

**MINISTRY OF FINANCE
UNIVERSITY OF FINANCE – MARKETING**

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**THE IMPACT OF THE AMBIDEXTROUS
ORGANIZATION MODEL ON SUSTAINABLE
DEVELOPMENT: THE MEDIATING ROLE OF
ENTREPRENEURIAL ORIENTATION IN MEKONG
DELTA SMES**

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SUMMARY OF ECONOMICS PH.D'S THESIS

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LIST OF PUBLISHED RESEARCH PAPERS

No	RESEARCH PAPERS	Year
<i>Relevant to the content of the dissertation</i>		
1	Resource Orchestration for Sustainable Development in the Mekong Delta: A Resource-Based View Perspective	2026
2	Mediating Mechanisms in the Relationship Between the Ambidextrous Organization Model and Sustainable development in Mekong Delta SMEs	2025
3	The Impact of Ambidextrous Organization Model Factors on Sustainable Development and the Mediating Role of Entrepreneurial Orientation: Discussions and Future Research Directions	2025
4	Sustainable Development of Mekong Delta SMEs Under the Triple Bottom Line Framework: Linking the Ambidextrous Organization Model and Entrepreneurial Orientation	2025
<i>Relevant to the dissertation's field of study</i>		
1	The mediating role of intrinsic motivation in the relationship among perceived autonomy support, psychological capital, and individual innovation: A Case Study of Universities in Vietnam.	2023
2	Developing a Digital Transformation Maturity Assessment Model for Enterprises in Vietnam	2023

SUMMARY OF THE THESIS

Rationale and Objectives: As small and medium enterprises (SMEs) in the Mekong Delta face twin pressures from climate change, internal resource constraints, and the urgent demand to transition toward sustainable development (SD), the mechanisms through which organizational capabilities translate into SD outcomes remain under-examined. This study aims to examine the impact of the ambidextrous organization model (AO) on SD, while clarifying the mediating role of entrepreneurial orientation (EO) and the moderating role of resource orchestration capability (ROC) within this structural relationship.

Methodology: The study adopts a sequential mixed-methods approach, combining in-depth expert interviews ($n = 15$) for scale adaptation with a quantitative survey ($n = 367$ SMEs in the Mekong Delta). Data were analyzed using PLS-SEM via SmartPLS 4.1.4, combined with a 5,000-resample bootstrapping procedure.

Findings: AO exerts a strong, positive, and statistically significant impact on both EO ($\beta = 0.543$) and SD ($\beta = 0.541$), yielding an $R^2 = 0.894$. ROC selectively amplifies the impact of AO on EO ($\beta = 0.048$, $p = 0.018$). Conversely, EO does not show a statistically significant direct impact on SD ($\beta = 0.024$, $p = 0.557$).

Conclusions and Implications: AO serves as the central driver of SD, ROC acts as the operational transformation mechanism, while EO is a necessary but insufficient condition when execution capability is lacking. These findings provide scientific evidence for SME managers and policymakers in the Mekong Delta, while opening up future research avenues regarding the missing link between entrepreneurial mindset and sustainability outcomes in emerging economies.

Keywords: *Ambidextrous organization model, entrepreneurial orientation, sustainable development, resource orchestration capability, SMEs, Mekong Delta.*

CHAPTER 1. INTRODUCTION TO THE RESEARCH STUDY

1.1. Rationale for the Research Study

1.1.1. Theoretical Context

In the face of highly volatile global economic environments, strategic management theories have shifted their focus from static to dynamic approaches. The foundation of this dynamic approach lies in the Resource-Based View (RBV), which posits that firms are bundles of valuable, rare, inimitable, and non-substitutable resources (Wernerfelt, 1984; Barney, 1991). However, the RBV primarily describes "what a firm has" rather than explaining "what a firm does with what it has." This limitation propelled the advancement of RBT. Under this framework, Grant (1996) argued that firms must combine, develop, and restructure resources to generate new capabilities through three distinct steps: structuring, bundling, and leveraging (Sirmon et al., 2011). RBT serves as the bedrock for the two central concepts of this study: AO, which reflects the ability to balance exploitation and exploration (March, 1991; O'Reilly & Tushman, 2013), and EO, which captures innovativeness, proactiveness, and risk-taking behaviors (Lumpkin & Dess, 1996). In Vietnam, recent studies reinforce this argument, showing that innovation capability positively affects SD among SMEs (Đinh Văn Hoàng et al., 2023; Trần Mạnh Hưng, 2025).

Nevertheless, RBV and RBT remain constrained by their assumption that strategic resources reside predominantly inside the firm and can be stably controlled — an assumption criticized as an oversimplification of resource ownership in practice (Kraaijenbrink et al., 2010; Lavie, 2006). In reality, critical capital, technology, and information often cross organizational boundaries, a gap addressed by RDT. Pfeffer and Salancik (2003) contended that firms must proactively manage external dependencies by diversifying suppliers and establishing strategic alliances. Yet, accessing external resources heavily depends on the quality of inter-organizational

networks. SNT elucidates this mechanism by identifying social capital as a strategic resource that enhances organizational learning and innovation (Granovetter, 1985; Nahapiet & Ghoshal, 1998), with evidence from Vietnam showing that social capital positively affects product and process innovation among SMEs (Do et al., 2025). Ultimately, the real value derived from networks relies on ROC, the mechanism that converts external resources into tangible outcomes.

Consequently, a clear research gap emerges: most domestic studies have failed to comprehensively evaluate Sustainable Development across all three dimensions include economic, social, and environmental (Elkington, 1997). Furthermore, the integration mechanism among AO, EO, and ROC in driving SD within Mekong Delta SMEs has not been empirically verified. This study aims to bridge this gap by deploying an integrated framework of RBT, RDT, and SNT to fully explain the formation mechanism of sustainable competitive advantage for SMEs in Vietnam.

1.1.2. Practical Context

Driven by accelerating globalization, digital transformation, and mounting pressures for SD, more than 60% of firms worldwide have scaled up investments in digital technologies to restructure value chains and enhance competitiveness (OECD, 2023). Within this landscape, AO has emerged as a core capability that enables firms to maintain operational stability while fostering innovation amidst turbulent business environments (March, 1991; O'Reilly & Tushman, 2013). Recent international studies consistently affirm that AO is a critical prerequisite for firms to sustain competitive advantage and achieve SD (Roth & Corsi, 2023; Sarmiento et al., 2024; Hu et al., 2023).

