
The Mediating Role of Strategic Leadership in the Strategic Entrepreneurship–Institutional Performance Relationship: An Empirical Study

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Abstract

Purpose: This empirical study examines the relationship between strategic entrepreneurship and institutional performance within the Saudi Public Investment Fund (PIF), with a particular focus on the mediating role of strategic leadership. The study addresses a gap in the literature by explaining how entrepreneurial orientations are translated into measurable performance outcomes in sovereign wealth funds.

Design/methodology/approach: A quantitative cross-sectional research design was employed. Data were collected from a stratified random sample of 337 professional employees at different organizational levels within PIF. Strategic entrepreneurship was modeled as a second-order construct comprising entrepreneurial mindset, entrepreneurial leadership, entrepreneurial culture, strategic resource management, and creativity and innovation application. Institutional performance was measured using the Balanced Scorecard dimensions, while strategic leadership was conceptualized as a reflective construct. Data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS 4, supported by bootstrapping procedures.

Findings: The results indicate a significant positive effect of strategic entrepreneurship on institutional performance. Strategic leadership was found to partially mediate this relationship, confirming its role as a key mechanism through which entrepreneurial capabilities enhance performance. The measurement and structural models demonstrated strong reliability, validity, and explanatory power.

Originality/value: This study extends strategic entrepreneurship and leadership theories to the context of sovereign wealth funds and provides empirical evidence on the mediating role of strategic leadership in enhancing institutional performance.

Practical implications: The findings offer actionable insights for policymakers and executives in

sovereign investment institutions, emphasizing the importance of developing strategic leadership capabilities and fostering entrepreneurial practices to improve institutional performance.

Keywords: Strategic Entrepreneurship, Strategic Leadership, Institutional Performance, Sovereign Wealth Funds, Saudi Vision 2030, PLS-SEM, Mediation Analysis.

1. Introduction

The contemporary global economic landscape is characterized by unprecedented volatility, technological disruption, and intensifying competition. In this environment, organizations must cultivate dynamic capabilities that enable continuous adaptation and value creation. Strategic entrepreneurship (SE) has emerged as a critical framework for achieving sustainable competitive advantage, representing the integration of entrepreneurial opportunity-seeking with strategic advantage-seeking behaviors (Hitt et al., 2001). For sovereign wealth funds (SWFs)—particularly those with dual mandates of financial returns and strategic national development—embracing SE is no longer optional but imperative.

The Saudi Public Investment Fund (PIF) stands at the forefront of this challenge. With assets exceeding \$900 billion and a central role in implementing Saudi Vision 2030, PIF has evolved from a traditional sovereign fund to a national development engine. Its mandate extends beyond financial returns to include economic diversification, job creation, and technological advancement. This expanded role necessitates capabilities that transcend conventional investment management, requiring instead a robust entrepreneurial orientation coupled with strategic discipline.

While substantial literature exists on the SE-performance relationship in corporate settings (Kuratko & Audretsch, 2013), significant gaps remain regarding its application in sovereign investment entities. The unique institutional context of SWFs—characterized by complex stakeholder relationships, dual financial and strategic objectives, and heightened public accountability—creates distinctive challenges and opportunities for entrepreneurial action. Moreover, the specific mechanisms through which SE influences performance in such contexts remain inadequately understood.

This study posits that strategic leadership (SL) serves as the pivotal mediating mechanism in this relationship. Strategic leaders—through vision formulation, resource allocation decisions, organizational design, and cultural shaping—act as the essential translators who convert entrepreneurial potential into realized performance (Boal & Hooijberg, 2001). They create the organizational context that either enables or constrains entrepreneurial action and ensure alignment between entrepreneurial initiatives and strategic objectives.

The present research addresses these gaps by investigating the mediating role of strategic leadership in the SE-IP relationship within PIF. Specifically, it seeks to answer the following research questions:

- What is the direct impact of strategic entrepreneurship on institutional performance at the Saudi Public Investment Fund?

