



**UNIVERSITY
OF
LUSAKA**

SCHOOL OF POSTGRADUATE STUDIES

**EXAMINING THE EFFECTS OF STAKEHOLDER
ENGAGEMENT AND RISK MANAGEMENT STRATEGIES ON
PROJECT PERFORMANCE: A CASE STUDY OF THE
COPPERBELT ENERGY CORPORATION**

**A DISSERTATION SUBMITTED TO THE SCHOOL OF POSTGRADUATE STUDIES,
UNIVERSITY OF LUSAKA IN PARTIAL FULFILLMENT OF THE AWARD OF THE
MASTER OF PROJECT MANAGEMENT.**

BY

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Declaration

I, **Esaya Mwanza**, declare that the work presented in this Dissertation, titled "**Examining the Impact of Stakeholder Engagement and Risk Management Strategies on Project Performance: A Case Study of the Copperbelt Energy Corporation**," is my original work and has been conducted in conformity with the copyright and academic writing rules as stipulated by the University of Lusaka.

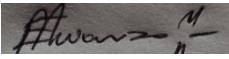
This research adheres to the University of Lusaka's **Research Ethics Guidelines**, ensuring the integrity, accuracy, and ethical conduct of the study. I confirm that all sources used have been properly acknowledged, and no part of this work has been submitted for any other academic qualification or award.

I hereby submit this Dissertation for assessment, with full knowledge of the rules and regulations governing academic submissions at the University of Lusaka.

Signed by the Student:

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Date: **07.01.2025**

Sign; 

This research dissertation has been prepared with the approval of my supervisor.

Supervisor Name: Prof. Levy Siaminwe

Signature: 

Date: 25th March 2025

Dedication

This Dissertation is dedicated to myself for the resilience, determination, and belief that have guided me through this incredible journey to achieve a Master's education.

To my loving wife, your unwavering support, constant encouragement, and belief in my abilities have been the extra push I needed to persevere through the challenges. Thank you for always standing by my side.

To my two boys, your love has been a source of strength and joy, reminding me of the importance of pursuing my dreams.

And to my family, I am deeply grateful for your support and encouragement throughout this journey. Your belief in me has made all the difference.

This accomplishment is as much yours as it is mine.

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List of acronyms

CEC	Copperbelt Energy Corporation
RM	Risk Management
SM	Stakeholder Management
SE	Stakeholder Engagement
ZCCM	Zambia Consolidated Copper Mines
SAPP	Southern African Power Pool
NGOs	Non – Governmental Organizations

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Abstract

This study investigates the impact of stakeholder engagement and risk management strategies on project performance within Zambia's Copperbelt Energy Corporation (CEC), a key player in the energy sector. It examines how these two factors influence critical project success indicators, including budget adherence, schedule compliance, quality of deliverables, and overall stakeholder satisfaction. Using a quantitative research design, data was collected through a structured questionnaire survey from a stratified random sample of 100 respondents.

The findings reveal weak positive correlations between stakeholder engagement ($r = 0.15$) and risk management ($r = 0.18$) with project performance, suggesting that these strategies alone have a limited direct impact. Specifically, stakeholder engagement exhibited only a minor effect on schedule adherence ($r = 0.15$) and stakeholder satisfaction ($r = 0.12$). Similarly, CEC's risk management strategies demonstrated a modest relationship with project outcomes ($r = 0.18$), implying that current practices may not be adequately customized to individual project needs. Furthermore, the combined effect of stakeholder engagement and risk management on overall project success was minimal ($r = 0.14$), indicating that opportunities for strategic integration remain underutilized.

To enhance project performance, the study recommends incorporating leadership effectiveness, organizational culture, and external environmental factors into project management frameworks. It further advocates for future research using larger, more diverse project samples and mixed-methods approaches to deepen insights and refine best practices in project management within the energy industry.

Keywords: Stakeholder engagement; Risk management; Project performance; Copperbelt Energy Corporation (CEC); Energy sector

Chapter One

Introduction

1.1 Background

Risks and challenges are common to project management in the energy and construction industries. The fact that project success depends on efficient risk management can be understood in the statement "No project is risk-free" (Latham, 1994). Stakeholder satisfaction and the timely and economical completion of projects depend on managing these risks (Chapman & Ward, 2004; Du et al., 2016; Zou et al., 2007). Project execution and results can be further complicated by the numerous stakeholder-related issues that are commonly encountered (Hwang & Ng, 2016; Lehtiranta, 2014).

According to research done by KPMG, a lot of projects fail to reach their initial goals in terms of schedule, budget, and stakeholder satisfaction. Only 31% of firms completed projects on schedule, 29% under budget, and 33% reached their initial targets, according to a 2017 survey conducted in New Zealand (KPMG, 2017). Furthermore, only 34% of projects were able to satisfy stakeholders, and 70% of businesses faced difficulties that resulted in delays, budget overruns, or missed objectives (KPMG, 2017). A key component of successful project management is generally acknowledged to be clear and efficient communication among project stakeholders (Zou et al., 2010; Olander & Landin, 2005; Tang & Shen, 2013). The significance of managing stakeholders to guarantee successful project implementation is emphasized by meta-analyses of stakeholder theory execution in project settings (Achterkamp & Vos, 2008; Littau et al., 2010).

Even though risk management (RM) and stakeholder management (SM) are acknowledged to be vital for project success, many projects nevertheless fail because of shortcomings in these areas (Flyvbjerg et al., 2002; Mok et al., 2015). Project success can be achieved by improved risk management, public acceptance, and project design, all of which can result from effective stakeholder engagement (Freeman, 1984; Rowley, 1997). On the other hand, poor stakeholder participation can lead to disputes, hold-ups,

and higher expenses, underscoring the necessity of all-encompassing approaches to meet stakeholder expectations and demands (Reed et al., 2009).

While there has been significant progress in improving risk management (RM) and stakeholder management (SM) individually, little research exists on how these two important areas can be effectively combined (Xia et al., 2018). Most studies tend to address RM and SM as separate fields, overlooking their potential integration. Thus, the lack of research on the integration of RM and SM has made it difficult in the development of project management approaches that address stakeholder engagements and risk management strategies holistically (Xia et al., 2018).

Recently, there has been a lot of interest and emphasis on how vital RM and SM are to the success of project management. Many organisations continuously face more complex and hostile environments, hence engaging stakeholders and knowing how to manage risks effectively and efficiently is becoming so important in achieving project targets. This is even more so for the energy sector that involves projects that require vast amounts of finances and complicated stakeholder interactions (Khalilzadeh et al., 2023). Further, the energy sector's carry a huge environmental impact, public health, and economic growth for the surrounding communities thus stakeholder engagements is critical to make sure that the success of the project goes on smoothly without many issues (Olander & Landin, 2005; Khalilzadeh et al., 2023).

On the local perspective of project management, the Copperbelt Energy Corporation (CEC) is faced with different types of challenges when managing its diverse energy projects. In order for CEC to have project success it must find a balance on how to navigate regulatory requirements, respond to technological changes, and address the expectations of a wide range of stakeholders. All this, while trying to maintain its core business of delivering reliable and sustainable energy solutions. Although both RM and SM, are vital, these aspects have been discussed separately by many scholars and academicians. This has led to the lack of development of a solution that would successfully integrate the two (Xia et al., 2018). In order to address this gap in knowledge thorough research on the relationships between these two components and project performance using CEC as a case study is necessary. By so doing this study will close

the gap and add to the knowledge of understanding the interaction or integration of the two components especially on the Zambian perspective. The results will not only add to the knowledge in project management but also provide practical suggestions that will not only be used by CEC but other organisations especially those in the energy sector.

1.2 CEC Company profile

Introduction

Copperbelt Energy Corporation Plc (CEC) is one of Zambia's top energy companies that has over 60 years of operation and has established itself as the primary supplier of electricity to mines and industries on the Copperbelt province and other parts of Zambia's Northern region.

History of The Company

CEC was Founded as part of Zambia Consolidated Copper Mines (ZCCM), transformation that began in 1997 that led to the company being privatized as independent entity. This transition initiated the company's turning point, leading massive business overhaul to modernize its power grid that had been in existence since 1951. Changing the grid capacity to meet increasing demands positioned CEC as a forward-thinking energy providing company (McClatchie, 2024).

In 2006 the Company underwent further development when it was sold by the foreign consortium that owned it with the government retaining 23% of the shares and the other 77% went to CM Investment Holdings. This shift led to CEC's public listing on the Lusaka Securities Exchange in 2008, thus broadening its investor base and strengthening its governance structures (McClatchie, 2024).

Operations, Infrastructure and Projects

Transmission, distribution, and generation of energy are the main activities of CEC. About US\$1.1 billion is the estimated value of the company's own electricity network, which it owns and runs. The state-owned Zambia Electricity Supply Corporation (ZESCO) is in charge of managing this network, which consists of transmission lines, high-voltage substations, and connections to Zambia's national grid. CEC provides electricity to a

range of consumers via this infrastructure, especially copper mining firms that account for half of Zambia's energy use (Masige, 2018).

CEC's activities are not limited to Zambia. The company uses regional power trading to provide electricity to customers in the Democratic Republic of the Congo (DRC). The commissioning of a dual-circuit transmission line in 2016, which raised the interconnection's capacity from 250 megawatts to 550 megawatts, was a significant turning point in this respect. Within the Southern African Power Pool (SAPP), of which CEC is a major part, this development strengthened supply security (McClatchie, 2024).

CEC's dedication to sustainability is reflected in its investments in renewable energy projects. One notable achievement is the Riverside Solar Power Project, launched in 2018 as Zambia's first grid-connected solar plant. This one-megawatt facility, developed in partnership with GIZ and Copperbelt University, serves not only as a power source but also as a learning hub for renewable energy education (Masige, 2018). CEC has also ventured into biodiesel production and plans for the Kabompo Hydro Power Project. The biodiesel plant, capable of producing 900,000 liters annually, uses locally sourced jatropha and soybean seed oil. Meanwhile, the Kabompo project is designed as an underground hydroelectric station with a capacity of 40 megawatts. In addition to providing emergency power for mines, it is expected to bring social and economic benefits to surrounding communities (McClatchie, 2024).

Company Relevance to the Study

CEC will continue to endeavour to promote innovation and economic growth in the energy sector of Zambia. Its role as Africa's leader in energy transformation has openly been highlighted based on its success, vast infrastructure, emphasis on sustainability, and regional cooperation. Therefore, CEC offers a very useful case study for analyzing how risk management, stakeholder involvement, and project performance interact. With recent projects like the Riverside Solar Power Project and the planned Kabompo Hydro Power Project. These act as examples of how successfully striking a balance between business goals and community requirements may provide win-win results. The difficulties in balancing the interests of many stakeholders while reducing operational risks in a

dynamic market are illustrated by CEC's active involvement in regional power trading and cross-border collaborations.

As the company progresses toward net-zero operations and broader integration of renewable energy, it offers a practical lens for analysing how stakeholder engagement and risk management strategies contribute to successful project outcomes. By leveraging its technical expertise, strategic alliances, and established infrastructure, this research can provide valuable insights into the energy sector's best practices for managing stakeholder expectations and addressing project-related risks. These findings could inform both CEC's future projects and broader efforts in similar organizations.

1.3 Problem Statement

Organizations in the energy sector, such as Copperbelt Energy Corporation (CEC), face significant challenges in effectively managing project portfolios. While stakeholder engagement and risk management strategies are widely acknowledged as critical to project success, their specific and combined impact on project performance within organizations like CEC remains insufficiently explored. This study addresses this gap by examining how these strategies influence key project performance metrics such as efficiency (schedule and quality), cost-effectiveness, and overall success. Grounded in stakeholder theory and risk management frameworks, the research will employ a Quantitative approach to analyse projects within CEC for this particular study. By doing so, it aims to provide actionable insights that enhance project management practices in dynamic and uncertain energy sector environments, with potential applicability to other sectors facing similar challenges.

1.4 Research Objectives:

1. To evaluate the extent of stakeholder engagement within the Copperbelt Energy Corporation (CEC) and its influence on project performance.
2. To examine the range and effectiveness of risk management strategies implemented by CEC in its projects.
3. To analyze the interplay between stakeholder engagement and risk management practices in CEC projects.

4. To investigate the impact of integrated risk and stakeholder management strategies on the performance outcomes of CEC's projects.

