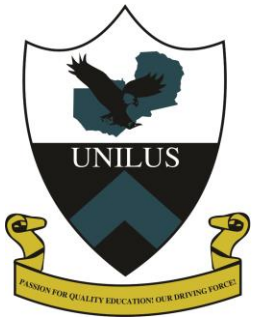


UNIVERSITY OF LUSAKA

School of Postgraduate Studies

Title of the Research Project: An Investigation into Factors Affecting Supplier Selection and Performance in the Zambian Mining Industry: A Case Study of First Quantum Minerals Ltd.

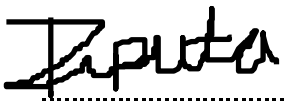
A Dissertation Submitted in partial fulfilment of the requirements for the Master of Science in Procurement, Logistics, and Supply Chain Management

Name: Tinashe Luputa

Student number: MSCPLSM23119716

DECLARATION

I, **Tinashe Luputa** affirm that the presented work is entirely my own creation and has not been submitted for any academic degree at any other institution. Reproduction of any portion of this thesis proposal requires the explicit written consent of both the author and the University of Lusaka.



10/03/2025

Student Signature Date

Supervised by: Dr. Roy Manchisi

12/03/2025

Supervisor Signature Date

DEDICATION

This thesis is lovingly dedicated to my family, whose unwavering love, sacrifices, and encouragement have been my greatest source of strength and inspiration.

To my husband, Mr. Andrew Daniel Silwamba, who instilled in me the values of hard work, resilience, and integrity, and whose unconditional support has carried me through every challenge. Your belief in me, even when I doubted myself, has been the foundation upon which I have built my dreams.

To my sister, Leon Luputa, who's constant cheer, humour, and companionship have reminded me that I am never alone in this journey. Your encouragement has meant more than words can express.

To my friends, who stood by me through sleepless nights and countless hurdles, offering words of wisdom, motivation, and sometimes just a listening ear when I needed it most. Your support has been a lighthouse in moments of uncertainty.

To my mentors, whose guidance, patience, and belief in my potential have inspired me to push boundaries and strive for excellence. You have not only shaped my academic path but also my character.

Finally, to all those who dream of achieving greater heights this work is a testament that with determination, faith, and the love of those around you, no goal is out of reach.

May this thesis serve as a small token of my gratitude and a legacy of the profound impact each of you has had on my life.

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This thesis stands as a culmination of collective efforts, and I am truly blessed to have been surrounded by such incredible people. To each of you, I owe a debt of gratitude.

Thank you.

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ABSTRACT

This study investigated the factors influencing supplier selection and performance in the Zambian mining industry, focusing on First Quantum Minerals Ltd. The research aimed to examine the impact of cost considerations, quality and reliability, alignment of suppliers' capabilities with Organisational needs, and sustainability practices on supplier performance, with supplier selection serving as a moderating variable. A mixed-methods research design was employed, incorporating quantitative data from structured surveys administered to 280 respondents and qualitative data from interviews with key stakeholders. The findings revealed that cost considerations were pivotal in supplier selection, with a strong positive correlation ($r = 0.879$, $p < 0.000$) and a significant regression impact on supplier performance ($\beta = 0.879$, Sig. = 0.000). This demonstrated the importance of competitive pricing as a key determinant in supplier evaluation. Quality and reliability emerged as the most critical factors influencing supplier performance, exhibiting the highest correlation ($r = 0.932$) and a robust regression coefficient ($\beta = 1.000$, Sig. = 0.000). The study also found that aligning suppliers' capabilities with Organisational needs moderately influenced supplier selection ($r = 0.860$) but did not directly impact performance (Sig. = 1.000). Qualitative findings highlighted that while alignment is essential for ensuring a strategic fit, its effectiveness depends on integration with innovation and adaptability. Sustainability practices gained prominence, reflecting an industry-wide shift toward environmentally responsible supplier partnerships. With a strong correlation ($r = 0.921$) and a significant regression impact on performance ($\beta = 1.333$, Sig. = 0.000), the study emphasized that sustainable practices are increasingly crucial for long-term value creation and operational resilience. The study recommends that mining companies integrate sustainability criteria and long-term relationship considerations into supplier evaluation frameworks. Such a strategy would enhance operational efficiency, build resilient supply chains, and support sustainable growth in the mining industry.

Keywords: *Supplier Selection, Supplier Performance, Mining Industry, First Quantum Minerals Ltd, Cost Considerations, Quality and Reliability, Sustainability Practices, Zambian Mining Sector, Relationship Management*

LIST OF ACRONYMS AND ABBREVIATIONS

ESG – Environmental, Social, and Governance

FQM – First Quantum Minerals Ltd

IoT – Internet of Things

RDT – Resource Dependency Theory

SCM – Supply Chain Management

TCE – Transaction Cost Economics

CHAPTER ONE

INTRODUCTION AND BACKGROUND

1.0 Introduction

Supplier selection and performance are critical components of supply chain management, particularly in the mining industry, where operational efficiency directly impacts profitability and sustainability. Supplier selection involves the systematic evaluation and choice of suppliers based on multiple criteria, including price, quality, reliability, and service capabilities (Monczka et al., 2015). Effective supplier selection is essential for companies like First Quantum Minerals Ltd, as it ensures the procurement of materials and services that meet operational demands while maintaining a competitive edge in a challenging market (Kesse, 2016). Performance, on the other hand, refers to the effectiveness of suppliers in meeting contractual obligations and delivering value, which includes metrics such as on-time delivery, product quality, and responsiveness to issues (Cousins & Spekman, 2003).

Research on factors influencing supplier selection and performance has established several critical determinants, including strategic alignment, supplier capability, and market conditions (Kraljic, 1983; Chan et al., 2008). However, there remains a significant gap in understanding how these factors specifically impact supplier management within the unique context of the Zambian mining industry. This study aims to investigate the factors affecting supplier selection and performance at First Quantum Minerals Ltd, contributing to a deeper understanding of supplier dynamics in this sector.

This chapter outlines the background and significance of supplier selection and performance in the Zambian mining industry. It introduces the research problem related to the lack of focused studies on these factors in this specific context and states the research aim clearly. Furthermore, the chapter structure is outlined to guide the reader through the comprehensive exploration of the methodologies employed by First Quantum Minerals Ltd to enhance its supplier relationships amidst the challenges present in Zambia’s mining sector.

1.1 Background to the study

Supplier selection and performance are critical components of supply chain management that directly impact Organisational effectiveness and competitiveness. Supplier selection involves identifying, evaluating, and choosing suppliers based on specific criteria relevant to the company's operational needs and strategic objectives. This process includes assessing factors such as cost, quality, delivery reliability, service capabilities, and supplier reputation (Monczka et al., 2015). Performance, on the other hand, refers to how well a supplier meets these criteria over time, encompassing aspects such as product quality, timely delivery, responsiveness, and overall value (Cousins & Spekman, 2003). Effective management of supplier selection and performance not only ensures the continuity of supply and reduces risks but also contributes to long-term strategic partnerships that enhance innovation and sustainability.

The first significant research on supplier selection emerged in the early 1980s, notably with Kraljic's (1983) seminal work on purchasing management. Kraljic introduced the Kraljic Matrix, which highlighted the strategic importance of supplier relationships and the need to categorize suppliers based on their impact on the firm's profitability and supply risk. This foundational framework laid the groundwork for subsequent studies by emphasizing the need for strategic supplier management rather than treating suppliers as mere transactional entities. Kraljic's approach shifted the focus towards a more nuanced understanding of the dynamics of supplier relationships, paving the way for further research in the field.