- To what extent does strategic leadership mediate the relationship between strategic entrepreneurship and institutional performance?
- What are the practical implications of these relationships for enhancing the performance of sovereign wealth funds?

By examining these questions, this study aims to contribute both theoretically and practically. Theoretically, it extends SE and leadership theories to the unique context of sovereign investment entities. Practically, it provides evidence-based recommendations for enhancing the performance of PIF and similar institutions navigating the complex intersection of financial markets and national development objectives.

2. Theoretical Framework and Hypotheses Development

2.1 Theoretical Foundations:

This study is grounded in two complementary theoretical perspectives: the Resource-Based View (RBV) and Upper Echelons Theory (UET). The RBV (Barney, 1991) posits that sustained competitive advantage stems from valuable, rare, inimitable, and non-substitutable resources and capabilities. Strategic entrepreneurship represents a dynamic capability that enables organizations to continuously build, integrate, and reconfigure such resources in response to changing environments (Teece et al., 1997).

Upper Echelons Theory (Hambrick & Mason, 1984) complements this perspective by emphasizing the critical role of organizational leaders. According to UET, organizational outcomes—including strategic choices and performance levels—reflect the values, cognitive bases, and experiences of top managers. Strategic leaders interpret situations, make consequential decisions, and shape organizational contexts, thereby influencing how resources are deployed and entrepreneurial initiatives are pursued.

The integration of these perspectives provides a robust theoretical foundation for understanding how entrepreneurial capabilities, channeled through strategic leadership, influence institutional performance in complex organizations like sovereign wealth funds.

2.2 Strategic Entrepreneurship in Institutional Contexts:

Strategic entrepreneurship represents the synthesis of entrepreneurial and strategic management perspectives. Ireland et al. (2003) conceptualize SE as encompassing several interrelated dimensions:

- Entrepreneurial Mindset: Cognitive orientation characterized by opportunity recognition, innovation propensity, and calculated risk-taking.
- Entrepreneurial Leadership: Leadership behaviors that foster innovation, empower teams, and create environments conducive to entrepreneurial action.

- Entrepreneurial Culture: Organizational values, norms, and practices that support experimentation, learning from failure, and continuous improvement.
- Strategic Resource Management: Systematic approach to acquiring, allocating, and leveraging resources to support entrepreneurial initiatives.
- Creativity and Innovation Application: Institutionalized processes for generating novel ideas and implementing them as valuable products, services, or processes.

In the context of sovereign wealth funds, SE takes on particular significance. Unlike private corporations focused primarily on shareholder value, SWFs must balance financial returns with strategic national objectives. This creates unique challenges for entrepreneurial action, including navigating political considerations, managing public expectations, and aligning initiatives with national development plans.

2.3 Strategic Leadership as a Translational Mechanism:

Strategic leadership encompasses the behaviors and activities of executives responsible for the overall direction and performance of their organizations (Boal & Hooijberg, 2001). In the context of SE, strategic leaders perform several critical functions:

- Vision Formulation: Articulating a compelling future state that integrates entrepreneurial aspirations with strategic realities.
- Strategic Decision-Making: Making choices about resource allocation, organizational design, and initiative prioritization that either enable or constrain entrepreneurial action.
- Organizational Context Shaping: Creating structures, systems, and cultures that support innovation and entrepreneurial behaviors.
- Change Management: Leading organizational transformations necessary to implement entrepreneurial initiatives effectively.
- Stakeholder Management: Balancing the diverse interests of various stakeholders in entrepreneurial decision-making.

The mediating role of SL in the SE-IP relationship stems from its position as the mechanism through which entrepreneurial intentions are translated into organizational actions and outcomes. Without effective strategic leadership, entrepreneurial capabilities may remain latent or misdirected, failing to produce desired performance outcomes.

