

Risk Management as a Mediator in Strategic Management: Enhancing Operational Efficiency and Achieving Sustainability Goals: A Proposed Framework

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ABSTRACT

In today's dynamic and uncertain business environment, organizations must simultaneously pursue operational excellence and long-term sustainability. Strategic management provides direction and competitive positioning, yet the successful realization of strategic objectives depends on effectively managing uncertainty. In increasingly volatile and complex business environments, organizations must simultaneously enhance operational efficiency and achieve sustainability goals. This paper proposes a conceptual framework positioning risk management as a mediating mechanism between strategic management and organizational outcomes—specifically operational efficiency and sustainability performance. Strategic management provides long-term direction, while risk management addresses uncertainty and potential disruptions. This review examines the mediating role of risk management in linking strategic management practices to operational efficiency and sustainability performance. Drawing on theoretical perspectives such as the Resource-Based View (RBV), Dynamic Capabilities Theory and stakeholder theory, this paper synthesizes existing literature to develop a conceptual framework positioning risk management as a strategic enabler. The review concludes that risk management strengthens the effectiveness of strategic initiatives by reducing uncertainty, improving decision quality, aligning sustainability risks with corporate objectives, and enhancing organizational resilience. The framework explains how risk management translates strategic intent into measurable operational and sustainability outcomes. The proposed model offers theoretical grounding and practical guidance for future empirical validation.

Keywords: Risk Management, Strategic Management, Operational Efficiency, Sustainability Goals.

INTRODUCTION

Organizations today operate in environments characterized by uncertainty, technological disruption, regulatory pressures, climate change, and shifting stakeholder expectations. These forces demand strategic clarity while simultaneously requiring proactive risk identification and mitigation (AlYammahi and Robani, 2024). Traditionally, strategic management focuses on setting long-term goals, allocating resources, and achieving competitive advantage. Risk management, on the other hand, has often been viewed as a defensive mechanism aimed at minimizing losses. However, contemporary scholarship suggests that risk management—particularly Enterprise Risk Management (ERM) has evolved into a strategic function that can enhance organizational value creation. SM in the public sector involves a structured approach to planning, decision-making, and resource allocation that aligns public organizations' objectives with societal needs and governmental priorities. Unlike the private sector, where the primary focus is on profitability and competitiveness, public sector SM emphasizes accountability, transparency, and delivering value to citizens (AlMazrouei and Yassin, 2020; Ferlie and Ongaro, 2021). According to AlMazrouei et al. (2021), SM in the public sector serves as a critical tool for navigating

resource constraints, meeting stakeholder expectations, and addressing national and international development goals.

OE refers to the ability of an organization to maximize output while minimizing the use of resources and waste, ensuring that objectives are achieved effectively and efficiently. In the context of public sector organizations, OE is particularly important due to the resource constraints, accountability requirements, and societal expectations these organizations face (Alenezi et al., 2021; AlYammahi and Robani, 2024). According to Almazrouei and Yassin (2020), OE in public sector entities involves optimizing processes, improving resource allocation, and enhancing service delivery to meet the needs of stakeholders.

Sustainable development is a multidimensional concept that balances economic growth, environmental stewardship, and social equity to ensure long-term prosperity for future generations (United Nations, 2019). This concept has gained increasing attention in public sector management, where sustainability is not only a compliance requirement but also a strategic imperative. Governments and public institutions play a critical role in implementing sustainability practices, integrating environmental responsibility, social equity, and economic viability into their operational frameworks (AlMazrouei and Yassin, 2020).

RM in public sector organizations focus on mitigating both internal and external threats that could hinder service delivery and public trust. RM involves integrating RI, assessment, mitigation, and monitoring into decision-making frameworks (Settembre-Blundo et al., 2021). Additionally, RM frameworks must address both traditional risks, such as physical security threats, and emerging risks, such as the increasing reliance on digital tools and AI in law enforcement operations (Johnstone, 2024). Scholars argue that RM functions as an enabling mechanism that ensures strategies are not only well-formulated but also resilient and adaptable (Aven, 2020; Lam, 2021). By systematically identifying, assessing, and mitigating uncertainties, RM enhances the likelihood that strategic objectives will be realized in practice.