1.5 Research Questions:

1. To what extent is stakeholder engagement practiced within the Copperbelt Energy Corporation (CEC), and how does it influence project performance?
2. What range of risk management strategies are implemented by CEC, and how effective are they in managing project risks?
3. How do stakeholder engagement practices and risk management strategies interact within CEC projects?
4. What is the impact of integrated risk and stakeholder management strategies on the performance outcomes of CEC's projects?

1.6 Hypotheses:

1. **H₁ (Alternative Hypothesis):** There is a significant positive relationship between the level of stakeholder engagement and project performance within the Copperbelt Energy Corporation (CEC).
H₀ (Null Hypothesis): There is no significant relationship between the level of stakeholder engagement and project performance within CEC.
2. **H₂ (Alternative Hypothesis):** Project performance and the risk management strategies used by CEC are significantly correlated.
H₀ (Null Hypothesis): Project performance and the risk management strategies used by CEC are not correlated.
3. **H₃ (Alternative Hypothesis):** Project performance is correlated with CEC's stakeholder management and risk management integration practices.

H₀ (Null Hypothesis): Project performance is not correlated with CEC's stakeholder management and risk management integration practices.

1.7 Significance of the Study:

The understanding the impact of Stakeholder Engagement (SE) and RM strategies on project performance in the energy sector particularly with organizations such as CEC holds a very significant standing for both academics and industry. By addressing this gap in literature, the study aims to contribute to the advancement of project management theories, specifically the integration of RM and SM as well as the practical aspects in the following ways:

1.7.1 Practical Implications for Energy Organizations:

The results of this research will help provide practical elements and recommendations for how PM practices can be enhanced within organizations such as CEC that are in the energy sector and other sectors in general. In order to develop and implement more effective strategies that help in mitigating risks, how stakeholders are engaged and how to improve project outcomes a better understanding of the influence of SE and RM is needed.

1.7.2 Strategic Decision-Making:

The results of the study will help guide CEC's and other comparable energy organizations' strategic decision-making procedures. Organizational leaders can optimize project success by emphasizing stakeholder engagement initiatives, allocating resources more efficiently, and customizing risk management tactics by determining the critical elements impacting project performance.

1.7.3 Academic Contributions:

The theoretical understanding of stakeholder involvement, risk management, and project performance in the context of the energy sector is advanced by this work, which adds to the body of knowledge in academics. The study adds to our understanding of the shifting

dynamics of project management in a variety of situations by evaluating theoretical frameworks and models empirically.

1.7.4 Enhancing Project Management Practices:

This study offers important insights for enhancing project management procedures across a range of industries by highlighting best practices and lessons discovered from the CEC case study. Apart from helping other similar firms to broaden their approach to the handling of SM and RM, this study will provide a pointer to the way forward on how to battle project management problems. Finally at the end, the study tried to bring together and connect the actual state of events with the theoretical one regarding the SM practice area and RM, that is, the integration at that level connected with project performance

1.8 Scope of the Study:

The study was restricted to different CEC projects that concentrate on the infrastructure development and their maintenance. The research examines how both external and internal stakeholders are impacted by project results. It further highlights how the management and decision makers in its operations contribute on the overall success of the project. Meanwhile entities like government bodies agencies and community groups shape the environment in which projects unfold. The strategies employed by CEC to engage with these stakeholders' communication methods utilized and the overall effectiveness of these approaches, in fostering successful relationships are all carefully examined. In analysing risk management procedures, the study takes into account CEC's methodology for detecting, assessing, and reducing possible risks that might materialize throughout project execution. The study also looks at how the company monitors these risks to ensure they remain manageable and do not compromise project success. Gaining knowledge of how these tactics are used in real-world situations can help one better understand how they affect overcoming obstacles and accomplishing project goals.

The study takes into account a number of important variables to assess project success, such as whether projects are finished on schedule, within budget, and to the necessary

quality standards. Since stakeholder satisfaction is a key indicator of a project's success, it is also evaluated. The study looks at how risk management and stakeholder involvement affect key performance indicators in an effort to find workable solutions for enhancing project results. In order to assess numerical data and derive significant results, the study uses a quantitative research approach, depending on statistical tools. This method guarantees that the conclusions are solid and supported by evidence.

Although CEC is the study's main emphasis, other energy-related organizations should find value in the lessons gathered. The research's recommendations are intended to improve project management procedures for CEC as well as for other organizations of a similar nature that are attempting to handle the challenges of risk management and stakeholder involvement.

1.9 Definitions

Stakeholder Engagement:

Stakeholders are people, organizations, and groups that are either impacted by, have the ability to influence, or anticipate being impacted—whether favorably or unfavorably—by the activities or results of a project. Employees, suppliers, shareholders, regulators, lobby organizations, environmentalists, financial institutions, and the media are a few examples of these stakeholders (PMI, 2017). Accordingly, a research study's definition of stakeholder engagement includes the objectives, activities, and outcomes of managing stakeholder interactions in a morally sound, strategic, and/or useful manner (Kujala et al., 2022).

Risk Management Strategies:

Strategies for risk management include the methodical identification, assessment decreasing, and management of potential risks over the course of a project. To guarantee project success, these tactics seek to proactively identify possible risks and opportunities, evaluate their likelihood and impact, put mitigation or exploitation measures in place, and track their efficacy (PMI, 2017).

Project Performance:

Project performance is how far to which a project meets its goals while adhering to stakeholder expectations, schedule, budget, and quality restrictions. According to Xia et al. (2018), it includes a number of indicators, such as stakeholder satisfaction, schedule and budget adherence, deliverable quality, and the overall achievement of the project criteria.

1.10 Legal and Policy Framework

A robust legal and policy framework governs project management in Zambia's energy sector. Key regulatory bodies, such as the Energy Regulation Board (ERB), oversee project implementation to ensure compliance with national energy policies and safety standards. The Electricity Act and the Environmental Management Act provide guidelines on risk mitigation and stakeholder engagement, particularly concerning environmental impact assessments and community consultations. Additionally, Zambia is a member of the Southern African Power Pool (SAPP), which influences cross-border energy projects and regulatory compliance. Understanding these legal and policy requirements is critical for effectively integrating RM and SE into project management strategies.

1.11 Chapter Summary

This chapter has introduced the significance of RM and SE in project success, particularly in the energy sector. It has highlighted the existing research gap concerning the integration of these two components and their combined impact on project performance. The discussion also underscores the relevance of CEC as a case study and the regulatory environment shaping its project management practices. Subsequent chapters will delve deeper into the research objectives, methodology, and findings, aiming to offer practical insights that enhance project management in the energy sector.

Chapter Two

Literature Review

2.1 Introduction

This chapter explores the fundamental ideas of risk management and stakeholder involvement in project management, with an emphasis on the Copperbelt Energy Corporation (CEC) in Zambia. Understanding and controlling the various risks and interests of stakeholders is essential to effective project management. Finding and interacting with project stakeholders entails making sure their interests and concerns are taken into account at every stage of the project. Contrary, risk management focuses on detecting, evaluating, and reducing risks in order to safeguard project goals. Although these fields are typically thought of independently, their connections and the benefits of combining them to improve project results are becoming more widely acknowledged.

The theoretical foundations of risk management and stakeholder engagement, as well as their practical applications in the energy industry, specifically in CEC's projects, will be studied in this evaluation of the literature. The advantages of integrating risk management techniques with stakeholder management will be discussed in this chapter, along with how doing so can enhance project performance. It will also point out any gaps in the existing literature, especially with relation to the adaptation and use of these methods in Sub-Saharan Africa. By doing thus, this analysis provides fresh insights into efficient project management in complex environments and lays the groundwork for the empirical study of how risk management and stakeholder involvement affect project results within CEC.

2.1 Theoretical Foundations

2.1.1 Stakeholder Theory

Stakeholder theory was introduced in 1984 by Freeman, the suggestions he made completely changed how organizations are understood. Freeman changed how we view stakeholders, who now recognised as part of a chain of relationships with customers, employees, suppliers, investors and community as opposed to just seen or focused on shareholder interests. When stockholders are seen in this manner it brings a whole

different dimension of promoting the idea that organisations should consider the interests of these various groups rather than just the interests of shareholders. The work done by Freeman dramatically changed how many businesses view strategic management

Building on this, Rowley (1997) argued for a relational approach, suggesting organizations should see stakeholder relationships as part of a larger network rather than isolated connections. This perspective is helpful for handling conflicts and aligning stakeholder goals with organizational objectives. However, Rowley's model doesn't fully address how relationships evolve over time, especially in complex projects, making it harder to apply directly in dynamic environments.

Achterkamp and Vos (2008) extended stakeholder theory into project management, emphasizing the importance of engaging stakeholders throughout the project lifecycle. They argued that integrating stakeholder concerns during planning increases project success. While their work is a useful starting point, it doesn't address the unique challenges of large-scale energy projects like the Itimpi Solar Project, where issues like community concerns and environmental impacts are particularly significant.

Littau, Lange, and Roehrich (2010) focused on supplier relationships in big projects, showing how managing external stakeholders can reduce risks and improve outcomes. Their findings highlight the importance of strong relationships but don't fully incorporate the environmental and social considerations critical for projects like Itimpi Solar. This leaves a gap in applying their insights to energy projects that have unique sustainability challenges.

Du, Cakravastia, and Li (2016) introduced the concept of stakeholder relationship management (SRM) for international development projects. They stressed the need to balance diverse interests for effective and sustainable outcomes. While their findings are relevant, they mainly focus on international settings and don't delve into the specific challenges energy projects face in Zambia, where local dynamics are a significant factor.

Zou et al., (2007) then linked stakeholder management to the success of projects. he established that the success of a project was directly connected to how stakeholders are managed. Although, Zou et al., work was very relevant to the historical evolution of

stakeholder management it doesn't go further into investigating their findings and how they can be applied to large infrastructure projects, that goes beyond technical successes but delve deep into how social and economic impacts of those projects can be managed.

Projects involve huge financial aspects and how stakeholders influence cost estimations and decisions making in these public work projects was researched by Flyvbjerg, Holm, and Buhl (2002) Their views into political and social interests can be used as a reference to CEC projects such as the famous to Itimpi Solar project, where there was a lot of interest from government bodies, local communities, and NGOs.

The stakeholder theory further developed by building a blueprint that could be used to evaluate public-private partnership (PPP) projects from the eyes of a stakeholder (Mok et al., 2015). The findings from their study found that managing stakeholder interests could potentially improve project outcomes significantly. Mok et al., (2015) outlook on PPP aligns with the challenges faced by CEC with projects such Itimpi Solar, that have a PPP stamp on them.

A model to evaluate stakeholder influence in construction projects, emphasizing conflict prevention and stakeholder alignment was proposed by Olander and Landin (2005). While this proposal proved useful, their model failed fully address the ever-shifting nature stakeholder relationships over a project's lifespan. Therefore, the failure to address this leaves a gap in research that would potentially look at stakeholder relationship over a lifecycle.

Most scholars focused their research on stakeholders in the construction sector. However, a study by Khalilzadeh et al, (2023) changed this view by focusing on energy projects, emphasizing proactive engagement to manage environmental and social impacts. This knowledge is crucial as CEC being in the energy sector and thus such information or literature would help with how projects such as Itimpi Solar are managed. It is worth mentioning though, that while their study contributed to the knowledge gap in the energy sector it did not however, fully explore how to navigate the challenges of managing diverse stakeholders as the like of Zambian contexts that has different cultural perspectives.

In order to have a comprehensive outlook of various research done by different scholars on the stakeholder theory Parmar et al. (2010) offered a meta-analysis review on the stakeholder theory, by pulling together various perspectives to form a more cohesive framework. Parmar et al. (2010) made emphasis to the importance of considering stakeholders to be part of decisions that involved strategy in order to achieve success. Their work on stakeholder theory is a good reference to the understanding of stakeholder theory's and how they have evolved and what practical aspects can be used

All these different contributions are a good reference of how projects such as Itimpi Solar can be managed. The section also helps identify gaps in the current literature, particularly on the challenges faced by local project management

2.1.2 Risk Management Theories

Risk Management (RM) is central focus in making sure organisations can manage uncertainties while meeting their strategic goals. Key to the establishment of RM was Stulz (1984) who introduced an idea of selective hedging in the financial sector. He made sure that firms focused on managing those risks that aligned with their long-term financial goals. Such an approach could be adopted to the energy sector to manage their risks where prices can be quite volatile and a lot of regulations have to be navigated

The theory was later expanded on by Smith and Stulz (1985) who then focused on showing how risk management could potentially reduce on taxes, financial stress, and other costs. Their argument established by them was that to have effective RM, it needs to align with an organisation overall strategy. This concept is particularly relevant to diversified energy companies like CEC.