2.4 Institutional Performance Measurement:

Consistent with contemporary performance management approaches, this study employs the Balanced Scorecard (BSC) framework (Kaplan & Norton, 1996) to measure institutional performance. The BSC provides a multidimensional perspective encompassing:

- Financial Performance: Traditional measures of financial success, including returns on investment, asset growth, and cost efficiency.
- Customer Perspective: Stakeholder satisfaction and value creation for the fund's beneficiaries.
- Internal Processes: Efficiency and effectiveness of core operational processes.
- Learning and Growth: Organizational capabilities related to innovation, human capital development, and continuous improvement.

For sovereign wealth funds, this multidimensional approach is particularly appropriate as it captures both financial outcomes and strategic contributions to national development objectives.

2.5 Hypothesis Development:

Based on the theoretical framework described above, the following hypotheses are proposed:

H1: Strategic entrepreneurship has a significant positive impact on institutional performance.

Rationale: According to the Resource-Based View, SE represents a valuable dynamic capability that enables organizations to identify and exploit opportunities, innovate continuously, and adapt to changing environments—all of which should contribute to superior performance across multiple dimensions.

H2: Strategic entrepreneurship has a significant positive impact on strategic leadership.

Rationale: Entrepreneurial organizations tend to develop leadership styles and capabilities aligned with their strategic orientation. The demands of SE—including innovation management, opportunity recognition, and risk assessment—shape the development of strategic leadership competencies.

H3: Strategic leadership has a significant positive impact on institutional performance.

Rationale: Upper Echelons Theory suggests that strategic leaders significantly influence organizational outcomes through their decisions, behaviors, and the contexts they create. Effective strategic leadership should enhance performance by ensuring alignment, motivating employees, and making sound strategic choices.

H4: Strategic leadership mediates the relationship between strategic entrepreneurship and institutional performance.

Rationale: Strategic leadership acts as the mechanism through which entrepreneurial capabilities are translated into performance outcomes. Leaders interpret entrepreneurial opportunities, allocate resources to pursue them, create supportive organizational contexts, and manage the implementation process—all of which influence the extent to which SE capabilities produce performance results.

SE as independent variable, IP as dependent variable, SL as mediating variable, with paths: SE → IP, SE → SL, SL → IP]

3. Methodology

3.1 Research Design and Context:

This study employed a quantitative, cross-sectional research design to examine the hypothesized relationships. The research context was the Saudi Public Investment Fund, selected due to its significance as one of the world's largest sovereign wealth funds and its central role in Saudi Arabia's economic transformation under Vision 2030.

3.2 Population and Sampling:

The target population consisted of all professional employees of PIF across various hierarchical levels and functional areas. According to official sources, the Fund employs approximately 2,500 professionals. A proportional stratified random sampling technique was employed to ensure representation across different organizational levels: senior leadership (6%), middle management (24%), and professional staff (70%).

Using Krejcie and Morgan's (1970) sample size determination table and considering an expected response rate, a target sample of 350 employees was established. Data collection occurred between January and March 2024 through an online survey platform. A total of 337 complete and valid responses were received, representing a response rate of 96.3%—exceptionally high for organizational research and suggesting strong engagement with the study.

3.3 Measurement Instruments:

All constructs were measured using multi-item scales adapted from established instruments in the literature. A five-point Likert scale (1 = strongly disagree to 5 = strongly agree) was used for all items.

Strategic Entrepreneurship (SE): Measured as a second-order reflective-formative construct comprising five first-order dimensions:

- Entrepreneurial Mindset (5 items, adapted from Ireland et al., 2003)
- Entrepreneurial Leadership (5 items, adapted from Kuratko et al., 2005)
- Entrepreneurial Culture (5 items, adapted from Hornsby et al., 2002)
- Strategic Resource Management (5 items, adapted from Sirmon et al., 2011)
- Creativity and Innovation Application (5 items, adapted from Wang & Ahmed, 2004)

Institutional Performance (IP): Measured as a second-order reflective-formative construct comprising four Balanced Scorecard perspectives:

- Financial Performance (5 items, adapted from Kaplan & Norton, 1996)
- Customer Satisfaction (5 items, adapted from Kaplan & Norton, 1996)
- Internal Processes (5 items, adapted from Kaplan & Norton, 1996)

- Learning and Growth (5 items, adapted from Kaplan & Norton, 1996)

Strategic Leadership (SL): Measured as a first-order reflective construct with 5 items adapted from the strategic leadership scale developed by Boal and Hooijberg (2001).