In Vietnam, SMEs account for about 98% of the total number of enterprises, contributing nearly 45% of GDP and about 60% of the national workforce (Asian Development Bank, 2024; General Statistics Office, 2024; VCCI, 2025). In the Mekong Delta, the region's share of the country's total enterprises has declined steadily, from about 22% in 2000 to only around 7%

in 2024 (VCCI-Mekong Delta & Fulbright, 2025), while structural challenges have grown increasingly acute: 18% of firms nationwide report difficulties from natural disasters and climate change (World Bank, 2020; VCCI, 2025); 96% of Mekong Delta firms are micro or small enterprises, with medium-sized firms accounting for only 1.8%, and the rate of micro firms successfully upgrading to small firms has fallen from 9.1% (2001-2002) to just 1.3% (2022-2023) (VCCI-Mekong Delta & Fulbright, 2025; Trieu et al., 2023); and logistics costs account for 20-25% of product cost due to heavy reliance on transshipment systems outside the region (Feng et al., 2024).

This reality confronts Mekong Delta SMEs with dual pressures: optimizing existing resources for short-term survival while simultaneously innovating to secure long-term competitiveness, all while adapting to increasingly stringent international environmental and SD standards. The relationship between AO and organizational performance is not direct; rather, it hinges upon EO (Lumpkin & Dess, 1996) and ROC (Sirmon et al., 2011). Hu et al. (2023) cautioned that without appropriate orchestration mechanisms, AO may fail to yield benefits, instead escalating operational costs and diminishing performance. Therefore, the strategic alignment of AO, EO, and ROC plays a pivotal role in enabling Mekong Delta SMEs to transcend resource constraints and steer toward comprehensive SD across the triple bottom line of economic, social, and environmental performance (Elkington, 1997).

1.2. Research Objectives and Questions

1.2.1. Research Objectives

General Objective: To examine the relationships among AO, EO, and SD within SMEs in the Mekong Delta region, while assessing the mediating role of EO and the moderating role of ROC within the research model. Based on the findings, the study proposes managerial implications to assist SMEs in steering toward sustainable development.

Specific Objectives:

First, to examine the direct impacts within the research model, including: the impact of AO on EO; the impact of EO on SD; and the impact of AO on SD.

Second, to examine the mediating role of EO in the relationship between AO and SD.

Third, to analyze the moderating role of ROC on the relationships among AO, EO, and SD, as well as on the mediating mechanism of EO in the relationship between AO and SD.

Fourth, to propose managerial implications aimed at helping SMEs in the Mekong Delta region enhance their ability to balance exploitation and exploration, leverage EO, and orchestrate resources effectively toward achieving SD.

1.2.2. Research Questions

Question 1: How are the direct relationships among AO, EO, and SD manifested within the context of SMEs in the Mekong Delta?

Question 2: Does EO play a mediating role in the relationship between AO and SD among SMEs in the Mekong Delta?

Question 3: Does ROC moderate the direct relationships (among AO, EO, and SD) as well as the mediating effect of EO in the relationship between AO and SD among SMEs in the Mekong Delta?

Question 4: Based on the empirical findings, what managerial and policy implications should be proposed to assist SMEs in the Mekong Delta region in enhancing their implementation of AO, leveraging EO, and strengthening ROC to drive sustainable development?

1.3. Research Subject and Scope

1.3.1. Research Subject

This study focuses on analyzing the relationships among AO, EO, and SD within SMEs in the Mekong Delta region. This includes investigating the driving role of AO toward SD, the mediating role of EO within this relationship, and the role of ROC as a moderating variable to elucidate the underlying transformation mechanism.

1.3.2. Research Scope

Geographical Scope: The Mekong Delta region, an area characterized by distinct economic, social, and environmental features that shape the operations of local SMEs.

Content Scope: The study centers on analyzing the interactive relationships among AO, EO, and SD through the moderating role of ROC within Mekong Delta SMEs.

Temporal Scope: The research is conducted using primary and secondary data collected over the 2023–2025 period.

1.4. Research Methodology

The dissertation adopts a mixed-methods approach, combining qualitative and quantitative research designs in an exploratory sequential framework. In the first stage, qualitative research is deployed to explore and validate conceptual constructs, refine measurement scales, and strengthen the theoretical model. The subsequent stage utilizes quantitative methods to test the model and research hypotheses using empirical data. This integration enables a more comprehensive approach to the topic, spanning from the theoretical overview to empirical testing, thereby reinforcing the scientific arguments regarding the relationships among AO, EO, ROC, and SD.

1.5. Novel Contributions of the Dissertation

1.5.1. Theoretical Contributions

First, the dissertation extends the theoretical approach to AO within the context of firms in developing countries, confirming that SMEs can still achieve ambidexterity through flexibility and learning-by-doing, rather than this being a capability exclusive to large corporations. Second, the dissertation clarifies the operating mechanism among AO, EO, and SD: unlike most prior studies that assume EO mediates the conversion of AO's benefits into SD, the empirical results show this mediating role is not confirmed among Mekong Delta SMEs ($\beta_{\text{indirect}} = 0.013$, $p = 0.562$), thereby establishing an important boundary condition and confirming that AO (not EO) is the capability that determines sustainable outcomes. Third,

the dissertation extends and links three foundational theories (RBT, RDT, and SNT) to more fully explain how firms operate under conditions of limited resources. Fourth, the dissertation adds a boundary-condition dimension through ROC's selective role: ROC significantly amplifies the effect of AO on EO, but does not exhibit a moderating role in relationships leading directly to strategic outcomes (AO-SD and EO-SD).

1.5.2. Practical Contributions

First, the dissertation proposes a governance model suited to firms in the Mekong Delta, a region characterized by agricultural economic structures, small firm scale, and limited resources, yet dynamic market activity. Second, the dissertation proposes a concrete operating mechanism that helps firms convert internal capability into sustainable outcomes through ROC, confirming that investing in resource-coordination capability matters more than expanding scale or capital. Third, the dissertation provides a standardized system of 54 measurement indicators, validated across three stages, that can serve as an assessment and strategic-planning tool for firms and SME-support organizations. Fourth, the dissertation offers concrete practical recommendations to help firms strengthen ambidextrous capability and EO, such as separating yet linking exploitation and exploration streams, fostering an internal entrepreneurial culture, and strengthening external network ties. Fifth, the dissertation provides scientific evidence for policymakers, suggesting that SME support policy should shift focus from resource allocation toward strengthening coordination capability. Sixth, the dissertation contributes a robust empirical dataset of 367 SMEs in the Mekong Delta, providing a valuable foundation for future empirical research on SMEs in emerging economies.

