



OPTIMIZING RISK ASSESSMENT AND MITIGATION TECHNIQUES FOR IMPROVED PROJECT OUTCOMES: A CASE STUDY OF FEICOM

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Abstract: This study investigates the optimization of risk assessment and mitigation techniques to improve project outcomes at the Special Council Support Fund for Mutual Assistance (FEICOM), a key public institution supporting municipal development in Cameroon. Using a mixed-methods approach, data were collected through questionnaires, interviews, observations, and document analysis to evaluate current risk management practices within the Projects and Programs in Partnership Department. The findings reveal that operational, strategic, and governance risks are most prevalent, with a dominant reliance on qualitative assessment methods and inconsistent implementation of risk mitigation strategies. Observations further identified weak stakeholder accountability and a lack of clear risk indicators. The study proposes an enhanced framework emphasizing structured risk identification, sensitivity analysis, scenario planning, stakeholder engagement, and continuous monitoring through Key Risk Indicators (KRIs). These recommendations aim to support FEICOM in achieving more resilient, transparent, and efficient project delivery. The study contributes to the growing body of knowledge on public sector risk governance in sub-Saharan Africa and offers practical insights for institutional strengthening.

Keywords: Risk assessment, mitigation strategies, project outcomes, FEICOM

1. Introduction

In an era of heightened uncertainty and increasing complexity in project environments, risk management has become a central pillar of effective project execution, especially within the public sector. Public institutions frequently operate in environments characterized by scarce resources, political instability, and bureaucratic bottlenecks, all of which increase the likelihood of project failure if risks are not adequately assessed and mitigated (IBRIR, 2023).

Risk management, particularly when optimized, provides tools for identifying uncertainties, assessing their potential impact, and developing strategies to either mitigate or adapt to them (Nguyen, Grigg, & Valdes-Vasquez, 2024). Despite the growing adoption of risk frameworks globally, public institutions in sub-Saharan Africa often lag in implementing integrated risk assessment models, due in part to governance challenges and weak institutional capacities (Balgah & Vubo, 2024).

In Cameroon, the Special Council Support Fund for Mutual Assistance (FEICOM) plays a crucial role in supporting municipal infrastructure projects and promoting decentralized development. However, like many similar institutions, FEICOM has faced persistent setbacks, including project delays, cost overruns, and misalignment with community expectations often as a result of inadequate risk planning and mitigation strategies (Azibo & Sonkey, 2024). Infrastructure-led development without systematic risk assessment can result in negative externalities for communities, as has been observed in various Cameroonian local councils (Abowoh, 2016; Wu, Njoke, Tian, & Feng, 2021).

Recent studies indicate that poor risk planning at the early phases of a project—particularly during front-end planning—can lead to unplanned field change orders, delays, and budget escalations (Nguyen et al., 2024). In response to these challenges, this study examines how an optimized risk management framework can be applied within FEICOM, with specific emphasis on the Projects and Programs in Partnership Department. The paper aims to review existing practices, analyze gaps, and propose scalable strategies that enhance project outcomes, especially in environments like Cameroon where infrastructural and governance systems are still developing (Falama et al., 2024).

Furthermore, by integrating risk management practices with broader development goals, institutions like FEICOM can improve not only project efficiency but also community wellbeing and sustainability outcomes (Azibo & Sonkey, 2024; Lopes, 2023). Optimizing these techniques has the potential to transform risk from a threat into an opportunity for innovation, community engagement, and adaptive planning (Amungwa, 2018).

2. Research Methodology

2.1 Research Design

This study adopted a mixed-methods case study design to explore the optimization of risk assessment and mitigation techniques at the Special Council Support Fund for Mutual Assistance (FEICOM), specifically within its Projects and Programs in Partnership Department. A mixed-methods approach was chosen to gain both depth and breadth of understanding—allowing qualitative insights to complement and contextualize quantitative trends (Creswell & Plano Clark, 2018). The research integrated both quantitative tools, such as structured questionnaires, and qualitative

techniques, including participant observation, informal interviews, and document analysis. This design enabled triangulation and enhanced the reliability of findings.

