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Risk Management Approaches in Public Financial Administration

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Abstract

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This study reviews literature (2016-2022) on the adaptation of Enterprise Risk Management (ERM), especially COSO ERM, in the public sector. While ERM enhances fiscal resilience, transparency, and performance, direct application from the private sector often requires contextual adjustment. Success depends on leadership, risk aware culture, and integration with Financial Management Information Systems, but barriers such as limited capacity, cultural resistance, and fragmented budgeting remain. Emerging risks like cybersecurity and climate change highlight the need to expand fiscal risk frameworks. The study notes gaps in evidence on ERM's budgetary impact and calls for future research on maturity indicators and cross country comparisons, stressing the importance of tailored ERM approaches for effective governance and accountability.

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1. Introduction

Risk management in public financial administration has become increasingly essential in the era of fiscal complexity. Effective risk management practices not only ensure compliance and integrity in budgetary processes but also support the achievement of public service objectives and fiscal resilience. The updated Enterprise Risk Management (ERM) framework by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) emphasizes the integration of risk management into strategy formulation and performance management, positioning it as a critical element of governance and strategic decision-making within public entities (COSO, 2017).

In the realm of public financial management (PFM), the adoption of ERM practices and risk assessment instruments has been driven by fiscal reforms, growing accountability demands, and stakeholder pressure particularly from donors, oversight bodies, and citizensfor greater transparency and improved risk oversight. Empirical studies and literature reviews reveal a rising trend in the implementation of ERM approaches in public organizations, while also highlighting institutional barriers and the need to strengthen organizational capabilities for effective risk management in the public sector (Mahama et al., 2022).

However, scholars caution that risk management frameworks designed for the private sector cannot always be directly applied to public institutions without adaptation. Challenges such as complex public exposures, non-profit service orientation, and resource limitations require tailoring risk management approaches to the public context emphasizing strategic leadership, a risk-aware organizational culture, and the integration of financial management information systems (FMIS) for continuous risk monitoring. Consequently, research on risk management approaches in public financial administration should explore how frameworks like COSO ERM are adapted, the enablers and constraints of their implementation, and empirical evidence of their impact on budget performance and public accountability (Fletcher & Abbas, 2018). Recent studies highlight that the effectiveness of ERM in the public sector depends heavily on organizational learning mechanisms and cross-departmental collaboration, which help translate risk information into actionable strategies (Rana et al., 2019). Furthermore, the integration of ERM with digital governance systems and data analytics tools has been shown to strengthen transparency and improve early warning capacities for fiscal and operational risks (Arena et al., 2017).

2. Literature Review

Over the past decade, there has been a growing trend in the adoption of Enterprise Risk Management (ERM) within public organizations as a response to the increasing complexity of operations, heightened accountability requirements, and the need for more informed decision making. Both conceptual and empirical studies emphasize that ERM enables the alignment of risk management with organizational strategies and performance goals, yet its implementation in the public sector remains heterogeneous across countries and institutions (Welch, 2018; Bracci et al., 2021).

Scholars have highlighted that risk management frameworks originally designed for the private sector cannot be directly applied to public institutions without significant adaptation. The distinct characteristics of the public sector such as a non-profit service orientation, political and social risk exposure, and limited financial and administrative capacity necessitate the design of governance arrangements that place greater emphasis on leadership, risk culture, and context-specific accountability mechanisms (Bullock et al., 2019; Bracci et al., 2021).

In the area of public financial administration, fiscal risk management has emerged as a central component, encompassing the identification of macro-fiscal risks, contingent liabilities, state-owned enterprise exposures, and risks associated with public investments. International bodies such as the International Monetary Fund (IMF) have recommended comprehensive frameworks for systematically analyzing and managing fiscal risks, integrating mitigation strategies into medium term budgetary planning (IMF, 2016).

With the increasing digitalization of public financial management (PFM) systems, recent research has underscored the need to address operational risks, including cybersecurity threats, within public sector risk frameworks. The deployment of Financial Management Information Systems (FMIS) has improved real-time risk monitoring but has also introduced new vulnerabilities, such as system failures and cyberattacks, that require robust governance and resilience strategies (AlGhamdi, 2020).

Despite these advances, several empirical studies point to persistent barriers in achieving effective ERM implementation in public organizations. These include technical capacity limitations, cultural resistance to change, weak political incentives for transparency, and fragmented budgeting functions. Addressing these challenges often requires capacity-building initiatives, procedural reforms, and strengthened accountability mechanisms to support ERM maturity (Bracci et al., 2021; Bullock et al., 2019).

Finally, the literature reveals several research gaps that warrant further investigation. These include the need for more empirical evidence on the causal relationship between risk management practices and public sector budgetary performance, cross-country comparative studies on the effectiveness of different risk models, the development of robust indicators for measuring ERM maturity in the public sector, and integration of emerging risks such as climate change and systemic shocks into public financial risk frameworks. Future research is encouraged to combine quantitative approaches, such as panel data analysis, with qualitative case studies to uncover the mechanisms of implementation and impact (Welch, 2018; Bracci et al., 2021).