Later, Stulz (1996) emphasized avoiding extreme financial outcomes and introduced the idea of "comparative advantage in risk-bearing." This is especially relevant for CEC, which must manage not just financial risks but also operational and regulatory risks.

Froot et al. (1993) added to this discussion by suggesting that RM should allow flexibility for future investments. This approach resonates with CEC, as it balances managing current risks with pursuing new energy projects.

More recently, Smithson and Simkins (2005) highlighted the practical benefits of RM, showing how it contributes to financial stability and resilience. Their findings support the idea that CEC's RM strategy should integrate both financial and operational risks to remain competitive in a dynamic energy sector.

Integrating these insights shows that RM isn't just about minimizing risks—it's about strategically aligning risk management with broader organizational goals. For firms like CEC, this means addressing financial, operational, and environmental risks in a cohesive way.

Within the broader discussion of RM, Rabechini Junior and Monteiro de Carvalho (2013) identified two critical streams of thought: the conceptual nature of risks and their practical management. Bernstein (1997), for instance, provides a historical perspective on risk's importance to project managers, while De Meyer et al. (2002) emphasize the role of variability and ambiguity in shaping project outcomes. This dual perspective is echoed by Ward and Chapman (2003), who propose managing uncertainties as a broader approach to RM, emphasizing both threats and opportunities inherent in uncertain events (Hillson, 2001; Ward and Chapman, 2003).

The practical aspects of RM are further addressed by the Project Management Institute (PMI, 2008), which defines risk as "an uncertain event or condition that, if it occurs, has a positive or negative effect on at least one project objective." This definition highlights the dual nature of risk, encompassing both threats and opportunities. Perminova et al. (2008) distinguish risk from uncertainty by noting that risk involves calculable probabilities, while uncertainty pertains to events where such probabilities are unknown.

De Meyer et al. (2002) classify uncertainty into four types, which provide a nuanced framework for understanding project risks:

1. **Variability:** Predictable and controllable variations around known objectives such as cost and timelines.

2. **Foreseeable Uncertainty:** Factors with predictable impacts that can be managed through contingency plans.
3. **Unforeseen Uncertainty:** Unpredictable factors that require solutions as they emerge.
4. **Chaos:** Completely unpredictable factors that necessitate redefining project objectives and strategies.

These classifications are particularly useful for understanding the challenges CEC faces in managing risks across diverse project environments, where both predictable and unforeseen uncertainties must be addressed.

Integrating these theoretical insights demonstrates that RM is not merely about minimizing risks but about strategically aligning risk practices with broader organizational goals. For organizations like CEC, this involves addressing financial, operational, and environmental risks cohesively, ensuring resilience in a rapidly evolving energy sector.

2.1.3 Integration of Theories

Combining Stakeholder Management (SM) and Risk Management (RM) creates a more holistic approach to managing projects. Xia et al. (2018) emphasized that these two areas complement each other. For example, identifying key stakeholders helps tailor RM strategies, and engaging stakeholders improves risk assessment by adding diverse perspectives.

This integration promotes transparency and trust, making it easier to address challenges as they arise. Feedback from stakeholders can also refine RM strategies, ensuring they stay relevant throughout a project.

By adopting this integrated approach, projects like Itimpi Solar can better navigate complexities, balancing financial, environmental, and social considerations. Future research should focus on practical ways to apply these linkages in different contexts, ensuring they deliver measurable benefits across industries.

2.2 Core Concepts

2.2.1 Stakeholder Engagement

Stakeholder engagement is the practice of incorporating all pertinent stakeholders in a project to guarantee that their concerns and interests are taken into consideration at every stage of its development. In the framework of CEC's initiatives, stakeholder participation is crucial for risk management and enhancing project outcomes. Stakeholders' opinions are guaranteed to be included in decision-making processes through early and continuous participation, which reduces disputes and aligns project goals with stakeholder interests. According to stakeholder theory, an organization's ability to manage its relationships with all of its stakeholders determines how well it performs over the long run (Freeman et al., 2010). Effective stakeholder involvement not only improves communication but also fosters commitment and trust, two qualities that are critical to risk management and the long-term viability of projects.

2.2.2 Risk Management Strategies

Risk management is the process of recognizing, evaluating, and reducing risks in order to guarantee that projects are completed successfully. In order to foresee any risks and put precautions in place to lessen their influence on project performance, risk management techniques are crucial to CEC's projects. A more thorough method of risk management is provided by combining stakeholder interaction with risk management. According to Xia et al. (2018), better risk identification and assessment are made possible by coordinating risk management with stakeholder management, which results in more successful risk mitigation techniques. Through this integration, risks are controlled not only technically but also in a way that is agreeable and advantageous to all parties involved. Early comprehension of community issues during the project planning stage, for example, enables proactive risk management and helps prevent disputes connected to concerning community reaction or regulatory change.

2.2.3 Project Performance

project performance describes how well a project achieves its predetermined objectives in terms of budget, schedule, quality, and stakeholder satisfaction. A balanced strategy that incorporates strong risk management and efficient stakeholder involvement is necessary to achieve excellent project performance in the context of CEC's initiatives. Strong stakeholder management reduces the likelihood of delays and cost overruns in projects, according to Ahsan and Gunawan (2010). Additionally, combining stakeholder involvement and risk management guarantees proactive risk management, which enhances project performance. In order to ensure timely and effective project delivery for CEC's Itimpi Solar Project, risk management techniques and stakeholder involvement are essential for controlling risks like community opposition or regulatory changes.

2.3 Empirical Evidence

2.3.1 Stakeholder Engagement and Project Performance

A Number of studies have examined the relationship of stakeholder engagement in impacting project performance or success in a positive direction. Most of these empirical studies have been done in the construction industry. Some of the studies done on the relationship of stakeholder engagement and project performance are (Garvare & Johansson, 2010; Mathur et al., 2008; Rohrbacher, 2001; Williams & Dair, 2007; Ahsan and Gunawan, 2010; Andersen et al., 2006; Fraz et al., 2016; Ika & Donnelly, 2017; Nangoli et al., 2016). Ahsan and Gunawan, (2010) highlight that proactive stakeholder involvement helps to minimize uncertainties and conflicts, thereby improving project outcomes. Ika and Donnelly (2017) made suggestions that when they are high levels of stakeholder commitment, collaboration, alignment, and adaptation are necessary for project performance. Nangoli et al. (2016) study proposed that they were a need to always consult stakeholders before any project was implemented, and that this participation should be encouraged throughout the project cycle. In another study done by Fraz et al. (2016), the findings showed that project performance is significantly related to stakeholder management. Ngwabije & Gitahi (2023) in a study done in Kenya found similar results, with project performance having a direct positive relationship with stakeholder engagement in their correlation matrix analysis Effective engagement fosters better communication, strengthens risk management practices, and ensures project objectives

align with stakeholder interests. For companies as the case of CEC it is important to establish continuous stakeholder engagement in order to pick out on risks in their initial stages that may result from any regulatory changes or community opposition, both of which can critically impact project success.

To validate this perspective Rahman and Alzubi (2015) found that in order to prevent project failure, service quality, communication skills, budget adherence, safety performance, schedule adherence, key staff skills, and management competencies were crucial. while discussing specification changes with stakeholders.

Project scheduling is a big performance indicator, according to research done in India, a lot of factors affect project scheduling, and one significant one was low stakeholder participation (Rajeev & Kothai, 2014). Subsequent research showed that inaccurate time estimate calculations resulted from inadequate stakeholder participation, since they were not included during the procedure. In Zambia, Chilongo and Mbetwa (2017) went on to say that a lack of stakeholder involvement was the primary cause of poor project scheduling, which in turn affected project schedules. Mambwe et al., (2020) who did another study on the local scene confirmed it.

Xia et al. (2018) findings further, revealed that integrating stakeholder engagement with risk management was the best way to better risk identification and assessment, and thus eventually lead to improved project outcomes.

When stakeholders are engaged the risks that are encountered by projects is drastically reduced, and thus leading to enhanced goal alignment and making sure they are no delays or cost overruns this is according to research that was done by Ahsan and Gunawan (2010). This is particularly vital knowledge as these are common challenges faces by organisations such as CEC's. This literature was further built upon by Xia et al., (2018) whose findings found that an integrated approach to stakeholder engagement and risk management was key to yielding strategies that would not only prove to be good technically for projects but be acceptable socially and the community at large. A good example that can be given is when local communities are involved early in the process or

initiation of projects it can help identify and mitigate some of the risks that are related to societal opposition or any regulation difficulties that may arise and hence ensure a smooth project performance.

Managing stakeholder engagement, particularly in complex projects like the Itimpi Solar initiative, comes with its fair share of challenges. Ahsan and Gunawan (2010) highlight common difficulties, such as resolving conflicting interests, maintaining consistent communication, and keeping stakeholders engaged throughout the project lifecycle. These challenges are often compounded by the diverse and sometimes competing expectations of stakeholders. To address these issues, Xia et al. (2018) suggest exploring best practices for managing stakeholder engagement across different cultural contexts. Effectively tackling these challenges could significantly enhance stakeholder participation and, in turn, improve project outcomes for CEC's ventures. Xia et al. (2018) further emphasize that stakeholder engagement should go beyond simply managing relationships; it should become an integral part of risk management. By actively involving stakeholders throughout the project lifecycle, project managers can gain valuable insights into potential risks and opportunities. For instance, engaging with the community early in CEC's initiatives can help identify and address critical risks, such as public resistance or regulatory changes, which are vital for the successful implementation of projects. Stakeholder engagement plays a vital role in driving the success of projects. By ensuring alignment with stakeholder expectations, it not only reduces risk exposure but also significantly boosts overall performance. Research, such as the work of Xia et al. (2018), underscores the importance of integrating stakeholder involvement with risk management to achieve these benefits. However, Zambia's construction industry faces unique challenges that require more tailored research to uncover practical solutions and address these specific needs effectively.

2.3.2 Risk Management and Project Performance

The management of risk is pivotal in determining the success of projects across various sectors, particularly when numerous uncertainties are involved. Risk management isn't merely about avoiding setbacks; it's about anticipating potential challenges and establishing a resilient foundation to handle those challenges effectively. Stulz (1984,

1996) emphasized that good risk management goes beyond trouble avoidance, ensuring that strategic tools are in place. When capital costs are reduced, steady cash flows are maintained, and tax liabilities are controlled, even fragile projects can be transformed into financially stable and successful ventures. This is crucial for large-scale initiatives such as CEC's Itimpi Solar Program, where these benefits are integral to the financial viability of the project.

However, risk management cannot exist in isolation, especially for complex construction projects. Smith and Stulz (1985) stress the need to integrate risk management with the broader objectives of the project. It's not enough to simply identify risks and mitigate them; strategies must align with the project's overarching goals. For example, in a project focused on revolutionizing solar energy access, risk management efforts should not only protect against cost overruns but also contribute to the sustainability and community engagement targets of the initiative.

Studies show that a well-structured risk management approach leads to smarter decision-making and fewer unexpected surprises, as highlighted by Zhou et al. (2017). This proactive approach is crucial for projects in dynamic and unpredictable environments like Zambia, where being prepared can be the difference between success and failure.

The literature also underscores the significance of stakeholder engagement in risk management. Scholars like Bakker, Boonstra, and Wortmann (2012) suggest that stakeholder involvement enhances the adaptability of risk management strategies, particularly in the context of complex projects. They identified that risk reporting, allocation, control, and analysis are central to stakeholder concerns, making effective communication a key to aligning perceptions and expectations. Studies from Browning et al. (2002) and Han et al. (2007) emphasize the role of communication in bridging gaps in stakeholder perceptions, fostering a unified approach to managing risks.

Risk management must also balance both soft and hard approaches. While soft approaches focus on strategic thinking and relationship management, hard approaches prioritize planning and analysis. Scholars like Söderlund and Maylor (2012) argue that combining these approaches yields the most successful outcomes. This balance is crucial

for construction projects in Zambia's evolving economic landscape, as it enables the integration of technical skills with relational dynamics.