1.6. Structure of the Dissertation

Chapter 1: Introduction to the Research Study

Chapter 2: Theoretical Framework and Research Model

Chapter 3: Research Methodology

Chapter 4: Research Results and Discussion

CHAPTER 2. THEORETICAL FRAMEWORK AND RESEARCH MODEL

2.1. Foundational Theories of the Study

2.1.1. Resource-Based Theory

RBT evolved from the Resource-Based View proposed by Barney (1991) and was subsequently systematized into an independent theory by Acedo, Barroso, and Galan (2006). This theory seeks to explain not only "what a firm possesses" but, more importantly, "what a firm does with what it possesses."

2.1.2. Resource Dependence Theory

RDT operates on three core assumptions: organizations survive through internal and external cooperation; the environment contains rare and critical resources; and firms consistently pursue two parallel objectives—minimizing their own dependence on other organizations while maximizing the dependence of other organizations on them (Tehseen & Sajilan, 2016).

2.1.3. Social Network Theory

SNT asserts that all economic activities are embedded within networks of social relations, and firms must actively seek an optimal partner configuration to gain access to critical resources (Majid et al., 2021).

2.1.4. An Integrated Theoretical Approach for the Research Model

The research model is constructed upon an integrated approach combining three foundational theories: RBT, RDT, and SNT. This integration establishes a comprehensive theoretical framework capable of simultaneously explaining both endogenous and exogenous factors in the formation of organizational capabilities and corporate sustainable development (SD).

2.2. Core Research Concepts

2.2.1. Outcome Variable: Sustainable Development

Sustainable development is understood as a development process that meets current needs without compromising the ability of future generations to meet their own needs.

2.2.2. Antecedent Variable: Ambidextrous Organization

The most critical theoretical foundation of an ambidextrous organization was established by March (1991) through two core components: exploration and exploitation.

2.2.3. Mediating Variable: Entrepreneurial Orientation

An entrepreneurial organization is one that engages in product innovation, undertakes high-risk projects, and proactively stays ahead of competitors in the market.

2.2.4. Moderating Variable: Resource Orchestration Capability

Resource orchestration capability is viewed as a firm's ability to organize, coordinate, and effectively exploit resources to enhance performance, create competitive advantage, and adapt to volatile business environments (Sirmon et al., 2011; Wang et al., 2020).

2.3. Literature Review of Related Studies

A review of domestic and international studies shows that the relationship among AO, EO, ROC, and SD has attracted growing attention amid dynamic competition, digital transformation, and firms' long-term development requirements. However, bibliometric analysis of the Scopus database, combined with a review of empirical studies, reveals that current approaches remain fragmented, focusing primarily on individual variables or isolated pairwise relationships. Specifically, the dissertation identifies four principal research gaps: (1) inconsistency regarding the mechanism through which AO affects EO, with results varying by context and firm resource base; (2) a lack of studies simultaneously testing the effect chain from AO to SD through EO within a single model; (3) ROC's moderating role in the AO-EO-SD relationship remains insufficiently examined; and (4) a lack of empirical

evidence in the context of SMEs in the Mekong Delta. These gaps highlight the absence of a unified explanatory mechanism that explains how organizational capabilities are translated into sustainable development outcomes, particularly in SMEs. This dissertation addresses this gap by developing and empirically testing an integrated theoretical framework.

2.4. Research Gaps

Building on a synthesis and analysis of empirical studies examining the relationships among AO, EO, ROC, and SD, the dissertation identifies four principal research gaps.

The first gap: there is no consensus on the mechanism through which AO affects EO. Most studies suggest that AO serves as the foundation for firms to develop EO (Tuan, 2016; Aftab et al., 2022), yet several recent studies in emerging economies show that this relationship varies by context and firm resource base, with exploitation and exploration sometimes competing with one another under conditions of resource scarcity (Raalskov et al., 2024).

The second gap: there is a lack of studies that simultaneously test the effect chain from AO to SD through EO within a single model. Current studies primarily examine AO's direct effect on SD, or its effect through other mediating mechanisms (innovation, green innovation, dynamic capabilities), while very few studies treat EO as the mediating mechanism that converts organizational capability into sustainable outcomes.

The third gap: ROC's moderating role has not been sufficiently examined within the AO-EO-SD model. Although resource orchestration theory has been widely applied to explain innovation and competitive advantage (Sirmon et al., 2007, 2011), ROC remains rarely integrated into the AO research stream, and in particular, its moderating role in the AO-EO and EO-SD relationships has yet to be tested.

The fourth gap: there is a lack of empirical evidence in the context of SMEs in the Mekong Delta. Most studies on AO and SD have been conducted in developed countries or in knowledge-intensive technology and

manufacturing sectors (Nobakht et al., 2021); within Vietnam, existing studies focus only on specific sectors or narrow scopes (Tuan, 2016; Nguyen-Van et al., 2025), and has yet to examine AO, EO, ROC, and SD within an integrated framework in the Mekong Delta, a context characterized by persistent resource constraints, intense competitive pressures, and increasing demands for sustainable development.

2.5. Research Hypotheses and Conceptual Model

2.5.1. Research Hypotheses

H1: AO positively affects EO of SMEs in the Mekong Delta region.

H2: EO positively affects SD of SMEs in the Mekong Delta region.

H3: AO positively affects SD of SMEs in the Mekong Delta region.

H4: ROC positively moderates the relationship between AO and EO of SMEs in the Mekong Delta region.

H5: ROC positively moderates the relationship between EO and SD of SMEs in the Mekong Delta region.

H6: ROC positively moderates the indirect relationship between AO and SD through EO of SMEs in the Mekong Delta region.