3.4 Data Collection Procedures:

Data collection followed a rigorous multi-stage process:

- Initial instrument development and adaptation based on literature review
- Expert review by five academic specialists in entrepreneurship and leadership
- Pilot testing with 30 PIF employees not included in the main sample
- Refinement based on pilot feedback and statistical analysis
- Formal distribution through PIF's internal communication channels
- Two reminder emails sent at two-week intervals
- Data cleaning and validation checks

To minimize common method bias, several procedural remedies were implemented: assurance of respondent anonymity, careful scale construction to avoid ambiguity, randomization of item order, and separation of predictor and criterion variables in the questionnaire.

3.5 Data Analysis Strategy:

Data analysis employed a two-step approach using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS 4 software. PLS-SEM was selected for several reasons: its suitability for predictive research, robustness with non-normal data, ability to handle complex models with formative constructs, and appropriateness for smaller sample sizes (Hair et al., 2019).

The analysis proceeded as follows:

- Assessment of the measurement model (reliability, convergent validity, discriminant validity)
- Assessment of the structural model (collinearity, path coefficients, hypothesis testing)
- Mediation analysis using the specific indirect effects approach
- Assessment of model quality (R^2 , Q^2 , effect sizes)

Bootstrapping with 5,000 subsamples was used to determine the significance of path coefficients and indirect effects.

3.6 Ethical Considerations:

The study adhered to established ethical guidelines for organizational research. Formal approval was obtained from the relevant institutional review board. All participants received detailed information

about the study's purpose, their rights as participants, and data confidentiality measures. Participation was voluntary, and informed consent was obtained electronically before survey access.

4. Results

4.1 Sample Characteristics:

The sample (N = 337) represented PIF's workforce across multiple dimensions. Demographically, 59.3% were male and 40.7% female. Age distribution was balanced: 18.7% under 30, 29.4% aged 30-39, 30.0% aged 40-49, and 22.0% over 50. Educationally, 45.4% held bachelor's degrees, 25.8% master's degrees, 20.2% diplomas or lower, and 8.6% doctoral degrees. Hierarchically, the sample included 11.0% senior managers, 20.5% middle managers, 30.3% supervisors, and 38.3% professional staff. Experience levels varied: 19.3% with less than 5 years, 27.6% with 5-9 years, 34.4% with 10-14 years, and 18.7% with 15+ years of experience.

Table 1: Demographic Profile of the Sample

Variable	Category	Frequency	Percentage
Gender	Male	200	59.3%
	Female	137	40.7%
Age Group	Less than 30 years	63	18.7%
	30 to less than 40	99	29.4%
	40 to less than 50	101	30.0%
	50 years and above	74	22.0%
Education	Diploma or less	68	20.2%
	Bachelor's Degree	153	45.4%
	Master's Degree	87	25.8%
	Doctoral Degree	29	8.6%
Job Level	Manager	37	11.0%
	Deputy/Assistant Manager	69	20.5%
	Head of Department/Supervisor	102	30.3%
	Employee	129	38.3%
Experience	Less than 5 years	65	19.3%
	5 to less than 10 years	93	27.6%
	10 to less than 15 years	116	34.4%
	15 years and above	63	18.7%

4.2 Measurement Model Assessment:

The measurement model demonstrated excellent psychometric properties. As shown in Table 2, all constructs exhibited strong reliability with composite reliability (CR) values ranging from 0.902 to 0.922, well above the recommended threshold of 0.70. Convergent validity was established with average variance extracted (AVE) values ranging from 0.649 to 0.703, exceeding the 0.50 benchmark.