In an era characterized by rapid technological advancements, shifting societal expectations, and increasing global uncertainties, public sector organizations are under immense pressure to enhance OE while simultaneously addressing RM and sustainability challenges. This paper proposes a framework in which risk management mediates the relationship between strategic management and two critical organizational outcomes: Operational efficiency and Sustainability.

THEORETICAL LITERATURE AND HYPOTHESIS DEVELOPMENT

The Resource-RBV posits that an organization's ability to gain and sustain a competitive advantage hinge on its capacity to develop, deploy, and protect valuable, rare, inimitable, and non-substitutable (VRIN) resources (Barney, 1991). These capabilities enable the organization to remain agile and responsive in a rapidly evolving security environment. However, RBV also suggests that the presence of such resources is not inherently sufficient; rather, their strategic integration into operational processes and governance structures determines their actual value (Peteraf, 1993). SM, RM, OE and SDG are important internal factors for any organization as intangible resources that can differentiate them in the competitive market.

Strategic management

SM, as defined by Grant (2020), is the process of formulating, implementing, and evaluating strategies that align an organization's internal capabilities with external opportunities to achieve long-term objectives.. It is assessed through strategic planning, capability, choice, and action, which together enable the organization to align operations with national SDG and improve law enforcement outcomes. SM in the public sector involves a structured approach to planning, decision-making, and resource allocation that aligns public organizations' objectives with societal needs and governmental priorities. Unlike the private sector, where the primary focus is on profitability and competitiveness, public sector SM emphasizes accountability, transparency, and delivering value to citizens (AlMazrouei and Yassin, 2020; Ferlie and Ongaro, 2021). According to AlMazrouei et al. (2021), SM in the public sector serves as a critical tool for navigating resource constraints, meeting stakeholder expectations, and addressing national and international development goals. SM plays a vital role in balancing immediate operational priorities with long-term societal objectives, such as sustainability and public safety. The

complexity of public sector environments, characterized by diverse stakeholders, regulatory frameworks, and dynamic challenges, necessitates the adoption of a comprehensive SM approach. As highlighted by Kamalrudin et al. (2024), this approach must integrate OE with broader goals, such as fostering community trust, enhancing security, and contributing to national strategies. SM encompasses four key dimensions: strategic planning, strategic capability, strategic choice, and strategic action, all of which are essential for achieving organizational objectives (AlMazrouei and Yassin, 2020; Grant, 2020).

Strategic planning is the foundation of SM, involving the formulation of long-term objectives, resource allocation, and the development of actionable strategies to achieve organizational goals (AlMazrouei et al., 2021; Alshurideh et al., 2023). In the public sector, strategic planning ensures transparency, accountability, and OE (Kamalrudin et al., 2024).

Strategic capability refers to an organization's ability to effectively deploy and utilize resources, skills, and competencies to achieve its objectives (AlMazrouei and Yassin, 2020). This capability is crucial for public sector organizations operating in complex environments with high accountability demands and limited resources (Juma and Perumal, 2022; Alseiari et al., 2020).

Strategic choice involves the selection of appropriate strategies to achieve long-term objectives, given internal and external constraints (AlMazrouei and Yassin, 2020; Grant, 2020). In public sector organizations, strategic choices must align with national policies, societal expectations, and regulatory frameworks (AlMazrouei et al., 2021).

Strategic action involves the execution of selected strategies through concrete initiatives, resource allocation, and operational measures to achieve desired outcomes (AlMazrouei and Yassin, 2020). In organizations strategic action ensures that plans are translated into effective policies and operational improvements (AlMazrouei et al., 2021).

Operational efficiency

OE, as described by Epstein and Buhovac (2020), is the ability of an organization to maximize output while minimizing the use of resources and waste, reflecting the effective achievement of objectives. OE refers to optimizing resources, streamlining processes, and achieving measurable performance outcomes such as improved response times, higher public satisfaction, and reduced crime rates. It highlights the organization's capacity to fulfill its public safety mission effectively while using resources sustainably. OE in the public sector is critical for ensuring that government agencies and institutions provide effective and high-quality services while optimizing resource utilization. Unlike private sector organizations, public entities must balance efficiency with public accountability, transparency, and regulatory compliance (AlMazrouei and Yassin, 2020). However, achieving OE in the public sector presents several challenges, including bureaucratic rigidity, resource constraints, technological limitations, and evolving stakeholder expectations (Pollitt and Bouckaert, 2022). One major issue affecting OE in the public sector is bureaucratic inefficiency. Many government organizations operate within hierarchical structures that can slow down decision-making processes and create inefficiencies in service delivery (Christensen and Lægheid, 2021). Excessive layers of approval, rigid regulations, and a lack of operational flexibility hinder the ability of public institutions to respond promptly to emerging issues, including security threats, emergency responses, and administrative tasks (Moore, 2020).