Moreover, the definition of project success has evolved. Traditional metrics such as time, cost, and scope are commonly used, but Shenhar and Dvir (2007) suggest a broader framework that includes client impact, team performance, business results, and future preparedness. This expanded perspective captures more aspects of project success but may vary in applicability depending on the project type.

Challenges in evaluating risk management's impact on project success also emerge in the literature. Some studies highlight the substantial role of risk management, while others, like Ropponen and Lyytinen (1997, 2000), suggest its impact is limited under certain conditions. This divergence calls for further research into contextual factors that influence risk management's effectiveness.

In the case of Zambia's energy sector, particularly for projects like CEC's solar program, the integration of localized risk management strategies is essential. This involves addressing regulatory uncertainties, responding to community concerns, and ensuring the alignment of risk management strategies with Zambia's unique environmental, regulatory, and cultural factors. Engaging stakeholders early in the process, as Xia et al. (2018) suggest, can uncover critical insights into potential risks and opportunities, fostering trust and cooperation and enhancing the likelihood of success.

Ultimately, risk management is not just a technical requirement but a mindset and strategic commitment to guiding a project toward its highest potential while navigating inevitable challenges. By incorporating stakeholder engagement and considering both the soft and hard elements of risk management, projects can enhance their resilience and achieve long-term success.

2.3.3 Combined Impact of Stakeholder Engagement and Risk Management

Stakeholder engagement and risk management, when integrated, have the potential to significantly enhance the performance of large-scale projects. This is especially true for complex endeavours like CEC's Itimpi Solar initiative. According to Xia et al. (2018), these two processes are deeply interconnected, and their combined application creates a solid

foundation for ensuring project success. Their findings emphasize that projects which merge stakeholder involvement with proactive risk management tend to experience better outcomes, particularly in terms of staying on schedule, managing costs effectively, and delivering high-quality results. For CEC, the challenges of managing external factors, such as regulatory changes or potential resistance from local communities, highlight why these strategies must work together. Early engagement with stakeholders allows the organization to gather crucial insights into the concerns, expectations, and priorities of the groups most affected by the project. This collaboration helps shape risk management strategies that are not only technically effective but also socially considerate. For instance, consulting with local communities during the planning phase can pre-emptively address concerns about environmental impact or land use, which might otherwise lead to delays or opposition later in the project. By aligning stakeholder engagement with risk management, organizations like CEC create a more cohesive approach to addressing both technical and social challenges. This integration fosters trust among stakeholders, enhances transparency, and ensures smoother project execution. Xia et al. (2018) argue that this synchronization strengthens decision-making and increases the likelihood of achieving project goals.

2.4 Research Gaps

While there has been significant progress in both theoretical and empirical research on the role of stakeholder engagement (SM) and risk management (RM) in project performance, most studies have been conducted in the construction sector for SM and the IT and financial sectors for RM. This creates notable gaps, particularly in Zambia's energy sector, where project dynamics present unique challenges.

At both the local and regional levels, research has largely examined SM and RM separately. Xia et al. (2018) proposed an integrated approach to SM and RM, yet empirical validation remains limited, especially in Zambia. Similarly, Zou et al. (2010) assessed risk management maturity in construction, but their findings are not directly applicable to energy projects. Mambwe et al. (2020) examined the impact of stakeholder engagement on construction project performance in Lusaka District, revealing strong correlations with project schedules and specifications but a negative correlation with

project cost. However, this study focused solely on construction projects and did not integrate risk management, leaving a gap in understanding its impact on energy sector projects. Likewise, Kituu (2015) explored stakeholder participation in risk management within mineral exploration in Kenya, yet these findings do not comprehensively address Zambia’s energy sector dynamics.

To bridge this gap, there is a pressing need for research that integrates both SM and RM within Zambia’s energy sector, where projects often face unique socio-economic challenges. These include volatile economic conditions, shifting regulations, and significant community resistance. Without a tailored, evidence-based strategy, project management practitioners and organizations lack a reliable framework for improving project success rates. Addressing this gap will not only enhance project performance but also serve as a benchmark for future research and policy development in Zambia’s energy industry.

Table 2.1: showing research gaps of the study

Author (Year)	Research Topic	Methodology	Findings	Research Gap
Xia et al. (2018)	Towards integrating construction risk management and stakeholder management: A systematic literature review and future research agendas	Systematic literature review	Proposed integration but lacked empirical validation.	Limited empirical studies applying integration, especially in Zambia’s energy sector.
Zou et al. (2010)	Risk Management Maturity Assessment in Construction	Development of RM3 Model	Australian construction industry has low risk management maturity; weakest areas were risk analysis and	Focuses on construction; lacks applicability to Zambia’s energy sector projects.

			standardized risk management processes.	
Kituu (2015)	Stakeholder Participation in Project Risk Management in Mineral Exploration (Tullow Oil, Kenya)	Exploratory Research Design	Active participation in risk-related activities linked to monetary value; security concerns reduce participation levels.	Focuses on mineral exploration, not general energy sector projects. Lacks focus on Zambia.
Mambwe et al. (2020)	Impact of Stakeholder Engagement on Construction Project Performance in Lusaka District	Quantitative (Descriptive Research Design)	Strong positive correlation between stakeholder engagement and project schedule & specifications; negative correlation with project cost.	Focuses on construction projects; lacks application to energy sector projects. Lacks integration of risk management and stakeholder engagement
Current Study	Stakeholder Engagement & Risk Management in Zambia's Energy Sector	Quantitative Approach	Exploring the relationship between SM, RM, and project performance in the energy sector.	Addresses the gap by examining both SM and RM together within the energy sector.

2.5 Conceptual Framework

The conceptual framework for this study illustrates how stakeholder engagement and risk management strategies interact, moderated by the cultural and regulatory context of Zambia, to achieve project success. Below is a detailed explanation of these interactions and their relevance to the study:

1. Interaction Between Stakeholder Engagement and Risk Management Strategies

The framework highlights the interdependence between stakeholder engagement and risk management strategies. These two components work together to create a holistic approach to project management, ensuring that both technical and social aspects of projects are addressed.

- **Stakeholder Engagement Enhances Risk Management:**
 - By involving stakeholders early and consistently, project managers can identify potential risks that may not be apparent through technical analysis alone. For example, local communities may highlight environmental or social concerns that could lead to regulatory delays or opposition.
 - Stakeholder feedback can improve risk assessment by providing diverse perspectives, ensuring that risk mitigation strategies are comprehensive and socially acceptable.
- **Risk Management Supports Stakeholder Engagement:**
 - Proactive risk management builds trust with stakeholders by demonstrating that their concerns are being addressed. For instance, mitigating environmental risks can reassure communities and regulators, fostering cooperation.
 - Effective risk management reduces uncertainties, which aligns stakeholder expectations with project outcomes, minimizing conflicts and delays.

This interaction ensures that risks are managed not only from a technical perspective but also in a way that aligns with stakeholder interests, leading to smoother project execution and better outcomes.

2. Moderating Role of Cultural and Regulatory Context

The cultural and regulatory context of Zambia influences how stakeholder engagement and risk management strategies are implemented. This context acts as a moderating variable, shaping the effectiveness of these strategies in achieving project success.

- **Cultural Dynamics:**
 - Local cultural norms and values influence how stakeholders perceive and engage with projects. For example, community leaders may play a central role in decision-making, requiring tailored engagement strategies.
 - Understanding cultural dynamics helps project managers design stakeholder engagement approaches that are respectful and inclusive, fostering trust and cooperation.
- **Regulatory Environment:**
 - Zambia’s regulatory framework, including environmental and social compliance requirements, shapes risk management practices. Projects must adhere to these regulations to avoid legal challenges and delays.
 - Regulatory changes, such as new environmental policies, can introduce uncertainties that require adaptive risk management strategies.

By considering the cultural and regulatory context, project managers can tailor stakeholder engagement and risk management strategies to the specific challenges and opportunities of Zambia’s energy sector, enhancing their effectiveness.

3. Achieving Project Success

The ultimate goal of the framework is to improve **project performance**, which is measured by:

- **Budget Adherence:** Staying within financial constraints.
- **Schedule Adherence:** Completing projects on time.
- **Quality of Deliverables:** Meeting technical and functional requirements.
- **Stakeholder Satisfaction:** Ensuring that stakeholder expectations are met.

The interactions in the framework contribute to project success in the following ways:

- **Improved Risk Identification and Mitigation:**
 - Integrating stakeholder engagement with risk management ensures that risks are identified early and addressed comprehensively. For example,

engaging with local communities can reveal risks related to land use or environmental impact, allowing for proactive mitigation.

- **Enhanced Stakeholder Trust and Collaboration:**

- Transparent and inclusive stakeholder engagement builds trust, reducing the likelihood of conflicts and opposition. This is particularly important in Zambia, where community support is critical for project success.

- **Adaptability to Local Context:**

- By considering Zambia's cultural and regulatory context, project managers can design strategies that are culturally sensitive and compliant with local laws, reducing the risk of delays and disputes.

- **Alignment of Stakeholder Expectations:**

- Effective stakeholder engagement ensures that project goals align with stakeholder interests, reducing the risk of misaligned expectations and
-
- improving overall satisfaction.

Independent Variables

Moderating Variable

Dependent variable

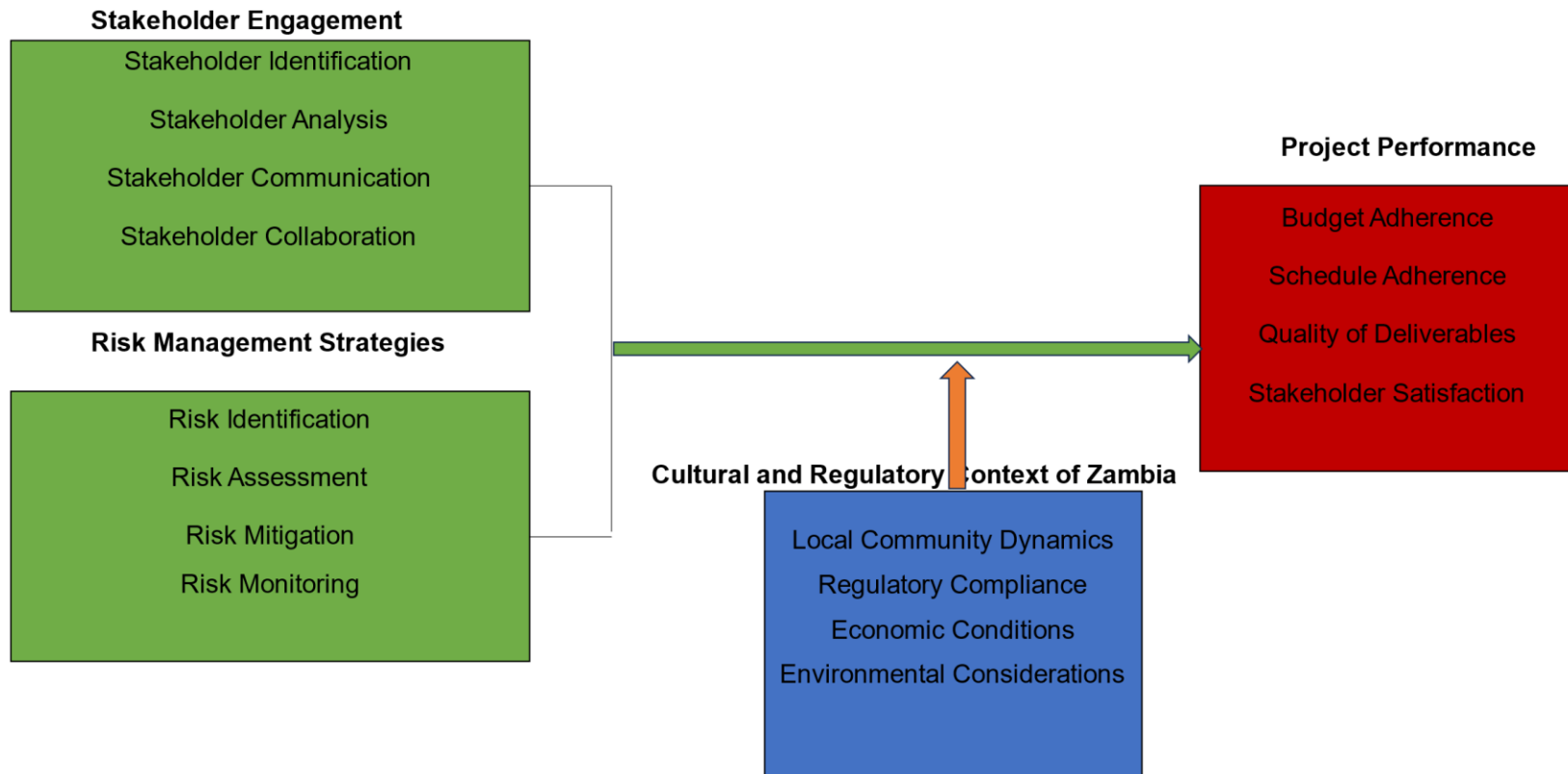


Figure 2.1: Conceptual framework

Chapter Three

Research Methodology

3.1 Introduction to the Research Design

This study employs a quantitative research approach to examine the relationships between project performance, risk management strategies, and stakeholder engagement at Copperbelt Energy Corporation (CEC). The research design is structured to ensure a systematic investigation of these variables, enabling the identification of patterns and correlations that can inform project management practices in the energy sector. The methodology is grounded in established research principles, ensuring the study's credibility, reliability, and validity. Key components of the research design include the study population, sampling techniques, data collection procedures, and data analysis methods, all of which are detailed in the following sections

3.2 Research Approach

The study used a quantitative research approach, which is ideal for examining the connections between variables, in this case, project performance, risk management tactics, and stakeholder involvement at Copperbelt Energy Corporation (CEC). According to Creswell & Creswell (2017), quantitative research entails analysing the relationships between variables to test objective theories. Measurement tools are used to quantify these factors, enabling the gathering of numerical data. After that, statistical analysis of this data can be performed to identify trends and connections. For this study, the quantitative approach works especially well since it allows for a structured analysis of the data, which makes it easier to examine the main elements affecting CEC project performance.