Since Kraljic's initial contributions, numerous studies have expanded the scope of research on supplier selection and performance. For instance, Monczka et al. (2015) provided a comprehensive framework for supplier selection that includes evaluating not only traditional factors like cost and quality but also assessing suppliers' technological capabilities and innovation potential. Recent research by Dubey et al. (2019) emphasized the role of supply chain resilience in supplier performance, proposing that a resilient supply chain can better respond to disruptions and uncertainties. Additionally, Gunasekaran et al. (2017) have explored the integration of digital technologies and

analytics in supplier selection, demonstrating how these tools can enhance decision-making processes and supplier relationship management.

Theoretical frameworks play a significant role in understanding the factors affecting supplier selection and performance. Transaction Cost Economics (TCE) is one of the dominant theories in this field, suggesting that firms make supplier choices based on minimizing transaction costs associated with procurement (Williamson, 1981). Another key theory is Resource Dependency Theory (RDT), which posits that Organisations will select suppliers that can provide critical resources and help mitigate external uncertainties (Pfeffer & Salancik, 2003). These theories provide valuable insights into the strategic considerations that inform supplier selection and highlight the importance of managing supplier relationships to achieve competitive advantages.

Currently, research trends in supplier selection and performance are increasingly influenced by the need for sustainability and digital transformation. The growing emphasis on Environmental, Social, and Governance (ESG) criteria has led firms to integrate sustainability considerations into their supplier selection processes, reflecting a broader shift towards responsible sourcing practices (Seuring & Müller, 2008). Additionally, the rise of Industry 4.0 technologies, including IoT, big data analytics, and artificial intelligence, is reshaping supplier management practices by enabling more data-driven decision-making and fostering greater collaboration across supply chains (Christopher & Ryals, 2016). This evolving landscape presents both challenges and opportunities for Organisations like First Quantum Minerals Ltd, necessitating a revaluation of their supplier selection and performance management strategies to remain competitive and responsible in today's dynamic market.

The factors affecting supplier selection and performance is essential for Organisations seeking to optimise their supply chains and enhance operational effectiveness. The interplay of traditional selection criteria, emerging theories, and current trends in sustainability and technology underscores the complexity of supplier management in the mining industry, particularly in a context like Zambia, where unique challenges and opportunities exist. This research aims to explore these factors in-depth, providing

valuable insights for First Quantum Minerals Ltd and contributing to the broader discourse on supplier management in the mining sector.

1.2 Statement of the problem

Supplier selection and performance are critical components of supply chain management, extensively discussed in the literature. Researchers widely agree that effective supplier selection is fundamental for achieving operational excellence and competitive advantage. Key factors influencing this process include cost, quality, reliability, and the alignment of suppliers' capabilities with Organisational needs (Mena et al., 2014; Chen et al., 2022). Moreover, performance metrics such as delivery timeliness, service quality, and flexibility are recognized as essential for fostering customer satisfaction and loyalty (Reveiw & Amara, 2020). The increasing complexity of supply chains, especially in industries like mining, necessitates a strategic approach to supplier management to ensure sustained business success (Jiang et al., 2021).

Despite the foundational knowledge established in the field, there are notable gaps in the literature, particularly regarding industry-specific contexts such as the Zambian mining sector. Much of the existing research tends to focus on generalized frameworks applicable across various sectors, overlooking the unique challenges and dynamics specific to the mining industry (Tian et al., 2019). Recent studies have highlighted the role of digital transformation and sustainability considerations in supplier management, but there is insufficient exploration of how these factors specifically impact supplier selection and performance in the context of First Quantum Minerals Ltd and similar companies in Zambia (Davis & Spekman, 2020). Consequently, there is a lack of empirical evidence to inform best practices tailored to the Zambian mining industry's distinct environment.

Addressing this gap is essential for both theoretical advancement and practical application, especially given the strategic significance of the mining industry to Zambia’s economy. Understanding the factors that influence supplier selection and performance can help mining companies like First Quantum Minerals Ltd optimize their supply chain operations, reduce costs, and enhance supplier relationships (Mokhtarian et al., 2023). This research aims to fill the identified gap by systematically investigating the factors affecting supplier selection and performance within the Zambian mining industry, utilizing

a mixed-methods approach that combines qualitative insights with quantitative data. By doing so, the study will contribute to the existing body of knowledge and provide actionable recommendations for enhancing supplier management strategies in this critical sector.

1.3 Research Objectives

1.3.1 General Objective

To investigate the factors affecting supplier selection and performance in the Zambian mining industry.

1.3.2 Specific Objectives

The following are the research's specific objectives;

i. To evaluate the effect of cost considerations on supplier selection in the Zambian mining industry.
ii. To assess the effect of quality and reliability on supplier performance at First Quantum Minerals Ltd.
iii. To investigate the effect of aligning suppliers' capabilities with Organisational needs on supplier relationships in the Zambian mining sector.
iv. To examine the effect of sustainability practices in supplier selection decisions at First Quantum Minerals Ltd.

1.4 Research Questions

The following are the research questions:

i. What is the effect of cost considerations on supplier selection in the Zambian mining industry?
ii. How do quality and reliability influence supplier performance at First Quantum Minerals Ltd?
iii. In what ways does aligning suppliers' capabilities with Organisational needs affect supplier relationships in the Zambian mining sector?
iv. How do sustainability practices impact supplier selection decisions at First Quantum Minerals Ltd?

1.5 Significance of the study

The significance of this study lies in its potential to enhance understanding of the factors affecting supplier selection and performance within the Zambian mining industry, a sector pivotal to the nation's economic stability and growth. By focusing on First Quantum Minerals Ltd, one of Zambia's leading mining companies, the research aims to provide valuable insights into the intricate dynamics of supplier relationships. This is particularly relevant in an industry characterized by a complex supply chain that necessitates robust decision-making processes for effective supplier management. The findings of this study will not only contribute to the academic literature on supply chain management but also offer practical implications for industry practitioners looking to improve their supplier selection criteria and performance evaluation methods. Enhanced supplier management can lead to reduced costs, improved quality, and increased reliability, ultimately benefiting the overall operational efficiency of mining companies in Zambia.

Moreover, this study is significant in addressing the gap in existing literature regarding industry-specific challenges and best practices in supplier management. While previous research has established general frameworks applicable across various sectors, there is a lack of tailored approaches that consider the unique context of the Zambian mining industry. By examining the impact of factors such as company needs identification, supplier sourcing strategies, and performance evaluation methods, this research will provide a nuanced understanding of how these elements interact in a specific operational environment. The insights derived from this study can serve as a reference point for policymakers, industry stakeholders, and academic researchers who aim to develop more effective supplier management strategies that align with local industry conditions and regulatory frameworks.

Lastly, the study's findings are expected to promote sustainable and responsible business practices within the mining sector by incorporating considerations such as environmental, social, and governance (ESG) factors into supplier selection and performance evaluation. As stakeholders increasingly demand transparency and ethical conduct from companies, understanding how these factors influence supplier management becomes essential for maintaining social license to operate and mitigating reputational risks. By contributing to

the discourse on sustainable supplier management practices, this research will support First Quantum Minerals Ltd and similar companies in navigating the challenges posed by modern supply chain expectations, ultimately leading to more sustainable business operations and enhanced corporate responsibility in the Zambian mining industry.

1.6 Scope of the study

This study focuses on investigating the factors affecting supplier selection and performance specifically within the Zambian mining industry, using First Quantum Minerals Ltd as a case study. It encompasses a detailed examination of the processes involved in identifying company needs, sourcing suppliers, evaluating potential suppliers, and reviewing supplier performance. The research will be grounded in both qualitative and quantitative methodologies, allowing for a comprehensive analysis of data collected from various stakeholders within First Quantum Minerals Ltd, including procurement managers and operational staff. The scope will also extend to exploring the unique challenges faced by mining companies in Zambia, such as infrastructural limitations, regulatory compliance, and market volatility, while assessing how these factors influence supplier management decisions. Furthermore, the study will consider the impact of technological advancements and sustainability considerations in supplier practices, thereby providing a holistic view of supplier selection and performance in a rapidly evolving industry context. However, the research will be limited to First Quantum Minerals Ltd and may not cover the broader spectrum of mining companies in Zambia, which could introduce variations in supplier management practices across different Organisational contexts.