2.5.2. Proposed Research Model

Based on the literature review, theoretical foundations, and baseline theories, the author proposes the research model as follows:

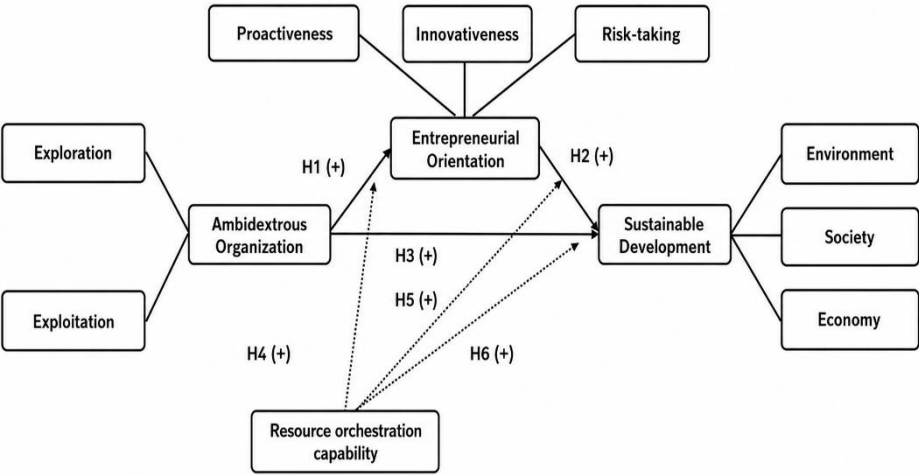


Figure 2-2. Research Model

Note:
 —————> Direct
> Moderating

CHAPTER 3. RESEARCH METHODOLOGY

3.1. Research process

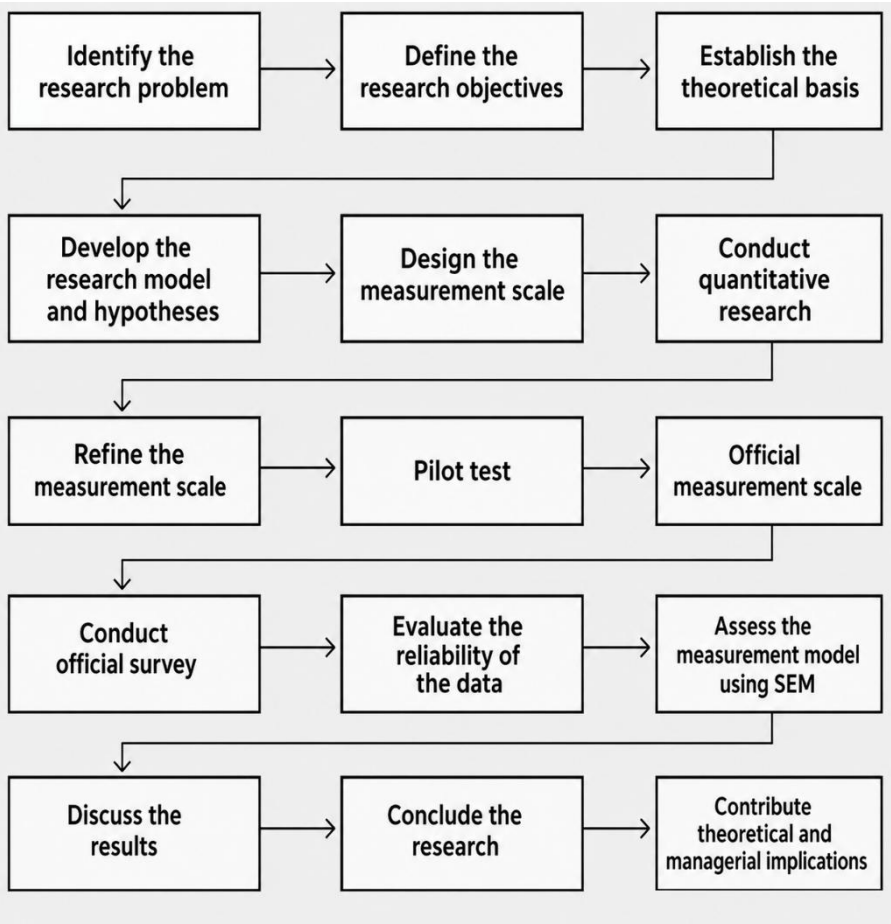


Figure 3-1. Research process

3.2. Qualitative Research Methodology

The qualitative research stage was conducted to validate, adjust, and refine the preliminary measurement scales, ensuring maximum adaptability to the specific context of SMEs in the Mekong Delta region (Lý Thị Minh Châu et al., 2024). The author applied a systematic literature review

combined with bibliometric analysis using VOSviewer on Scopus and Web of Science databases spanning 2019–2025. This process helped map the conceptual networks, identify research gaps, and determine the most prevalent measurement systems as a foundational baseline.

The qualitative stage aimed at three core objectives: testing the clarity and semantic fit of 54 preliminary observed variables; making timely adjustments to statements that were unrealistic or potentially misleading; and ensuring the content validity and feasibility of the survey instrument to serve the testing of hypotheses H1–H6 in the subsequent quantitative stage.

3.3. Quantitative Research

The objective is to test the theoretical model and research hypotheses constructed from the literature review and refined through the qualitative study. Data were processed using a multi-step procedure. First, unsatisfactory survey responses were discarded. Subsequently, the study utilized partial least squares structural equation modeling (PLS-SEM) supported by SmartPLS 4.1.4 software to test the model.

The analytical process consists of two stages. The first stage focuses on assessing the measurement model by examining the reflective-reflective second-order construct of AO, evaluating internal consistency reliability, and verifying discriminant validity using the HTMT index (less than 0.90). The second stage tests the structural model by assessing multicollinearity via VIF (less than 3.0), model fit via SRMR (less than 0.08), the coefficient of determination R^2 , and effect size f^2 .

Finally, the study employed a bootstrapping technique with 5,000 resamples to test the statistical significance of path coefficients, the mediating effects of EO, and the moderating impacts of ROC. Hypotheses were accepted when T-statistics were greater than 1.96 or p-values were less than 0.05.

CHAPTER 4. RESEARCH RESULTS AND DISCUSSION

4.1. Sample Description

The study conducted a survey of over 400 SMEs in the Mekong Delta region. The data were cleaned by removing unsatisfactory survey questionnaires. As a result, out of over 400 initial responses, the study retained 367 valid questionnaires for analysis.

Although the actual sample size ($n = 367$) is lower than the initially expected scale, it still fully satisfies the statistical requirements of the PLS-SEM method. According to the "10-times rule" of Hair et al. (2019), this sample size far exceeds the minimum required level. Meanwhile, according to the statistical power analysis of Cohen (1992), the sample size of 367 ensures high statistical power and increases the stability of the bootstrapping estimations with 5,000 resamples.

4.2. Measurement Model Assessment Results

4.2.1. Common Method Bias Test Results

The exploratory factor analysis results show that 6 factors were extracted with Eigenvalues greater than 1. Among these, the first factor explains 49.140% of the total variance, ensuring reliability for subsequent analytical steps.

Table 4-1. Common Method Bias Test Results

Total Variance Explained						
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	26.535	49.140	49.140	26.535	49.140	49.140
2	1.929	3.572	52.711	1.929	3.572	52.711
3	1.237	2.291	55.003	1.237	2.291	55.003
4	1.166	2.160	57.163	1.166	2.160	57.163

5	1.097	2.031	59.193	1.097	2.031	59.193
6	1.082	2.004	61.197	1.082	2.004	61.197

4.2.2. *Construct Validity Results for Second-Order Measurement Models*

Table 4-2 indicates that both variables yield highly significant loading coefficients (reflecting strong effect intensity and reliability at $P < 0.001$).