3.3 Research Design

This study used a correlational research design to investigate and measure the relationships among key variables, including stakeholder engagement, risk management strategies, and project performance. According to Grove et al. (2012), correlational research is particularly useful for determining the strength and direction of these

relationships as they naturally occur without manipulation. The primary goal of this design is to identify and describe the nature of the correlations between the variables being studied. This approach enables the study to determine whether and to what extent variations in project performance are linked to changes in stakeholder engagement and risk management techniques (Grove et al., 2012). The study employs correlational analyses and descriptive statistics to describe the sample and the distribution of the variables, as well as to confirm the individual associations within the theoretical framework guiding the research.

3.4 Study Population

The study population consisted of individuals involved in project management at Copperbelt Energy Corporation (CEC) and its external stakeholders. This included project managers, engineers, senior management, community leaders, contractors, government officials, and regulatory bodies. These participants were selected because of their direct or indirect involvement in CEC's projects, ensuring a comprehensive representation of internal and external stakeholders. The inclusion of diverse stakeholders enhances the study's ability to capture multiple perspectives on project performance, stakeholder engagement, and risk management.

3.5 Population

The sample population of this study was based on all employees such as project managers, engineers, and senior management of Copperbelt Energy Corporation (CEC) who have been involved before in project management in one role or the other. Other participants of the sample were drawn from community leaders, and contractors, and other key government officials and regulatory bodies. as well as internal stakeholders like.

3.6 Sample Size

In order to established an inclusive sample size, the study used Cohen's (1988) recommendations sample size calculation formula for any research that involved correlational. From the calculations as seen in thee formular 1 These characteristics were used to determine the necessary sample size, which came out to be about 88. However, the research decided to increase it to 100 in order to get more complete number and

account for any participants that would choose not to answer the survey. Increasing the sample size from the calculated 88 to 100 would actually be advantageous and not affect results as it would reflect result close to the population

$$N = \frac{\left(\frac{Z_{\alpha}}{2} + Z_{\beta}\right)^2}{d^2}$$

Where:

- $Z_{\alpha/2}$ is the Z-value corresponding to the significance level (α). For $\alpha = 0.05$, $Z_{\alpha/2} = 1.96$.
- Z_{β} is the Z-value corresponding to the desired power ($1 - \beta$). For 80% power, $Z_{\beta} = 0.84$.
- d is the effect size (medium effect size = 0.3)

$$N = \frac{(1.96 + 0.84)^2}{0.3^2}$$

$$N \approx 87.11$$

$$N = 88$$

3.7 Sampling Techniques

Participants were selected using a stratified random sampling technique. The population was divided into distinct strata based on key characteristics, such as internal stakeholders (e.g., project managers, engineers) and external stakeholders (e.g., community leaders, contractors, government officials). Random samples were then drawn from each stratum to ensure the sample's diversity and representativeness. This approach improves the generalizability of the findings and ensures that the sample accurately reflects the population's composition.

3.6 Data Collection Procedures

Quantitative data on stakeholder participation, risk management strategies, and project performance was collected through the use of a structured questionnaire in appendix B. All of the selected participants were given the questionnaire electronically. The pilot study was carried out with a small sample of the population before data collection in order to improve the questionnaire and guarantee its dependability and clarity. To promote high response rates, the completed questionnaire were sent out via email after it had been finalised, along with follow-up reminders.

3.7 Data Analysis Procedures

To achieve the research aims, data analysis involved a number of statistical approaches. The distribution of replies and the sample's demographic features were summed up using descriptive statistics. The study employed correlational analysis to investigate the connections among project performance, risk management tactics, and stakeholder engagement. In particular, the direction and strength of these correlations were evaluated using Pearson's correlation coefficient. Furthermore, after subjecting them variables to multiple regression analysis was used to assess how risk management techniques and stakeholder engagement affect project success.

3.8 Data Collection Procedures

Quantitative data on stakeholder engagement, risk management strategies, and project performance was collected using a structured questionnaire (see Appendix B). The questionnaire was distributed electronically to all selected participants. Prior to the main data collection, a pilot study was conducted with a small sample of the population to refine the questionnaire and assess its reliability and validity. The pilot study results were used to make necessary adjustments to the questionnaire, ensuring clarity and relevance. To maximize response rates, follow-up reminders were sent to participants after the initial distribution.

3.9 Reliability and Validity Assessments

To ensure the credibility and reproducibility of the research findings, the study incorporated reliability and validity assessments.

- **Reliability:** The internal consistency of the questionnaire was assessed using Cronbach's alpha, with a threshold of 0.7 or higher indicating acceptable reliability. The pilot study confirmed that all scales used in the questionnaire met this criterion.
- **Validity:** The questionnaire's content validity was established through a review by experts in project management and stakeholder engagement. Additionally, construct validity was assessed using factor analysis to ensure that the measured variables accurately represented the theoretical constructs.

3.10 Data Analysis Procedures

The data analysis involved several statistical techniques to address the research objectives:

1. **Descriptive Statistics:** Used to summarize the demographic characteristics of the sample and the distribution of responses.
2. **Correlational Analysis:** Employed to examine the relationships between stakeholder engagement, risk management strategies, and project performance. Pearson's correlation coefficient was used to determine the strength and direction of these relationships.
3. **Multiple Regression Analysis:** Conducted to assess the combined impact of stakeholder engagement and risk management strategies on project performance. This analysis helps identify the relative contribution of each variable to the overall project outcomes.

3.11 Ethical Considerations

Ethical considerations were paramount in this study to ensure the integrity of the research and the protection of participants' rights. Participants were informed about the study's

purpose, procedures, and potential risks through an informed consent process. Confidentiality was maintained by anonymizing responses and securely storing data. Participation was voluntary, with participants having the option to withdraw at any time without penalty. The study adhered to ethical guidelines for research involving human subjects, ensuring that all procedures met the standards set by relevant ethical review boards.

Chapter Four

Data Analysis and Results

4.1 Introduction

The data analysis results for this study, which sought to assess the impact of risk management techniques and stakeholder involvement on project performance at Copperbelt Energy Corporation (CEC), are presented in this chapter. Three main concepts serve as the framework for the analysis: project performance, risk management techniques, and stakeholder engagement. Numerous statistical techniques, such as regression analysis, multiple response analysis, correlation analysis, and descriptive statistics, were used to examine the survey data. The findings shed light on CEC's present procedures and demonstrate the connections between them and project performance.

4.2 Respondents Demographics characteristics

Table 4.1 presents the demographic characteristics of the respondents, including their roles, years of service, project involvement levels, and types of projects they have worked on.

Table 4.1.: Demographics characteristics of the respondents

Variable	Frequency	Percent
Role of the respondent		
<i>Community Leader</i>	9	11.0
<i>Contractor</i>	10	10.0
<i>Engineer</i>	20	20.0
<i>Other</i>	30	30.0
<i>Project Manager</i>	1	1.0
<i>Project Supervisor</i>	6	6.0
<i>Regulatory Body Representative</i>	-	-
<i>Senior Management</i>	22	22.0
Years of service involved		
<i>Less than 1 year</i>	7	7.0
<i>1 to 3 years</i>	18	18.0
<i>4 to 6 years</i>	16	16.0

<i>More than 6 years</i>	59	59.0
Project level involvement		
<i>high</i>	2	2.0
<i>High</i>	54	54.0
<i>Low</i>	27	27.0
<i>Medium</i>	17	17.0
Project type		
<i>Infrastructure development</i>	26	26.0
<i>Other</i>	20	20.0
<i>Renewable energy</i>	34	34.0
<i>Transmission and distribution</i>	20	20.0

4.3 Stakeholder Engagement

4.3.1 Descriptive Statistics for Stakeholder Engagement

Descriptive statistics were generated for the stakeholder involvement ratings at various stages of the project lifecycle in order to comprehend the level of stakeholder engagement at CEC.

The findings include descriptive statistics for stakeholder engagement ratings throughout the several stages of the project lifetime, and they are shown in Table 4.2. A five-point Likert scale was used to measure this assessment, where 1 = Never, 2 = Rarely, 3 = Sometimes, 4 = Often, and 5 = Always. The findings are shown below as revealed by the data analysis

Table 4.2 presents the descriptive statistics for stakeholder engagement ratings across different project stages. It includes the number of respondents (N), minimum and maximum ratings, mean scores, and standard deviations, providing insight into how stakeholder engagement is perceived throughout the project lifecycle.

Table 4.2: Stakeholder Engagement Rating Descriptive Statistics by Project Stage

	N	Min	Max	Mean	Std. Deviation
Rating of engagement initiation	100	2	5	3.57	0.977
Rating of engagement planning	100	2	5	3.63	0.960
Rating of engagement execution	100	2	5	3.54	0.999
Rating of engagement monitoring	100	1	5	3.40	1.128
Rating of engagement closure	100	1	5	3.55	1.019

4.3.2 How Effective is Stakeholder Communication

Table 4.3 presents the descriptive statistics for stakeholder communication ratings, assessed on a five-point Likert scale, where 1 = Very ineffective, 2 = Ineffective, 3 = Neutral, 4 = Effective, and 5 = Very effective.

Table 4.3: Descriptive Statistics for Stakeholder Communication Effectiveness

	N	Min	Max	Mean	Std. Deviation
Frequency of communication	100	2	5	3.37	1.051
Clarity of communication	100	2	5	3.50	1.040
Responsiveness of feedback	100	2	5	3.45	0.978
Transparency of information sharing	100	2	5	3.61	1.091

4.3.2 Multiple Response Analysis (Challenges in Stakeholder Engagement)

The questionnaire also explored the key challenges faced by CEC in engaging stakeholders effectively. Respondents were asked to select up to three challenges, and the results revealed the following most common issues:

The multiple response analysis as shown in table 4.4 revealed the most commonly identified challenges in stakeholder engagement at CEC. The most frequently identified challenge was inadequate stakeholder involvement, with 60 respondents (23.5%) selecting this option. Following closely were communication barriers (54 respondents, 21.2%) and other issues (54 respondents, 21.2%). A good number of respondents (48 respondents, 18.8%) highlighted limited stakeholder identification processes as a key challenge, while conflicting stakeholder expectations was the least mentioned challenge (39 respondents, 15.3%).

Table 4.4 presents the key challenges in stakeholder engagement, including issues such as limited identification processes, inadequate involvement, communication barriers, and conflicting expectations.