Risk Management

RM, according to Aven (2020), refers to the systematic process of identifying, assessing, mitigating, and monitoring risks to ensure the resilience and adaptability of an organization. In this study, RM are viewed as a mediating variable, bridging SM and OE. These practices include identifying potential risks, assessing their impact, mitigating uncertainties, and continuously monitoring them to ensure the effectiveness of strategies and the organization's operational stability (Albastaki and Manap, 2024). RM in the public sector is crucial for ensuring operational stability, public trust, and effective resource allocation. Public institutions, such as law enforcement agencies, must navigate complex and dynamic environments where uncertainties range from cybersecurity threats to financial constraints and shifting regulatory requirements. Effective RM ensure that these

institutions remain resilient and capable of responding to emerging threats while maintaining high levels of service efficiency and accountability (Frigo and Anderson, 2020). One of the critical challenges in public sector RM is cybersecurity. With the increasing reliance on digital systems for governance, law enforcement, and public service delivery, cyber threats pose significant risks. Cyberattacks can compromise sensitive data, disrupt operations, and erode public trust. Studies highlight the importance of integrating advanced cybersecurity measures, including predictive analytics, threat detection algorithms, and encrypted communication networks, to mitigate such risks (Albastaki and Manap, 2024).

Sustainable development goals

SDGs, according to the United Nations (2019), refer to strategic objectives aimed at balancing economic development, social well-being, and environmental protection to ensure long-term global sustainability. In this study, SDG are examined as an outcome influenced by the integration of SM and RM. Public sector institutions also contribute to sustainable urban development by incorporating environmentally responsible practices into their infrastructure planning. Implementing green building standards within government facilities, reduces environmental impact and improves energy efficiency (Alzaabi et al., 2020). Awareness campaigns on sustainability-related issues, such as waste management and traffic safety, further contribute to creating environmentally conscious communities (AlMazrouei et al., 2021).

Hypothesis development

Hypothesis development is the process of formulating a clear, testable, and research-based prediction about the relationship between variables.

The relationship between strategic management and risk management

SM and RM are closely interconnected, as both frameworks enable organizations to navigate uncertainties while maintaining long-term strategic objectives (Pollitt and Bouckaert, 2022). SM provides structured planning and governance mechanisms, while RM identifies, assesses, and mitigates potential threats that could hinder organizational performance (Frigo and Anderson, 2020). Empirical studies highlight that the integration of RM within SM processes strengthens organizational resilience and adaptability (Lam, 2021). This interrelationship ensures that organizations can effectively allocate resources, enhance preparedness, and maintain strategic agility (Aven, 2020). Strategic management and risk management are deeply interconnected. Strategy defines the direction and objectives of an organization, while risk management ensures that uncertainties do not derail those objectives. When integrated effectively, risk management enhances the success of strategic initiatives, improves operational stability, and supports long-term sustainability. Organizations that treat risk management as a strategic partner rather than a compliance function are better positioned to thrive in uncertain and competitive environments. Based on this understanding, the following hypothesis is proposed:

H1: SM and RM are positively correlated.

The effect of strategic management on operational efficiency

SM significantly influences OE in public sector organizations by ensuring efficient resource allocation, streamlining decision-making, and fostering adaptability to emerging challenges (Pollitt and Bouckaert, 2022). Empirical studies indicate that public sector organizations that adopt strategic frameworks experience enhanced service delivery, increased accountability, and improved decision-making processes (Frigo and Anderson, 2020). These elements contribute to an organization's ability to maintain operational resilience and meet evolving public safety demands. Strategic management significantly influences operational efficiency by aligning resources, processes, and performance systems with long-term organizational objectives. Firms with well-developed strategic frameworks are better positioned to optimize operations, reduce waste, and maintain resilience in dynamic environments. Operational efficiency is not merely an operational issue—it is a strategic outcome shaped by the quality and integration of strategic management practices. Therefore, this study hypothesizes the following:

H2: SM has a significant positive effect on OE.

