

Article

Sustainable Operations of SMEs in the Southern Thailand Special Economic Corridor: The Roles of Dynamic Capabilities and Business Model Innovation

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Abstract

As Thailand advances regional economic revitalization through the Southern Thailand Special Economic Corridor (SSEC), small and medium-sized enterprises (SMEs) have become pivotal to sustainable economic transformation. However, limited empirical evidence explains how environmental pressures are translated into sustained firm-level performance within policy-driven regional economies. To address this gap, this study examines the structural relationships among the external environment, dynamic capabilities, business model innovation, and SMEs' business success across four SSEC provinces. Drawing on Dynamic Capabilities Theory (DCT) and the Resource-Based View (RBV), the study proposes that external conditions stimulate internal adaptive capabilities, which subsequently enable firms to reconfigure business models and achieve durable business performance. Using stratified sampling, data were collected from 412 SMEs in the manufacturing, trade, and service sectors. The data were analyzed using covariance-based structural equation modeling. The results reveal that while the external environment does not exert a significant direct effect on business success, it influences performance indirectly through a sequential capability–innovation pathway, supporting an indirect-only mediation pattern. Dynamic capabilities significantly enhance both business model innovation and business success, whereas business model innovation emerges as the strongest direct predictor of performance. By identifying an indirect-only mediation mechanism, the study specifies the structural boundary condition under which environmental dynamism translates into sustainable firm performance within regional economic corridors. From a sustainability perspective, the findings further demonstrate that long-term regional resilience in emerging economic corridors depends not solely on macro-level policy initiatives but on SMEs' capability to continuously reconfigure resources, renew business models, and adapt strategically under structural volatility. Accordingly, the study provides integrated theoretical and policy insights for capability-driven sustainability and innovation-oriented regional development.

Keywords: dynamic capabilities; business model innovation; economic corridor; SMEs; sustainability; Thailand

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1. Introduction

Small and medium-sized enterprises (SMEs) are central to economic growth, social development, and innovation diffusion worldwide, particularly in emerging economies where they significantly contribute to employment and national productivity [1]. In Southeast Asia, for example, SMEs account for the vast majority of business establishments and play a critical role in sustaining industrial output and economic resilience [2]. In Thailand, SMEs similarly serve as key drivers of economic stability while facing increasing pressure to strengthen organizational capabilities to compete in a rapidly evolving global landscape [3]. This growing pressure stems from heightened market dynamism, technological disruptions, and frequent crises, which require SMEs to develop adaptive and innovation-oriented capabilities to sustain long-term performance [4,5]. In this study, firm performance is approached from a sustainability-oriented perspective, emphasizing long-term resilience, sustained organizational viability, and durable competitiveness rather than short-term financial performance alone.

Despite the well-recognized importance of SMEs, scholarly understanding of how SMEs in geographically unique and economically strategic regions develop capabilities to navigate environmental turbulence remains limited. Existing research has largely focused on macro-level determinants or sector-specific challenges, while integrated examinations of internal capabilities, external environment, and business model mechanisms within special economic corridors—particularly in Southern Thailand—are scarce. This represents a critical gap, given that such corridors often exhibit heightened environmental dynamism, infrastructure asymmetries, and institutional variations that uniquely influence SMEs growth trajectories. To address this gap, the present study draws on Dynamic Capabilities Theory (DCT) and the Resource-Based View (RBV) to investigate how SMEs in the Southern Thailand Special Economic Corridor (SSEC) integrate, build, and reconfigure their internal and external competencies to achieve sustainable business performance. These theoretical lenses emphasize the importance of sensing opportunities, seizing them through strategic actions, and reconfiguring resources to maintain competitiveness—processes that are particularly vital for SMEs operating under resource constraints and volatile conditions [6,7]. By examining entrepreneurial characteristics, managerial capabilities, technological capabilities, and the external political, economic, social, and technological environment, the study demonstrates how these factors interact to shape business model effectiveness and long-term business performance [8,9].

Furthermore, the SSEC provides a distinctive empirical context for understanding how SMEs in developing regions respond to structural shifts, technological changes, and regional policy transformations. Insights from this region offer broader implications for SMEs resilience and sustainability in similar emerging economies. This study therefore contributes to the current literature by offering an integrated framework that explains the mechanisms through which dynamic capabilities translate environmental pressures into adaptability, innovation, and sustained competitive advantage [10,11]. Finally, the findings are expected to yield meaningful implications for policymakers, development agencies, and SMEs owners by identifying the capability-building pathways and strategic interventions necessary to enhance SMEs resilience and drive sustainable economic development. By integrating theoretical perspectives with empirical insights, this study enhances understanding of how firms adapt and innovate within dynamic economic environments, while offering evidence-based implications that contribute to broader discussions on sustainable development and organizational resilience.

Rather than merely examining established theoretical linkages, this study advances a boundary-condition refinement within capability-based theory. Specifically, we demonstrate that environmental dynamism does not exert a direct effect on SME performance within corridor-based regional economies. Instead, its influence materializes

only through a sequential capability–innovation transmission mechanism, whereby external pressures activate dynamic capabilities, which in turn enable business model innovation and ultimately drive sustainable business success. By explicitly specifying this indirect-only pathway, the study moves beyond theoretical confirmation and delineates the structural condition under which environmental change translates into firm-level performance. This refinement contributes to DCT and RBV by demonstrating that environmental dynamism functions as a conditional catalyst rather than an autonomous performance driver in policy-driven regional economic systems.

2. Literature Review and Hypothesis Development

This section reviews theoretical and empirical research on the external environment (EXT), dynamic capability (DYC), business model innovation (BMI), and business success (BUS), laying the conceptual groundwork for hypothesis development. Guided by DCT, the review synthesizes insights into how firms sense opportunities, seize them, and reconfigure resources to sustain performance in complex environments [12]. This integrated perspective offers a coherent framework for understanding how internal capabilities and external conditions interact to shape business model mechanisms and SMEs' performance within the SSEC [10,13].

2.1. SMEs in Southern Thailand

SMEs in Southern Thailand operate within a dynamic regional economy influenced by cross-border flows, infrastructural disparities, and policy-driven development initiatives. These unique conditions create both opportunities and vulnerabilities, highlighting the need for SMEs to strengthen capabilities that enhance adaptability and long-term competitiveness [14]. Despite their significant economic contributions, these firms remain sensitive to political, economic, social, and technological fluctuations, making strategic capability development essential for survival and growth. Existing research has not sufficiently explained how SMEs in such distinctive regional contexts build and deploy DYC to navigate environmental uncertainty [10]. This study addresses that gap by examining how entrepreneurial characteristics, managerial competencies, and technological capabilities interact with EXT to influence BMI and BUS. By clarifying these relationships, the study advances theoretical understanding of SMEs' resilience and practical guidance for policymakers and regional development stakeholders.

2.2. DCT

DCT explains how firms integrate, build, and reconfigure internal and external resources to adapt to rapidly changing environments. It emphasizes three core processes—sensing opportunities, seizing them through strategic actions, and transforming or reconfiguring resources to maintain competitiveness [15]. For SMEs operating in volatile and resource-constrained environments such as the SSEC, DYC are especially critical. They enable firms to overcome institutional barriers, manage uncertainty, and respond effectively to technological and market shifts [16]. Accordingly, DCT offers a robust theoretical foundation for examining how capability development underpins resilience, innovation, and sustained performance among SMEs facing intensified competitive pressures.

2.3. EXT

The EXT shapes opportunities and constraints for firms and plays a critical role in strategic decision-making. The PEST framework—encompassing political, economic, social, and technological dimensions—provides a structured approach for analyzing macro-environmental forces that influence organizational performance [17,18]. For SMEs,

especially those in dynamic regions like the SSEC, understanding these external conditions is vital for anticipating regulatory changes, technological disruptions, shifting consumer behaviors, and economic fluctuations [19,20]. Effective environmental scanning enables firms to mitigate risks, capitalize on emerging opportunities, and maintain competitiveness in complex markets. In this study, the PEST framework is employed to conceptualize how EXT conditions shape internal capability deployment, drive BMI, and influence firm performance.

2.4. Internal Capability Theory

The internal capability theory posits that sustained competitive advantage depends on a firm's ability to integrate and leverage entrepreneurial, managerial, and technological capabilities. Building on the RBV, this perspective argues that resources alone do not generate performance gains; rather, competitive advantage arises from their effective orchestration through distinctive capabilities [21]. In this study, creativity for survival reflects the entrepreneurial capability to generate innovative ideas and adaptive solutions in response to market challenges [22]. Proactive management represents the managerial capability to plan strategically, coordinate resources efficiently, and respond ahead of environmental changes [23]. Technology utilization captures the firm's ability to deploy digital tools, integrate technology into operations, and enhance productivity and innovation [24]. Collectively, these capabilities form a higher-order construct that reinforces adaptive capability, enabling SMEs to innovate, manage disruption, and sustain competitive advantage in dynamic environments [25,26].

2.5. BMI

BMI refers to significant modifications to how firms create, deliver, and capture value, representing a strategic mechanism for responding to technological change, market disruption, and evolving customer expectations [13]. Unlike incremental product or process improvements, BMI involves reconfiguring the fundamental logic of how value is generated, thereby reshaping core operational architectures to support sustained competitiveness in dynamic environments [27,28]. Emerging technologies—such as AI, cloud computing, and digital platforms—have accelerated business model transformation, shortening innovation cycles and compelling firms to continuously adapt their business models [29]. Within this framework, BMI manifests through several key observable components. First, innovation in value proposition allows firms to redesign the core benefits offered to customers, enabling SMEs to deliver superior value and respond effectively to shifting market needs. Second, enhancing the customer experience supports differentiation by improving service processes, interaction quality, and overall satisfaction, thereby reinforcing customer loyalty. Third, adjustments to the revenue model enable firms to explore new monetization mechanisms, diversify income streams, and secure financial sustainability. Finally, a well-developed differentiation strategy positions firms uniquely in competitive markets by emphasizing distinctiveness in offerings or delivery mechanisms. For SMEs in the SSEC, these four elements collectively provide a structured pathway for leveraging BMI to strengthen competitive resilience and long-term performance. By systematically reconfiguring value propositions, refining customer experiences, redesigning revenue structures, and articulating clear differentiation strategies, SMEs are better positioned to navigate environmental uncertainty and sustain growth over time.

2.6. BUS

BUS comprises both customer-related and financial performance. On the customer side, higher satisfaction and loyalty strengthen customer performance, leading to

improved retention, positive word-of-mouth, and greater engagement [30,31]. These improvements frequently translate into stronger financial performance, reflected in higher profitability, revenue growth, and long-term stability. Customer orientation also supports innovation by aligning products and services with market needs [32]. Thus, in the SME context, BUS is reflected in the combined customer and financial performance, both essential for sustaining competitiveness and growth. In this study, BUS is further conceptualized from a sustainability-oriented perspective, encompassing not only short-term financial gains but also sustained organizational viability and adaptive capability under dynamic environmental conditions. This broader conceptualization aligns firm performance with long-term sustainability imperatives, particularly in emerging regional economies characterized by institutional complexity and market volatility. Accordingly, within the proposed model, DYC and BMI are positioned as strategic mechanisms that enable SMEs to convert environmental pressures into durable competitive outcomes.