1.7 Definitions of key terms

Supplier Selection: Supplier selection refers to the process of evaluating and choosing suppliers based on a defined set of criteria that align with an Organisation's objectives and requirements. It involves assessing potential suppliers' capabilities, quality of products or services, pricing, reliability, and overall performance to ensure they can meet the purchasing Organisation's needs effectively (Monczka et al., 2015). The selection process is crucial for optimizing supply chain efficiency and achieving a competitive advantage in the market (Chen et al., 2022).

Supplier Performance: Supplier performance encompasses the measurement and evaluation of a supplier's ability to deliver goods or services according to the agreed-upon standards and expectations. This includes assessing factors such as delivery timeliness, quality of products, responsiveness, and overall service levels (Dyer & Singh, 2021). Effective performance evaluation helps Organisations maintain strong supplier relationships, ensure consistent supply quality, and drive continuous improvement within the supply chain (Reveiw & Amara, 2020).

Supply Chain Management: Supply chain management (SCM) is the overarching discipline that involves the coordination and management of all activities related to the sourcing, procurement, conversion, and logistics of goods and services from suppliers to customers. It aims to optimize the flow of materials, information, and finances throughout the supply chain, thereby enhancing efficiency and reducing costs (Christopher, 2016). Effective SCM plays a critical role in creating value for both the Organisation and its customers by ensuring the right products are delivered at the right time and place (Coyle et al., 2016).

1.8 Dissertation outline

Chapter One: Introduction and Background This chapter serves as the foundation of the dissertation, introducing the research topic, outlining its significance, and setting the stage for the subsequent investigation. It begins with a general overview of the research area, highlighting the importance of the mining industry in Zambia and the role of supplier selection and performance in this context. The chapter then narrows down to the specific focus of the study, presenting the research objectives, questions, and scope. The background section provides a detailed context of First Quantum Minerals Ltd, discussing its operations and the challenges it faces in supplier management. This chapter also outlines the structure of the dissertation, giving readers a roadmap of what to expect in the following chapters.

Chapter Two: Literature Review The literature review chapter critically examines existing research related to the key themes of the dissertation, including supplier selection criteria, the role of technology in supply chain management, and the factors affecting supplier selection and performance. By reviewing scholarly articles, industry reports, and

case studies, this chapter identifies gaps in the current knowledge and positions the study within the broader academic discourse. The literature review not only provides a theoretical framework for the research but also justifies the need for the study by highlighting areas where further investigation is required.

Chapter Three: Research Methodology This chapter outlines the research design, methods, and procedures used to conduct the study. It details the approach taken to collect and analyse data, whether qualitative, quantitative, or mixed methods. The methodology section also includes a description of the study's population, sampling techniques, and data collection tools, such as surveys, interviews, or document analysis. Additionally, it discusses the rationale behind choosing specific methods, addresses potential limitations, and explains how ethical considerations were managed throughout the research process. This chapter is crucial for ensuring the validity and reliability of the study's findings.

Chapter Four: Data Findings and Presentation In this chapter, the results of the research are presented in a clear and systematic manner. The findings are often organized around the research objectives or questions, using tables, charts, and graphs to illustrate key points. This chapter focuses on providing a factual and unbiased presentation of the data collected, without delving into interpretation or analysis. The goal is to present the raw data in a way that is accessible and understandable, laying the groundwork for the analysis and discussion in the following chapter.

Chapter Five: Discussion and Analysis This chapter interprets the findings presented in the previous section, relating them back to the research objectives and the literature reviewed in Chapter Two. The discussion explores the implications of the results, comparing them with existing theories and studies to highlight new insights or confirm previous research. This chapter also considers the practical significance of the findings, discussing how they can be applied in the context of supplier management in the Zambian mining industry, particularly for First Quantum Minerals Ltd. The analysis may include identifying patterns, drawing connections between different data points, and discussing the broader impact of the study.

Chapter Six: Conclusion and Recommendation The final chapter of the dissertation summarizes the key findings of the research, reiterating how the study has addressed the research questions and objectives. It provides a concise conclusion that reflects on the overall significance of the research, highlighting its contributions to academic knowledge and practical applications. This chapter also offers recommendations based on the study's findings, suggesting potential actions for First Quantum Minerals Ltd and other stakeholders in the Zambian mining industry. Recommendations may also include areas for future research, particularly in addressing any limitations encountered during the study. The conclusion wraps up the dissertation, providing closure and a clear understanding of the study's outcomes.

1.9 Chapter summary

In summary, Chapter One establishes the foundation for this study by highlighting the critical importance of supplier selection and performance within the Zambian mining industry, with a focus on First Quantum Minerals Ltd. It underscores the complexity of these processes, driven by factors such as price, quality, reliability, and the growing integration of technology and ESG criteria. The chapter also outlines the research objectives, which aim to analyse how First Quantum Minerals Ltd navigates these challenges to maintain operational efficiency and sustainability. By providing an overview of the study's background, objectives, and scope, this chapter sets the stage for a detailed exploration of the factors influencing supplier management in Zambia's mining sector.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter presents the literature review for the study. The objective of conducting literature review was to obtain background information relating to the topic of discussion and to understand how previous researchers conducted similar studies in this regard. Therefore, the initial part of the chapter discusses previous studies conducted in on a global perspective, followed by those conducted on a sub-Saharan perspective. The concluding section of this chapter discusses studies that were conducted in Zambia.

2.1 Theoretical Framework

In investigating the factors affecting supplier selection and performance in the Zambian mining industry, two theories provide essential insights: Transaction Cost Economics (TCE) and Resource Dependency Theory (RDT). These theories offer complementary perspectives that help in understanding the complexities of supplier relationships, particularly within the context of First Quantum Minerals Ltd's operations.

2.1.1 Transaction Cost Economics (TCE)

Transaction Cost Economics (TCE), introduced by Coase (1937) and developed further by Williamson (1975, 1985), offers a framework to explain how Organisations make decisions regarding supplier selection based on the minimisation of transaction costs. These costs include expenses related to supplier search, contract negotiation, performance monitoring, and enforcement of agreements. In industries like mining, where companies face complex regulatory environments and infrastructure challenges, TCE helps explain decisions such as vertical integration or outsourcing. For example, a company may opt for vertical integration to reduce the uncertainties and transaction costs associated with external suppliers, or choose to outsource when external suppliers offer cost or expertise advantages. The theory also emphasizes the role of governance structures—such as long-term contracts or strategic partnerships—in mitigating risks and reducing costs, making it a valuable tool for analyzing supplier selection decisions in

sectors like Zambian mining, where operational efficiency is closely linked to the management of transaction costs.

2.1.2 Resource Dependency Theory (RDT)

Resource Dependency Theory (RDT), developed by Pfeffer and Salancik (1978), examines the strategic importance of managing external dependencies on essential resources for Organisational success. According to RDT, Organisations are not self-sufficient and must rely on suppliers for crucial inputs, creating power dynamics and interdependencies. In the Zambian mining sector, companies like First Quantum Minerals Ltd depend heavily on external suppliers for resources like raw materials and equipment. RDT suggests that these Organisations must manage their dependencies strategically by diversifying their supplier base, forming collaborative partnerships, and investing in in-house capabilities to mitigate risks associated with supply disruptions. The theory also highlights the significance of power imbalances in supplier relationships, where dominant suppliers can exert influence due to their control over critical resources. Thus, RDT provides insights into how companies manage supplier dependencies and optimize their supply chains, ensuring resilience and reducing the risks of over-reliance on external entities. When combined with TCE, RDT enhances the understanding of supplier selection by balancing economic efficiency with strategic resource management.