The effect of risk management on operational efficiency

RM is fundamental to enhancing OE, particularly in public sector organizations operating in high-risk and complex environments (Aven, 2020). ERM frameworks support the integration of RA, mitigation, and monitoring mechanisms into strategic planning, ensuring that organizations maintain operational continuity and resilience (Moore, 2020). Research indicates that organizations that embed RM into their operational frameworks are better equipped to manage uncertainties, enhance decision-making, and improve overall efficiency (Christensen and Læg Reid, 2021). Risk management positively affects operational efficiency by reducing uncertainty, preventing disruptions, improving decision-making, and strengthening organizational resilience. Organizations that integrate comprehensive risk management systems into their operational frameworks achieve greater stability, cost control, and process optimization. In modern business environments, operational efficiency is not only a function of process design but also of how effectively risks are anticipated and managed. This leads to the following hypothesis:

H3: RM has a significant positive effect on OE.

The effect of operational efficiency on sustainable development goals

OE directly influences an organization's ability to achieve SDG by optimizing resources and reducing waste. The integration of advanced technologies, predictive analytics, and smart policing solutions in law enforcement agencies contributes to reducing energy consumption, improving crime prevention strategies, and fostering responsible governance (Ferlie and Ongaro, 2021). Furthermore, studies have shown that OE leads to improved sustainability outcomes by reducing environmental impact and enhancing the effectiveness of law enforcement strategies (Frigo and Anderson, 2020). Operational efficiency significantly contributes to achieving Sustainable Development Goals by reducing resource consumption, minimizing waste, lowering emissions, and enhancing economic productivity. Efficient operations strengthen both environmental sustainability and economic resilience. Organizations that integrate operational excellence with sustainability objectives are better positioned to support global development goals while maintaining long-term competitiveness. Hence, the following hypothesis is formulated:

H4: OE has a significant positive effect on SDG.

Risk management as mediate strategic management and operational efficiency

Scholars argue that RM functions as an enabling mechanism that ensures strategies are not only well-formulated but also resilient and adaptable (Aven, 2020; Lam, 2021). By systematically identifying, assessing, and mitigating uncertainties, RM enhances the likelihood that strategic objectives will be realized in practice. For example, in law enforcement, risks such as inadequate training, political influence, or cyberattacks may derail operational reforms. Integrating RM into strategic frameworks allows police organizations to anticipate these threats, thereby safeguarding OE outcomes such as reduced response times, optimized resource allocation, and improved public trust (Juma and Perumal, 2022).

In addition, RM strengthens accountability and transparency—two elements that are indispensable in public administration. When risks are addressed proactively, strategies can be implemented with greater efficiency and less disruption, enabling the organization to achieve higher levels of OE while aligning with broader Sustainable Development Goals (SDGs). The mediating role of RM, therefore, is not merely about controlling negative outcomes but about ensuring that strategic efforts are robust enough to thrive under uncertainty.

Building on the theoretical underpinnings of the Resource-Based View (RBV), Institutional Theory, and Stakeholder Theory, RM can be conceptualized as the process that operationalizes strategic resources in a manner consistent with institutional legitimacy and stakeholder expectations. Previous empirical studies confirm that organizations that embed RM into their strategic frameworks are more likely to achieve efficiency gains and long-term sustainability (AlMazrouei and Yassin, 2020; Albastaki and Manap, 2024). Risk management plays a critical mediating role between strategic management and operational efficiency. Strategic planning alone does not guarantee efficient outcomes; it is the systematic identification and mitigation of risks that ensures successful execution. Organizations that integrate risk management into strategic processes achieve greater operational

stability, cost efficiency, and long-term performance sustainability. Accordingly, this study posits the following hypothesis:

