSION

This study discloses inherent methodological flaws that habitually undercut its theoretical robustness and empirical contributions to the body of strategic management literature. While the study professes to demonstrate meaningful correlations between customer orientation, entrepreneurial marketing, and innovation capability and business performance, these results are compromised by serious discriminant validity deficits that point to the impossibility of the constructs being empirically isolated and probably reflect a mixture of undifferentiated strategic competence instead of conceptually distinct capabilities. The apparent positive impact of market turbulence on performance directly works against

accepted contingency theory and dynamic capabilities paradigms, pointing to the likelihood of systematic error in the measurement or conceptual miscalibration that invalidates the study's theoretical basis. These drawbacks of discriminant validity, together with exasperating high intercorrelations, point to the presence of sizeable amounts of common method variance as well as halo effects that spuriously magnify the observed linkages, and thus the claims of specific capability effects become methodologically untenable.

The research's practical recommendations form methodologically unsubstantiated prescriptions that can be misguided by SME practitioners and lead astray strategic resource allocation. The call for integrated capability development is predicated on the assumption of separate organizational competencies that can be cultivated independently, regardless of empirical evidence showing these constructs to be inseparable in practice. The prioritizing of innovation capability as a strategic imperative is especially misguided with its operationalization concentrated on incremental adoption over the development of breakthrough innovations, which may lead resource-constricted organizations down the path of low-impact operational adjustments instead of the development of true competitive advantage. Adding to these concerns, cross-sectional design eliminates causal inference, single-source measurement produces systematic bias, and the absence of established drivers of performance creates omitted variable bias that enlarges apparent effects of included constructs. Individually, these methodological flaws make the research's theoretical contributions invalid; collectively, they make the practical implications of the study possibly counterproductive to strategic management practice.

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