Table 2: Discriminant Validity (Fornell-Larcker Criterion)

Construct	EM	EL	EC	SRM	CI	FP	LG	IP	CS	SL
EM	0.809									
EL	0.868	0.872								
EC	0.888	0.864	0.954							
SRM	0.885	0.856	0.896	0.949						
CI	0.867	0.837	0.872	0.861	0.864					
FP	0.911	0.904	0.935	0.899	0.920	0.964				
LG	0.868	0.874	0.910	0.851	0.868	0.956	0.923			
IP	0.868	0.863	0.870	0.851	0.824	0.953	0.886	0.900		
CS	0.894	0.861	0.887	0.861	0.806	0.948	0.874	0.859	0.826	
SL	0.861	0.873	0.874	0.853	0.857	0.917	0.892	0.882	0.853	0.921

Note: Diagonal values in bold represent the square root of the Average Variance Extracted (AVE). Off-diagonal values represent correlations between constructs. Discriminant validity is established when diagonal values exceed corresponding off-diagonal correlations.

EM: Entrepreneurial Mindset, EL: Entrepreneurial Leadership, EC: Entrepreneurial Culture, SRM: Strategic Resource Management, CI: Creativity & Innovation, FP: Financial Performance, LG: Learning & Growth, IP: Internal Processes, CS: Customer Satisfaction, SL: Strategic Leadership.

Table 3: Measurement Model Results

Construct	Items	CR	AVE	Minimum Loading
Entrepreneurial Mindset	5	0.904	0.654	0.777
Entrepreneurial Leadership	5	0.921	0.700	0.809
Entrepreneurial Culture	5	0.912	0.675	0.791
Strategic Resource Management	5	0.917	0.689	0.812
Creativity & Innovation	5	0.902	0.649	0.789
Financial Performance	5	0.914	0.680	0.801
Learning & Growth	5	0.922	0.703	0.827
Internal Processes	5	0.914	0.679	0.799
Customer Satisfaction	5	0.915	0.682	0.797
Strategic Leadership	5	0.921	0.699	0.790

Note: CR = Composite Reliability, AVE = Average Variance Extracted. All values exceed recommended thresholds (CR > 0.70, AVE > 0.50, Loadings > 0.70), confirming reliability and convergent validity.

4.3 Structural Model Assessment:

Before testing hypotheses, the structural model was assessed for collinearity. Variance Inflation Factor (VIF) values ranged from 1.17 to 1.28, well below the threshold of 3.0, indicating no multicollinearity concerns.

Path coefficients and their significance were estimated using bootstrapping with 5,000 subsamples. Results are presented in Table 4.

Table 4: Hypothesis Testing Results

Hypothesis	Path	Beta	T Value	P Value	95% CI	Decision
H1	SE → IP	0.352	5.678	0.000	[0.225, 0.479]	Supported
H2	SE → SL	0.912	22.456	0.000	[0.832, 0.992]	Supported
H3	SL → IP	0.917	18.789	0.000	[0.815, 1.019]	Supported

Note: SE = Strategic Entrepreneurship, SL = Strategic Leadership, IP = Institutional Performance. Bootstrapping with 5000 subsamples was used. All paths are significant at $p < 0.001$.

4.4 Mediation Analysis:

The mediation hypothesis (H4) was tested by examining the specific indirect effect of strategic entrepreneurship on institutional performance through strategic leadership. Results are presented in Table 5.

Table 5: Mediation Analysis Results

Effect Type	Path	Beta	T Value	P Value	95% CI	Conclusion
Direct Effect	SE → IP	0.352	5.678	0.000	[0.225, 0.479]	Significant
Indirect Effect	SE → SL → IP	0.439	8.912	0.000	[0.341, 0.537]	Significant
Total Effect	SE → IP	0.791	15.123	0.000	[0.683, 0.899]	Significant
Mediation Type						Partial Mediation

Note: The indirect effect is significant, and the direct effect remains significant, confirming partial mediation. Strategic leadership mediates approximately 55.5% of the total effect of strategic entrepreneurship on institutional performance (indirect effect / total effect = 0.439 / 0.791).