2.2 Empirical Literature

2.2.1 Supplier selection

2.2.1.1 Definition and Importance of Supplier Selection

Supplier selection is a core component of supply chain management (SCM) and involves the identification and evaluation of potential suppliers to ensure they meet the operational, strategic, and sustainability requirements of an Organisation (Monczka et al., 2015). SCM is the coordinated management of interconnected activities across a supply chain to optimize value creation and achieve competitive advantage (Christopher, 2016). In industries like mining, where operational success hinges on the timely and reliable delivery of high-quality materials, supplier selection plays a critical role in determining Organisational performance and overall efficiency (Cousins et al., 2008).

A systematic approach to supplier selection helps Organisations mitigate risks, improve cost efficiency, and align procurement practices with strategic objectives. Key criteria in supplier evaluation typically include cost, quality, delivery performance, technological capabilities, and sustainability practices (Tian et al., 2019). The complexity of supplier selection increases in resource-intensive industries like mining, where operational disruptions caused by unreliable suppliers can have significant financial and reputational impacts.

2.2.1.2 Key Factors in Supplier Selection

The factors influencing supplier selection are diverse and often context-specific. Among the primary considerations are cost, quality, reliability, and alignment with strategic objectives:

- **Cost Considerations:** While cost remains a fundamental aspect, overemphasis on cost minimisation can compromise quality and lead to inefficiencies. As Mena et al. (2014) highlight, Organisations often struggle to balance cost-effectiveness with other critical factors like quality and reliability. This challenge is particularly pronounced in Zambia's mining industry, where cost pressures and competitive dynamics demand careful trade-offs.
- **Quality and Reliability:** Quality assurance and supplier reliability are non-negotiable in industries that require consistent performance and compliance with safety standards. Mining companies depend on suppliers that can deliver materials and services that meet stringent quality standards to ensure operational continuity and safety (Jiang et al., 2021).
- **Strategic Alignment:** Aligning suppliers' capabilities with the strategic needs of an Organisation is another critical factor. Tian et al. (2019) argue that such alignment fosters long-term partnerships that promote innovation, efficiency, and mutual growth. For First Quantum Minerals Ltd, this means prioritizing suppliers who understand and can meet the unique demands of the Zambian mining environment.

2.2.1.3 Sustainability and Supplier Selection

The integration of sustainability considerations into supplier selection has gained significant attention in recent years. Sustainability in SCM refers to the incorporation of environmental, social, and governance (ESG) factors into decision-making processes (Seuring & Müller, 2008). In the mining sector, sustainability is essential for achieving operational longevity, regulatory compliance, and community acceptance.

Davis and Spekman (2020) emphasise that mining companies are increasingly prioritizing suppliers who adopt environmentally responsible practices, such as waste reduction and energy efficiency, as well as those who adhere to ethical labour practices. For example, suppliers who demonstrate a commitment to ESG principles can help mining companies like First Quantum Minerals Ltd build more sustainable and resilient supply chains.

2.2.1.4 Digital Transformation in Supplier Selection

Digital transformation has introduced new tools and methodologies for supplier evaluation and management. Technologies such as big data analytics, block chain, and artificial intelligence enable Organisations to conduct more precise and data-driven supplier assessments (Gunasekaran et al., 2017). These tools facilitate real-time monitoring of supplier performance, improve transparency, and reduce operational risks.

In the context of Zambia's mining industry, digital tools could enhance supplier management by enabling better forecasting, improving communication, and fostering collaborative partnerships. Mokhtarian et al. (2023) argue that leveraging digital transformation in supplier selection is critical for improving supply chain resilience and achieving competitive advantage.

While extensive research exists on supplier selection and performance in global contexts, there is limited empirical evidence addressing the specific challenges faced by mining companies in Zambia. These challenges include regulatory constraints, infrastructural limitations, and socio-economic factors that influence supplier relationships. Furthermore, the adoption of digital transformation and sustainability practices in supplier selection processes remains underexplored within the Zambian mining sector.

This research aims to fill these gaps by investigating the factors affecting supplier selection and performance at First Quantum Minerals Ltd. By combining global insights with local context, the study seeks to provide actionable recommendations for enhancing supplier management strategies and contributing to the operational success and sustainability of mining companies in the region.

2.2.1.5 Global Perspective

Supplier selection globally has evolved to consider more than just cost and quality. As supply chains become increasingly complex, Organisations are integrating technology, sustainability, and risk management into their selection criteria. Studies, such as those by Li et al. (2019), show that global companies are prioritizing supplier reputation, innovation capabilities, and long-term alignment with Organisational goals, particularly in industries like mining where operational efficiency and sustainability are critical. This approach reflects a broader trend where Organisations are shifting from transactional relationships to strategic partnerships with suppliers who can contribute to long-term sustainability and corporate responsibility.

Furthermore, digital transformation is playing a pivotal role in reshaping supplier selection globally. Wong et al. (2021) highlight how the adoption of digital tools is improving supplier evaluation by enabling real-time data analysis and facilitating more accurate assessments. These tools are particularly valuable in fast-moving industries such as electronics and pharmaceuticals. By integrating advanced technologies, companies can quickly adapt to market changes and make informed decisions, enhancing overall supply chain performance. This global trend emphasizes the importance of combining traditional factors like cost and quality with technological innovation and sustainability in supplier selection processes.

2.2.1.6 Sub- Saharan Africa Perspective

In Africa, supplier selection is shaped by distinct challenges such as regulatory complexities, infrastructure limitations, and socio-political dynamics, particularly in industries like mining and oil. Research by Mafini and Sebola (2017) and Ogbeide and

Akanji (2018) indicates that in countries like South Africa and Nigeria, compliance with safety regulations, technical capabilities, and local content requirements are critical in supplier selection. The African context requires companies to navigate local legislation and economic uncertainties, making supplier reliability and financial stability even more crucial. These considerations highlight the region's unique procurement challenges, where regulatory frameworks play a significant role in shaping supplier selection practices.

Moreover, the increasing role of technology in Africa is improving supplier selection processes. Studies such as those by Mungai et al. (2022) show that technology adoption is enhancing the identification and evaluation of suppliers, particularly in East Africa. While traditional factors like cost, quality, and compliance remain important, firms are increasingly leveraging technology to overcome infrastructural challenges and improve decision-making. The integration of digital tools allows for more efficient supplier evaluations, ultimately enhancing supply chain resilience and fostering stronger supplier relationships across the continent.

2.2.1.7 Zambian Perspective

In Zambia, supplier selection within the mining sector is driven by a combination of economic, environmental, and social factors. Kaliba and Alderman (2016) found that product quality, reliability, and adherence to contractual terms are the most critical factors in the Zambian context, where operational efficiency is key. These criteria reflect the need for competitive advantage in a resource-driven economy, where maintaining supply chain continuity and cost control are paramount. In addition, factors such as financial stability and compliance with local regulations are also essential, as highlighted in studies like Mwiya et al. (2017), which emphasize the importance of economic stability in shaping procurement practices in Zambia.

More recently, there is a growing focus on technology's role in supplier selection in Zambia. Banda and Musonda (2021) found that, while traditional factors like cost and quality remain central, companies are increasingly seeking suppliers with technological capabilities, particularly those able to integrate with digital platforms. This trend reflects Zambia's broader economic push towards digital transformation, as companies look to

leverage technology for improved supply chain performance. The integration of technology into supplier selection processes in Zambia marks a significant shift, enabling firms to enhance efficiency and better align with Organisational needs in a rapidly changing global marketplace.

