

The Influence of ISO 31000-Based Risk Management in Mitigating Budget Fraud Risk in the Public Sector During Crisis: A Systematic Literature Review

Rafi Fadhlorrahman¹, Rela Sari²

^{1,2} Faculty of economics, Sriwijaya University

*Correspondent Email: rfadhlorrahman130502@gmail.com

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Abstract

The world is currently in an era of systemic uncertainty, where crises demand rapid government responses, yet often create control dilemmas that increase the risk of budget fraud. This study aims to analyze the influence of ISO 31000-based risk management in mitigating the risk of budget fraud in the public sector during times of crisis through a Systematic Literature Review (SLR) approach. By following the PRISMA protocol, a total of 25 selected Scopus-indexed articles (spanning 2019–2026) were analyzed to synthesize the most effective mitigation patterns.

The results indicate that the systematic implementation of ISO 31000, driven by legitimacy motivations in accordance with Institutional Theory, serves as a crucial instrument in strengthening organizational defenses against fraudulent practices. A key finding reveals that the integration of digital technologies such as Artificial Intelligence (AI) and real-time monitoring acts as an important catalyst in enhancing the ISO 31000 framework for detecting budget anomalies during emergencies.

This study concludes that the success of fraud mitigation depends not only on technical compliance but also on the development of an adaptive integrity culture to maintain fiscal resilience and public trust.

Keywords: ISO 31000, Risk Management, Budget Fraud, Public Sector, Crisis

1. Introduction

The world is currently facing systemic uncertainty, where crises such as economic shocks, natural disasters, and pandemics demand rapid and flexible government responses. However, this urgency often creates control dilemmas, increasing the risk of budget fraud due to weakened procedures and governance structures. Without adaptive mechanisms, public sector organizations become highly vulnerable to operational failures and policy deviations.

To address these challenges, the adoption of ISO 31000 provides a comprehensive and flexible risk management framework that integrates risk into strategic decision-making. Unlike traditional approaches, it emphasizes proactive, inclusive, and dynamic risk management as

part of governance and leadership. This enables governments to identify risks and opportunities even in highly uncertain conditions.

During crises, budget fraud risk increases due to financial pressure and expanded discretion in managing public funds. Weak internal controls and regulatory relaxation further intensify fraud opportunities, especially in developing countries like Indonesia, where risk awareness and governance systems remain limited. Leadership commitment is therefore critical to ensure effective risk-based auditing and fraud mitigation.

ISO 31000 supports proactive fraud prevention through continuous risk assessment and strong control monitoring. Its effectiveness is enhanced by integrating technologies such as Artificial Intelligence and Machine Learning, which improve the detection of anomalies in complex transactions.

However, implementation challenges persist due to cultural resistance and low risk awareness within public institutions. Without fostering an integrity-driven and adaptive risk culture, technical frameworks alone are insufficient.

Overall, effective fraud mitigation requires not only compliance with standards but also cultural transformation, technological integration, and strong leadership to ensure fiscal resilience and public trust..

2. Research Methodology

This study employs a Systematic Literature Review (SLR) method following the PRISMA protocol to ensure transparency, objectivity, and replicability. The process consists of four stages: identification, screening, eligibility assessment, and final inclusion.

Inclusion criteria cover peer-reviewed journal articles published between 2019 and 2026, indexed in Scopus, and written in English or Indonesian. The selected studies focus on the relationship between ISO 31000, risk management, fraud mitigation, and public sector governance in a global context.

Exclusion criteria include articles published before 2019, non-journal sources (such as books, reports, or news), non-Scopus indexed journals, and studies unrelated to fraud or public sector governance.

These criteria ensure that the selected literature is academically rigorous and highly relevant. The 25 analyzed articles reflect recent developments in public sector accounting and risk management.

Regarding journal quality, 69% of the articles come from high-ranking journals (Scopus Q1: 31% and Q2: 38%), while the remaining are distributed across Q3 (19%) and Q4 (12%). This distribution indicates that the study is grounded in strong and internationally recognized scientific evidence.

3. Results and Discussion

No	Grand Theory	Jumlah Artikel	Persentase (%)
1	Institutional Theory	10	40%
2	Signaling Theory	7	28%
3	Social Exchange Theory	5	20%
4	Agency Theory	3	12%
	Total	25	100%

The dominance of Institutional Theory (40%) in the analyzed literature indicates that the adoption of risk management standards such as ISO 31000 in the public sector is largely driven by the need for organizational legitimacy and compliance with stakeholder expectations. Governments tend to adopt international frameworks not only for operational efficiency but also as a response to coercive and mimetic pressures to appear accountable and transparent in budget management. This aligns with Signaling Theory (28%), where the implementation of robust risk management systems serves as a positive signal to the public and international donors of a strong commitment to minimizing corruption and financial misconduct.

Meanwhile, Social Exchange Theory (20%) and Agency Theory (12%) provide deeper behavioral insights into relationships within institutions. Social Exchange Theory emphasizes reciprocity and employee integrity, where fair and transparent organizational cultures encourage voluntary compliance and reduce fraud intentions. Agency Theory highlights conflicts of interest between government (agent) and society (principal).

Overall, the integration of these theories shows that budget fraud mitigation cannot rely solely on technical instruments like ISO 31000, but requires a comprehensive understanding of institutional structures, informational signals, and behavioral dynamics.

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The systematic implementation of the ISO 31000 framework plays a crucial role in strengthening public sector organizations against budget fraud. Its principles—particularly leadership and integration—help create a preventive control environment by embedding risk-based oversight into all business processes. This aligns with Institutional Theory, where organizations adopt international standards to enhance legitimacy and accountability, with top management commitment acting as a key driver in transforming risk management into a substantive anti-fraud culture.

However, the effectiveness of risk management systems is challenged during crises. The urgency of rapid response often leads to relaxed internal controls, creating opportunities for

fraud. Economic pressure and uncertainty further intensify actors' rationalization for misconduct, explaining why fraud risks remain high even when ISO 31000 is implemented without adaptive monitoring.

To address these vulnerabilities, digital transformation has become essential. Technologies such as Artificial Intelligence (AI) and real-time monitoring strengthen ISO 31000 by enabling early detection of budget anomalies, especially when traditional oversight is limited. From a Signaling Theory perspective, this also enhances transparency and reduces information asymmetry.

In conclusion, effective fraud mitigation during crises depends on organizational resilience in integrating technical frameworks with behavioral change. Beyond compliance, ISO 31000 must be supported by adaptive strategies, strong leadership, and an integrity-driven culture. By combining institutional structures with employee integrity, it can serve as a robust safeguard for fiscal sustainability and public trust in times of uncertainty.

4. Conclusion

Based on the systematic analysis of 25 Scopus-indexed articles, it can be concluded that the implementation of ISO 31000-based risk management has a positive and significant impact on mitigating budget fraud risk in the public sector, particularly through strengthening governance and information transparency.

Although crises create new vulnerabilities due to situational pressures and relaxed controls, the integration of digital technologies and Artificial Intelligence (AI) within the risk management framework proves to be a crucial solution in maintaining organizational resilience and budget accountability.

Ultimately, successful fraud mitigation depends not only on technical compliance with international standards but also on the institution's ability to build an adaptive integrity culture, ensuring sustained public trust and fiscal stability amid uncertainty.

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