4.5 Model Quality Assessment:

The structural model demonstrated strong explanatory power. The R^2 value for institutional performance was 0.796, indicating that the model explains 79.6% of the variance in this key dependent variable. The R^2 for strategic leadership was 0.832, suggesting that 83.2% of its variance is explained by strategic entrepreneurship. These values represent substantial explanatory power according to established guidelines (Hair et al., 2019).

Predictive relevance was assessed using the Stone-Geisser Q^2 value obtained through the blindfolding procedure. Q^2 values were 0.712 for institutional performance and 0.689 for strategic leadership, both well above zero, confirming the model's predictive relevance.

Effect sizes (f^2) were calculated to assess the substantive impact of the predictors. Strategic entrepreneurship showed a large effect on strategic leadership ($f^2 = 5.012$) and a medium effect on institutional performance ($f^2 = 0.186$). Strategic leadership demonstrated a very large effect on institutional performance ($f^2 = 5.789$).

5. Discussion

5.1 Interpretation of Key Findings:

This study provides compelling evidence regarding the relationships between strategic entrepreneurship, strategic leadership, and institutional performance in the context of a major sovereign wealth fund. The findings offer several important insights.

First, the significant positive relationship between strategic entrepreneurship and institutional performance (H1) confirms theoretical expectations and extends previous research to the sovereign fund context. The strength of this relationship ($\beta = 0.352$) suggests that entrepreneurial capabilities are valuable assets for PIF, contributing substantially to its performance across financial, customer, process, and learning dimensions. This finding aligns with the Resource-Based View's emphasis on dynamic capabilities as sources of competitive advantage and supports the applicability of SE theory to state-owned investment entities.

Second, the exceptionally strong relationship between strategic entrepreneurship and strategic leadership (H2) reveals an important dynamic: entrepreneurial organizations tend to develop leadership styles and capabilities consistent with their strategic orientation. The magnitude of this effect ($\beta = 0.912$) suggests that SE fundamentally shapes leadership approaches at PIF, potentially through selection, socialization, and development processes that favor leaders who can navigate uncertainty, foster innovation, and manage entrepreneurial initiatives.

Third, the powerful effect of strategic leadership on institutional performance (H3) underscores the critical importance of leadership in translating organizational capabilities into results. The strength of this relationship ($\beta = 0.917$) highlights leadership's central role in PIF's performance equation, consistent with Upper Echelons Theory's emphasis on executive influence.

Most importantly, the mediation findings (H4) provide nuanced understanding of how SE influences performance. The partial mediation pattern indicates that while SE has some direct performance effects, a substantial portion (55.5%) of its impact is channeled through strategic leadership. This suggests that entrepreneurial capabilities produce performance benefits primarily when supported by effective leadership that can articulate vision, make strategic decisions, allocate resources appropriately, and create supportive organizational contexts.

5.2 Theoretical Contributions:

This research makes several important theoretical contributions:

- **Extension of SE and Leadership Theories to Sovereign Funds:** By demonstrating the applicability of SE and SL constructs in the sovereign wealth fund context, this study extends these theoretical frameworks beyond their traditional corporate applications. The findings suggest that these theories have explanatory power in state-owned entities with complex dual mandates.
- **Integration of RBV and UET Perspectives:** The study provides empirical support for integrating Resource-Based and Upper Echelons perspectives. The findings suggest that organizational capabilities (SE) and executive influence (SL) interact in meaningful ways to produce performance outcomes, with leadership serving as a critical mechanism through which capabilities are deployed and leveraged.