2.7. EXT and DYC

Although firms leverage internal capabilities to shape competitive positioning, existing research consistently demonstrates that external political, economic, social, and technological conditions serve as primary drivers of DYC development, particularly for SMEs operating in uncertain and resource-constrained environments [33,34]. Environmental turbulence, regulatory shifts, and technological change generate pressures that compel firms to enhance their capability to sense opportunities, seize them, and reconfigure resources accordingly [35,36]. In the context of the SSEC, these external forces play a pivotal role in shaping how SMEs develop DYC to adapt, innovate, and sustain competitiveness.

RQ1. *How does the EXT influence DYC among SMEs in the SSEC?*

H1. *The EXT positively influences DYC.*

2.8. EXT and BMI

A substantial body of research demonstrates that EXT conditions—such as technological shifts, market competition, regulatory changes, and evolving customer preferences—serve as key drivers of BMI. These external forces often compel firms to reassess and redesign how they create, deliver, and capture value in order to remain competitive in dynamic markets [37,38]. Technological advancements, particularly in digitalization and artificial intelligence, accelerate this need for business model adaptation by disrupting established value structures and generating new strategic opportunities [39]. Likewise, changes in market demand, industry networks, and contextual factors encourage firms to modify value propositions, customer engagement processes, and revenue models. Accordingly, EXT dynamism functions as a foundational antecedent of BMI, shaping the strategic orientation and innovation trajectories of SMEs operating in turbulent yet opportunity-rich settings such as the SSEC.

RQ2. *How does the EXT influence BMI among SMEs in the SSEC?*

H2. *The EXT positively influences BMI.*

2.9. EXT and BUS

The EXT—comprising political, economic, social, and technological conditions—plays a pivotal role in shaping business performance. These external forces influence market stability, customer demand, and operational constraints, thereby affecting a firm's

overall performance [40]. In dynamic and uncertain settings, SMEs must continuously interpret and respond to environmental signals to sustain customer satisfaction and financial viability [41]. Such pressures may generate growth opportunities or intensify risks, making strategic adaptability essential for achieving superior business performance [16]. In regions such as the SSEC, where environmental volatility is pronounced, the capability of SMEs to navigate political shifts, economic fluctuations, and technological advancement becomes a critical determinant of both customer performance and financial performances [34,42]. Accordingly, the EXT functions as a significant antecedent of BUS, shaping the competitive conditions under which SMEs operate and grow.

RQ3. *How does the EXT influence BUS among SMEs in the SSEC?*

H3. *The EXT positively influences BUS.*

2.10. *DYC and BMI*

DYC—particularly the capabilities to sense opportunities, seize them, and reconfigure resources—play a pivotal role in driving BMI. These capabilities enable firms to realign their value propositions, redesign customer experiences, reconfigure revenue mechanisms, and differentiate their strategic positions in response to technological and market shifts [43,44]. In digitally dynamic environments, effective deployment of entrepreneurial, managerial, and technological capabilities enhances a firm's capability to experiment, integrate new technologies, and refine business model components to create and capture value [29,45]. SMEs with stronger DYC are therefore better positioned to initiate and sustain BMI, leveraging these internal strengths to proactively adapt their business models and capitalize on emerging opportunities.

RQ4. *How do DYC influence BMI among SMEs in the SSEC?*

H4. *DYC positively influences BMI.*

2.11. *DYC and BUS*

DYC—manifested through entrepreneurial, managerial, and technological capabilities—play a central role in shaping BUS. These capabilities enable SMEs to sense emerging opportunities, seize them through effective resource deployment, and reconfigure processes to maintain operational efficiency and strategic fit in changing environments [9,46]. Entrepreneurial characteristics foster opportunity recognition, managerial capabilities support strategic alignment and execution, and technological aptitude enhances product innovation and service quality. Together, these integrated capabilities strengthen SMEs' adaptability, resilience, and overall performance, contributing directly to improved customer outcomes and financial results. Therefore, strong DYC serve as critical determinants of BUS, particularly for SMEs operating in resource-limited environments and competitive pressures.

RQ5. *How do DYC influence BUS among SMEs in the SSEC?*

H5. *DYC positively influences BUS.*

2.12. *BMI and BUS*

BMI—through enhancements in value proposition, customer experiences, revenue mechanisms, and strategic differentiation—plays a critical role in strengthening BUS. By redesigning how firms create, deliver, and capture value, BMI enables SMEs to improve customer satisfaction, increase operational efficiency, and enhance financial performance

[12,13]. In dynamic environments, SMEs that innovate their business models are better positioned to respond to market changes, integrate digital technologies, and reach new customer segments, thereby reinforcing both customer and financial performance [47]. Empirical evidence consistently shows that firms with more adaptive and innovative business models achieve superior business performance, underscoring BMI as a key driver of sustained competitive advantage [48,49]. Thus, BMI functions as a strategic mechanism through which SMEs translate internal strengths and external opportunities into long-term BUS.

RQ6. *How does BMI influence BUS among SMEs in the SSEC?*

H6. *BMI positively influences BUS.*

Based on the related literature reviewed above concerning operational approaches that enhance sustainable BUS among SMEs in Thailand's SSEC, the conceptual framework and research hypotheses can be formulated as illustrated in Figure 1.

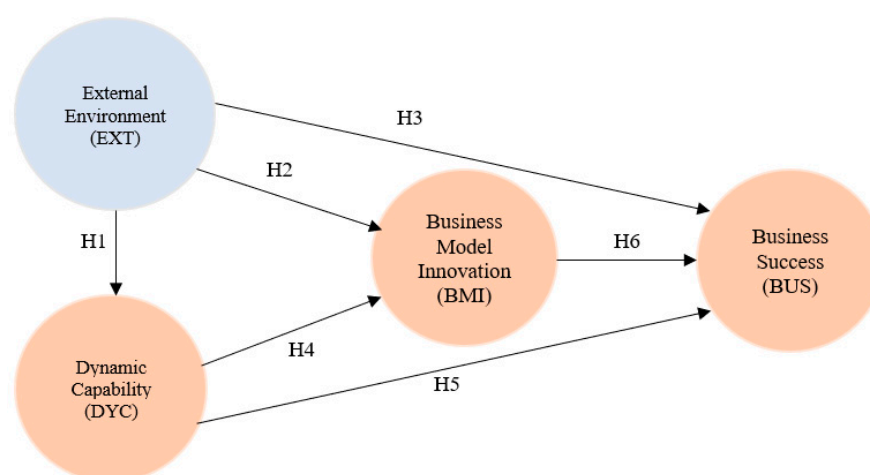


Figure 1. The conceptual framework.

3. Materials and Methods

3.1. Research Design and Data Collection

This study employed an explanatory sequential mixed-methods design, beginning with a quantitative phase followed by a qualitative phase. The sequencing was theoretically grounded and methodologically justified. Given that the study aimed to examine theory-derived causal relationships based on DCT and the RBV, rather than to generate emergent themes, a quantitative-first approach was therefore appropriate. The quantitative component applied covariance-based structural equation modeling (CB-SEM) to test the hypothesized relationships among the EXT, DYC, BMI, and BUS.

The qualitative phase was subsequently conducted to provide explanatory depth and contextual interpretation of statistically supported structural paths. In alignment with the logic of explanatory sequential mixed-methods research—where qualitative inquiry elaborates and clarifies quantitative findings rather than exploring phenomena inductively—the interview protocol was developed directly from the significant SEM results. This design enhances methodological coherence by positioning qualitative analysis as a mechanism-level explanatory layer that clarifies how DYC and BMI transmit environmental influences into sustainable firm performance within the SSEC. By structuring the study in this sequence, theoretical testing preceded interpretive

elaboration, thereby strengthening internal validity and improving the explanatory precision of the proposed capability–innovation–performance pathway.

The target population consisted of 27,795 registered SMEs across four provinces—Chumphon, Ranong, Surat Thani, and Nakhon Si Thammarat [50]. For the quantitative phase, sample size determination followed Hair et al. [51], who recommend a minimum of 10 cases per observed indicator and up to 15–20 for complex SEM models. With 13 observed variables, the recommended range was 130–260 cases; the final valid sample of 412 responses exceeded these thresholds, which indicates adequate statistical power and model stability. Stratified random sampling was employed to ensure proportional representation across both provinces and business sectors within the SSEC. The sampling frame was constructed using the official registry of juristic SMEs obtained from the Office of Small and Medium Enterprises Promotion (OSMEP), and respondents were allocated according to each province's and sector's relative share of the total SME population. The geographic distribution comprised 16.26% from Chumphon ($n = 67$), 13.59% from Ranong ($n = 56$), 41.26% from Surat Thani ($n = 170$), and 28.88% from Nakhon Si Thammarat ($n = 119$). Sectorally, 21.36% were manufacturing firms ($n = 88$), 45.87% were trading firms ($n = 189$), and 32.77% were service firms ($n = 135$). This proportional allocation enhances sample representativeness and supports the external validity of the findings within the corridor context. For the qualitative phase, purposive sampling was used to select 20 entrepreneurs who demonstrated notable BUS in the post-COVID-19 context. Quantitative data were collected between June and September 2024 using a five-point Likert scale questionnaire administered both face-to-face and online. Qualitative data were gathered between October and November 2024 through semi-structured interviews designed to elicit in-depth insights into adaptive strategies and mechanisms underpinning SMEs' success across the SSEC.

The qualitative phase was conducted following completion of the quantitative SEM analysis to interpret the statistically supported structural relationships. Consistent with an explanatory sequential approach, the interview protocol was developed directly from the statistically supported paths, focusing on how EXT conditions are transmitted into BUS through DYC and BMI. Qualitative data were analyzed using a structured coding procedure aligned with the four core constructs, and findings were systematically integrated with the SEM results to clarify the mechanisms underlying these relationships. This process strengthened the methodological rigor and analytical coherence of the mixed-methods framework within the regional corridor context.

3.2. Research Instrument

The research instruments comprised two main steps. The first step involved a quantitative questionnaire developed through an extensive review of the domestic and international literature and grounded in the theoretical foundations of DYC and BMI. The questionnaire encompassed four latent variables: (1) EXT, measured through four observed indicators—(a) government policy, (b) economic conditions, (c) social and consumer dynamics, and (d) technology—comprising 12 items adapted from Rizal et al. [52] and Idisondjaja et al. [40]; (2) DYC, assessed through three observed indicators—(a) creative thinking for business survival, (b) proactive management, and (c) digital technology adoption—comprising 9 items derived from Helfat and Martin [53], Duchek [54], and Li et al. [55]; (3) BMI, measured through four observed indicators—(a) distinctive value proposition, (b) customer experience, (c) multi-channel revenue models, and (d) differentiation strategies—comprising 13 items adapted from Battistella et al. [56], Chesbrough [57], and To et al. [58]; and (4) BUS, measured through two observed indicators—(a) customer outcomes and (b) financial performance—comprising 6 items based on Al-Tit et al. [59] and Berger-Walliser et al. [60]. The questionnaire underwent

content validation by five subject-matter experts, yielding an Item-Objective Congruence (IOC) index ranging from 0.80 to 1.00. A pilot test was subsequently conducted with 30 respondents to assess reliability, and all constructs demonstrated Cronbach's alpha values ranging from 0.756 to 0.888 (Table 1), indicating a high level of internal consistency.