Table 4-2. Second-Order Structural Assessment Results for the Ambidextrous Organization Model

Relationship	Loading Coefficient (β)	T-Statistic	P-Value	Conclusion
AO ---> Exploitation	0.972	273.222	0.000	Accepted
AO ---> Exploration	0.968	233.591	0.000	Accepted

The loading coefficients for Exploitation ($\beta = 0.972$) and Exploration ($\beta = 0.968$) substantially exceed the recommended threshold of 0.708 (Hair et al., 2019), approaching a value of 1.0. Bootstrapping results (5,000 resamples) reveal very large T-statistics (> 1.96), confirming the robustness of both relationships.

4.2.3. *Construct Validity Results for First-Order Variables in the Research Model*

4.2.3.1. *Reliability and Convergent Validity Assessment*

The summary results in Table 4.3 indicate that all measurement scales satisfactorily meet the requirements for reliability and convergent validity.

Table 4-3. Summary of Reliability and Convergent Validity Assessment Results

Latent Variable	Code	Cronbach's Alpha (α)	Composite Reliability (CR)	Average Variance Extracted (AVE)	Evaluation
AO	AO	0.972	0.978	0.935	Good
- Exploitation	KT	0.968	0.978	0.941	Acceptable
- Exploration	KP	0.958	0.974	0.927	Acceptable
EO	EO	0.897	0.935	0.804	Good
- Proactiveness	CD	0.758	0.851	0.656	Acceptable
- Innovativeness	DM	0.760	0.854	0.660	Acceptable
- Risk-taking	RR	0.758	0.851	0.656	Acceptable
ROC	ROC	0.918	0.934	0.618	Good
SD	SD	0.925	0.952	0.870	Good
- Economic	KT	0.852	0.896	0.683	Acceptable
- Environmental	MT	0.902	0.925	0.713	Acceptable
- Social	XH	0.853	0.897	0.686	Acceptable

Regarding reliability: All Cronbach's Alpha and CR coefficients exceed 0.70, ranging from 0.758 to 0.978, indicating that the data collected from SMEs is of very high quality.

Regarding convergent validity: The AVE values for all constructs surpass the 0.50 threshold (the lowest being ROC = 0.618), confirming that the scales achieve strong convergent validity (Hair et al., 2019).

4.2.3.2. Discriminant Validity Assessment

Table 4-4. Discriminant Validity Results (HTMT)

Construct	CD	DM	RR	ROC	KT	XH	MT
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CD							
DM	0.706						
RR	0.593	0.558					
ROC	0.790	0.789	0.614				
KT	0.739	0.759	0.544	0.854			
XH	0.709	0.744	0.528	0.863	0.812		
MT	0.774	0.769	0.491	0.838	0.802	0.816	

As observed in the table, although the variables are intercorrelated within the overall model, they each measure entirely distinct dimensions with no conceptual overlap.

To further substantiate discriminant validity at the indicator level, the cross-loading matrix was examined. The evaluation criterion requires that the outer loading of an observed variable on its parent construct must be higher than its loading on any other construct in the model (Chin, 1998).

Table 4-5. Cross-Loading Matrix for Selected Observed Variables

Observed Variable	CD (Proactive ness)	DM (Innovative ness)	RR (Risk- taking)	ROC (Coordinati on)	Concl usion
CD1	0.823	0.620	0.489	0.672	Acceptable
CD2	0.830	0.549	0.490	0.616	Acceptable
CD3	0.790	0.554	0.470	0.641	Acceptable
DM1	0.620	0.778	0.450	0.580	Acceptable

DM2	0.590	0.839	0.510	0.620	Acceptable
RR1	0.450	0.420	0.769	0.350	Acceptable
RR2	0.480	0.460	0.817	0.380	Acceptable
ROC1	0.580	0.610	0.320	0.759	Acceptable
ROC4	0.620	0.650	0.340	0.808	Acceptable

The data presented in Table 4.5 reveal a clear pattern of differentiation across constructs. The collected data thus meet the necessary conditions for hypothesis testing within the structural model.

4.3. Structural Model Testing

4.3.1. Multicollinearity Assessment

The analysis results in Table 4.6 show that all inner VIF values for the predictor variables fall within the safe threshold, ranging from 1.000 to 2.786.

Table 4-6. Multicollinearity Assessment Results Based on VIF

Independent Variable	Dependent Variable: EO	Dependent Variable: SD	Conclusion
AO	1.000	2.786	No multicollinearity
EO	—	2.654	No multicollinearity
ROC	1.000	—	No multicollinearity

Moderating Variables (Interaction Terms)	1.035	1.120	No multicollinearity
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The low VIF values (< 3.0) confirm that the independent variables provide distinct, non-overlapping information, ensuring the accuracy of subsequent hypothesis tests.

4.3.2. Model Fit Assessment

The results show that the model's SRMR index is 0.068 (< 0.08), indicating that the proposed theoretical model fits the empirical data adequately.

4.3.3. Explanatory Power of the Model

Table 4-7. Explanatory Power Assessment of the Research Model

Dependent Variable	R ²	Adjusted R ²	Level of Explanatory Power
SD	0.894	0.893	Very strong
EO	0.791	0.790	Strong

The results in Table 4.4 demonstrate that the model possesses very high explanatory power: (1) SD: $R^2 = 0.894$, meaning that the factors AO, EO, and ROC collectively account for 89.4% of the variance in SD. (2) EO: $R^2 = 0.791$, indicating that 79.1% of the variation in firms' EO is explained by the ambidexterity model and ROC.

4.3.4. Effect Size Assessment

- **AO → SD:** $f^2 = 0.432$ (> 0.35). The effect of AO on SD is very large, making it the most important predictor in the model.
- **AO → EO:** $f^2 = 1.054$ (> 0.35). The effect of AO on EO is exceptionally strong.

- **EO → SD:** $f^2 = 0.001$ (< 0.02). The effect of EO on SD is trivial. This result foreshadows the potential rejection of the corresponding hypothesis.

4.4. Hypothesis Testing

A hypothesis is accepted when the T-statistic > 1.96 or P-value < 0.05 (at the 95% confidence level). Detailed results are presented in Table 4-8.