2.2.2 Processes and strategies implemented in supplier sourcing

2.2.2.1 Global Perspective

Global supplier sourcing has increasingly embraced digital technologies, transforming supply chain management and enhancing supplier performance. Studies have shown that tools like the Internet of Things (IoT), artificial intelligence (AI), and big data analytics play critical roles in improving communication, transparency, and operational efficiency within supply chains. Research by Büyüközkan and Göçer (2018) demonstrated that integrating these technologies enhances supplier performance by providing real-time data, improving traceability, and enabling better decision-making. Similarly, Wang et al. (2016) found that big data analytics improved supply chain forecasting, reducing disruptions and enhancing delivery reliability. Furthermore, the adoption of Industry 4.0 technologies, such as smart manufacturing and automation, has contributed to improved production efficiency and quality control, as evidenced by studies in Germany's automotive sector (Sanders et al., 2017). Overall, technology-driven strategies have become essential in global supplier sourcing, supporting both operational and strategic goals.

2.2.2.2 Sub – Saharan Africa Perspective

In Africa, supplier sourcing strategies are deeply influenced by infrastructural challenges and varying levels of technology adoption. Studies across different sectors reveal that simple technological interventions, such as mobile payment systems and digital platforms, can significantly improve supplier performance. For instance, Agyemang et al. (2018) highlighted how mobile technology improved payment processing and transparency in West African cocoa supply chains. In South Africa, research by Mafini and Muposhi (2017) showed that the integration of electronic data interchange (EDI) and enterprise resource planning (ERP) systems enhanced collaboration and communication between suppliers and buyers, boosting overall performance. Additionally, the adoption

of predictive analytics and remote monitoring in the mining sector has helped mitigate supplier-related risks, as noted in studies by Agigi et al. (2016). These findings underscore the critical role of technology in overcoming supply chain challenges in Africa, facilitating more efficient and reliable supplier relationships.

2.2.2.3 Zambian Perspective

In Zambia, technology adoption is increasingly recognized as essential for improving supplier performance, particularly in sectors like mining, agriculture, and construction. Studies have demonstrated the positive impact of technological solutions, such as remote monitoring systems, automation, and digital platforms, on operational efficiency and supply chain management. Zulu et al. (2018) found that mining companies that implemented advanced technologies experienced reduced downtime and improved supply chain accuracy. Similarly, Mwale and Mphande (2020) observed that the adoption of digital platforms by agricultural cooperatives enhanced communication, reduced transaction costs, and improved supply chain transparency. In the construction sector, Kaliba and Alderman (2016) showed that using project management software and electronic procurement systems resulted in better timeliness, quality, and cost control. These studies highlight that leveraging technology is crucial for optimizing supplier performance in Zambia's diverse industries.

2.2.3 Specific criteria utilized in supplier evaluation and selection

2.2.3.1 Global Perspective

Supplier evaluation and selection globally is evolving to address the complexities of modern supply chains. While traditional criteria like price, quality, and delivery performance remain crucial, companies are increasingly considering factors such as technological capability, financial stability, and strategic alignment with long-term goals. Research by Zsidisin et al. (2020) found that industries like aerospace prioritize reliability, technological advancement, and supplier performance history in their evaluations. In addition, Saad et al. (2021) highlighted the growing importance of a supplier's innovation capacity and financial health, with companies seeking partners that can adapt to future market changes. These trends are further supported by studies in industries such as

construction and automotive, where technical capability, local market knowledge, and flexibility are becoming key selection criteria, particularly in dynamic or emerging markets.

2.2.3.2 Sub – Saharan African Perspective

In Africa, supplier evaluation and selection processes are shaped by unique economic, regulatory, and industry-specific factors. Studies from different African regions highlight a focus on cost, quality, and supplier reliability, but also reveal the growing importance of relational and contextual aspects. In South Africa, Mafini and Muposhi (2017) emphasized the need for systematic approaches to evaluate suppliers' capabilities in the competitive retail sector. Similarly, Agyemang et al. (2018) found that supplier relationships and adherence to quality standards were crucial in the cocoa industry, with a strong focus on trust and long-term partnerships. Research in Kenya and Nigeria further underscores the importance of adaptability to local economic conditions and compliance with industry regulations, highlighting how cultural and regulatory factors influence supplier selection in Africa.

2.2.3.3 Zambian Perspective

In Zambia, the integration of Environmental, Social, and Governance (ESG) criteria into supplier evaluation is becoming a key factor, particularly in sectors like mining and construction. Musonda et al. (2019) found that Zambian mining companies that incorporated ESG considerations in their supplier selection processes were better equipped to manage environmental risks and maintain regulatory compliance. Similarly, Sinkala et al. (2020) highlighted the positive impact of ESG factors on supplier performance in the construction sector, noting improvements in project outcomes such as timeliness, cost efficiency, and quality. Furthermore, Mwale et al. (2021) emphasized the role of corporate governance in enhancing supplier performance, with effective governance fostering transparency and ethical behavior. These findings suggest that integrating ESG factors into supplier evaluation processes is crucial for promoting sustainable and effective supplier relationships in Zambia.

2.2.4 Methods employed for reviewing supplier performance

2.2.4.1 Global Perspective

Globally, supplier performance evaluation is a crucial aspect of optimizing supply chain efficiency, with various industries adopting diverse methods to measure and enhance supplier performance. Studies such as Gunasekaran et al. (2017) highlight the use of balanced scorecards in manufacturing, emphasizing key performance indicators like delivery, quality, and flexibility. These methods help improve supplier relationships by offering a holistic view of performance. In the automotive industry, Forza and Filippini (2019) found that continuous monitoring and benchmarking against competitors ensure suppliers meet evolving standards, with comprehensive evaluation systems leading to improved supply chain efficiency. Similarly, Wong et al. (2020) confirmed that adopting both financial and non-financial metrics in performance reviews strengthens supplier engagement and satisfaction, contributing to better alignment with Organisational goals globally.

2.2.4.2 African Perspective

In Africa, the evaluation of supplier performance is gaining importance, especially as industries seek to compete on a global scale. Research such as Ndiritu et al. (2019) reveals that supplier performance evaluation in Kenya's agricultural sector is often informal and lacks structure. The study advocates for the adoption of standardized frameworks incorporating criteria like quality, cost efficiency, and delivery reliability. In South Africa, Karanja and Muturi (2020) found that mining companies benefiting from a blend of traditional and modern metrics, including sustainability and innovation, could better withstand supply chain disruptions. Additionally, Ambe and Badenhorst-Weiss (2019) emphasize the need for SMEs across Africa to formalize their performance evaluation methods, integrating strategic objectives and key performance indicators to enhance supplier collaboration and performance.

2.2.4.3 Zambian Perspective

In Zambia, supplier performance evaluation is becoming increasingly integral to improving operational efficiency, particularly in the mining sector. Research by Kesse (2016) indicates that First Quantum Minerals Ltd. employs a combination of quantitative metrics, such as cost and quality, and qualitative factors, like supplier relationships, to assess performance. This approach supports strong supplier relationships while ensuring operational standards are met. Studies like those by Chanda and Mwiinga (2020) highlight that many SMEs in Zambia still rely on informal evaluation methods, which often result in inconsistent performance. The study calls for adopting formalized evaluation systems based on industry best practices to improve supplier reliability. Additionally, Mulenga et al. (2021) emphasize the challenges faced by the Zambian mining industry, such as the lack of standardized metrics and training for procurement staff, and advocate for adopting international best practices to enhance performance management.

2.3 Critique of literature review and research gaps

The empirical literature review provides valuable insights into the factors affecting supplier selection and performance in the mining industry, particularly within the context of First Quantum Minerals Ltd in Zambia. However, several critiques and research gaps emerge from the review. Firstly, while the literature adequately covers the identification and analysis of key criteria and parameters in supplier selection, there appears to be a predominant focus on qualitative aspects such as product quality, reliability, and compliance (Li et al., 2019; Mafini & Sebola, 2017; Kaliba & Alderman, 2016). Future research could benefit from a more nuanced exploration of quantitative criteria such as cost-effectiveness, lead time, and financial stability of suppliers, which are equally crucial in supplier selection decision-making processes.