Table 1. Reliability values of the questionnaire.

Latent Variable	Observed Variables	Cronbach's Alpha
External Environment (EXT)	Political	0.833
	Economic	0.839
	Social	0.836
	Technological	0.832
Dynamic Capability (DYC)	Creativity for Survival	0.793
	Proactive Management	0.795
	Technology Utilization	0.877
Business Model Innovation (BMI)	Value Proposition	0.863
	Customer Experience	0.847
	Revenue Model	0.656
	Differentiation Strategy	0.861
Business Success (BUS)	Customer Performance	0.860
	Financial Performance	0.888

The second step of the research instrument involved an in-depth interview protocol with open-ended questions designed to complement the quantitative findings. The protocol was developed based on the synthesized results of the SEM analysis and aligned with the four latent constructs examined in the model. Accordingly, the semi-structured interview guide was organized around themes including entrepreneurial characteristics, managerial capability, technological capability, business model adaptation, digital technology utilization, value-design processes, and post-COVID-19 strategic adjustments among entrepreneurs in the SSEC. All interviews were audio-recorded and transcribed in accordance with established research ethics standards. The protocol was reviewed by five subject-matter experts to ensure content relevance and alignment with the research objectives prior to pilot testing with five participants.

3.3. Data Analysis Methods

The Statistical Package for Social Sciences (IBM SPSS Statistics Version 29) was employed to calculate mean scores for all variables and to generate descriptive statistics for the sample. Mean values were classified into five descriptive levels—very low (1.00–1.80), low (1.81–2.60), moderate (2.61–3.40), high (3.41–4.20), and very high (4.21–5.00)—to facilitate clear interpretation of respondent characteristics. Independent samples t-tests were conducted to compare mean differences between male and female respondents, while one-way ANOVA (F-tests) was used to examine whether demographic factors—including age, education, job position, business location, type of business, annual revenue, number of employees, and duration of business operation—significantly influenced the four key constructs: EXT, DYC, BMI, and BUS. Subsequently, CB-SEM was applied to evaluate the theoretically specified structural model grounded in DCT and RBV. The study required confirmatory testing of causal relationships and assessment of global model fit, for which covariance-based estimation is particularly suited. All constructs were specified as reflective latent variables, and the sample size ($n = 412$) was adequate to support robust parameter estimation. Accordingly, the method aligns with the confirmatory and theory-driven objectives of the study.

The analysis proceeded in two stages: (1) assessment of the measurement model, including indicator loadings, internal consistency reliability, convergent validity, and discriminant validity; and (2) evaluation of the structural model using established fit indices— χ^2/df , Comparative Fit Index (CFI), Tucker–Lewis Index (TLI), Root Mean Square Error of Approximation (RMSEA), and Standardized Root Mean Square Residual (SRMR). Additional diagnostics examined multicollinearity among exogenous variables and assessed the explanatory power of endogenous constructs using R-squared (R^2) values. Path coefficients were then estimated to test the hypothesized causal relationships.

To assess indirect effects, a bootstrapping procedure with 5000 resamples was applied. Bias-corrected 95% confidence intervals were generated, and mediation was considered statistically significant when the interval did not include zero.

Although CB-SEM is well-suited for theory confirmation and causal hypothesis testing, it is sensitive to assumptions of multivariate normality, sample size adequacy, and potential model misspecification. Accordingly, model evaluation incorporated multiple fit indices alongside the magnitude and direction of structural paths within the theoretical framework.

Following the completion of the quantitative analysis, qualitative data were analyzed using content analysis to provide explanatory depth to the structural findings. Interviews were transcribed verbatim and systematically organized by participant profile. The analysis followed a three-stage coding procedure: open coding to identify meaningful units, axial coding to cluster related codes into higher-order categories aligned with *DYC*, *BMI*, *EXT*, and *BUS*, and selective coding to refine overarching themes that explain the mechanisms linking environmental stimuli to business performance. The process combined deductive guidance from the theoretical framework with inductive refinement from empirical data.

Data collection and analysis proceeded concurrently to monitor thematic development and assess saturation. Through constant comparison of codes across interviews, no substantially new conceptual categories or relational patterns emerged after the seventeenth interview. Three additional interviews (18–20) were conducted to confirm thematic redundancy and ensure stability across participant profiles. As no further analytical variation was identified, the research team concluded that thematic saturation had been achieved. The stopping criterion was therefore based on conceptual completeness rather than on numerical sufficiency.

This decision is consistent with qualitative research guidance indicating that thematic saturation in relatively homogeneous samples frequently occurs within 12–20 interviews, depending on analytical scope and depth [61]. Accordingly, the final sample size of 20 participants reflects methodological adequacy grounded in saturation principles rather than in arbitrary numerical targeting.

Qualitative findings were integrated with the SEM results through a structured alignment process. Following thematic coding, emergent categories were mapped onto the statistically significant structural paths identified in the quantitative model. This cross-phase integration enabled comparison between empirical narratives and validated relationships, allowing the qualitative data to clarify the mechanisms linking *EXT*, *DYC*, *BMI*, and *BUS*. This systematic integration enhanced methodological rigor and reinforced cross-phase coherence.

3.4. Assessment of Common Method Bias

To assess potential common method variance (CMV) associated with the cross-sectional and self-reported survey design, Harman’s single-factor test was conducted. The unrotated exploratory factor analysis indicated that the first factor accounted for 46.38% of the total variance, which is below the 50% threshold commonly applied in CMV

assessment. This result suggests that common method bias is unlikely to pose a serious threat to the validity of the study. In addition, procedural remedies were implemented, including assurances of respondent anonymity and confidentiality to reduce evaluation apprehension and mitigate method-related bias.

In addition to Harman's single-factor test, a common latent factor (CLF) approach was implemented within the CFA framework. The CLF was specified to load on all observed indicators, and standardized loadings were compared before and after its inclusion. The differences ranged from 0.02 to 0.12 (all < 0.20), indicating no substantial inflation attributable to common method bias.

4. Results of the Study

4.1. Descriptive and Inferential Statistics

Descriptive statistics (Table 2) were used to profile the sample of 412 SMEs across the SSEC. Of these, 59.9% were female and 40.1% male, with most respondents aged below 30 or between 30–44 years. A substantial proportion held at least a bachelor's degree (64.1%), while 10.0% possessed qualifications beyond the bachelor's level. Approximately half of the respondents (51.5%) were managing directors or business owners, indicating strong representation of key decision-makers. Most enterprises were located in Surat Thani (41.3%) and Nakhon Si Thammarat (28.9%) and operated primarily in trading (46.1%), services (32.5%), or manufacturing (21.4%). The majority reported annual revenues below 50 million baht (80.6%), employed 5–50 staff members (58.3%), and had been established for 8–15 years (50.0%), suggesting that the firms were relatively mature rather than new start-ups.

At the construct level, the mean scores presented in Table 2 reflect moderate-to-high perceptions across all key dimensions: $DYC = 3.74$, $EXT = 3.67$, $BMI = 3.83$, and $BUS = 4.01$. These patterns indicate that respondents generally perceived their operational contexts as supportive, with relatively innovative business models and strong business performance. Independent-samples t-tests revealed no significant gender-based differences across the four constructs ($p > 0.05$), and no significant variations were observed across age groups. Educational attainment, however, was associated with significant differences in EXT ($F = 2.47$, $p = 0.04$) and BUS ($F = 2.78$, $p = 0.03$), with bachelor's degree holders reporting slightly more favorable assessments. No significant differences were detected based on job position, business location, sector, or revenue tier (all $p > 0.05$). Firm size emerged as a meaningful factor, with significant differences observed for DYC , EXT , and BMI ($p < 0.05$): micro-enterprises with fewer than five employees reported lower capability and innovation levels relative to larger firms, although BUS did not significantly vary by firm size.

Overall, the descriptive and comparative analyses in Table 2 indicate that the sample comprised well-established SMEs with generally positive perceptions of their capabilities, operating environments, and performance. While most demographic characteristics did not meaningfully differentiate perceptions, educational background and firm size played a notable role in shaping how SMEs entrepreneurs evaluated their internal capabilities, external conditions, and BMI. These contextual insights inform the interpretation of subsequent CFA and SEM analyses.

Table 2. Characteristics of the sample group and *t*-test and F-test results comparing EXT, DYC, BMI, and BUS.

General Data	n	%	<i>t</i> -test/F-test for Equality of Means															
			EXT				DYC				BMI				BUS			
			$\bar{x}$	s	t/F	Sig.	$\bar{x}$	s	t/F	Sig.	$\bar{x}$	s	t/F	Sig.	$\bar{x}$	s	t/F	Sig.
Gender																		
Male	165	40.05	3.66	0.74	−0.25	0.80	3.79	0.76	1.31	0.19	3.87	0.70	0.91	0.37	4.08	0.70	1.53	0.13
Female	247	59.95	3.68	0.75			3.70	0.73			3.80	0.74			3.96	0.88		
Age																		
<30 years	142	34.47	3.69	0.82	1.25	0.29	3.80	0.82	1.21	0.30	3.88	0.81	0.62	0.60	3.98	0.89	0.09	0.96
30–44 years	166	40.29	3.69	0.72			3.76	0.71			3.83	0.67			4.01	0.75		
45–59 years	82	19.90	3.71	0.69			3.62	0.69			3.74	0.73			4.03	0.85		
>60 years	22	5.34	3.38	0.65			3.62	0.64			3.83	0.61			4.05	0.65		
Education																		
Primary school	19	4.61	3.80	0.77	2.47	0.04	3.47	0.69	2.19	0.07	3.86	0.68	1.69	0.15	4.46	0.72	2.78	0.03
Secondary school	63	15.29	3.50	0.72			3.60	0.68			3.69	0.71			3.83	0.87		
Vocational certificate/Higher	25	6.07	3.43	0.75			3.56	0.68			3.59	0.81			3.81	0.99		
Bachelor's degree	264	64.08	3.74	0.76			3.81	0.77			3.88	0.75			4.04	0.80		
Higher than bachelor's degree	41	9.95	3.63	0.64			3.72	0.69			3.82	0.52			4.02	0.64		
Job Position																		
Managing Director/Owner	212	51.46	3.63	0.73	1.31	0.27	3.67	0.74	1.68	0.17	3.76	0.70	1.33	0.26	4.01	0.82	0.04	0.99
Manager/Director	30	7.28	3.58	0.75			3.73	0.75			3.92	0.81			4.01	0.79		
Deputy Manager/Deputy Director	33	8.01	3.87	0.57			3.96	0.62			3.99	0.58			4.05	0.74		
Supervisor/Section Head	137	33.25	3.71	0.80			3.78	0.77			3.86	0.77			3.99	0.82		
Business Location																		
Chumphon Province	67	16.26	3.47	0.52	2.53	0.06	3.73	0.61	0.34	0.79	3.87	0.52	0.17	0.92	4.05	0.53	1.10	0.35
Ranong Province	56	13.59	3.79	0.63			3.68	0.73			3.77	0.62			4.03	0.69		