Table 4-8. Hypothesis Testing Results via Path Analysis

Hypothesis	Relationship	Standardized Regression Coefficient (β)	Standard Deviation	T-Statistic	P-Value	Conclusion
H1	AO→EO	0.543	0.055	9.836	0.000	Supported
H2	EO→SD	0.024	0.043	0.587	0.557	Rejected
H3	AO→SD	0.541	0.052	10.475	0.000	Supported
H4	ROC × AO→EO (Moderation)	0.048	0.020	2.363	0.018	Supported
H5	ROC × EO→SD (Moderation)	-0.017	0.046	0.351	0.726	Rejected
H6	Moderated Mediation	0.002	0.003	0.481	0.630	Rejected

(Note: $p < 0.05$: statistically significant; $p < 0.01$: highly significant)

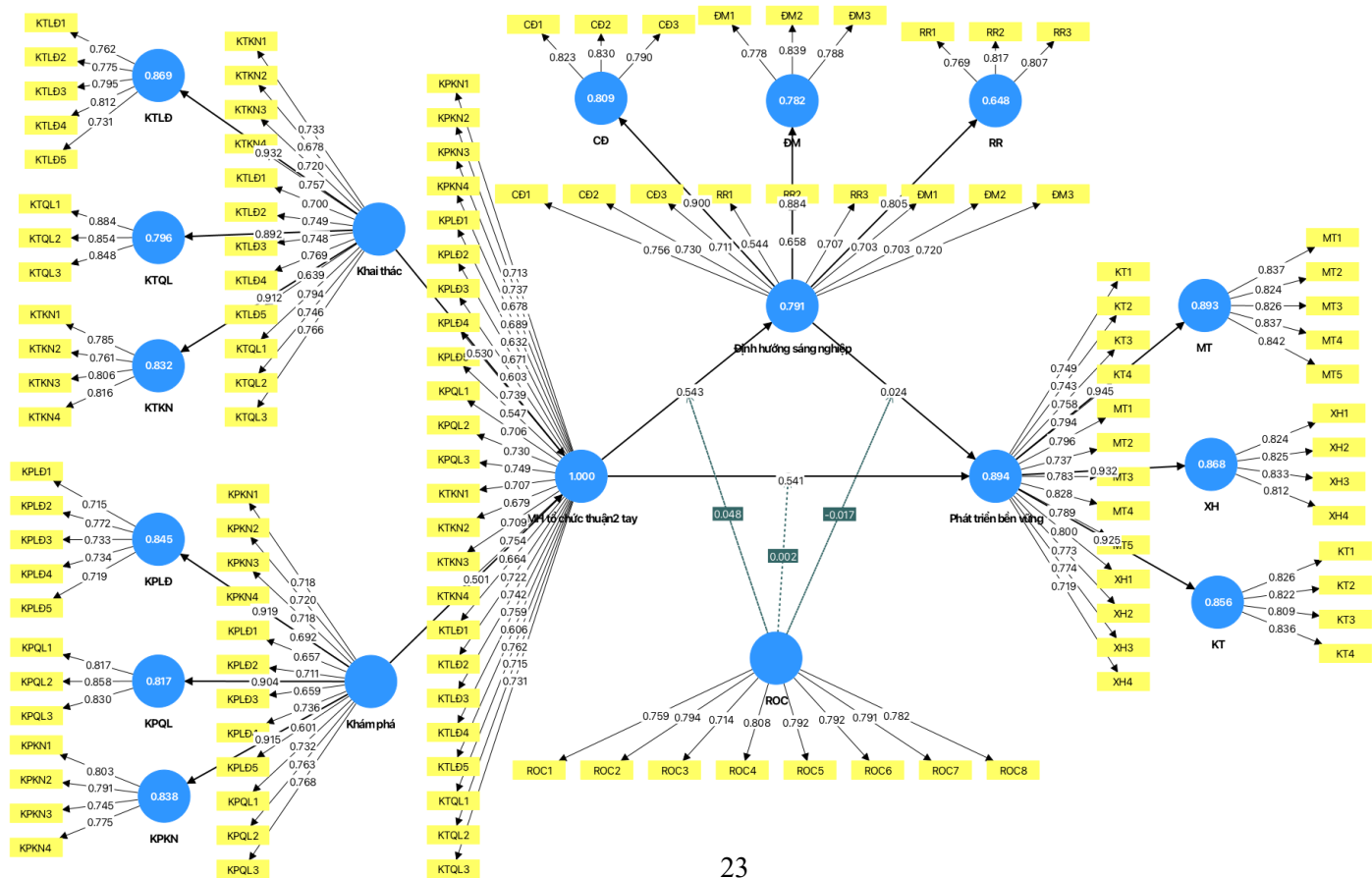


Figure 4-1. Structural Model

Analysis of Results

The results show that AO exerts a strong, positive, and highly statistically significant effect on both EO ($\beta = 0.543$, $p < 0.001$) and SD ($\beta = 0.541$, $p < 0.001$). Hypothesis H2 is rejected ($\beta = 0.024$, $p = 0.557 > 0.05$). Hypothesis H4 is supported ($\beta = 0.048$, $p = 0.018 < 0.05$). Given that the baseline relationship between EO and SD is non-significant (H2 rejected), neither the moderating effect on that relationship (H5) nor the indirect effect operating through it (H6) reached statistical significance.

4.3. Discussion of Research Findings

The findings confirm that AO exerts a positive and statistically significant effect on both EO ($\beta = 0.543$, $p < 0.001$) and SD ($\beta = 0.541$, $p < 0.001$) among SMEs in the Mekong Delta. This result is consistent with March's (1991) argument that organizations achieve sustained development only by maintaining a balance between exploitation and exploration, and is further supported by Tushman & O'Reilly (1996), who characterize this balance as a strategic imperative in uncertain environments. O'Reilly & Tushman (2013) additionally demonstrate that ambidextrous organizations consistently outperform those focused on a single strategic orientation. From a dynamic capabilities perspective, Teece et al. (1997) and Teece (2007) argue that the simultaneous integration of exploration and exploitation constitutes the core of dynamic capability, enabling firms not only to adapt but to proactively shape their business ecosystems. For SMEs in the Mekong Delta, this mechanism manifests as firms simultaneously preserving traditional business models while actively pursuing digital transformation, green agriculture, and sustainable supply chains, thereby overcoming the path dependency that is prevalent in the region (O'Reilly & Tushman, 2008).