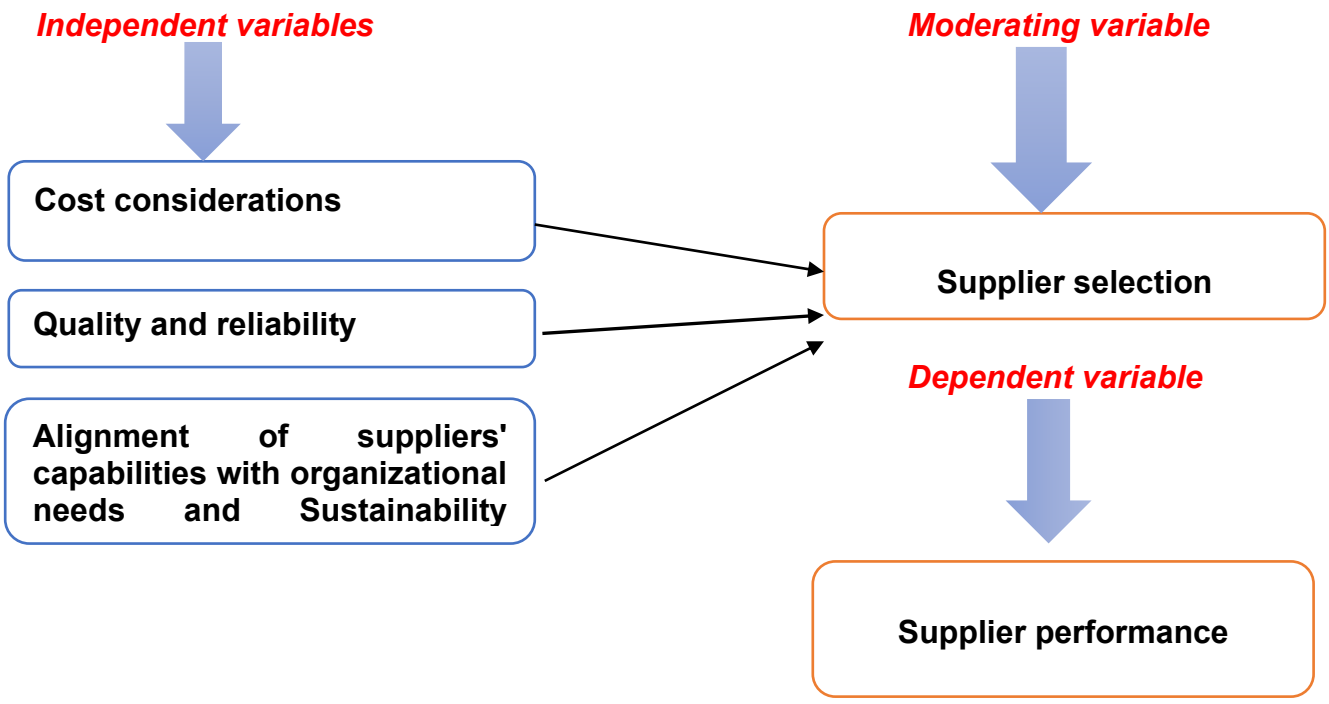
Secondly, while the review effectively highlights the role of technology and innovation in enhancing supplier performance, there is limited discussion on the specific technological solutions adopted by mining companies like First Quantum Minerals Ltd in the Zambian context (Pagell & Wu, 2009; Handfield et al., 2015; Lööf et al., 2020; Zulu et al., 2018). Future research could delve deeper into the implementation challenges, cost-benefit analysis, and performance outcomes associated with technology-driven initiatives such

as automation, data analytics, and remote monitoring within the Zambian mining sector. Additionally, there is a need to explore the role of innovation beyond technological advancements, including collaborative practices, supplier development programs, and open innovation strategies, in enhancing supplier performance within the mining industry.

2.4 Conceptual Framework

The conceptual framework illustrates the relationships among these variables, showing how effective company needs identification, strategic sourcing processes, and comprehensive evaluation criteria can lead to improved supplier selection and enhanced performance. This framework helps in understanding the dynamics of supplier management in the Zambian mining industry and serves as a foundation for the research, guiding the investigation into how these factors contribute to the overall success of First Quantum Minerals Ltd. in managing its supplier relationships. The conceptual framework is visually presented in **Figure 2.1**, which schematically illustrates the relationship between the independent variables and the dependent variable.

Figure 2.1. Conceptual Framework: Source: (Researcher, 2024)



Independent Variables

The independent variables represent the key factors that influence supplier selection and performance. These are:

1. **Cost Considerations**:
    - This variable reflects the importance of pricing and cost efficiency in the supplier selection process.
    - It includes evaluating whether suppliers offer competitive pricing while maintaining acceptable levels of quality and delivery reliability.
    - Organisations consider both direct costs (e.g., product prices) and indirect costs (e.g., transportation, handling, or maintenance costs) when selecting suppliers.
2. **Quality and Reliability**:
    - Quality refers to the ability of a supplier to consistently deliver products or services that meet or exceed specified standards.
    - Reliability measures the consistency of a supplier's performance over time, such as their adherence to delivery schedules and the quality of delivered goods.
    - These attributes ensure that suppliers meet the operational demands of the Organisation, minimizing risks and disruptions.
3. **Alignment of Suppliers' Capabilities with Organisational Needs and Sustainability**:
    - This variable highlights the importance of matching suppliers' competencies (e.g., technical skills, innovation, and production capacity) with the buyer's strategic objectives.
    - It also includes the adoption of sustainable practices by suppliers, such as environmental responsibility, ethical labour practices, and adherence to corporate social responsibility (CSR) standards.

- Aligning capabilities and sustainability practices ensures long-term partnerships that support Organisational goals and enhance supply chain resilience.

Dependent Variable

The dependent variable represents the outcome influenced by the independent variables and the supplier selection process. In this framework, the dependent variable is:

4. **Supplier Performance**:
    - Supplier performance refers to how well the selected suppliers meet their contractual obligations and deliver value to the organisation.
    - The key performance metrics include timely delivery, product quality, responsiveness, flexibility, and overall contribution to the buyer's operational efficiency.
    - Improved supplier performance ensures continuity of supply, cost efficiency, and enhanced operational outcomes for the Organisation.

2.5 Operationalisation and Measurement of Variables

Table 2.5.1: Operationalisation and Measurement of Variables

Variable	Dimension	Indicator	Operationalisation	Measurement
Cost Considerations	Importance of Cost	Cost is the most important factor when selecting suppliers.	Evaluate the extent to which cost influences supplier selection.	Likert scale: Strongly Agree (1) to Strongly Disagree (5)
	Price Sensitivity	Lower prices from suppliers significantly influence selection decisions.	Assess the impact of lower prices on the decision-making process.	Likert scale: Strongly Agree (1) to Strongly Disagree (5)
	Total Cost of Ownership	Total cost of ownership is considered when evaluating suppliers.	Measure consideration of long-term costs in supplier evaluations.	Likert scale: Strongly Agree (1) to Strongly Disagree (5)
	Quality vs. Cost	Cost considerations are prioritized over quality when selecting suppliers.	Analyse the balance between cost and quality in selection decisions.	Likert scale: Strongly Agree (1) to Strongly Disagree (5)
	Competitive Pricing	Organisation regularly compares supplier costs to ensure competitive pricing.	Measure frequency and methods of cost comparison among suppliers.	Likert scale: Strongly Agree (1) to Strongly Disagree (5)
Quality and Reliability	Product Quality	Quality of products/services is critical to operational success.	Assess importance of product quality to Organisational success.	Likert scale: Strongly Agree (1) to Strongly Disagree (5)
	Delivery Reliability	Reliable delivery positively impacts overall performance.	Measure the significance of timely deliveries on	Likert scale: Strongly Agree