Surat Thani Province	170	41.26	3.67	0.72			3.72	0.69			3.83	0.69			4.06	0.80		
Nakhon Si Thammarat Province	119	28.89	3.74	0.90			3.79	0.90			3.82	0.91			3.89	0.98		
Type of Business																		
Manufacturing	88	21.36	3.70	0.70	0.18	0.84	3.73	0.72	0.43	0.65	3.82	0.70	0.44	0.65	4.02	0.71	0.22	0.81
Trading	190	46.12	3.65	0.73			3.70	0.74			3.80	0.73			3.98	0.84		
Service	134	32.52	3.69	0.81			3.78	0.77			3.87	0.75			4.04	0.84		
Annual Revenue																		
<50 million baht	332	80.58	3.68	0.76	0.70	0.50	3.74	0.74	1.34	0.26	3.83	0.74	1.72	0.18	4.00	0.82	1.53	0.22
50–100 million baht	52	12.62	3.68	0.39			3.54	0.76			3.74	0.56			3.97	0.60		
>100 million baht	28	6.80	3.28	0.92			4.04	0.83			4.40	0.60			4.63	0.51		
Number of Employees																		
<5 employees	115	27.91	3.53	0.76	3.30	0.04	3.51	0.73	7.97	0.00	3.62	0.75	7.76	0.00	3.89	0.83	2.27	0.11
5–50 employees	240	58.25	3.72	0.74			3.82	0.71			3.88	0.71			4.03	0.82		
>50 employees	57	13.84	3.79	0.69			3.84	0.83			4.03	0.66			4.15	0.70		
Duration of Business Operation																		
8–15 years	206	50.00	3.65	0.79	0.69	0.56	3.73	0.79	0.31	0.82	3.79	0.76	0.37	0.77	3.93	0.89	1.26	0.29
16–20 years	129	31.31	3.73	0.71			3.78	0.71			3.85	0.71			4.07	0.71		
21–30 years	38	9.22	3.72	0.69			3.71	0.71			3.85	0.71			4.07	0.84		
>30 years	39	9.47	3.56	0.66			3.66	0.64			3.92	0.63			4.14	0.63		
Total	412	100.00																

The measurement model was rigorously assessed to ensure that all latent constructs demonstrated adequate reliability and convergent validity before proceeding to the structural analysis. Three key criteria were examined: standardized factor loadings, Composite Reliability (CR), and Average Variance Extracted (AVE). Table 3 summarizes the results. All standardized factor loadings exceeded the recommended threshold of 0.70 [51], ranging from 0.71 to 0.92, indicating strong item–construct relationships. These results indicate that each observed variable makes a substantial contribution to measuring its underlying latent construct. For example, the indicators of *DYC* (0.84–0.89) and *BUS* (0.87–0.92) showed particularly high loading values, reflecting the precision with which the items capture the conceptual meaning of the constructs. Internal consistency was evaluated using CR, which is considered more appropriate than Cronbach’s alpha in SEM because it incorporates the actual factor loadings of the indicators [51]. The CR values for all constructs ranged from 0.85 to 0.90, surpassing the minimum recommended benchmark of 0.70. These results confirm that all latent constructs exhibit strong internal consistency and that their indicators are highly reliable. Convergent validity was assessed using the AVE, with a threshold value of 0.50 indicating that a construct explains at least 50% of the variance in its indicators [62]. All AVE values met or exceeded this requirement, ranging from 0.586 to 0.802, confirming adequate convergent validity across constructs. The *BUS* construct achieved the highest AVE (0.802), demonstrating its strong explanatory power over customer and financial performance indicators. The combination of high factor loadings, strong CR values, and satisfactory AVE scores affirms that the measurement model is statistically sound and theoretically coherent. These results provide a solid foundation for evaluating the structural relationships among the constructs—particularly the influence of *DYC*, *BMI*, and *EXT* factors on the sustainable performance of SMEs. Ensuring high measurement quality is essential in sustainability-focused research, as it enhances the credibility of the findings and reinforces the robustness of theoretical contributions within the broader sustainability discourse.

Table 3. Construct reliability and Convergent validity.

Latent Variable	Observable Variable	Factor Loading	Communality: h ²	Collinearity Statistics		Cronbach’s Alpha (α)	Composite Reliability (CR)	Average Variance Extracted (AVE)
				Tolerance	VIF			
External Environment (EXT)	Political	0.72	0.518	-	-	0.844	0.850	0.586
	Economic	0.76	0.578	0.545	1.834			
	Social	0.78	0.608	0.489	2.044			
	Technological	0.80	0.640	0.558	1.791			
Dynamic Capability (DYC)	Creativity for Survival	0.84	0.706	-	-	0.848	0.859	0.672
	Proactive Management	0.89	0.792	0.598	1.673			
	Technology Utilization	0.72	0.518	0.598	1.673			
Business Model Innovation (BMI)	Value Proposition	0.88	0.774	-	-	0.889	0.900	0.695
	Customer Experience	0.82	0.672	0.488	2.048			
	Revenue Model	0.71	0.504	0.501	1.996			
	Differentiation Strategy	0.91	0.828	0.355	2.819			
Business Success (BUS)	Customer Performance	0.92	0.846	-	-	0.892	0.890	0.802

Financial Performance	0.87	0.757	1.000	1.000
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4.2. Measurement Model

Confirmatory Factor Analysis (CFA) results demonstrated that all observed variables exhibited factor loadings ranging from 0.71 to 0.92, exceeding the recommended threshold of 0.70 and indicating strong indicator reliability and theoretical coherence [51]. These high loadings confirm that the indicators were strongly associated with their respective latent constructs, thereby supporting convergent validity and the adequacy of the measurement model. Reliability assessment further reinforced the robustness of the constructs. CR values ranged from 0.850 to 0.900, surpassing the minimum recommended level of 0.70, reflecting strong construct reliability. Similarly, the AVE values between 0.586 and 0.802 exceeded the 0.50 criterion, indicating that each construct captured sufficient variance from its indicators and demonstrating satisfactory convergent validity. Although the Cronbach's alpha of the Revenue Model dimension was slightly below 0.70 ($\alpha = 0.656$), its composite reliability and AVE exceeded recommended thresholds, indicating acceptable internal consistency within the SEM framework. The CFA indicated that the initial measurement model did not achieve satisfactory fit (CMIN/DF = 6.131; GFI = 0.912; CFI = 0.947; TLI = 0.925; IFI = 0.947; SRMR = 0.049; RMSEA = 0.098), as the chi-square ratio and RMSEA exceeded recommended thresholds. Model respecification was therefore undertaken guided by modification indices ($MI > 10$) and theoretical justification. Three correlated error terms (e4–e7, e8–e10, and e8–e11) were introduced only within the same latent constructs to account for shared method-related variance and wording similarity among closely positioned items measured using the same Likert-scale format and administered within the same questionnaire section. No cross-loadings were added and no indicators were removed; thus, the underlying measurement structure remained unchanged. Following respecification, the model achieved acceptable fit (CMIN/DF = 2.845; GFI = 0.945; CFI = 0.976; TLI = 0.965; IFI = 0.976; SRMR = 0.031; RMSEA = 0.067), indicating improved model parsimony and stronger alignment between the observed and model-implied covariance matrices.

Table 4 presents the results of discriminant validity assessment using the Fornell–Larcker criterion and HTMT ratio, confirming that the four latent constructs—EXT, DYC, BMI, and BUS—are conceptually distinct. The square roots of AVE displayed on the diagonal (0.762–0.898) exceed all corresponding inter-construct correlations, indicating that each construct explains its own indicators more strongly than it relates to other constructs, thereby satisfying the Fornell–Larcker criterion. In addition, all HTMT values (0.649–0.814) fall below the recommended threshold of 0.85, suggesting no issues of conceptual overlap or multicollinearity among constructs. Overall, these results provide strong evidence of discriminant validity, confirming that the constructs are sufficiently distinct for subsequent SEM.

Although DYC and BMI are often described as multidimensional constructs in the prior literature, the present study operationalizes their dimensions as correlated first-order latent constructs rather than specifying a hierarchical second-order structure. The first-order measurement model demonstrated satisfactory reliability, validity, and model fit, supporting the empirical distinctiveness of the dimensions. This specification was adopted to preserve model parsimony and ensure stable estimation within the covariance-based SEM framework.

Table 4. Discriminant Validity.

Latent Variable	Fornell-Larcker Criterion				Heterotrait-Monotrait (HTMT) Ratio			
	EXT	DYC	BMI	BUS	EXT	DYC	BMI	BUS
External Environment (EXT)	0.762							
Dynamic Capability (DYC)	0.753	0.816			0.814			
Business Model Innovation (BMI)	0.626	0.738	0.851		0.649	0.790		
Business Success (BUS)	0.714	0.725	0.755	0.898	0.812	0.814	0.792	

4.3. Structural Model Analysis

The structural relationships among EXT, DYC, BMI, and BUS were examined using the CB-SEM approach, as illustrated in Figure 2. The initial structural model demonstrated inadequate fit to the empirical data (CMIN/DF = 6.607; GFI = 0.898; CFI = 0.939; TLI = 0.918; IFI = 0.939; SRMR = 0.057), as the chi-square ratio exceeded the recommended threshold (≤ 3.00) and the GFI fell marginally below the acceptable cut-off (≥ 0.90), suggesting potential model misspecification. Model respecification was undertaken, guided by modification indices ($MI > 10$) and theoretical justification. Four correlated residuals (e1–e4, e2–e3, e8–e11, and e9–e11) were introduced only within the same latent constructs to account for shared method-related variance and wording similarity among closely positioned items measured using the same Likert-scale format and administered within the same questionnaire section. No structural paths were added or removed; thus, the theoretical relationships among latent constructs remained unchanged. Given the non-significant direct effect and significant bootstrapped indirect effects, additional nested model comparisons were unnecessary, supporting an indirect-only mediation pattern. Following respecification, the structural model achieved acceptable fit (CMIN/DF = 2.827; GFI = 0.947; CFI = 0.977; TLI = 0.965; IFI = 0.977; SRMR = 0.031), indicating improved model parsimony and stronger alignment between the observed and model-implied covariance matrices. Although one BMI indicator showed a loading slightly below 0.70 (0.697), it was retained because the construct demonstrated strong composite reliability (CR = 0.900) and adequate convergent validity (AVE = 0.695), indicating satisfactory measurement robustness.