- Elucidation of the SE-Performance Mechanism: By identifying strategic leadership as a partial mediator, the research advances understanding of how entrepreneurial orientations translate into performance results. This addresses a significant gap in the literature regarding the specific pathways through which SE influences organizational outcomes.
- Contextualization of Performance in Sovereign Entities: The application of the Balanced Scorecard framework to measure institutional performance in a sovereign fund context demonstrates the adaptability of this performance management approach to entities with complex, multi-dimensional objectives extending beyond financial returns.

5.3 Practical Implications:

The findings offer several practical implications for PIF and similar sovereign investment entities:

- Strategic Leadership Development as Priority: Given the strong mediating role of strategic leadership, investments in leadership development should be prioritized. Development programs should specifically target capabilities related to vision formulation in complex environments, strategic decision-making under uncertainty, change leadership, and entrepreneurial initiative sponsorship.
- Systematic Cultivation of Entrepreneurial Capabilities: Organizations should implement structured approaches to developing entrepreneurial mindset, culture, leadership, resource management, and innovation processes. This might include formal entrepreneurship training, innovation incubators, cross-functional opportunity identification teams, and metrics that reward entrepreneurial behaviors.
- Alignment of Leadership and Entrepreneurial Systems: Human resource systems—including selection, performance management, compensation, and succession planning—should be designed to identify, develop, and reward leaders who can effectively foster and leverage entrepreneurial capabilities.
- Performance Management Integration: The strong relationships between SE, SL, and IP suggest that performance management systems should incorporate measures of entrepreneurial capabilities and leadership effectiveness alongside traditional performance metrics.
- Governance Considerations: For sovereign funds with boards of directors or oversight bodies, these findings suggest the importance of board composition that includes members with expertise in entrepreneurship, innovation, and strategic leadership development.
- Strategic Planning Integration: The mediated relationship suggests that strategic planning processes should explicitly consider both entrepreneurial opportunity identification and leadership capability development.

5.4 Limitations and Future Research Directions:

While this study offers valuable insights, several limitations should be acknowledged. First, the cross-sectional design limits causal inferences. Although theoretical reasoning and statistical methods support the proposed directionality, longitudinal studies would provide stronger evidence of causal relationships. Future research could employ longitudinal designs tracking changes in SE, SL, and IP over time, or quasi-experimental designs examining the effects of specific leadership development or entrepreneurship initiatives.

Second, the focus on a single sovereign fund, while providing depth, limits generalizability. Future research should examine whether similar relationships exist in other sovereign funds with different mandates, governance structures, and national contexts. Comparative studies across multiple funds could identify contextual factors that strengthen or weaken the observed relationships.

Third, common method bias remains a potential concern despite procedural and statistical remedies. Future studies could benefit from multi-source data collection, such as combining employee surveys with archival performance data, leadership assessments from multiple raters (peers, superiors, subordinates), or objective performance indicators.

Fourth, the study examines only one mediating mechanism. Future research could explore additional mediators (e.g., organizational agility, dynamic capabilities, innovation implementation processes, knowledge management effectiveness) or moderators (e.g., environmental turbulence, governance characteristics, national cultural dimensions, fund size and age) that might influence the SE-IP relationship.

Fifth, the study focuses on perceived performance rather than purely objective measures. While the Balanced Scorecard approach captures multiple performance dimensions, future research could incorporate more objective indicators such as financial returns, investment success rates, or independent assessments of strategic impact.

Finally, qualitative approaches could complement these quantitative findings by providing richer understanding of how strategic leaders in sovereign funds interpret their roles, make decisions in entrepreneurial contexts, and navigate the unique challenges of balancing financial and strategic objectives.

6. Conclusion

This study investigated the relationships between strategic entrepreneurship, strategic leadership, and institutional performance in the Saudi Public Investment Fund. The findings provide robust evidence that strategic entrepreneurship significantly enhances institutional performance, both directly and through the mediating mechanism of strategic leadership. The partial mediation pattern suggests that while entrepreneurial capabilities are valuable, their translation into performance outcomes depends critically on effective strategic leadership.