In contrast, EO does not produce a direct effect on SD ($\beta = 0.024$, $p = 0.557$). This result does not negate the role of EO; rather, it reflects that EO is a necessary but not sufficient condition for generating SD in the context of resource-constrained SMEs. Miller (1983) and Lumpkin & Dess (1996) define

EO as a set of strategic behaviors that drive innovation, opportunity exploitation, and risk-taking; however, recent studies increasingly indicate that the EO and SD relationship is not always direct. Hu et al. (2023) argue that strategic orientation typically demands substantial resource investment, whereas SMEs are constrained by limited financial capacity and organizational capability. From a Resource-Based View, Barney (1991) contends that EO primarily reflects strategic orientation rather than strategic resources, and is therefore insufficient to generate SD in the absence of resource slack for experimentation and long-term investment (George, 2005). Shepherd & Patzelt (2011) further note that EO and SD operate under distinct strategic logics, which can generate tension when coordination mechanisms are absent. Notably, Ed-Dafali et al. (2023) find that EO's effect on sustainable competitive advantage materializes only when firms possess adequate digital transformation capabilities. Nevertheless, EO retains a mediating role within the AO, EO and SD chain, consistent with the perspectives of Wiklund & Shepherd (2005) and Wales et al. (2013), who conceptualize EO as a strategic conversion mechanism within complex organizational models.

ROC is confirmed as a positive moderator in the AO and EO relationship ($\beta = 0.048$, $p = 0.018$), meaning that higher levels of ROC amplify the effect of AO on EO. This finding aligns with Sirmon et al.'s (2011) resource orchestration theory, which holds that competitive advantage depends on the firm's ability to structure, bundle, and leverage resources to create strategic value. Lubatkin et al. (2006) emphasize that the behavioral integration of top management teams is critical to effectively balancing exploitation and exploration. However, ROC does not produce a significant moderating effect on either the EO and SD relationship (H5) or the AO and SD relationship (H6), with $p > 0.05$ in both cases. This reflects the reality that SD is a complex, long-term objective requiring business model transformation and the simultaneous balancing of economic, social, and environmental goals (Elkington, 1997; Bocken et al., 2014), a challenge that extends well beyond operational-level resource optimization. A complementary interpretation is

that AO already embeds resource coordination functions within its strategic architecture (Lubatkin et al., 2006; O'Reilly & Tushman, 2013), such that the incremental contribution of ROC diminishes once firms reach a sufficient level of ambidexterity. Taken together, these findings extend the theoretical boundaries of resource orchestration theory by demonstrating that not all managerial capabilities can amplify the effect of strategic orientation on SD, and that the pathway toward SD must begin with building strategic capability before optimizing operational coordination mechanisms.

CHAPTER 5. CONCLUSIONS AND MANAGERIAL IMPLICATIONS

5.1. Conclusions

This dissertation examines the relationships among AO, EO, ROC, and SD among SMEs in the Mekong Delta, integrating three foundational theories (RBT, RDT, and SNT) through SEM with 367 observations. Five principal conclusions are drawn. First, AO exerts a positive and statistically significant effect on both EO and SD, reflecting that the simultaneous balance between exploitation and exploration generates no internal contradiction but rather produces strategic synergy. Second, EO does not have a statistically significant direct effect on SD. This finding does not negate the role of EO; rather, it clarifies that EO constitutes a necessary but not sufficient condition for generating sustainable outcomes in the absence of appropriate implementation mechanisms, particularly in the context of Mekong Delta SMEs. Third, ROC operates as a selective moderator, significantly amplifying the effect of AO on EO but failing to moderate the relationships directed toward SD. Fourth, modeling AO as a second-order construct composed of two first-order components is empirically validated, demonstrating that even small-scale SMEs are capable of sustaining organizational ambidexterity. Fifth, the Mekong Delta's distinctive context, characterized by agricultural dependence, saltwater intrusion pressure, and infrastructure constraints, creates particular boundary conditions under which partnership networks and ROC function as compensatory mechanisms for internal resource deficiencies,

consistent with Pfeffer & Salancik's (1978) argument that value derives from the capacity to coordinate resources within networks rather than from the scale of ownership.

Overall, the pathway toward SD for Mekong Delta SMEs is shaped by the structured interaction among AO (the central factor with the most pronounced diffusion effect), EO (the transformation mechanism driven by AO), and ROC (a conditional operational amplifier), operating within a coherent governance system.

5.2. Contributions of the Dissertation

5.2.1. Theoretical Contributions

This study makes four principal theoretical contributions. First, the dissertation empirically validates AO as a second-order construct comprising Exploitation and Exploration, confirming that even small-scale SMEs can sustain organizational ambidexterity. Second, it refines RBT by establishing the conditional moderating role of ROC in the AO and EO relationship, and simultaneously refines RDT by showing that Mekong Delta SMEs manage resource dependence primarily through informal partnership networks rather than through the ownership-control mechanisms assumed by the original theory. Third, the rejection of EO's mediating role ($\beta_{\text{indirect}} = 0.013$, $p = 0.562$) establishes an important boundary condition for a mediation mechanism widely accepted in the international literature, thereby confirming that AO (not EO) is the organizational capability that drives sustainable outcomes among SMEs. Fourth, the study integrates the Economic, Social, and Environmental pillars into a unified SD construct while contextualizing SNT for a transition economy, where informal social networks serve as the primary substitute channel for underdeveloped capital and information market institutions.

5.2.2. Practical Contributions

For enterprises: The findings suggest three concrete lines of action. First, standardize AO down to the middle-management level through a dual-KPI system pairing operational efficiency with innovation targets, since the

loading patterns show ambidextrous thinking has taken hold at the leadership level but has not yet been institutionalized in daily operations. Second, prioritize investment in ROC over asset ownership expansion, given ROC's direct and independent effect on SD ($\beta = 0.402$, $p < 0.001$). Third, establish an internal innovation testing fund (2-5% of quarterly profit) to address EO's boundary condition, converting entrepreneurial intent into measurable organizational behavior.

For business associations: Associations serve as an intermediary that enables member firms to jointly attain these capabilities at lower cost than firms could individually, through: developing standardized ROC training programs at the industry level; formalizing informal partnership networks, which currently substitute for underdeveloped market institutions in the Mekong Delta into a shared resource-coordination platform; and establishing a co-funded, cross-firm innovation testing pool to lower the minimum cost threshold for individual members.

For local government: Government's role is to build institutional infrastructure around three core findings, specifically by integrating the AO/ROC capability framework into existing SME training programs already funded under Decree 80/2021/ND-CP rather than seeking new budget allocations; developing regional innovation centers modeled on industry clusters to overcome the scale limitations of individual firms; and designing tax and land-use incentives tied to measurable performance indicators rather than mere statements of innovation intent.