Table 4.4: Key Challenges in Stakeholder Engagement

	Responses		% of Cases
	N	%	
Stakeholder Engagement Challenges			
<i>Challenge: Limited stakeholder identification processes</i>	48	18.8%	48.0%
<i>Challenge: Inadequate stakeholder involvement</i>	60	23.5%	60.0%
<i>Challenge: Communication barriers</i>	54	21.2%	54.0%
<i>Challenge: Conflicting stakeholder expectations</i>	39	15.3%	39.0%
<i>Challenge: Other issues</i>	54	21.2%	54.0%
	255	100.0%	255.0%

4.3.3 Correlation Analysis: Stakeholder Engagement and Project Performance

A correlation analysis was conducted to examine the relationship between overall stakeholder engagement and various project performance indicators, including schedule adherence, budget compliance, quality of deliverables, and overall performance satisfaction. The results of the correlation analysis are presented in Table 4.5

1. Overall Stakeholder Engagement and Performance Based on Schedule: A weak positive correlation was found between overall stakeholder engagement and schedule adherence ($r = 0.190$). This correlation was marginally significant ($p = 0.058$), suggesting a borderline significant relationship.
2. Overall Stakeholder Engagement and Performance Based on Budget: A weak positive correlation was observed between overall stakeholder engagement and

budget compliance ($r = 0.080$). However, this correlation was not significant ($p = 0.430$), indicating no meaningful relationship between these variables.

3. Overall Stakeholder Engagement and Performance Based on Quality: The correlation between overall stakeholder engagement and the quality of deliverables was very weak ($r = 0.051$) and not statistically significant ($p = 0.614$), suggesting no meaningful relationship.
4. Overall Stakeholder Engagement and Overall Performance Satisfaction: A very weak negative correlation was observed between overall stakeholder engagement and overall performance satisfaction ($r = -0.022$). This correlation was also not significant ($p = 0.825$), indicating no significant relationship.

Table 4.5 shows the correlations between overall stakeholder engagement and project performance, considering schedule, budget, quality, and overall satisfaction.

Table 4.5: Correlations between Overall Stakeholder Engagement and Project Performance

	Performance based on schedule	Performance based on budget	Performance based on quality	Overall performance satisfaction
Overall	$r = 0.190$	$r = 0.080$	$r = 0.051$	$r = -0.022$
Engagement	$P = 0.058$	$P = 0.430$	$P = 0.614$	$P = 0.825$
	100	100	100	100

N = 100; $p < 0.05$

4.4 Risk Management Strategies

4.4.1 Descriptive Statistics for Risk Management Strategies

Descriptive statistics were calculated to understand how effectively CEC's risk management practices are being applied. The results, shown in Table 4.6, paint a picture of how different practices are being adopted and highlight some important trends.

Risk identification and assessment came out on top, with a mean score of $M=0.61$ ($SD=0.490$), suggesting that these practices are implemented by most respondents. This indicates that identifying and assessing risks is a key focus for the majority of those involved. Similarly, risk communication scored high, with a mean of $M=0.59$ ($SD=0.494$), reflecting a solid level of adoption. It seems that keeping stakeholders informed about risks is also a priority for many at CEC.

Risk monitoring and review showed a more moderate level of implementation, with a mean score of $M=0.55$ ($SD=0.500$), suggesting that while it's present, it's not as consistently applied as risk identification and communication. Both risk mitigation planning and risk documentation were rated similarly, with a mean of $M=0.53$ ($SD = 0.502$), showing a reasonable amount of engagement but still room for further integration.

On the other hand, other risk-related activities appeared to be given less attention, with a mean of $M=0.36$ ($SD=0.482$), the lowest among all the practices measured. While respondents could identify any additional risk activities, these were not mentioned often, suggesting that these practices are not being prioritized.

Table 4.6 presents the descriptive statistics for risk management practices, including identification, mitigation, monitoring, communication, documentation, and other risk-related activities.

Table 4.6: Descriptive Statistics for Risk Management Practices and Effectiveness

	Minimum	Maximum	Mean	Std. Deviation
Risk identification and assessment	0	1	0.61	0.490
Risk mitigation planning	0	1	0.53	0.502
Risk monitoring and review	0	1	0.55	0.500
Risk communication	0	1	0.59	0.494
Risk documentation	0	1	0.53	0.502
Other risk-related activities	0	1	0.36	0.482

Note: $N = 100$

4.4.2 Multiple Response Analysis (Challenges in Risk Management)

Respondents were also asked to identify the primary challenges in managing project risks. The most common responses are presented in Table 4.7. The results from the study as revealed by the data analysis

Table 4.7 outlines the key challenges in risk management, including inadequate identification, poor assessment methodologies, insufficient mitigation, lack of monitoring, and ineffective communication.

Table 4.7: Key Challenges in Risk Management

	Responses		% of Cases
	N	%	
Challenges in Risk Management			
<i>Inadequate risk identification</i>	47	20.0%	47.0%
<i>Poor risk assessment methodologies</i>	36	15.3%	36.0%
<i>Insufficient risk mitigation measures</i>	52	22.1%	52.0%
<i>Lack of regular monitoring and updates</i>	34	14.5%	34.0%
<i>Ineffective communication of risks</i>	30	12.8%	30.0%
<i>Other issues</i>	36	15.3%	36.0%
Total	235	100.0%	235.0%

N = 100

4.4.3 Correlation Analysis: Risk Management and Project Performance

The relationship between risk management practices and project performance was examined through correlation analysis. The findings, as shown in Table 4.8, Risk Management and Schedule Adherence: A weak positive correlation was observed between overall risk management and performance based on schedule adherence ($r =$

0.166, $p = 0.098$). However, this relationship is not statistically significant. Risk Management and Budget Compliance: The correlation between risk management and performance based on budget compliance ($r = 0.072$, $p = 0.477$) is weak and not significant. Risk Management and Quality of Deliverables: A weak positive correlation ($r = 0.101$, $p = 0.317$) was found between risk management and performance based on quality, which also lacks statistical significance. Risk Management and Overall Performance Satisfaction: The correlation between risk management and overall performance satisfaction ($r = 0.060$, $p = 0.550$) is negligible and not significant.

Table 4.8 presents the correlations between risk management strategies and project performance, considering schedule, budget, quality, and overall satisfaction.

Table 4.8: Correlations between Risk Management Strategies and Project Performance

			Performance based on schedule	Performance based on budget	Performance based on quality	Overall performance satisfaction
Overall	Risk	r	0.166	0.072	0.101	0.060
Management		P	0.098	0.477	0.317	0.550
		N	100	100	100	100

$N = 100$; $p < 0.05$

4.5 Project Performance

4.5.1 Descriptive Statistics for Project Performance

Descriptive statistics for project performance were calculated based on ratings of schedule adherence, budget compliance, quality of deliverables, and stakeholder satisfaction.

Table 4.9 presents the descriptive statistics for project performance ratings, including schedule, budget, quality, and overall performance satisfaction.

Table 4.9: Descriptive Statistics for Project Performance Ratings

	Minimum	Maximum	Mean	Std. Deviation
Performance based on schedule	2	5	3.73	0.962
Performance based on budget	2	5	3.61	0.963
Performance based on quality	2	5	3.68	0.931
Overall performance satisfaction	2	5	3.60	0.841

N = 100

4.5.2 Multiple Response Analysis (Critical Indicators of Project Success)

Respondents were also prompted to indicate the key factors they considered most critical in defining project success. The findings in Table 4.10 show the key indicators that respondents deemed essential for evaluating project success

Table 4.10 highlights the critical indicators of project success, including on-time completion, budget adherence, quality standards, stakeholder satisfaction, and risk management effectiveness.

Table 4.10: Critical Indicators of Project Success

	Responses		% of Cases
	N	%	
Critical Indicators of Project Success			
On-time project completion	49	20.4%	49.0%
Staying within budget	43	17.9%	43.0%
Meeting quality standards	41	17.1%	41.0%
Stakeholder satisfaction	41	17.1%	41.0%

Risk management effectiveness	37	15.4%	37.0%
Other performance indicators	29	12.1%	29.0%
<hr/>			
Total	240	100.0	240.0%
		%	

N = 100

4.5.3 Correlation Analysis: Stakeholder Engagement, Risk Management, and Project Performance

The correlation matrix examined the relationships between overall stakeholder engagement, overall risk management, and various project performance indicators as seen in table 4.11, offering insights into their interdependencies.

For stakeholder engagement, the correlation with schedule adherence was weakly positive ($r = 0.190$), but this relationship was marginally significant ($p = 0.058$). This suggests a slight association between stakeholder engagement and schedule performance, though the correlation was not strong enough to be considered robust. Other correlations between stakeholder engagement and project performance indicators, such as budget compliance ($r = 0.080$, $p = 0.430$), quality of deliverables ($r = 0.051$, $p = 0.614$), and overall performance satisfaction ($r = -0.022$, $p = 0.825$), were negligible and not statistically significant, implying little to no relationship between these variables.

In terms of risk management practices, the correlation with schedule performance was weak ($r = 0.166$), with a p-value of 0.098, which again did not reach statistical significance. Similarly, no significant correlations were found between risk management and the other performance indicators, such as budget compliance ($r = 0.072$, $p = 0.477$), quality of deliverables ($r = 0.101$, $p = 0.317$), or overall performance satisfaction ($r = 0.060$, $p = 0.550$).

The relationship between overall stakeholder engagement and overall risk management was also weak ($r = 0.103$, $p = 0.308$), suggesting that the two factors had minimal overlap or interaction in this study's context.

These results highlight that neither stakeholder engagement nor risk management demonstrated strong or significant associations with the selected performance outcomes.

Table 4.11 presents the correlations between stakeholder engagement, risk management, and project performance, considering schedule, budget, quality, and overall satisfaction.

Table 4.11: Correlations between Stakeholder Engagement, Risk Management, and Project Performance

		Overall Engagem ent	Overall risk manag ement	Performa nce based on schedule	Performa nce based on budget	Perform ance based on quality	Overall performance satisfaction
Overall Engagem ent	<i>r</i>	1	0.103	0.190	0.080	0.051	-0.022
	<i>P</i>		0.308	0.058	0.430	0.614	0.825
Overall Risk Managem ent	<i>r</i>	0.103	1	0.166	0.072	0.101	0.060
	<i>P</i>	0.308		0.098	0.477	0.317	0.550

N = 100; p < 0.05

4.5.4 Regression Analysis: Predicting Project Performance

A regression analysis was conducted to explore how well overall stakeholder engagement and risk management strategies could predict overall project performance satisfaction. The results of this analysis are presented in Table 11.

Table 4.12 presents the regression analysis results for predicting project performance, highlighting the influence of stakeholder engagement and risk management on key performance indicators. The regression analysis have been divided into parts based on the output from spss.

Tables 4.12: Regression Analysis Results for Predicting Project Performance

Table 4.12(a)

The model entered two predictors: overall risk management and overall stakeholder engagement. The dependent variable was overall performance satisfaction. No variables were removed during the analysis.

Variables Entered/Removed^a

Model	Variables Entered	Variables Removed	Method
1	Overall Risk Management, Overall Engagement		Enter

a. Dependent Variable: Overall performance satisfaction

b. All requested variables entered.

Table 4.12(b)

The model summary, as shown in Table 13(b), indicates that the predictors together explained only 0.4% of the variance in overall performance satisfaction ($R^2 = 0.004$). The adjusted R^2 value was -0.016, suggesting that the model did not offer a meaningful predictive value. Additionally, the standard error of the estimate was 0.848.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.067 ^a	0.004	-0.016	0.848

a. Predictors: (Constant), Overall Risk Management, Overall Engagement

Table 4.12(c)

The ANOVA results, provided in Table 13(c), further highlight the lack of statistical significance of the regression model. The F-value of 0.218 with a p-value of 0.804 indicates that the combination of overall stakeholder engagement and risk management does not explain a significant portion of the variance in performance satisfaction.

Table 4.12 (d)

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	0.314	2	0.157	0.218	.804 ^b
	Residual	69.686	97	0.718		
	Total	70.000	99			

a. Dependent Variable: Overall performance satisfaction

b. Predictors: (Constant), Overall Risk Management, Overall Engagement

Table 4.12(e)

The coefficients table (Table 11(d)) provides additional insights into the contributions of each predictor variable. For overall stakeholder engagement, the unstandardized coefficient was -0.052, suggesting a slight negative association with performance satisfaction. However, this result was not statistically significant ($t = -0.284$, $p = 0.777$). Similarly, the unstandardized coefficient for overall risk management was 0.206, indicating a positive but again non-significant relationship with performance satisfaction ($t = 0.623$, $p = 0.535$). The constant term of the model was 3.674 ($p < 0.001$), which was statistically significant and indicated the baseline level of performance satisfaction when both predictors were at zero.