The structural model results (Table 5) indicate that most hypothesized relationships are statistically significant at the 0.01 level, except for the direct EXT $\rightarrow$ BUS path. EXT exerts strong and significant positive effects on DYC ($\beta = 0.785$, $t = 11.717$, $p < 0.01$) and BMI ($\beta = 0.443$, $t = 7.063$, $p < 0.01$), although its direct effect on BUS is not significant ($\beta = -0.024$, $t = -0.354$, $p = 0.723$). DYC significantly predicts both BMI ($\beta = 0.482$, $t = 7.886$, $p < 0.01$) and BUS ($\beta = 0.373$, $t = 5.268$, $p < 0.01$). Furthermore, BMI demonstrates a strong and significant positive influence on BUS ($\beta = 0.582$, $t = 7.378$, $p < 0.01$). Beyond statistical significance, the magnitude of the standardized coefficients indicates substantive effects among the constructs. The model explains 61.6% of the variance in DYC ($R^2 = 0.616$), 76.4% in BMI ($R^2 = 0.764$), and 80.1% in BUS ($R^2 = 0.801$), demonstrating strong explanatory power for SMEs' success within the SSEC context. Collectively, these findings suggest that indirect pathways—particularly those mediated through DYC and BMI—play a more influential role than direct effects in determining SMEs' BUS.

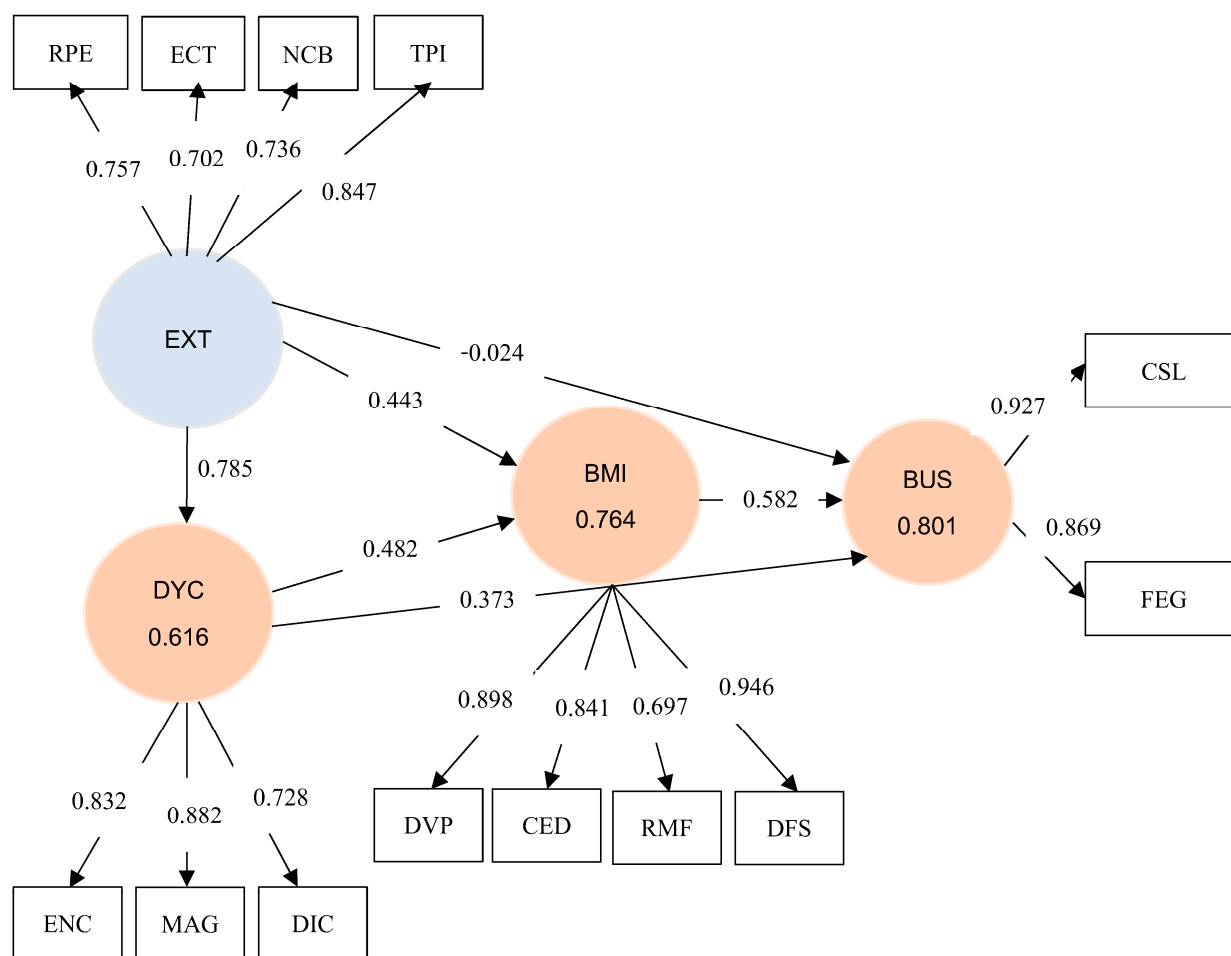


Figure 2. The structural model.

Table 5. Summary results.

Hypotheses	Effect	Path Coefficients (β)	t -Statistic	p -Value	Results
H1	EXT $\rightarrow$ DYC	0.785	11.717	0.000	Supported
H2	EXT $\rightarrow$ BMI	0.443	7.063	0.000	Supported
H3	EXT $\rightarrow$ BUS	−0.024	−0.354	0.723	Not supported
H4	DYC $\rightarrow$ BMI	0.482	7.886	0.000	Supported
H5	DYC $\rightarrow$ BUS	0.373	5.268	0.000	Supported
H6	BMI $\rightarrow$ BUS	0.582	7.378	0.000	Supported

The results indicate (Table 6) that EXT influences BUS entirely through indirect pathways. To assess the significance of indirect effects, a bootstrapping procedure with 5000 resamples was conducted using bias-corrected confidence intervals. An indirect effect was considered statistically significant when the 95% confidence interval did not include zero. Three mediating routes were identified: EXT $\rightarrow$ BMI $\rightarrow$ BUS ($\beta = 0.258$), EXT $\rightarrow$ DYC $\rightarrow$ BUS ($\beta = 0.293$), and the sequential mediation EXT $\rightarrow$ DYC $\rightarrow$ BMI $\rightarrow$ BUS ($\beta = 0.220$). The bootstrap results confirmed that all indirect pathways were statistically significant, supporting an indirect-only mediation pattern, given that the direct path from EXT to BUS was non-significant, whereas all indirect pathways were statistically significant based on bias-corrected bootstrapping.

This pattern indicates that environmental dynamism does not constitute an autonomous driver of firm performance. Rather, its influence materializes only when external conditions are interpreted and transformed through internal strategic capabilities and business model adaptation. In other words, the EXT serves as a contextual stimulus

whose performance implications depend on firms' DYC deployment and innovation alignment. These pathways collectively produce a substantial total indirect effect ($\beta = 0.771$), far exceeding the negligible direct effect. Consequently, the total effect of EXT on BUS is 0.747, confirming that BUS is driven not by external conditions alone but by the development of DYC and BMI as internal strategic mechanisms. The mediation structure was determined based on the non-significant direct effect and statistically significant indirect effects using bias-corrected bootstrapping. No additional structural paths were constrained or removed for nested model comparison. Accordingly, the findings indicate an indirect-only mediation pattern.

Table 6. Indirect and Total Effects.

Mediating Path	Indirect Effect (β)
EXT $\rightarrow$ BMI $\rightarrow$ BUS	0.258
EXT $\rightarrow$ DYC $\rightarrow$ BUS	0.293
EXT $\rightarrow$ DYC $\rightarrow$ BMI $\rightarrow$ BUS	0.220
Total Indirect Effect (EXT $\rightarrow$ BUS)	0.771
Total Effect (β) (EXT $\rightarrow$ BUS)	0.747

5. Discussion

5.1. The Role of the EXT

The findings indicate that the EXT within the SSEC does not exert a significant direct effect on BUS. Instead, its influence operates indirectly through internal mechanisms—DYC and BMI. This pattern reflects structural dependence on internal capability development within corridor-based regional economic systems, suggesting that environmental change alone does not automatically translate into firm-level performance gains.

In the SSEC context, environmental turbulence, technological shifts, demographic changes, and post-COVID-19 market restructuring appear to function primarily as external stimuli that compel SMEs to adapt rather than as direct drivers of business performance. This interpretation is consistent with recent empirical research indicating that the EXT forces exert limited direct influence on SMEs' BUS once strategic capabilities are accounted for. Evidence from Thailand and other emerging economies similarly demonstrates that uncertainty and digital disruption generate performance benefits only when firms upgrade internal processes, digital readiness, and innovation capability [63,64].

This contextual configuration may explain why the direct path remains insignificant in the SSEC setting. As a policy-driven economic corridor characterized by infrastructural asymmetries and uneven capability distribution among SMEs, environmental improvements may expand opportunity structures without immediately translating into measurable business performance. In such settings, external dynamism increases competitive pressure and opportunity visibility, but performance realization depends critically on firms' internal absorptive capability and strategic responsiveness.

Qualitative interview findings further reinforce this interpretation. Entrepreneurs in the SSEC reported that fluctuations in tourism demand, logistics constraints, regulatory adjustments, and raw material price volatility created substantial operational pressure. However, superior outcomes materialized only when firms responded proactively through strategic reconfiguration, resource redeployment, and business model adaptation. Taken together, these findings suggest that environmental dynamism functions as a conditional catalyst rather than an autonomous performance determinant in transitional regional economies.

In this study, the EXT was modeled as a higher-order construct encompassing political, economic, social, and technological dimensions based on the PEST framework. This specification enhances theoretical parsimony and captures the collective macro-level pressures experienced by SMEs in the SSEC. However, modeling the EXT as an aggregated construct may obscure the differential effects of specific environmental forces. The present findings therefore reflect the combined influence of macro-environmental conditions rather than isolating the relative impact of individual drivers, such as regulatory shifts or technological change. Future research could disaggregate these dimensions to examine their distinct structural effects and comparative influence.

5.2. The Role of DYC

DYC emerges as a central driver of both BMI and BUS. Quantitative results show significant direct effects of DYC on BUS and BMI, alongside notable indirect effects that channel the influence of external conditions toward performance. This finding aligns with prior studies emphasizing the importance of sensing, seizing, and reconfiguring capabilities in enhancing SMEs' competitiveness [1,65]. Interviews with participating SMEs in the SSEC further reinforce this mechanism, indicating that firms with strong entrepreneurial judgment, managerial flexibility, digital literacy, and adaptive problem-solving reported greater resilience and faster recovery following the COVID-19 disruption. These insights confirm that the DYC serves as the *interpretive and transformative mechanism* that allows SMEs to convert external challenges into strategic opportunities, consistent with the DYC' framework applied to SMEs in emerging markets.