2.2 Data Collection Methods

Data collection was carried out through both primary and secondary sources as follows: Questionnaires: Structured questionnaires were administered to 20 purposively selected FEICOM staff involved in project design, implementation, and monitoring. The instrument was designed to assess respondents’ awareness, perception, and application of risk management strategies. Questions covered themes such as risk identification, assessment procedures, mitigation strategies, and compliance mechanisms. Interviews: Semi-structured and informal interviews were conducted with selected employees to gather deeper insights into practical experiences with risk management, perceived limitations of current systems, and suggestions for improvement. This approach allowed for flexibility in exploring emergent themes. Observation: Direct participant observation was conducted during a five-day workshop focused on Income-Generating Activities (AGR) and a quality assurance session dubbed “Café Qualité.” These sessions provided valuable contextual information on organizational practices, risk management discussions, and stakeholder dynamics in real-time. Document Review: Secondary data included institutional documents such as risk management policies, project reports, and monitoring frameworks. In addition, key theoretical and industry frameworks such as the PMBOK (Project Management Body of Knowledge) and COSO ERM (Enterprise Risk Management) models were critically reviewed to benchmark FEICOM’s practices.

2.3 Data Analysis Techniques

Data analysis followed a structured multi-step process: Quantitative data from the questionnaires were analyzed using descriptive statistics, including frequency distributions and percentages, to identify trends and patterns in risk perception and mitigation practices. Qualitative data obtained from interviews, observation, and document reviews were analyzed using thematic analysis. Coding was used to categorize recurring themes related to risk identification, risk response planning, and stakeholder engagement. Triangulation was employed to cross-validate findings from multiple sources and enhance the robustness and credibility of the results (Denzin, 2017). This methodological rigor ensured that the findings reflected a comprehensive view of risk management practices within the institution.

3. Results and Discussion

This section presents the empirical findings of the study, interprets the results in the context of FEICOM's operational environment, and offers an analytical discussion supported by existing literature and field observations.

3.1 Key Findings and Interpretations

A. Dominant Risk Categories

Risk Category	Percentage (%)
Operational Risks	42%
Strategic Risks	30%
Governance Risks	28%

Operational risks emerged as the most dominant (42%), indicating recurring issues in day-to-day project execution, such as delays, equipment failures, or staffing challenges. These risks are often predictable but poorly managed due to weak internal controls or lack of routine performance reviews. Strategic risks (30%) reflect gaps in aligning projects with long-term institutional or national development plans, while governance risks (28%) suggest weak oversight, decision-making delays, and poor financial accountability. According to Roland Azibo and Sonkey (2024), weak governance structures in Cameroonian institutions hinder infrastructure effectiveness and community well-being, reinforcing the need for stronger internal checks and leadership oversight.

B. Risk Mitigation Strategies in Use

Strategy	Utilization (%)
Mitigation	52%
Transfer	21%
Avoidance	16%
Acceptance	11%

The most commonly employed strategy was risk mitigation (52%), showing that FEICOM attempts to reduce the impact of risks after they occur. However, the relatively lower adoption of transfer (21%) and avoidance (16%) techniques indicates a limited use of outsourcing, insurance, or preventative planning. The 11% reliance on risk acceptance—acknowledging certain risks without action—raises concern, as it may suggest complacency in addressing latent threats. Nguyen et al. (2024) argue that a proactive front-end risk management strategy is vital to prevent change orders and avoid financial drain in infrastructure projects, especially in public systems like FEICOM.

C. Risk Assessment Methods

Assessment Approach	Usage Rate (%)
Qualitative Assessment	85%
Quantitative Assessment	15%

A significant majority (85%) of FEICOM staff rely on qualitative risk assessments such as expert opinions, stakeholder feedback, or risk matrices. Only 15% use quantitative methods, such as probabilistic models or simulations. This imbalance suggests a strong reliance on intuition and experience, which may lack objectivity. While qualitative methods are easier to implement, they may miss hidden risks or fail to predict impact magnitude. Ibrir (2023) stresses that combining both qualitative and quantitative techniques improve accuracy in forecasting and enhances project resilience, a point underscored in the COSO ERM and ISO 31000 frameworks.