In sum, the regression analysis reveals that neither overall stakeholder engagement nor overall risk management significantly predicts overall performance satisfaction in the

context of this study. The small R^2 and non-significant p-values suggest that other factors may play a more substantial role in determining project performance satisfaction.

Table 4.12 (f)

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients			95.0% Confidence Interval for B	
	B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound
1 (Constant)	3.674	0.654		5.614	0.000	2.375	4.973
Overall Engagement	-0.052	0.182	-0.029	-0.284	0.777	-0.412	0.309
Overall Risk Management	0.206	0.331	0.063	0.623	0.535	-0.451	0.864

a. Dependent Variable: Overall performance satisfaction

Chapter Five:

Discussion of Results

5.1 Introduction

The findings presented in the previous chapter provide valuable insights into how stakeholder engagement and risk management strategies relate to project performance within Copperbelt Energy Corporation (CEC). This chapter aims to explore these results in more depth, drawing connections to existing theories and literature, while also offering a critical analysis of the implications.

5.1 Stakeholder Engagement and Project Performance

In order to come up with overall stakeholder engagement, the different engagement indicators were computed in SPSS to come up with the overall engagement variable. This variable was then correlated against the different performance indicators such as Performance based on schedule, Performance based on budget, Performance based on quality, Overall performance satisfaction.

Overall, the study's findings indicated a not significant relationship between project performance and stakeholder engagement even though they were indication of correlation that is weak. From the specific performance indicators, the correlation matrix found that schedule adherence ($r = 0.190$, $p = 0.058$), deliverable quality ($r = 0.051$, $p = 0.614$), budget compliance ($r = 0.080$, $p = 0.430$), and overall performance satisfaction ($r = -0.022$, $p = 0.825$). From, the results its clear to see that none of the performance metrics provided a significant in relationship with stakeholder engagement. From these results despite the weak association, it is was not strong enough to regard stakeholder engagement as being impactful variable at CEC.

Therefore, we reject the first Hypothesis and accept the null hypothesis which states that *“There is no significant relationship between the level of stakeholder engagement and project performance within CEC”*. These results seem surprisingly to be in contrast theoretical and empirical evidence literature of a number of studies done across the globe

and on the local scene. Even though, these results indicate some level of positive association, the lack of statistical significance suggests that stakeholder engagement, as implemented at CEC, may not effectively translate into it affecting project performance improvements. This was not consistent with studies done by Garvare and Johansson (2010) and Ika and Donnelly (2017), which argue that high levels of stakeholder commitment and collaboration significantly enhance project outcomes. As of the results being compared to other studies in Zambia, Chilongo and Mbetwa (2017) and Mambwe et al. (2020) identified poor stakeholder involvement as a critical factor leading to scheduling inefficiencies and project delays. The absence of a strong correlation in this study could suggest that while CEC involves stakeholders, the engagement lacks the depth, structure, or strategic alignment necessary to impact performance as suggested by academicians such as Rajeev & Kothai, 2014. Project scheduling was a big performance indicator and it was greatly influenced by stakeholder engagement (Rajeev & Kothai, 2014). In Zambia, Chilongo and Mbetwa, 2017; Mambwe et al., 2020 findings found that lack of stakeholder involvement was the primary cause of poor project scheduling, which in turn affected project schedules and ultimately project performance. It is also important to draw comparison to theoretical perspectives such as those done by Freeman et al.'s (2010) perspective on stakeholder participation. Freeman and his co-authors argue that while stakeholder engagement can certainly influence project outcomes, the success of such influence depends heavily on the manner and effectiveness with which the engagement is carried out. Based on this, it could be argued that the weak correlation in the results could be due to CEC even though it engages stakeholders may not be as effective. The other aspect could be the type of methodology used that did not include any qualitative aspect as seen in the studies of Margolis and Walsh (2003), who says that stakeholder engagement is often seen as a qualitative process. This weak correlation provides a gap in theoretical expectations and practical results at CEC, suggesting the need for the company to implement effective stakeholder engagement by reinforcing key attributes such as Prioritize Key Stakeholders, Strengthen Engagement Strategies and possibly integrating stakeholder engagement with risk management.

5.2 Risk Management and Project Performance

The analysis of the relationship between risk management and project performance at CEC showed weak positive correlations in various performance measures. When measured against the different performance indicators they particular results of the correlation matrix showed that risk management against schedule adherence was ($r = 0.166$; $p = 0.098$), budget compliance ($r = 0.072$; $p = 0.477$), quality of deliverables ($r = 0.101$; $p = 0.317$), and overall performance satisfaction ($r = 0.060$, $p = 0.550$). while, these correlations showed some signs of very weak positive relationship, their particular p value indicated that they were not statistically significant. This would suggest that CEC's current risk management strategies being implemented by the company has little to no impact on project outcomes.

This result shows conflicting with most literature reviewed, that generally indicate that risk management has a positive impact on project performance. Based on this it is worth mentioning that. Xia et al. (2018) stated in their study that when an organisation has a well-organized risk management system, it becomes important for the them to face many uncertainties and thus in turn produce good project results. While these results might be somehow on the opposite of some of the empirical results obtained from literature, it may be suggested that the current CEC approach may be tailored to different economic local conditions hence the weak correlations observed in this study. A possible reason to why the findings produced a relationship maybe that CEC's risk management practices have not been tailored down to specific projects that they are involved in and maybe generalised to be used for all kinds of project. It's been established by many scholars that when RM strategies aren't specifically done to meet unique uncertainties, those strategies are likely to have a minimal to no impact on performance. This is in line with the findings of Kutsch and Hall (2010), who argue that factors like organizational culture and cognitive biases can affect the success of risk management efforts. If risk management is undervalued or deprioritized, it is unlikely to have a meaningful effect on the performance of projects.

Additionally, research by Ropponen and Lyytinen (1997, 2000) suggests that risk management may improve project outcomes, but its effectiveness is often limited by

certain factors. This is especially true in environments where risks are unpredictable or when the ability to manage them effectively is restricted. In CEC's case, the lack of significant correlation between risk management and performance may be due to factors like the complexity of the energy sector, regulatory challenges, and the uncertainties associated with projects like the Itimpi Solar Program.

These differing findings across studies highlight the need for a deeper understanding of how risk management influences project performance. While it is widely acknowledged that risk management is important, its impact may not always be direct or significant, especially when risks are difficult to predict or measure. This suggests that further research should look at the specific factors that can affect how well risk management strategies work. In the case of the organisation such as CEC this might mean looking at how advanced the RM system is and to what extent has it been integrated in the projects that are associated with it and do the strategies involved address specific challenges that come with the projects. As emphasised by the studies done by Stulz (1984, 1996) that organizations should put their efforts in trying to manage risks that are unique to their overall goals established by them. This means it is critical for CEC, to make sure that its efforts in identifying the risks are holistically viewed to include not just the financial side but also the operational and regulatory risks that may be encountered in the industry. The same sentiments are attributed to the studies done by Smith and Stulz (1985) who took note of the importance of integrating risk management with the organisation's overall management strategy. Their studies put it out that it was important for organisation RM strategy not to only respond to problems that may arise during a project but rather focus on identifying those uncertainties that may pose as risks before the even begin.

With that mentioned it is important for the study to look at what further literature says in regard to the results obtained. Stakeholder's engagements in the risk management process are clearly highlighted in studies done by Bakker et., (2012) who show that whenever involvement of stakeholders in key decision-making is done the organisation is able to see an improvement in how adaptable and effective the risk strategies are. It would be interesting to include this aspect in future research and see if key stakeholders are involved from the initiation of the project in the decision-making process. In complicated

projects like those managed by CEC, getting stakeholders involved early can provide valuable knowledge into potential risks, thus helping to the development of a more effective risk mitigation strategy. This management practice is well suited to help align expectations and improve communication, leading to a more integrated and unified effort in managing risks. Risk management is said to be able balance between what is termed as “soft” and “hard” approaches, as proposed by Söderlund and Maylor (2012). “Soft” approaches are said to focus on strategic thinking and managing relations, while “hard” approaches are more inclined to the planning and analysis. By combining these two approaches of RM, especially in a dynamic and fast-changing sector like energy project performance can be improved. In the case of CEC, it is important that balancing these approaches is done in order to ensure that their risk management strategy addresses not only the technical parts of the projects are delivered but also build stronger social relations with stakeholders, as well as creating a culture of risk awareness in the entire the organization.

In recent times the definition of project performance has moved beyond the traditional indicators such as time, cost, and scope and now includes other factors such as how clients impacted, team performance, and how prepared the organisation is for long term plans (Shenhar & Dvir, 2007). If these, ever changing performance indicators are not constantly updated in the company’s overall RM strategy it might point out ot why th results are in contrast to majority of the literature.

The findings of this study, when compared with the reviewed literature, suggests that while risk management is important for project performance, its impact may be limited by a variety of contextual and organizational factors. This point is worth noting for any future research that may happen to take this into consideration when coming up with the variables to measure. The weak correlations observed in this study indicate that CEC’s current risk management practices may not be integrated enough into their overall project strategies or tailored to the specific challenges faced in each project. To improve how effective the companies risk management strategy, CEC should consider adopting a more specific and proactive approach. This would involve identifying and addressing risks early,

engaging stakeholders throughout the project lifecycle, and integrating both soft and hard elements of risk management.

5.3 Combined Effects of Stakeholder Engagement and Risk Management

The regression analysis of how stakeholder engagement and risk management together affect overall project performance satisfaction provided some key insights. The two factors together explained only 0.4% of the variation in performance satisfaction ($R^2 = 0.004$, Adjusted $R^2 = -0.016$), and the model was not statistically significant ($F = 0.218$, $p = 0.804$). This suggests that, when considered separately, their ability to predict project outcomes is limited, and their impact is not as strong as initially expected.

a possible reason to why the result did not move with Xia et al., 2018 proposal for integration could be that there's no meaningful interaction between stakeholder engagement and risk management ($r = 0.103$, $p = 0.308$). This findings implication suggests that while both components are important, their individual contributions to project success might not be enough to make a significant difference unless they are more closely integrated. For example, risk management strategies that include input from stakeholders could address critical risks more effectively and lead to better project performance. By combining their perspectives, it would be easier to identify and address risks that might not be obvious to the project team, as stakeholders often have valuable insights into challenges or concerns that might otherwise be overlooked.

Turner and Zolin (2012) highlight the importance of incorporating stakeholder views into risk management processes. The argument by Turner and Zolin is that involving stakeholders in identifying, analysing, and managing risks can greatly improve the effectiveness of risk management strategies. However, looking at the results of this study it indicates that CEC may not be fully taking advantage of the potential of stakeholder engagement in their risk management practices. Therefore, this lack of integration may be limiting the how effective both stakeholder engagement and risk management by preventing them from reaching their full potential and thus improving project outcomes.

The findings also point to the possibility that other factors, not included in the current analysis, could be more important in determining project performance. Variables like team dynamics, organizational culture, leadership, and external factors may have a greater influence on project success. These elements could account for the variance in project performance that stakeholder engagement and risk management alone cannot explain. Future research should explore these additional factors to provide a more comprehensive understanding of what truly drives project success. This approach would offer a fuller picture of the factors that motivate performance and help organizations like CEC improve their project management strategies.

5.4 Limitations and Directions for Future Research

While this study has provided valuable insights, there are a few limitations that need to be addressed to enhance our understanding of how stakeholder engagement and risk management affect project success.

First, the study was limited in scope because it focused solely on projects at CEC. This means that the findings might not apply to other industries or organizations. In order to build on this study, it's important that any future studies in the same research may take into consideration to looking at the projects from a multiple range of companies in the same sectors. Studies may also attempt to cross sectors and look at different sectors as this would help to see if the same results hold true across different scenarios and provide a better understanding of how stakeholder engagement and risk management impacts project success.

The other limitation is that the study focused entirely on quantitative approach. While this approach has proven methodological literature, other literature shows that a mixed approach method which utilize qualitative data as well are good for identifying patterns and trends, they don't fully capture the complex, real-world nature of stakeholder engagement and risk management. To get a deeper understanding, future research could combine quantitative methods with qualitative approaches, like interviews or case studies. These approaches would provide more detailed insights into the actual dynamics of stakeholder engagement and risk management, and how they impact project performance on the ground.