5.3. Managerial Implications

First, AO exerts a direct, strong, and highly statistically significant effect on SD ($\beta = 0.541$, $p < 0.001$), while accounting for nearly the entire total effect in the model with $R^2 = 0.894$. This confirms that AO is not merely a high-level managerial orientation but operates as an integrated organizational mechanism embedded directly into daily operations. In the context of Mekong Delta SMEs, where governance authority is concentrated in the owner and organizational structures are typically flat, AO is maintained primarily through

leadership capability across both exploitation and exploration dimensions, as reflected in their prominent loading coefficients (Exploitation–Leadership: $\beta = 0.932$; Exploration–Leadership: $\beta = 0.920$). However, middle management remains a link prone to drifting toward short-term performance objectives, with comparatively lower coefficients (Exploitation–Management: $\beta = 0.892$; Exploration–Management: $\beta = 0.906$), suggesting that many firms have developed ambidextrous thinking at the leadership level but have yet to institutionalize AO into a stable operational system. In terms of implementation, firms should adopt a dual KPI system that pairs operational efficiency targets with innovation targets, so as to close the gap between AO thinking at the leadership level and execution behavior at the operational level.

Second, EO does not produce a statistically significant effect on SD ($\beta = 0.024$, $p = 0.557$), despite being strongly formed by AO and ROC ($R^2 = 0.791$). This finding suggests the issue lies not in a deficiency of EO but in the failure to convert EO into concrete actions and sustainable outcomes. The root cause is the existence of a gap between strategic cognition and execution capability — a structural constraint characteristic of firms that have evolved from traditional agriculture- and aquaculture-based models. To ensure EO moves beyond the level of intent, firms should establish an internal innovation testing fund with a periodic budget (approximately 2–5% of quarterly profit), evaluate initiatives against three criteria, feasibility, measurable short-term impact, and acceptable risk level, and implement a controlled execute–feedback–adjust cycle operating on a 60–90 day basis.

Third, ROC demonstrates an independent and direct effect on both SD ($\beta = 0.402$, $p < 0.001$) and EO ($\beta = 0.391$, $p < 0.001$). This indicates that under conditions of resource scarcity faced by SMEs, the decisive factor lies not in the quantity of resources but in the capacity to allocate, reconfigure, and coordinate financial, human, knowledge, and network resources. ROC functions as a conversion mechanism that realizes value from both AO and EO, particularly at the operational level through middle management teams. Firms should prioritize building real-time management information systems to

track resources, strengthening the decision-making capacity of middle managers, and adopting dynamic resource allocation dashboards updated on a weekly or monthly cycle, with integrated early-warning alerts to support timely reallocation.

Fourth, ROC only exerts a significant moderating role in the AO and EO relationship ($\beta = 0.048$, $p = 0.018$) but does not produce a meaningful moderating effect in the EO and SD relationship. This result suggests that ROC in Mekong Delta SMEs currently operates at the level of operational coordination and has not yet reached the capacity to convert EO into strategically sustainable outcomes. Furthermore, simultaneously promoting both EO and ROC under conditions of limited managerial capability may generate coordination pressures that exceed the firm's absorptive capacity, reflecting the ambidexterity paradox of pursuing too many strategic objectives concurrently. Accordingly, firms should develop ROC through a phased roadmap: consolidating internal operations first, then expanding toward more complex innovation-supporting mechanisms. Individual initiatives should receive resource scale-up only upon meeting specific criteria, such as achieving a return on the pilot investment within 90 days and causing no disruption to current operations.

Fifth, the structure of EO among Mekong Delta SMEs is skewed toward cognition rather than action: the risk-acceptance component shows a markedly lower loading ($\beta = 0.805$, $R^2 = 0.648$) than proactiveness ($\beta = 0.900$) and innovativeness ($\beta = 0.884$), indicating that firms recognize opportunities well but remain reluctant to convert them into decisive investment decisions. Firms should therefore adopt a safety-buffer approach to innovation, prioritizing small-scale pilot projects (capped at under 3% of revenue) to gradually raise their risk tolerance without requiring an abrupt shift in organizational culture.

Sixth, the Mekong Delta's distinctive context is clearly reflected in the structure of SD, where the environmental pillar carries the highest loading ($\beta = 0.945$), exceeding both the social ($\beta = 0.932$) and economic ($\beta = 0.925$)

pillars. It's a pattern that reflects climate change pressure and saltwater intrusion, which make environmental adaptation an existential priority for firms in the region. The accompanying policy implication is that SME support programs in the Mekong Delta should shift focus from simple resource allocation toward strengthening coordination capability, while also promoting stronger linkages between firms, universities, and industry networks.

Overall, the study implies that the developmental constraints of Mekong Delta SMEs stem not only from external resource deficiencies but also from internal organizational and coordination capabilities. Sustainable development must be approached as a stepwise capacity accumulation process, in which AO serves as the foundation, ROC as the conversion mechanism, and EO generates real value only when supported by both of the preceding factors.

5.4. Limitations and Directions for Future Research

5.4.1. Research Limitations

First, the sample size of 367 firms is limited relative to the tens of thousands of enterprises operating across the Mekong Delta, and does not fully capture the governance nuances specific to individual localities and industry sub-sectors.

Second, all data were collected exclusively through self-assessment by managers, making the study susceptible to social desirability bias, whereby respondents may overstate the extent of their firms' exploration, innovation, and SD activities.

Third, the study operates at the organizational and strategic level and does not analyze the transmission mechanism from leadership cognition to the actual behavior of frontline employees in exploitation and exploration activities.

Fourth, the cross-sectional design captures only a single point in time and cannot track the dynamic evolution of SD and financial performance across different phases of the business cycle. Longitudinal research designs would therefore yield more accurate assessments of sustainable impact over time.

Fifth, the measurement items are largely adapted from international scales and do not model Mekong Delta-specific factors, such as saltwater intrusion, Mekong River flow variability, and village/family-network-based business culture, as explicit independent or moderating variables.

5.4.2. Directions for Future Research

First, future studies should expand the sample size and diversify the survey population across localities and industries.

Second, researchers should incorporate objective, multi-source data to reduce reliance on self-reported measures.

Third, deeper analysis of organizational structure and employee behavior is needed to trace how strategic orientation translates into operational action at the individual level.

Fourth, longitudinal research designs should be adopted to capture the temporal dynamics of SD and firm performance across economic cycles.

Fifth, future models should integrate local contextual factors, including saltwater intrusion pressure, evolving green agriculture development policies, and the role of inter-regional network linkages, as explicit variables within the theoretical framework.