H5: RM mediates the relationship between SM and OE

The Proposed Framework

The proposed framework is grounded in the theoretical foundations of the Resource-RBV theory,. In doing so, it extends existing models by explicitly theorizing the mediating role of RM and positioning SDG as the ultimate dependent outcome. By integrating these theoretical perspectives, the research framework demonstrates how RM mediates SM that would affect directly on OE and indirectly benefits to SDG achievement. In this way, the proposed model contributes originality by explicitly linking strategic planning, risk management, operational efficiency, and sustainability in a single empirically testable framework designed for high-risk public institutions. This contribution goes beyond prior models by showing that efficiency, legitimacy, and resilience are interconnected dynamics, offering a comprehensive lens for examining how organizations, , can optimize their strategies to achieve efficiency, resilience, and sustainability. In research methodology, a mediating variable explains the mechanism through which an independent variable influences a dependent variable.

In this context:

- **Independent Variable (IV):** Strategic Management
- **Mediator (M):** Risk Management
- **Dependent Variables (DV):** Operational Efficiency & Sustainability Goals

Risk management explains *how and why* strategic initiatives translate into improved operational and sustainability outcomes.

Risk management strengthens the link between strategic planning and performance outcomes by reducing uncertainty and aligning actions with risk appetite.

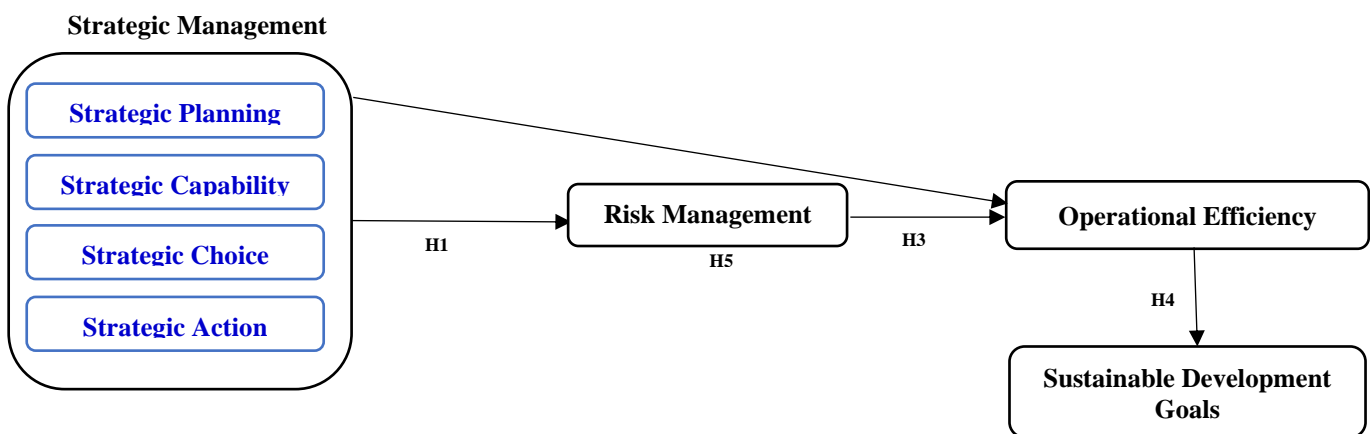


Figure 2. Conceptual Framework

DISCUSSION

The study reveal a structurally coherent, execution-centered governance configuration in which risk and operational mechanisms play pivotal roles in translating strategic intent into sustainability outcomes. The structural model reveals a hierarchical and execution-driven configuration. Operational Efficiency serves as the primary conduit through which strategic and risk governance processes influence sustainability outcomes. Risk Management emerges as a central mediating mechanism between strategic execution and operational performance. Strategic Action and Strategic Capability demonstrate significant roles in shaping governance and performance structures, while Strategic Choice and Strategic Planning exhibit limited or indirect influence.

These study underscore the theoretical proposition that sustainable development outcomes in public sector organizations are predominantly driven by operational execution and risk governance integration rather than by planning or decision orientation alone. The statistical strength and theoretical coherence of the supported paths reinforce the robustness of the structural model and provide empirical validation for the integrated strategic governance framework proposed in this study.