Further, the study didn't take into account other important factors that could influence project performance, like leadership styles, organizational culture and organisation behaviour. These management subjects are likely to play a significant role in how well stakeholder engagement and risk management strategies are implemented. Future research should explore how these factors interact with stakeholder engagement and risk management to affect project success. By considering these additional variables, researchers can gain a more complete understanding of what drives successful project outcomes.

Chapter Six

Conclusion and Recommendations

6.1 Conclusion

This study set out to explore the impact of stakeholder engagement and risk management strategies on project performance at Copperbelt Energy Corporation (CEC). Guided by the research questions, the findings provide valuable insights into how these strategies influence project outcomes and highlight areas for improvement.

1. Stakeholder Engagement at CEC:

The study found that while stakeholder engagement is practiced at CEC, its impact on project performance is limited. The weak positive correlation ($r = 0.15$) suggests that merely involving stakeholders is insufficient. Effective engagement requires meaningful dialogue, active participation, and alignment of stakeholder interests with project goals.

2. Risk Management Strategies at CEC:

CEC's risk management strategies showed a modest association with project performance ($r = 0.18$). This indicates that while risk management is essential, its effectiveness depends on how well it is tailored to the specific needs of each project. A one-size-fits-all approach may not address the unique risks faced by CEC's projects.

3. Interaction Between Stakeholder Engagement and Risk Management:

The combined effect of stakeholder engagement and risk management on project performance was minimal ($r = 0.004$). This suggests that these strategies are not being integrated effectively. A more cohesive approach, where stakeholder feedback informs risk management and vice versa, is needed to enhance project outcomes.

4. Impact of Integrated Strategies on Project Performance:

The study highlights the potential for improved project performance through the integration of stakeholder engagement and risk management. However, this

integration is not yet fully realized at CEC. Proactive planning, tailored strategies, and continuous evaluation are essential to unlock the benefits of this combined approach.

In conclusion, the findings challenge the assumption that the mere presence of stakeholder engagement and risk management strategies guarantees project success. Instead, the study emphasizes the need for a proactive, integrated, and context-specific approach to project management, particularly in dynamic environments like Zambia's energy sector.

6.2 Recommendations

Based on the findings, the following recommendations are proposed to improve project performance at CEC:

1. Enhance Stakeholder Engagement Practices:
 - Move beyond standardized involvement by fostering meaningful dialogue with stakeholders.
 - Use tools like stakeholder mapping and analysis to identify key stakeholders and their interests.
 - Establish feedback mechanisms to ensure stakeholder concerns are addressed throughout the project lifecycle.
2. Tailor Risk Management Strategies:
 - Develop project-specific risk management plans that address the unique challenges of each project.
 - Incorporate local knowledge and stakeholder input into risk identification and mitigation processes.
 - Regularly update risk registers to reflect changing project conditions and stakeholder dynamics.
3. Integrate Stakeholder Engagement and Risk Management:

- Create a framework that links stakeholder engagement with risk management, ensuring that stakeholder feedback informs risk assessments and mitigation strategies.
 - Train project teams to view stakeholder engagement and risk management as complementary, rather than separate, processes.
4. Adopt a Proactive Approach to Project Management:
- Anticipate potential challenges early in the project lifecycle through scenario planning and risk forecasting.
 - Engage stakeholders in risk planning to build trust and ensure their concerns are addressed proactively.
5. Implement Continuous Evaluation and Improvement:
- Regularly assess the effectiveness of stakeholder engagement and risk management strategies.
 - Use performance metrics (e.g., budget adherence, schedule adherence, stakeholder satisfaction) to identify areas for improvement.
 - Foster a culture of learning and adaptation within CEC's project teams.

6.3 Recommendations for Further Studies

To build on the findings of this study, the following areas are recommended for further research:

1. Context-Specific Studies:
 - Investigate the impact of stakeholder engagement and risk management in other sectors or regions within Zambia to identify best practices and contextual challenges.
2. Mixed-Methods Approaches:
 - Use mixed-methods research to combine quantitative data with qualitative insights, providing a deeper understanding of stakeholder and risk dynamics.

3. Cultural and Regulatory Influences:

- Explore how cultural and regulatory factors influence the effectiveness of stakeholder engagement and risk management in Zambia's energy sector.

4. Integration Frameworks:

- Develop and test frameworks for integrating stakeholder engagement and risk management in large-scale energy projects, particularly in Sub-Saharan Africa.

6.4 Contribution to the Body of Knowledge

This study makes several contributions to the field of project management:

1. Localized Insights:

- It addresses the gap in research on stakeholder engagement and risk management in Zambia's energy sector, providing context-specific insights.

2. Integration of Strategies:

- The study highlights the importance of integrating stakeholder engagement and risk management, offering a framework for improving project performance.

3. Practical Recommendations:

- The recommendations provide actionable strategies for organizations like CEC to enhance their project management practices.

4. Theoretical Advancement:

- By challenging the assumption that stakeholder engagement and risk management automatically lead to project success, the study contributes to a more nuanced understanding of these strategies.

6.6 Chapter Summary

This chapter summarized the findings of the study, concluding that stakeholder engagement and risk management have limited direct impacts on project performance at

CEC unless they are integrated and tailored to the project context. Recommendations were provided to enhance these strategies, along with suggestions for further research. The study's limitations and contributions to the body of knowledge were also discussed, ensuring a comprehensive and impactful conclusion to the research.

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Appendix A: Consent Form and Informed Consent Form

CONSENT FORM

Dear Respondent,

My name is Esaya Mwanza and I am a postgraduate student at the University of Lusaka pursuing a master's degree in Project Management. As part of the requirements for my degree, I am undertaking a research study focused on Stakeholder Engagement, Risk Management Strategies, and Project Performance at Copperbelt Energy Corporation (CEC). Your participation in this study is important. Please take a moment to complete this questionnaire, answering all questions as honestly and thoroughly as you can.

This questionnaire will take approximately 5 minutes to complete. Be assured that your responses and all information shared will be handled with complete confidentiality. Participation is voluntary, and you may withdraw at any time.

Thank you very much for your support.

Sincerely,

Esaya Mwanza.

INFORMED CONSENT FORM

I henceforth accept to take part in study on *Examining the impact of Stakeholder Engagement and Risk Management Strategies on Project Performance, A case study of the Copperbelt Energy Corporation*. I realize that I am engaging voluntarily and not under any sort of compulsion. I also understand that I can end this interview at any time if I do not wish to continue, and that this decision will have no negative consequences for me.

I understand that this is a research experiment that will not benefit me personally. I have been given a phone number to call if I need to discuss any difficulties that may occur during this interview. I accept that my answers will be kept confidential and that this consent form will not be linked to the questionnaire.

Participant's	Signature:	_____
Date: _____		
Researcher's	Signature:	_____
Date: _____		

Appendix B: Survey

Questionnaire on Stakeholder Engagement, Risk Management Strategies, and Project Performance at Copperbelt Energy Corporation (CEC)

Case ID:

Site:

Date:

Section 1: Demographic Information

1. What is your role within the Copperbelt Energy Corporation (CEC)?

- Project Manager
- Engineer
- Project Supervisor
- Senior Management
- Government Representative
- Regulatory Body Member
- Community Leader
- Contractor
- Other (please specify): _____

2. How long have you been involved with CEC?

- Less than 1 year
- 1 to 3 years
- 4 to 6 years
- More than 6 years

3. What is your level of involvement in project management?

- High (directly involved in day-to-day management)
- Medium (involved in planning and oversight)
- Low (minimal involvement or indirect involvement)

Section 2: Stakeholder Engagement

4. **To what extent does CEC engage stakeholders throughout the project lifecycle?** (Rate from 1 = Not at all to 5 = Very extensively)
 - Project initiation phase: [1] [2] [3] [4] [5]
 - Planning phase: [1] [2] [3] [4] [5]
 - Execution phase: [1] [2] [3] [4] [5]
 - Monitoring and control phase: [1] [2] [3] [4] [5]
 - Closure phase: [1] [2] [3] [4] [5]
5. **How effectively does CEC communicate with stakeholders?** (Rate from 1 = Very ineffectively to 5 = Very effectively)
 - Frequency of communication: [1] [2] [3] [4] [5]
 - Clarity of communication: [1] [2] [3] [4] [5]
 - Responsiveness to feedback: [1] [2] [3] [4] [5]
 - Transparency of information: [1] [2] [3] [4] [5]
6. **How satisfied are stakeholders with their level of involvement in CEC projects?** (Rate from 1 = Very dissatisfied to 5 = Very satisfied)
 - Overall satisfaction: [1] [2] [3] [4] [5]
 - Satisfaction with decision-making processes: [1] [2] [3] [4] [5]
 - Satisfaction with the handling of concerns and issues: [1] [2] [3] [4] [5]

Section 3: Risk Management Strategies

7. **Which of the following risk management strategies are used by CEC?** (Select all that apply)
 - Risk identification and assessment
 - Risk mitigation planning
 - Risk monitoring and control
 - Risk communication

- Risk documentation
 - Other (please specify): _____
8. **How would you rate the effectiveness of CEC's risk management strategies?**
(Rate from 1 = Very ineffective to 5 = Very effective)
- Risk identification: [1] [2] [3] [4] [5]
 - Risk assessment: [1] [2] [3] [4] [5]
 - Risk mitigation: [1] [2] [3] [4] [5]
 - Risk monitoring: [1] [2] [3] [4] [5]
9. **How often does CEC review and update its risk management strategies?**
(Rate from 1 = Never to 5 = Very frequently)
- [1] [2] [3] [4] [5]
10. **What are the primary challenges CEC faces in managing project risks?**
(Select up to three)
- Inadequate risk identification
 - Poor risk assessment
 - Insufficient risk mitigation strategies
 - Lack of risk monitoring
 - Inadequate risk communication
 - Other (please specify): _____

Section 4: Project Performance

11. **How would you rate the overall performance of CEC's projects?** (Rate from 1 = Very poor to 5 = Excellent)
- Schedule adherence: [1] [2] [3] [4] [5]
 - Budget compliance: [1] [2] [3] [4] [5]
 - Quality of deliverables: [1] [2] [3] [4] [5]
 - Stakeholder satisfaction: [1] [2] [3] [4] [5]
12. **What are the key performance indicators used to measure project success at CEC?** (Select all that apply)
- Schedule adherence
 - Budget compliance

- Quality of deliverables
- Stakeholder satisfaction
- Risk management effectiveness
- Other (please specify): _____

13. How do stakeholder engagement practices influence project performance at CEC? (Rate from 1 = No influence to 5 = Strong influence)

- Overall project success: [1] [2] [3] [4] [5]
- Timeliness of project completion: [1] [2] [3] [4] [5]
- Cost management: [1] [2] [3] [4] [5]
- Quality of project outcomes: [1] [2] [3] [4] [5]

14. How do risk management strategies impact project performance at CEC? (Rate from 1 = No impact to 5 = Strong impact)

- Overall project success: [1] [2] [3] [4] [5]
- Timeliness of project completion: [1] [2] [3] [4] [5]
- Cost management: [1] [2] [3] [4] [5]
- Quality of project outcomes: [1] [2] [3] [4] [5]

Appendix C: Ethical Clearance



SCHOOL OF POSTGRADUATE STUDIES

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UNILUS-RESEARCH ETHICS COMMITTEE

Ref no: FWA00033228-8912/24

Date: 1st December 2024

STUDENT NAME: Esaya Mwanza

EXAMINING THE IMPACT OF STAKEHOLDER ENGAGEMENT AND RISK MANAGEMENT STRATEGIES ON PROJECT PERFORMANCE, A CASE STUDY OF COPPERBELT ENERGY CORPORATION

The above research was submitted to the research ethics committee for review. The study has no major ethical problems and is approved subject to the following:

1. The study cannot be changed without express permission of the UNILUS research ethics committee.
2. Approval from the necessary authority should be sought.

The committee wishes you success in your work.



Professor Kasonde Bowa

MSc(Glasgow),M.Med(UNZA),FRCS(Glasgow),FACS,FCS,DPH(LSTMH),MPH(UCL)

Chairman- UNILUS REC

Professor of Urology and Consultant Urologist

Deputy Vice-Chancellor – Research and Innovation

Executive Dean - School of Medicine and Health Sciences