D. Risk Training and Communication

Indicator	Status
Risk Awareness Programs Present but inconsistent	
Employee Incentives	Largely absent

Although FEICOM has implemented some risk awareness and capacity-building sessions, these efforts are described as irregular and lacking strategic continuity. The absence of formal incentives or recognition mechanisms for staff who report or manage risks further limits institutional engagement. As Amungwa (2018) observed in the context of agricultural extension services in Cameroon, success in project governance depends significantly on regular training and motivated human capital. For FEICOM, sustained training and embedded risk culture are essential to improve responsiveness and risk ownership across departments.

3.2 Case Observations

Two core issues were observed during workshops and field activities:

Observation	Implication
Weak stakeholder accountability	Led to fund misuse and lack of transparency in AGR and PDCVEP projects.
Absence of clear risk indicators	Prevented effective tracking of project risk status and mitigation performance.

The misuse of funds in AGR projects, as noted during the 5-day workshop, demonstrates governance failure and insufficient controls over field actors such as social animators. Furthermore, the lack of clearly defined risk indicators made it difficult for project teams to measure risk exposure or monitor progress effectively. These findings mirror those of Balgah and Vubo (2024), who emphasized that governance inefficiencies significantly affect project success and livelihood outcomes in sub-Saharan Africa.

3.3 Interpretation and Proposed Improvements

The data suggest that although FEICOM has initiated risk strategies, their application is inconsistent, lacking a structured and continuously reviewed framework. To address this, the following improvements are proposed:

Proposed Enhancement	Description
Risk Identification 2.0	Regular stakeholder workshops to update the organizational risk register and evaluate project-specific vulnerabilities.
Enhanced Risk Analysis	Adopt tools like sensitivity analysis, scenario planning, and quantitative forecasting for high-impact projects.
Contingency Planning	Use risk matrices and decision trees to map out mitigation actions and their thresholds.

Proposed Enhancement	Description
Stakeholder Engagement Plans	Formalize stakeholder roles and build accountability through shared risk charters.
Monitoring Systems	Implement Key Risk Indicators (KRIs) with quarterly dashboards for senior management review.

These strategies align with international best practices. For example, Nguyen et al. (2024) promote early-stage risk planning as a cost-saving mechanism, while Falama et al. (2024) underscore the importance of participatory approaches in ensuring sustainable project outcomes. By embedding these risk strategies into its operational framework, FEICOM can not only minimize project failure but also enhance community trust and institutional performance.

4. Conclusion

This study set out to examine the effectiveness of risk assessment and mitigation practices within the Special Council Support Fund for Mutual Assistance (FEICOM), particularly focusing on the Projects and Programs in Partnership Department. The findings reveal that while FEICOM employs a variety of risk strategies—primarily mitigation—there remains a lack of structure, consistency, and proactive planning in its overall risk management framework.

Operational, strategic, and governance risks dominate the project environment, yet assessment practices are heavily skewed toward qualitative methods, with limited use of data-driven tools like sensitivity or scenario analysis. Training and awareness programs exist but are not systematically integrated into institutional practice, and risk communication is often reactive rather than strategic.

Moreover, observations from workshops such as those for AGR and Café Qualité confirmed the existence of critical gaps in stakeholder accountability and risk monitoring. These governance and capacity limitations undermine the effectiveness of existing risk frameworks and expose projects to delays, cost overruns, and reputational risks.

To improve project outcomes, this paper recommends a shift toward an optimized and adaptive risk management approach—one that incorporates regular stakeholder engagement, integrated quantitative analysis, and continuous monitoring through Key Risk Indicators (KRIs). Institutionalizing these practices will not only strengthen FEICOM's project delivery but also contribute to more accountable, resilient, and sustainable local development initiatives in Cameroon.

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