Bryson (2018) argues that strategic planning in public organizations often functions as a formalized and compliance-oriented exercise. While such processes may enhance alignment and legitimacy, they do not automatically generate operational agility. Institutional theorists such as Meyer and Rowan (1977) and DiMaggio and Powell (1983) similarly contend that formal structures may serve symbolic purposes rather than performance-enhancing functions. In highly institutionalized environments, planning frameworks can become ceremonial, emphasizing conformity rather than adaptive responsiveness.

The empirical pattern observed also supports arguments presented by Kamalrudin, Hakimi and Aldhaheeri (2024), who emphasize that integrating sustainable development principles into public sector strategy requires operational embedding rather than rhetorical commitment. Similarly, Omar, Latif and Hameed (2024) highlight that participatory and performance-based governance structures are necessary to translate sustainability strategies into actionable outcomes. The present findings extend this discussion by demonstrating that capability-based strategic management contributes more significantly to operational efficiency than formalized planning structures.

Arena, Arnaboldi and Azzone (2017) argue that the integration of ERM into strategic control systems enhances performance outcomes by aligning risk identification with performance monitoring. Similarly, Frigo and Anderson (2020) emphasize that strategic risk management strengthens governance by linking uncertainty assessment directly to decision-making processes. This interpretation is reinforced by Frigo and Anderson (2020), who contend that strategic risk management must be embedded within execution processes to enhance governance outcomes. Similarly, Arena, Arnaboldi and Azzone (2017) highlight that risk management contributes to performance only when integrated into strategic control systems.

The empirical pattern observed in this study also resonates with contemporary sustainability governance literature. Shad et al. (2019) emphasize that integrating sustainability reporting into enterprise risk management strengthens governance effectiveness. Similarly, Hristov et al. (2024) highlight the importance of integrating risk management with performance management systems. These integration perspectives reinforce the conclusion that risk governance improves when strategy is operationalized through structured institutional systems.

Scholars emphasize that institutional performance and sustainability outcomes are closely interconnected. Ahmad and Khalid (2023) argue that data-driven governance enhances sustainability performance in public institutions by integrating monitoring systems into operational decision-making. Similarly, Singh, Patel and Gupta (2023) highlight that digital dashboards and data-based performance tracking systems are critical in measuring sustainability progress. The current findings empirically support these perspectives by demonstrating that operational systems when structured around efficiency, transparency, and digital integration directly strengthen SDG achievement. The results also align with Epstein and Buhovac (2020), who emphasize that sustainability initiatives succeed when integrated into core operational processes rather than treated as peripheral corporate responsibility programs. Sustainability performance becomes sustainable only when embedded in routine operational structures. The mediating role of Risk Management within the framework proposed is particularly significant. Consistent with the enterprise risk management literature, risk governance functions as a coordinating mechanism that aligns strategy with operational control systems (Lam, 2021; Frigo and Anderson, 2020). The results suggest that Risk Management operates not as a peripheral compliance function but as a strategic integrator that translates capability and action into operational discipline. This supports the view that effective governance structures embed risk considerations into decision-making processes, resource allocation systems, and performance monitoring frameworks (Hristov et al., 2024).

The empirical results support an execution-centered governance framework in which risk-integrated operational systems function as the core drivers of sustainability performance. The findings demonstrate that while strategic

intent and planning are important, measurable performance and sustainability outcomes depend fundamentally on the effective alignment of strategic action, organizational capability, risk management, and operational execution. This study therefore provides strong empirical support for the proposed model and establishes a foundation for the discussion and theoretical implications presented.

CONCLUSION

This proposed framework conceptualizes risk management as a critical mediating mechanism linking strategic management to operational efficiency and sustainability outcomes. By systematically identifying, assessing, and mitigating uncertainties, risk management transforms strategic intentions into effective execution. Organizations that integrate risk management into their strategic processes are more resilient, efficient, and capable of achieving sustainable long-term growth. Risk management plays a critical mediating role in transforming strategic management initiatives into tangible operational efficiency and sustainability outcomes. When integrated into strategic planning, risk management enhances decision quality, reduces uncertainty, and strengthens organizational resilience. Organizations that treat risk management as a strategic partner rather than a compliance function are better positioned to achieve operational excellence and long-term sustainability. Future empirical research should validate this mediation model across industries and regions. The empirical findings reveal a clear and coherent governance pathway. Strategic Capability and Strategic Action emerged as the most influential strategic dimensions, significantly strengthening Risk Management systems. Risk Management, in turn, demonstrated a strong positive effect on Operational Efficiency, and Operational Efficiency emerged as the dominant predictor of Sustainable Development Goal achievement. This sequential structure confirms that sustainability performance is not directly produced by strategic declarations or planning frameworks alone; rather, it is mediated through capability-driven execution, risk-integrated governance, and efficient operational systems. Importantly, the results distinguish between formal strategic planning and strategic execution. While planning and strategic choice remain conceptually significant, they do not independently generate performance outcomes without institutional capability and implementation mechanisms.