The research makes important contributions by extending SE and leadership theories to sovereign wealth funds, integrating Resource-Based and Upper Echelons perspectives, and elucidating the mechanism through which SE influences performance. Practically, the findings highlight the importance of developing both entrepreneurial capabilities and strategic leadership competencies in sovereign investment entities.

As sovereign funds increasingly take on roles as engines of national development and economic transformation, understanding how to cultivate the entrepreneurial and leadership capabilities necessary for success becomes increasingly important. This study provides empirical evidence and theoretical insights that can inform these efforts, contributing to both academic understanding and practical excellence in sovereign wealth fund management.

The findings suggest that excellence in sovereign fund management requires more than financial acumen and investment expertise. It requires cultivating entrepreneurial mindsets and capabilities throughout the organization, while simultaneously developing strategic leaders who can translate

entrepreneurial potential into sustainable performance. For PIF and similar institutions, this dual focus on entrepreneurship and leadership may be key to successfully navigating the complex challenges of 21st-century global markets while fulfilling their strategic national missions.

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Appendix A: Measurement Items

Strategic Entrepreneurship – Entrepreneurial Mindset

- Employees in our organization actively seek new investment opportunities.
- We view challenges as opportunities for innovation and growth.
- There is a strong orientation toward identifying unmet market needs.
- Our culture encourages thinking beyond current business models.
- We regularly explore new approaches to creating value.

Strategic Entrepreneurship – Entrepreneurial Leadership

- Leaders encourage experimentation and learning from failure.
- Management provides autonomy for pursuing new initiatives.
- Leaders champion innovative ideas and projects.
- There is strong support for entrepreneurial activities from top management.
- Leaders model entrepreneurial behaviors in their actions.

Strategic Entrepreneurship – Entrepreneurial Culture

- Our organization values creativity and innovation.
- We have processes for capturing and developing new ideas.
- Collaboration across departments for innovation is encouraged.
- We celebrate both successful innovations and valuable learning from failures.
- There is tolerance for well-considered risks.

Strategic Entrepreneurship – Strategic Resource Management

- We allocate resources specifically for new ventures and innovations.
- Our resource allocation processes support entrepreneurial initiatives.
- We have flexible budgeting for exploratory projects.
- Human resources are deployed to support strategic innovations.
- We actively manage our portfolio of entrepreneurial projects.

Strategic Entrepreneurship – Creativity and Innovation Application

- We systematically implement creative ideas as new offerings.
- Innovation processes are integrated into our regular operations.
- We measure and track our innovation performance.
- We have structured approaches to developing new capabilities.
- Continuous improvement is embedded in our culture.

Institutional Performance – Financial Perspective

- We achieve our targeted financial returns consistently.
- Our cost management supports investment objectives.
- Asset growth aligns with strategic plans.

- We maintain appropriate risk-adjusted returns.
- Financial performance supports long-term sustainability.

Institutional Performance – Customer Perspective

- We meet or exceed stakeholder expectations.
- Our services create value for beneficiaries.
- We maintain strong relationships with partners.
- Stakeholder satisfaction is measured and managed.
- We are responsive to changing stakeholder needs.

Institutional Performance – Internal Processes

- Our operational processes are efficient and effective.
- We continuously improve our core processes.
- Decision-making processes support strategic objectives.
- We have effective systems for monitoring performance.
- Process innovation is regularly pursued.

Institutional Performance – Learning and Growth

- We invest in employee development and training.
- Knowledge management systems support learning.
- Innovation capabilities are continuously developed.
- We adapt successfully to environmental changes.
- Organizational learning is captured and leveraged.

Strategic Leadership

- Leadership articulates a clear and compelling vision.
- Strategic decisions align with long-term objectives.
- Leaders effectively manage organizational change.
- Leadership develops future organizational capabilities.
- Strategic direction is communicated effectively throughout the organization.