5.3. The Role of BMI

BMI plays a dual role as both a direct determinant of BUS and a mediator linking external conditions and DYC to performance. BMI significantly enhances customer satisfaction, financial performance, and long-term competitiveness, reflecting similar findings from recent SME studies across Asia. Research conducted during and after the COVID-19 crisis consistently shows that BMI strengthens resilience and revenue stability by enabling new value propositions, multi-channel delivery systems, digital platforms, and innovative revenue architectures [66,67]. International studies echo this pattern, indicating that BMI serves as a strategic mechanism through which digital transformation and capability development translate into performance gains [68,69]. In the SSEC context, qualitative insights further support these findings: SMEs that redesigned their logistics systems, adopted hybrid online–offline models, diversified product offerings, or improved customer experiences performed significantly better. Thus, BMI functions as a *strategic reconfiguration layer* enabling SMEs to leverage internal strengths under changing external conditions. Within the identified sequential pathway (EXT → DYC → BMI → BUS), BMI operates as the critical conversion mechanism through which activated capabilities are translated into sustained competitive and organizational resilience outcomes. This finding extends prior BMI research by positioning BMI as a structurally embedded transmission mechanism within capability-based sustainability logic.

5.4. Synthesis with DCT

The structural results move beyond mere confirmation of DCT by clarifying how capability activation functions as a critical transmission mechanism between environmental stimuli and SMEs' BUS within regionally structured emerging economies [70]. Rather than simply reaffirming that DYC influences performance, the findings specify a structural boundary condition: environmental dynamism does not directly generate performance advantages in corridor-based economies unless it is mediated through sequential capability activation and business model transformation. The absence

of a direct link between the EXT and BUS indicates that SMEs do not benefit automatically from favorable or unfavorable external conditions. Instead, they must actively deploy DYC to sense environmental signals, seize emerging opportunities, and reconfigure internal resources. This non-significant direct path is theoretically meaningful, as it suggests that environmental dynamism constitutes a contextual stimulus rather than an inherent source of performance. In other words, environmental change alone does not create competitive advantage; it must be strategically interpreted and operationalized through internal capability activation.

Importantly, this transmission mechanism also carries sustainability implications beyond financial performance. When firms activate DYC in response to environmental dynamism, they are better positioned to adopt resource-efficient practices, eco-innovative solutions, and stakeholder-oriented business models. Thus, capability-driven transformation may simultaneously enhance economic outcomes while promoting environmental responsibility and social value creation within regionally structured development corridors.

The sequential mediation pathway (EXT → DYC → BMI → BUS) provides empirical validation of this transmission logic, illustrating how external conditions are translated into BUS only through internal capability orchestration and subsequent BMI. This mechanism-level specification refines DCT by demonstrating that capability deployment operates not merely as a direct performance driver but as an intermediary structural conduit under regionally concentrated economic restructuring. Empirical studies grounded in the DYC' perspective report comparable indirect patterns, particularly among SMEs undergoing digital transition [29,71].

Recent turbulence-oriented research further strengthens this interpretation. Asad and Asif [72] demonstrate that strategic flexibility functions as a capability-based mechanism through which entrepreneurial firms convert environmental turbulence into enhanced business performance. Their findings indicate that volatility alone does not improve firm performance; rather, performance gains materialize only when firms possess adaptive strategic capabilities capable of resource reconfiguration under shifting conditions. This turbulence–capability alignment closely parallels the indirect-only mediation pattern identified in the present study, reinforcing the interpretation that environmental forces operate through capability activation rather than exerting autonomous performance effects.

By situating the SSEC findings within this emerging turbulence–capability literature, the study advances DCT beyond a generalized responsiveness framework toward a more precise articulation of transmission mechanisms in policy-driven regional economies. This contextualized extension demonstrates that corridor-based economic transformation reshapes opportunity structures but does not predetermine BUS without strategic capability alignment. Such alignment is essential not only for competitive advantage but also for advancing environmentally sustainable practices and socially embedded development within emerging regional economies. The integration of qualitative and quantitative findings further enhances explanatory precision by triangulating statistical mediation results with experiential evidence from entrepreneurs, thereby strengthening internal validity and deepening theoretical insight.

5.5. Synthesis with the RBV

The pattern of results is also strongly aligned with the RBV, which posits that sustainable competitive advantage derives from internal capabilities rather than external conditions [73]. Although the EXT shapes opportunities, the findings show that DYC and BMI—internal strategic capabilities consistent with VRIN logic—are the primary determinants of BUS. This aligns with recent RBV-informed research on SMEs'

sustainability, which highlights that digital skills, managerial competence, innovation capability, and organizational learning generate long-term performance advantages [74], while external conditions merely frame the competitive landscape [67,69]. In the SSEC context, where infrastructure challenges and sectoral volatility are prevalent, SMEs succeed not because the environment is favorable, but because they effectively leverage and reconfigure internal resources. The strong indirect effects of EXT through DYC and BMI provide empirical support for this RBV-consistent interpretation.

Beyond reinforcing RBV logic, these findings also engage contemporary debates in the BMI literature, where innovation is increasingly conceptualized as a capability-mediated response to digital disruption and environmental turbulence. Consistent with this perspective, the results confirm that BMI functions as a performance-enabling mechanism rather than a standalone outcome of environmental change.

However, the study extends prior work by demonstrating that environmental dynamism does not directly influence BUS, but operates exclusively through sequential capability activation and BMI. This indirect-only mediation pattern refines theoretical understanding by specifying the structural conditions under which internal resources generate competitive advantage within policy-driven regional economies such as the SSEC.

5.6. Practical Implications

This study advances DCT and RBV by clarifying how EXT conditions are translated into sustainable SME performance within a regional economic corridor. Rather than exerting a direct effect on BUS, environmental dynamism functions as a strategic trigger that activates DYC, which subsequently enable BMI and drive business performance.

By identifying this sequential capability–innovation–performance pathway, the study refines DCT through a clearly specified transmission mechanism and establishes an important boundary condition: environmental dynamism alone does not generate competitive advantage without effective internal capability orchestration. DYC therefore operate as essential mediating mechanisms through which environmental pressures are transformed into sustainable outcomes—extending beyond financial returns to environmental efficiency, responsible resource utilization, and socially inclusive value creation. In this respect, dynamic capabilities emerge as foundational drivers of long-term resilience in emerging regional economies.

The findings also extend RBV by reinforcing the primacy of internal strategic assets. While EXT shapes opportunity conditions, sustained performance depends on firms' ability to strategically deploy and reconfigure resources. By positioning BMI as the configuration mechanism linking capabilities to performance, the study clarifies how intangible assets are operationalized in dynamic and sustainability-oriented contexts.

Situated within the SSEC, the model further contributes to scholarship on corridor-based regional transformation. Macro-level restructuring reshapes opportunity landscapes but does not predetermine firm-level outcomes; instead, performance depends on how SMEs align internal capabilities with structural change, advancing mechanism-level understanding of capability-based explanations in emerging economies.

For policymakers and regional development agencies, these findings imply that corridor-based SME strategies must move beyond infrastructure expansion and macroeconomic incentives toward capability-centered development. Because EXT does not directly improve BUS, policy instruments should explicitly target the activation of firm-level dynamic capabilities. Funding mechanisms are therefore best structured as matching-fund schemes tied to verifiable capability-building initiatives rather than unconditional transfers. Examples include innovation vouchers to support SME

experimentation, conditional digital transformation grants, and ESG-linked performance subsidies tied to measurable sustainability improvements.

Operationally, the SSEC may establish a corridor-level Knowledge and Innovation Hub operating under a public–private partnership model. This platform could integrate university–industry collaboration, shared digital advisory services, ESG benchmarking frameworks, and cross-provincial peer-learning networks, while coordinating capability audits and sustainability standardization across Chumphon, Ranong, Surat Thani, and Nakhon Si Thammarat to reduce fragmentation in SME support systems.

To reinforce sustainability integration, policy support should be explicitly linked to measurable performance indicators, including reductions in carbon intensity, improvements in energy and resource efficiency, digital adoption milestones, and inclusive employment outcomes. Aligning financial incentives with verifiable environmental and social performance ensures that corridor restructuring fosters innovation-led, capability-embedded, and ESG-aligned competitive advantage rather than short-term expansion.

5.7. Limitations and Future Research Directions

5.7.1. Limitations

This study is subject to several limitations. First, the analysis focuses solely on SMEs located within four provinces of the SSEC, which may constrain the generalizability of the findings. Second, the use of cross-sectional data limits the ability to capture the temporal evolution of DYC. Third, firm performance was assessed through self-reported perceptual measures, which may introduce respondent bias. Finally, although the qualitative sample of 20 entrepreneurs provided rich insights, it may not fully represent the diversity of subsectors within the SME landscape.

Additionally, although theoretically grounded, modeling the EXT as a higher-order construct limits interpretability regarding the relative influence of specific environmental drivers.

5.7.2. Future Research Directions

Future research could employ longitudinal designs to explore how DYC evolve during periods of economic disruption, while extending comparative analyses to other regions such as Thailand’s Eastern Economic Corridor, Northeastern Special Zones, and selected ASEAN economies. Further studies may incorporate additional constructs such as ESG capabilities, green innovation, or circular business models to enrich the theoretical framework. Researchers may also investigate moderating variables—including digital maturity, supply chain integration, or entrepreneurial orientation—to deepen understanding of causal mechanisms. Additionally, the use of multi-group CB-SEM is recommended to examine sectoral differences within the SSEC, particularly across industries such as tourism, food processing, and logistics.

6. Conclusions

This study examined the determinants of BUS among SMEs registered as juristic persons in four provinces of the SSEC—Chumphon, Ranong, Surat Thani, and Nakhon Si Thammarat. Using a mixed-methods design, quantitative data were collected from 412 valid responses and qualitative insights were obtained from 20 purposively selected entrepreneurs. The research model comprised four latent variables: EXT, DYC, BMI, and BUS. These variables were operationalized through 40 observed indicators covering government policy, economic and social conditions, creativity for survival, proactive management, technological utilization, value proposition design, customer experience,

revenue model diversification, and financial and customer outcomes. The quantitative findings demonstrate that EXT does not directly enhance BUS. This non-significant direct effect is theoretically meaningful, indicating that environmental dynamism does not inherently generate firm-level performance. Instead, its influence flows through DYC and BMI, forming a sequential pathway that converts external pressures into improved performance. This pattern shows that SMEs benefit from the EXT only when they possess the internal ability to sense changes, adapt strategically, and innovate their business models. By clarifying this transmission mechanism, the study refines existing theoretical explanations by specifying a structural boundary condition: environmental forces function as contextual stimuli rather than autonomous drivers of performance in corridor-based emerging economies. DYC emerged as a decisive factor, as firms with higher agility, stronger problem-solving skills, and greater digital readiness achieved better customer and financial results.

BMI further strengthens this mechanism by enabling firms to redesign operations, differentiate themselves in the market, and expand value creation opportunities. The qualitative evidence reinforces the quantitative structure: successful entrepreneurs consistently reported that creativity, digital transformation, and proactive strategic adjustment were essential for navigating post-pandemic challenges. Overall, the study concludes that SMEs' success in the SSEC is shaped far more by internal capability development and continuous business model renewal than by the EXT itself. Enhancing DYC and fostering innovation-oriented business models represent essential pathways for SMEs seeking long-term resilience and sustainable growth. This refined mechanism constitutes the central theoretical contribution of the study.