Practical And Managerial Implications

The study emphasize the importance of digital transformation in strengthening operational systems. Digital dashboards, real-time analytics, AI-driven tools, and integrated communication platforms enhance coordination and transparency. Managers should therefore continue investing in digital technologies that enable data-driven governance and performance monitoring. However, digital transformation should be accompanied by training and institutional learning mechanisms to ensure effective utilization of technological tools.

The mediation results suggest that leaders must focus on execution quality. Strategic Action emerged as a strong predictor of Risk Management, indicating that implementation capacity rather than decision orientation alone strengthens institutional governance. Managers should cultivate execution-oriented leadership practices, including cross-departmental coordination, performance accountability mechanisms, and adaptive response systems. Leadership development programs should therefore emphasize implementation discipline, crisis management capability, and risk-informed governance competencies.

The integrated governance pathway identified in this study provides a structured framework for performance reform initiatives. Rather than implementing isolated reforms in planning, sustainability, or risk management, policymakers should adopt a systemic approach that aligns strategy, capability, risk governance, and operational systems. This holistic reform orientation reduces fragmentation and enhances institutional coherence.

Finally, the findings underscore the importance of continuous monitoring and evaluation. Managers should regularly assess the alignment between strategic intent, risk governance mechanisms, and operational outcomes. Performance management systems must incorporate feedback loops that enable adaptive learning and institutional refinement. Such mechanisms ensure that sustainability and operational objectives remain responsive to emerging risks and evolving societal expectations.

The managerial implications of this study advocate for an execution-centered governance model. Leaders should prioritize capability development, embed risk management into operational decision-making, operationalize

sustainability goals through measurable performance systems, leverage digital technologies for transparency and coordination, and foster execution-oriented leadership cultures. By adopting this integrated approach, institutions can enhance operational resilience, improve service quality, and achieve sustainable development objectives in a structured and measurable manner.

The Research Gaps And Directions For Future Research

The rapidly evolving nature of digital transformation, sustainability governance, and risk management practices means that institutional dynamics may shift over time. Continuous reform initiatives, emerging technologies, and global sustainability commitments may alter governance-performance relationships. Future studies should consider the dynamic and evolving context of public sector institutions. While this study provides robust empirical evidence supporting an execution-centered governance model, its findings should be interpreted within the constraints of cross-sectional design, self-reported data, contextual specificity, and construct operationalization choices. Addressing these limitations in future research will strengthen theoretical refinement, methodological robustness, and generalizability of governance-performance scholarship.

Future studies could examine sustainability at multiple levels of analysis. While this research focused on institutional-level perceptions of SDG achievement, multi-level models could analyze individual, departmental, and organizational-level dynamics simultaneously. Such approaches would clarify how micro-level behaviors aggregate into macro-level sustainability outcomes. Future research could test alternative measurement specifications, including formative modeling for sustainability and operational constructs. Comparing reflective and formative approaches would provide deeper insight into construct dimensionality and measurement theory within governance research.

Finally, given the accelerating global emphasis on resilience, climate adaptation, cybersecurity, and public sector innovation, future studies should examine how emerging global risks reshape the relationships among strategic management, risk governance, and sustainability performance. Exploring how institutions adapt to crises such as pandemics, technological disruptions, or environmental shocks would extend the model into resilience and crisis governance scholarship.

Future research should adopt longitudinal, comparative, multi-method, and multi-level approaches to further refine and validate the integrated governance framework developed in this study. By expanding contextual scope, incorporating additional variables, and deepening methodological rigor, subsequent investigations can continue advancing knowledge on how public sector institutions achieve sustainable development outcomes through strategic capability, risk integration, and operational excellence.

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