3. Methods

This study uses the Systematic Literature Review (SLR) method to examine research on risk management in public financial administration published between 2016 and 2022. The SLR approach is chosen to provide a systematic, transparent, and replicable process for identifying, selecting, and analyzing relevant studies. The research process begins by formulating questions that focus on how risk management frameworks, particularly COSO ERM, are adapted in the public sector, the enabling and constraining factors in their implementation, and their impact on budgetary performance and public accountability. The inclusion criteria specify that selected studies must be journal articles, conference proceedings, or authoritative reports that discuss risk management or fiscal risk frameworks in public financial administration, be indexed in reputable databases, and be published within the specified time frame.

The search strategy applies structured keywords such as "Enterprise Risk Management" and "public sector," "risk management" and "public financial administration," as well as "fiscal risk" and "governance," combined with Boolean operators and publication year filters. The selection process follows several stages, including identification, screening, eligibility assessment, and final inclusion. Out of 356 initially retrieved articles, duplicates were removed, titles and abstracts were screened, and full-text assessments were conducted, resulting in a final sample of 10 articles that met all criteria. Data extracted from each selected study included author name(s), year of publication, country, research objectives, methods, frameworks applied, and key findings. A thematic synthesis was then performed to identify patterns, similarities, and differences, focusing on the adaptation of risk management frameworks in the public sector, institutional enablers and barriers, impacts on budgetary performance and accountability, and the integration of emerging risks such as cybersecurity and climate change. To ensure reliability, a quality assessment was carried out, and only studies meeting the established quality standards were included in the final synthesis.

4. Results and Discussion

The systematic literature review of 10 selected studies published between 2016 and 2022 reveals that the adoption of Enterprise Risk Management (ERM) frameworks, especially COSO ERM, in public financial administration requires significant contextual adaptation. Public sector organizations face unique challenges such as non-profit service orientation, political influences, and complex stakeholder environments, which make direct implementation of private sector risk models inadequate. Therefore, effective ERM in the public sector depends heavily on strategic leadership, fostering a risk-aware culture, and establishing accountability mechanisms tailored to the public context (Bracci et al., 2021; Bullock et al., 2019).

Institutional enablers such as leadership commitment, integration of risk management into strategic planning, and capacity-building initiatives emerge as crucial factors for successful implementation, while barriers including limited technical expertise, resistance to organizational change, fragmented budgeting processes, and weak political incentives persistently hinder progress (Mahama et al., 2022; Fletcher & Abbas, 2018). Moreover, empirical evidence points to positive effects of ERM on budgetary performance by enhancing fiscal resilience and enabling more informed decision-making. The deployment of Financial Management Information Systems (FMIS) supports real-time risk monitoring and improves transparency and accountability; however, these digital advancements also introduce operational vulnerabilities such as cybersecurity threats that demand robust mitigation strategies (IMF, 2016; AlGhamdi, 2020; Bullock et al., 2019).

Despite these insights, there remains a lack of rigorous causal research demonstrating direct links between ERM implementation and improvements in public financial outcomes, indicating a critical gap for future investigation. Additionally, emerging risks like climate change and systemic economic shocks require integration into public financial risk frameworks to ensure comprehensive fiscal risk management (Bracci et al., 2021). The literature further recommends combining quantitative and qualitative research methods and conducting cross-country comparative studies to better understand the mechanisms and effectiveness of ERM in diverse public sector settings (Welch, 2018). Developing standardized indicators for ERM maturity in public institutions is also highlighted as an important step to facilitate benchmarking and the dissemination of best practices. Overall, the findings underscore that while ERM frameworks offer valuable tools for improving public financial administration, their success depends on tailored implementation that accounts for the public sector's specific governance, cultural, and operational characteristics.

5. Conclusion

This study highlights that effective risk management in public financial administration is not merely a compliance tool but a strategic necessity for achieving fiscal resilience, transparency, and improved public accountability. While Enterprise Risk Management frameworks such as COSO ERM provide a solid foundation, their direct adoption from the private sector is often insufficient due to the distinct governance structures, service orientations, and risk exposures of public sector organizations. Successful implementation requires strong leadership, a risk-aware organizational culture, integration into strategic planning, and robust accountability mechanisms adapted to the public context. Digitalization through Financial Management Information Systems enhances monitoring and decision making but also introduces new operational risks that must be addressed proactively. Although existing studies demonstrate positive impacts of ERM on budgetary performance, the lack of comprehensive empirical evidence and standardized measurement tools remains a significant gap. Future research should focus on developing robust ERM maturity indicators, incorporating emerging risks such as climate change and systemic shocks, and exploring cross country comparisons to identify best practices. Ultimately, tailored ERM approaches that align with the unique characteristics and constraints of the public sector are essential to strengthen fiscal governance and long term public value creation.

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