From a sustainability perspective, this study conceptualizes BUS not merely as short-term financial performance but as the capability of SMEs to maintain organizational viability, strategic adaptability, and long-term competitiveness under structural volatility. In corridor-based emerging economies such as the SSEC, sustainability is embedded in firms' capability to continuously reconfigure resources, innovate business models, and absorb environmental shocks. The identified sequential capability–innovation–performance pathway therefore contributes to sustainability scholarship by demonstrating that enduring regional development depends not only on macro-level policy initiatives but on firm-level adaptive capability. In this sense, sustainable economic transformation is realized through micro-foundations of DYC deployment and strategic renewal rather than through environmental conditions alone.

The findings should be interpreted within clearly defined boundary conditions. This study is empirically situated in the SSEC, a policy-driven economic corridor in Thailand, an emerging economy. Accordingly, the structural relationships identified may not be directly generalizable to SMEs operating in developed economies or in institutional environments that are less shaped by state-driven policy mechanisms. Future research should examine whether similar capability–innovation–performance pathways operate across different economic systems and regulatory contexts to assess the robustness of these relationships.

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References

1. Mongkol, K. The impact of Dynamic Capabilities on the performance of Thai small and medium enterprises. *Int. J. Asian Bus. Inf. Manag.* **2022**, *13*, 13. <https://doi.org/10.4018/IJABIM.309102>.
2. Kanyepe, J.; Musasa, T.; Wilbert, M. Supply chain risk factors, technological capabilities, and firm performance of small to medium enterprises (SMEs). *J. Small Bus. Strat.* **2025**, *35*, 115–128. <https://doi.org/10.53703/001c.125910>.
3. Boonpattarakon, A. Model of Thai small and medium sized enterprises' organizational capabilities: Review and verification. *J. Manag. Res.* **2012**, *4*, 15–42. <https://doi.org/10.5296/jmr.v4i3.1557>.
4. Chumphong, O.; Srimai, S.; Potipiroon, W. The Resource-Based View, Dynamic Capabilities and SME Performance for SMEs to Become Smart Enterprises. *ABAC ODI J. Vision. Action. Outcome* **2020**, *7*, 129–146. Available online: <https://api.semanticscholar.org/CorpusID:221757399> (accessed on 10 January 2026).
5. Pertheban, T.R.; Thurasamy, R.; Marimuthu, A.; Venkatachalam, K.R.; Annamalah, S.; Paraman, P.; Hoo, W.C. The impact of proactive resilience strategies on organizational performance: Role of ambidextrous and Dynamic Capabilities of SMEs in manufacturing sector. *Sustainability* **2023**, *15*, 12665. <https://doi.org/10.3390/su151612665>.
6. Weaven, S.; Quach, S.; Thaichon, P.; Frazer, L.; Billot, K.; Grace, D. Surviving an economic downturn: Dynamic Capabilities of SMEs. *J. Bus. Res.* **2021**, *128*, 109–123. <https://doi.org/10.1016/j.jbusres.2021.02.009>.
7. Barragan, K.E.; Becker, F.S.R. Keeping pace with the digital transformation—Exploring the digital orientation of SMEs. *Small Bus. Econ.* **2024**, *64*, 1361–1385. <https://doi.org/10.1007/s11187-024-00947-7>.
8. Sarfo, C.; Zhang, J.A.; O'Kane, C.; O'Kane, P. Perceived value of microfinance and SME performance: The role of exploratory innovation. *Int. J. Innov. Stud.* **2024**, *8*, 172–185. <https://doi.org/10.1016/j.ijis.2024.02.003>.
9. Phong, V.T.; Tam, V.T. The impact of Dynamic Capabilities on performance of small and medium tourism businesses: A study for the South-Central Coast Region, Vietnam. *Open J. Bus. Manag.* **2024**, *12*, 444–471. <https://doi.org/10.4236/ojbm.2024.121028>.
10. Mansouri, M.; Malainine, C.; Souti, H.; Cadimi, I. Dynamic Capabilities, competitiveness and performance of small and medium-sized enterprises: A systematic literature review. *Int. J. Account. Financ. Audit. Manag. Econ.* **2022**, *3*, 1–22. <https://doi.org/10.5281/zenodo.7121098>.
11. Malik, A.Z.; Thapa, S.; Paswan, A.K. Social media influencer as a human brand: A need fulfillment perspective. *J. Prod. Brand. Manag.* **2023**, *32*, 173–190. <https://doi.org/10.1108/JPBM-07-2021-3546>.
12. Huang, W.; Ichikohji, T. How Dynamic Capabilities enable Chinese SMEs to survive and thrive during COVID-19: Exploring the mediating role of business model innovation. *PLoS ONE* **2024**, *19*, e0304471. <https://doi.org/10.1371/journal.pone.0304471>.
13. Randhawa, K.; Wilden, R.; Gudergan, S. How to innovate toward an ambidextrous business model? The role of Dynamic Capabilities and market orientation. *J. Bus. Res.* **2021**, *130*, 618–634. <https://doi.org/10.1016/j.jbusres.2020.05.046>.
14. Molina-García, A.; Galache-Laza, M.T.; González-García, V.; Diéguez-Soto, J. Financial literacy and environmental sustainability in SMEs: Process innovation as an association mechanism. *Eurasian Bus. Rev.* **2025**, *15*, 765–802. <https://doi.org/10.1007/s40821-025-00289-8>.
15. Kongrode, J.; Aujirapongpan, S.; Ru-Zhue, J. Exploring the impact of dynamic talent management capability on competitive performance: The mediating roles of dynamic marketing capability of startups. *J. Compet.* **2023**, *15*, 113. <https://doi.org/10.7441/joc.2023.01.07>.

16. Zhou, K.Z.; Wu, F. Technological capability, strategic flexibility, and product innovation. *Strateg. Manag. J.* **2010**, *31*, 547–561. <https://doi.org/10.1002/smj.830>.
17. Gupta, R.; Pandit, A. Innovation and growth of small and medium enterprises: Role of environmental dynamism and firm resources as moderating variables. *Int. J. Entrep. Innov. Manag.* **2013**, *17*, 284–295. <https://doi.org/10.1504/IJEIM.2013.059888>.
18. Mircescu, G.D. Analysis of the external environment of the pharmaceutical organization. *Logos Universality Ment. Educ. Nov. Sect. Soc. Sci.* **2023**, *12*, 67–76. <https://doi.org/10.18662/lumenss/12.1/80>.
19. Yüksel, İ. Developing a multi-criteria decision-making model for PESTEL analysis. *Int. J. Bus. Manag.* **2012**, *7*, 52–66. <https://doi.org/10.5539/ijbm.v7n24p52>.
20. Çitilci, T.; Akbalık, M. The importance of PESTEL analysis for environmental scanning process. In *Advances in Marketing, Customer Relationship Management, and E-Services*; IGI Global: Hershey, PA, USA, 2019. <https://doi.org/10.4018/978-1-7998-2559-3.ch016>.
21. Newbert, S.L. Empirical research on the resource-based view of the firm: An assessment and suggestions for future research. *Strateg. Manag. J.* **2007**, *28*, 121–146. <https://doi.org/10.1002/smj.573>.
22. Kibria, U.; Ishtiaq, M.; Riaz, A.; Anees, F. Rethinking Resources: The Mediating Role of Bricolage in the Financial Success of SMEs. *Policy J. Soc. Sci. Rev.* **2025**, *3*, 99–114. Available online: <https://www.policyjssr.com/index.php/PJSSR/article/view/588> (accessed on 10 February 2026).
23. Cricelli, L.; Mauriello, R.; Strazzullo, S. Exploring blockchain adoption in the Italian wine industry: Insights from a multiple case study. *Wine Econ. Policy* **2024**, *13*, 89–104. <https://doi.org/10.36253/wep-16278>.
24. Arena, M.; Arnaboldi, M.; Azzone, G. The organizational dynamics of enterprise risk management. *Acc. Organ. Soc.* **2010**, *35*, 659–675. <https://doi.org/10.1016/j.aos.2010.07.003>.
25. Martín-Rojas, R.; Garcia-Morales, V.J.; Gonzalez-Alvarez, N. Technological antecedents of entrepreneurship and its consequences for organizational performance. *Technol. Forecast. Soc. Change* **2019**, *147*, 22–35. <https://doi.org/10.1016/j.techfore.2019.06.018>.
26. Razmdoost, K.; Alinaghian, L.; Linder, C. New venture formation: A capability configurational approach. *J. Bus. Res.* **2020**, *113*, 290–302. <https://doi.org/10.1016/j.jbusres.2019.09.047>.
27. Hock-Doepgen, M.; Clauss, T.; Kraus, S.; Cheng, C.F. Knowledge management capabilities and organizational risk-taking for business model innovation in SMEs. *J. Bus. Res.* **2021**, *130*, 683–697. <https://doi.org/10.1016/j.jbusres.2019.12.001>.
28. Petersen, N.H. Mindful organizing sensemaking of the innovative Blank Canvas business modelling: Critique of the Business Model Canvas framework. *Int. J. Entrep.* **2024**, *28*, 1–18. <https://doi.org/10.13140/RG.2.2.27830.92483>.
29. Liu, L.; Cui, L.; Han, Q.; Zhang, C. The impact of digital capabilities and Dynamic Capabilities on business model innovation: The moderating effect of organizational inertia. *Humanit. Soc. Sci. Commun.* **2024**, *11*, 420. <https://doi.org/10.1057/s41599-024-02910-z>.
30. Morgan, N.A.; Rego, L.L. The value of different customer satisfaction and loyalty metrics in predicting business performance. *Mark. Sci.* **2006**, *25*, 426–439. <https://doi.org/10.1287/mksc.1050.0180>.
31. Ramasamy, G.; Ramasamy, G.D.; Ramasamy, P. Conceptual review of consumer satisfaction theories with expectation-confirmation and disconfirmation paradigm for business sustainable growth and decision making. *F1000Research* **2024**, *13*, 1399. <https://doi.org/10.12688/f1000research.158612.1>.
32. Keelson, S.A.; Cúg, J.; Amoah, J.; Petráková, Z.; Addo, J.O.; Jibril, A.B. The influence of market competition on SMEs' performance in emerging economies: Does process innovation moderate the relationship? *Economies* **2024**, *12*, 282. <https://doi.org/10.3390/economies12110282>.
33. Gumel, B.I. The mediating impact of the Small and Medium Enterprises Development Agency of Nigeria on the relationship between the critical success factors and SMEs' success. *SSRN Electron. J.* **2024**. <https://doi.org/10.2139/ssrn.4873892>.
34. Cristofaro, M.; Hristov, I.D.; Cimini, R.; Lovallo, D. From start to stardom: The impact of resource allocation strategies on new venture survival and growth. *Long Range Plan.* **2025**, *58*, 102513. <https://doi.org/10.1016/j.lrp.2025.102513>.
35. Qiayum, S.; Wang, C.L. Understanding Internal Conditions Driving Ordinary and Dynamic Capabilities in Indian High-Tech Firms. *J. Bus. Res.* **2018**, *90*, 206–214. Available online: <https://ssrn.com/abstract=3186287> (accessed on 10 January 2026).
36. Abuseta, H.; Iyiola, K.; Aljuhmani, H.Y. Digital Technologies and Business Model Innovation in Turbulent Markets: Unlocking the Power of Agility and Absorptive Capacity. *Sustainability* **2025**, *17*, 5296. <https://doi.org/10.3390/su17125296>.
37. Farzaneh, M.; Wilden, R.; Afshari, L.; Mehralian, G. Dynamic Capabilities and innovation ambidexterity: The roles of intellectual capital and innovation orientation. *J. Bus. Res.* **2022**, *148*, 47–59. <https://doi.org/10.1016/j.jbusres.2022.04.030>.