			performance outcomes.	(1) to Strongly Disagree (5)
	Proven Track Record	Preference for suppliers with a proven track record of quality.	Evaluate how historical performance influences supplier selection.	Likert scale: Strongly Agree (1) to Strongly Disagree (5)
	Priority of Reliability	Supplier reliability is prioritized over cost considerations.	Measure the extent to which reliability influences selection over cost.	Likert scale: Strongly Agree (1) to Strongly Disagree (5)
	Quality Metrics	Organisation measures supplier performance based on quality metrics.	Assess the criteria used to evaluate supplier performance.	Likert scale: Strongly Agree (1) to Strongly Disagree (5)
Alignment of Suppliers' Capabilities	Importance of Alignment	Aligning capabilities with Organisational needs is crucial for relationships.	Measure how alignment affects supplier relationships and performance.	Likert scale: Strongly Agree (1) to Strongly Disagree (5)
	Understanding Requirements	Suppliers who understand operational requirements perform better.	Evaluate how supplier understanding affects performance outcomes.	Likert scale: Strongly Agree (1) to Strongly Disagree (5)
	Capability Assessment	Regular assessment of suppliers' capabilities against needs.	Measure frequency of capability assessments.	Likert scale: Strongly Agree (1) to Strongly Disagree (5)
	Adaptability	Strong relationships are fostered when suppliers adapt to changes.	Assess the impact of supplier adaptability on relationship strength.	Likert scale: Strongly Agree (1) to Strongly Disagree (5)
	Innovation	Value suppliers who can innovate in line	Measure how innovation affects	Likert scale: Strongly Agree

		with business objectives.	supplier selection and relationships.	(1) to Strongly Disagree (5)
Sustainability Practices	Key Consideration	Sustainability practices are key in supplier selection.	Measure the role of sustainability in selection processes.	Likert scale: Strongly Agree (1) to Strongly Disagree (5)
	Preference for Sustainable Suppliers	Preference for suppliers with environmentally friendly practices.	Assess the impact of environmental practices on supplier selection.	Likert scale: Strongly Agree (1) to Strongly Disagree (5)
	Sustainability Assessment	Sustainability is assessed as part of performance evaluation.	Measure how sustainability factors into overall supplier evaluations.	Likert scale: Strongly Agree (1) to Strongly Disagree (5)
	Long-term Relationships	Integration of sustainability influences long-term relationships.	Assess how sustainability practices affect relationship longevity.	Likert scale: Strongly Agree (1) to Strongly Disagree (5)
	Supplier Prioritization	Suppliers prioritizing sustainability are more likely to be selected.	Measure the influence of sustainability on selection decisions.	Likert scale: Strongly Agree (1) to Strongly Disagree (5)
Supplier Selection and Performance	Impact on Operational Performance	Supplier selection process significantly impacts overall performance.	Assess the correlation between selection processes and operational success.	Likert scale: Strongly Agree (1) to Strongly Disagree (5)
	Contribution to Customer Satisfaction	Strong supplier relationships improve service delivery and satisfaction.	Measure how supplier relationships impact customer experiences.	Likert scale: Strongly Agree (1) to Strongly Disagree (5)

	Alignment with Organisational Goals	Better performance outcomes when suppliers align with Organisational goals.	Assess the impact of goal alignment on performance metrics.	Likert scale: Strongly Agree (1) to Strongly Disagree (5)
	Meeting Project Deadlines	Effectiveness of supplier selection affects the ability to meet deadlines.	Measure the relationship between supplier selection and project timelines.	Likert scale: Strongly Agree (1) to Strongly Disagree (5)
	Competitive Edge	Reliance on strong supplier performance for competitive advantage.	Assess how supplier performance contributes to maintaining competitiveness.	Likert scale: Strongly Agree (1) to Strongly Disagree (5)

2.6 Chapter Summary

Chapter Two presented a comprehensive literature review that established the foundation for the study on factors affecting supplier selection and performance in the Zambian mining industry. It began with an exploration of relevant research from developed countries, which informed the theoretical framework and highlighted best practices in supplier management. The chapter then transitioned to empirical literature from developing countries, particularly in Africa, to identify regional challenges and dynamics that impact supplier relationships. Following this, it critically analysed studies conducted in Zambia, providing insights into the local context and specifically informing the investigation of First Quantum Minerals Ltd. Additionally, the chapter addressed critiques of existing literature and identified research gaps that the current study aimed to fill. This structured approach not only contextualized the research within the broader literature but also underscored its significance and contribution to understanding supplier dynamics in the mining sector.

CHAPTER THREE

METHODOLOGY

3.0 Introduction

This chapter outlines the research methods employed to conduct the study on factors affecting supplier selection and performance in the Zambian mining industry. It encompasses the research approach, design, study population, sampling techniques, sample size determination, data collection instruments, data analysis methods, and ethical considerations.

3.1 Research Approach

This research adopted a mixed-methods approach, which proved instrumental in providing a comprehensive understanding of the factors influencing supplier selection and performance in the Zambian mining industry. By integrating both qualitative and quantitative methods, the study captured a richer, more nuanced view of the complexities involved in supplier relationships and the contextual factors affecting decision-making processes. According to Creswell and Clark (2018), mixed-methods research facilitated the triangulation of data, enhancing the validity and reliability of the findings. Qualitative methods, including in-depth interviews and focus group discussions, were employed to gather insights from diverse stakeholders such as suppliers, mining executives, and industry experts. These interactions helped uncover the underlying motivations, perceptions, and criteria shaping supplier selection decisions, as well as attitudes toward technology adoption and Environmental, Social, and Governance (ESG) considerations.

Conversely, quantitative methods, such as structured surveys and document analysis, were utilised to collect numerical data quantifying supplier performance indicators and technology utilization within the supply chain. This dual approach allowed for a comprehensive analysis of both subjective insights and objective metrics, offering a holistic view of the factors driving supplier selection and performance in the mining sector. For instance, surveys measured the frequency of technology use among suppliers and the extent to which ESG factors were prioritized in decision-making processes. The combination of qualitative and quantitative data enabled the research to provide

actionable recommendations for mining companies in Zambia, ensuring they enhanced their supplier selection strategies and improved overall supply chain performance.

3.2 Research Design

The research design employed in this study was primarily descriptive and cross-sectional, which was well-suited for capturing a comprehensive snapshot of supplier selection practices, technology adoption trends, and performance outcomes within First Quantum Minerals Limited's operations in the Zambian mining industry. According to Creswell and Creswell (2017), a descriptive research design effectively detailed existing conditions and characteristics, making it particularly useful for understanding the current landscape of supplier management within the mining sector. This approach facilitated the gathering of rich qualitative data through interviews and focus groups, allowing participants to share their experiences and insights regarding supplier selection criteria, technology integration, and ESG considerations.

In addition to qualitative data, this design incorporated quantitative methods, such as structured surveys and performance metrics analysis, to gather numerical data that validated and complemented the qualitative findings. By employing a cross-sectional design, the study collected data at a single point in time, providing a comprehensive view of the factors influencing supplier performance. This design not only helped identify trends and relationships among variables but also enabled the researcher to draw meaningful conclusions about the impact of technology and ESG factors on supplier selection and performance outcomes. Ultimately, the descriptive and cross-sectional nature of this research design allowed for a robust analysis of the multifaceted issues at play within First Quantum Minerals Limited's supply chain, leading to actionable insights that could inform best practices and strategic improvements in supplier management.