38. Cheraghalizadeh, R.; Olya, H.; Tumer, M. The effects of external and internal factors on competitive advantage: Moderation of market dynamism and mediation of customer relationship building. *Sustainability* **2021**, *13*, 4066. <https://doi.org/10.3390/su13074066>.
39. Dörr, L.; Fliege, K.; Lehmann, C.; Kanbach, D.K.; Kraus, S. A taxonomy on influencing factors towards digital transformation in SMEs. *J. Small Bus. Strat.* **2023**, *33*, 53–69. <https://doi.org/10.53703/001c.66283>.
40. Idisondejaja, B.B.; Wahyuni, S.; Turino, H. The role of resource structuring, marketing, and networking capabilities in forming DMO orchestration capability toward sustainable value creation. *Cogent Bus. Manag.* **2023**, *10*, 2288381. <https://doi.org/10.1080/23311975.2023.2288381>.
41. Asikhia, O.; Naidoo, V. SMEs management success determinants and its implications on their performance in South West, Nigeria. *Int. J. Econ. Bus. Adm.* **2020**, *8*, 1057–1072. <https://doi.org/10.35808/ijeba/650>.
42. Nyamrunda, F.; Freeman, S. Small and medium enterprises in transitional East African economies: The case of Tanzania. In *Doing Business in Africa: From Economic Growth to Societal Development*; Apitsa, S.M., Milliot, E., Eds.; Palgrave Macmillan: Cham, Switzerland, 2021; pp. 277–307. https://doi.org/10.1007/978-3-030-50739-8_12.
43. Teece, D.J. Business models and Dynamic Capabilities. *Long Range Plan.* **2018**, *51*, 40–49. <https://doi.org/10.1016/j.lrp.2017.06.007>.
44. Warner, K.S.R.; Wäger, M. Building Dynamic Capabilities for digital transformation: An ongoing process of strategic renewal. *Long Range Plan.* **2019**, *52*, 326–349. <https://doi.org/10.1016/j.lrp.2018.12.001>.
45. Witschel, D.; Döhla, M.; Kaiser, S.; Voigt, K.I.; Pfletschinger, M. What takes the wind out of their sails? A micro-foundational perspective of challenges for building Dynamic Capabilities towards digital business model innovation. *Schmalenbach J. Bus. Res.* **2023**, *75*, 345–388. <https://doi.org/10.1007/s41471-023-00163-1>.
46. Zhang, Z. Hierarchical Dynamic Capabilities and strategic entrepreneurship in changing industrial environments. *Front. Bus. Res. China* **2014**, *8*, 388–410. <https://doi.org/10.3868/s070-003-014-0018-0>.
47. Balta, M.E.; Papadopoulos, T.; Spanaki, K. Business model pivoting and digital technologies in turbulent environments. *Int. J. Entrep. Behav. Res.* **2023**, *30*, 773–799. <https://doi.org/10.1108/IJEBR-02-2023-0210>.
48. Salfore, N.; Ensermu, M.; Kinde, Z. Business model innovation and firm performance: Evidence from manufacturing SMEs. *Heliyon* **2023**, *9*, e16384. <https://doi.org/10.1016/j.heliyon.2023.e16384>.
49. Yu, F.; Wang, G. Assessing the impact of business model innovation on firm performance: Insights from the China Growth Enterprise Market. *Int. Bus. Res.* **2023**, *16*, 51–68. <https://doi.org/10.5539/ibr.v16n4p51>.
50. SMEBigData. MSME Dashboard-B. 2025. Available online: <https://www.smebigdata.com/msme/dashboard-b> (accessed on 1 December 2025).
51. Hair, J.F.; Babin, B.J.; Anderson, R.E.; Black, W.C. *Multivariate Data Analysis*, 8th ed.; Pearson Education Limited: Harlow, UK, 2019.
52. Rizal, O.; Suhadak Mawardi, M.K. Analysis of the influence of external and internal environmental factors on business performance: A study on micro small and medium enterprises of food and beverage. *Russ. J. Agric. Soc. Econ. Sci.* **2017**, *6*, 47–56. <https://doi.org/10.18551/rjoas.2017-06.05>.
53. Helfat, C.E.; Martin, J.A. Dynamic managerial capabilities: Review and assessment of managerial impact on strategic change. *J. Manag.* **2015**, *41*, 1281–1312. <https://doi.org/10.1177/0149206314561301>.
54. Duchek, S. Organizational resilience: A capability-based conceptualization. *Bus. Res.* **2020**, *13*, 215–246. <https://doi.org/10.1007/s40685-019-0085-7>.
55. Li, Y.; Chen, M.; Cai, Z.; Liu, H. Online–offline channel integration and innovation ambidexterity: Roles of top management team and environmental dynamism. *J. Bus. Res.* **2023**, *160*, 113792. <https://doi.org/10.1016/j.jbusres.2023.113792>.
56. Battistella, C.; De Toni, A.F.; De Zan, G.; Pessot, E. Cultivating business model agility through focused capabilities: A multiple case study. *J. Bus. Res.* **2017**, *73*, 65–82. <https://doi.org/10.1016/j.jbusres.2016.12.007>.
57. Chesbrough, H. Business model innovation: Opportunities and barriers. *Long Range Plan.* **2010**, *43*, 354–363. <https://doi.org/10.1016/j.lrp.2009.07.010>.
58. To, C.K.M.; Au, K.F.; Tse, Y.K. Enhancing business model innovation: The role of Dynamic Capabilities and environmental dynamism. *J. Bus. Res.* **2019**, *97*, 12–21. <https://doi.org/10.1016/j.jbusres.2018.12.042>.
59. Al-Tit, A.; Omri, A.; Euch, J. Critical success factors of small and medium-sized enterprises in Saudi Arabia: Insights from sustainability perspective. *Adm. Sci.* **2019**, *9*, 32. <https://doi.org/10.3390/admsci9020032>.
60. Berger-Walliser, G.; Bird, R.C.; Haapio, H. Promoting Business Success Through Contract Visualization. *J. Law Bus. Ethics* **2011**, *17*, 23–31. Available online: <https://ssrn.com/abstract=1744096> (accessed on 10 January 2026).

61. Guest, G.; Bunce, A.; Johnson, L. How many interviews are enough? An experiment with data saturation and variability. *Field Methods* **2006**, *18*, 59–82. <https://doi.org/10.1177/1525822X05279903>.
62. Fornell, C.; Larcker, D.F. Structural equation models with unobservable variables and measurement error: Algebra and statistics. *J. Mark. Res.* **1981**, *18*, 382–388. <https://doi.org/10.2307/3150980>.
63. Kraus, S.; Jones, P.; Kailer, N.; Weinmann, A.; Chaparro-Barragan, F.; Roig-Ti, L. Digital transformation and firm performance: The mediating role of digital innovation. *J. Bus. Res.* **2021**, *123*, 809–818. <https://doi.org/10.1016/j.jbusres.2020.10.061>.
64. Bashir, M.A.; Zhao, D.; Amin, F.; Mentel, G.; Raza, S.A.; Bashir, M.F. Transition to greener electricity and resource use impact on environmental quality: Policy-based study from OECD countries. *Util. Policy* **2023**, *81*, 101518. <https://doi.org/10.1016/j.jup.2023.101518>.
65. Hernández-Linares, R.; López-Fernández, M.C.; García-Piqueres, G.; Cunha, M.P.; Rego, A. How knowledge-based Dynamic Capabilities relate to firm performance: The mediating role of entrepreneurial orientation. *Rev. Manag. Sci.* **2024**, *18*, 2781–2813. <https://doi.org/10.1007/s11846-023-00691-4>.
66. Gautam, P.K.; Gautam, D.K.; Silwal, P.P. Business model innovation and firm performance of SMEs during the COVID-19 pandemic: Test of serial mediation model. *SAGE Open*. **2025**, *15*, 21582440251342148. <https://doi.org/10.1177/21582440251342148>.
67. Madhavan, M.; Wangtueai, S.; Sharafuddin, M.A.; Chaichana, T. The precipitative effects of pandemic on open innovation of SMEs: A scientometrics and systematic review of Industry 4.0 and Industry 5.0. *J. Open Innov. Technol. Mark. Complex.* **2022**, *8*, 152. <https://doi.org/10.3390/joitmc8030152>.
68. Zheng, S.; Zhou, Y. Digital transformation and competitive advantage in manufacturing: The role of business model innovation. *Economies* **2025**, *13*, 209. <https://doi.org/10.3390/economies13070209>.
69. Dung, L.T.; Dung, T.T.H. Business model innovation: A key role in the internationalisation of SMEs in the era of digitalisation. *J. Innov. Entrep.* **2024**, *13*, 48. <https://doi.org/10.1186/s13731-024-00391-7>.
70. Teece, D.J. A Dynamic Capabilities-based entrepreneurial theory of the multinational enterprise. *J. Int. Bus. Stud.* **2014**, *45*, 8–37. <https://doi.org/10.1057/jibs.2013.54>.
71. Rinthaisong, I.; Duangtong, P. The dynamic capability, innovation, competitive advantage, and survival of tech startups. *HighTech. Innov. J.* **2024**, *5*, 977–994. <https://doi.org/10.28991/HIJ-2024-05-04-08>.
72. Asad, M.; Asif, M.U. From bricolage to turbulence: How strategic flexibility shapes entrepreneurial firms' performance. *J. Bus. Strategy* **2026**, *47*, 71–92. <https://doi.org/10.1108/JBS-11-2024-0232>.
73. Barney, J.B. Firm resources and sustained competitive advantage. *J. Manag.* **1991**, *17*, 99–120. <https://doi.org/10.1177/014920639101700108>.
74. Sungthong, S.; Aujirapongpan, S.; Meesook, K. Exploring the Relationship between entrepreneurial orientation, innovation and financial performance: The mediating role of absorptive capacity and technological innovation capability. *ABAC J.* **2023**, *43*, 258–275. <https://doi.org/10.59865/ABACJ.2023.49>.

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