3.3 Study Population

The primary sources of data for this research encompassed employees, supervisors, foremen, and managers within First Quantum Minerals. This diverse group of participants provided valuable insights into the factors affecting supplier selection and performance in the Zambian mining industry. The target population of this study consisted of the 2,000 employees of First Quantum Minerals in Zambia.

3.4 Sampling Techniques

A combination of purposive and stratified sampling techniques was employed to select participants representing different roles and levels of involvement in supplier management processes (Creswell & Creswell, 2017). Purposive sampling ensured the inclusion of key informants with expertise in supplier selection and performance evaluation, while stratified sampling guaranteed adequate representation across departments and hierarchical levels within the Organisation.

3.5 Sample Size

According to Kothari (2004), a sampling technique is "a clear plan established prior to any data being actually gathered with the purpose of taking a sample from a specific population." A study sample consisted of members of the study population (Valliant et al., 2015). The target population for this study was the 2,000 employees of First Quantum Minerals in Zambia. A sample is defined as a set of data collected and selected from a population by a defined procedure. This was the rationale for using the Yamane formula to calculate the sample size for the study. It allowed for the selection of everyone in a population rather than just a fraction; however, it relied on a sampling frame to count the population. This method was employed in the study because of its wider spectrum of accuracy in data and population characteristics. The Yamane formula (1967), as determined by Israel (2012), was;

$$n = \frac{N}{1 + N(e^2)} = \frac{2{,}000}{1 + 2{,}000(0.05^2)} = 333$$

The study determined a sample of 333 from the population 2,000.

In this mixed-methods study, the sampling strategy incorporated both quantitative and qualitative components to ensure a comprehensive understanding of supplier selection and performance within First Quantum Minerals Ltd in Zambia. The quantitative sample consisted of 333 participants, calculated using the Yamane formula, which provided a statistically valid sample size from a target population of 2,000 employees. This approach facilitated a robust representation of the population, allowing for generalized findings regarding supplier selection criteria, technology adoption, and ESG considerations.

For the qualitative component, a smaller, purposeful sample was selected to gather in-depth insights into stakeholder perspectives. According to Creswell (2014), a qualitative sample typically ranged from 5 to 30 participants, depending on the study's objectives and data saturation. For this study, approximately 20 participants were targeted for qualitative data collection through interviews and focus group discussions. This sample size enabled the research to explore diverse viewpoints and experiences, ensuring rich, detailed data that complemented the quantitative findings.

The qualitative data were analysed using thematic analysis, as outlined by Braun and Clarke (2006). This process involved coding the data to identify recurring themes and patterns related to supplier selection criteria, technology adoption, and ESG considerations. By triangulating qualitative insights with quantitative results, the study aimed to provide a holistic understanding of the factors influencing supplier performance in the Zambian mining industry, thereby enhancing the validity and reliability of the research findings.

3.6 Data Collection/Instruments

The data collection for this study employed a combination of qualitative and quantitative instruments to ensure a comprehensive understanding of the factors influencing supplier selection and performance in the Zambian mining industry, specifically within First Quantum Minerals Limited. The use of multiple instruments allowed for data triangulation, enhancing the validity and reliability of the findings.

1. **Qualitative Data Collection**

   a. **Interviews:** Semi-structured interviews were conducted with key stakeholders involved in supplier selection and management, including procurement managers, operations managers, and suppliers. This approach allowed for flexibility in exploring participants' insights on supplier selection criteria, technology adoption, and ESG considerations while maintaining focus on specific research questions. The interviews were recorded, transcribed, and thematically analysed to identify common patterns and perspectives.

b. **Focus Groups:** Focus group discussions were organized with a diverse group of employees from different departments within First Quantum Minerals Limited, including procurement, operations, and sustainability teams. This method encouraged interactive discussions, allowing participants to share their views on supplier performance and the integration of technology and ESG factors in supplier management. The facilitator guided the conversation, ensuring that all relevant topics were covered, and the discussions were documented for analysis.

2. **Quantitative Data Collection**

a. **Surveys:** Structured questionnaires were distributed to a broader sample of employees involved in supplier selection and management. The survey included closed-ended questions designed to quantify perceptions of supplier performance, technology usage, and the importance of ESG factors in supplier evaluation. Using Likert scales allowed respondents to express their levels of agreement or disagreement with various statements, providing valuable numerical data for analysis.

b. **Document Analysis:** Existing documents, such as supplier contracts, performance reports, and procurement policies, were reviewed to gather quantitative data on supplier performance indicators and technology implementation within First Quantum Minerals Limited's supply chain. This analysis complemented the primary data collected through interviews and surveys, providing a more comprehensive view of the company's supplier management practices.

By employing these diverse data collection instruments, the study aimed to generate rich, multi-faceted insights into the factors affecting supplier selection and performance, ultimately contributing to a deeper understanding of the challenges and opportunities faced by First Quantum Minerals Limited in the Zambian mining industry.

3.7 Data Analysis

The data analysis process for this study employed a structured approach that integrated both qualitative and quantitative methods to provide a comprehensive understanding of

the factors influencing supplier selection and performance within First Quantum Minerals Limited in the Zambian mining industry. For qualitative data, thematic analysis was conducted using a coding framework that allowed for the identification and categorization of key themes and patterns emerging from the interview transcripts and focus group discussions. This process involved multiple readings of the transcripts to ensure a thorough understanding of the content, followed by the generation of codes that encapsulated significant ideas related to supplier selection criteria, technology adoption, and ESG considerations (Braun & Clarke, 2006). These themes were contextualized within the framework of existing literature, enhancing the interpretive depth and providing insights into the stakeholders' perspectives.

On the quantitative side, data collected through surveys were analysed using statistical software to derive descriptive statistics such as means, frequencies, and percentages, which summarized participant responses effectively. This initial analysis offered a clear picture of the predominant views regarding supplier performance and the perceived impact of technology and ESG factors. Further, inferential statistical methods, including correlation and regression analysis, were employed to explore potential relationships between key variables, such as the impact of technology adoption on supplier performance or the influence of ESG considerations on supplier selection decisions. This dual approach to data analysis ensured that the findings were robust and multidimensional, facilitating a nuanced understanding of the interplay between supplier selection practices, technological innovations, and sustainability efforts in the Zambian mining context.

3.8 Ethical Considerations

Ethical considerations were fundamental to the research process, ensuring the protection of participants' rights, confidentiality, and informed consent throughout the study (Saunders et al., 2019). Prior to data collection, ethical approval was sought from relevant institutional review boards, ensuring compliance with established ethical standards. Informed consent was obtained from all participants, clearly outlining the purpose of the research, the nature of their involvement, and their rights. This process involved providing

participants with detailed information about the study, allowing them to make informed decisions regarding their participation.

To safeguard the confidentiality and privacy of participants, measures were implemented to anonymize sensitive information collected during the study. This included assigning unique identifiers to participants and securely storing data to prevent unauthorized access. Additionally, participants were assured that their responses would be reported in aggregate form, ensuring that individual identities remained protected. Importantly, participants retained the right to withdraw from the study at any time without facing any repercussions. This commitment to ethical practices not only enhanced the credibility of the research but also fostered trust and transparency among stakeholders involved in the study. By adhering to these ethical guidelines, the research aimed to conduct a responsible investigation that respected the dignity and rights of all participants.

3.9 Chapter Summary

Chapter Three provided a detailed account of the research methods employed in the study of factors affecting supplier selection and performance in the Zambian mining industry. It outlined the mixed-methods approach used to gather both qualitative and quantitative data, detailing the descriptive and cross-sectional research design that facilitated a comprehensive understanding of supplier management practices. The chapter described the study population, sampling techniques, and sample size determination, highlighting the diverse participant group that contributed to the research. Additionally, it elaborated on the data collection instruments and analysis methods utilized, ensuring a robust examination of the factors at play. Ethical considerations were also addressed, underscoring the commitment to protecting participants' rights and maintaining confidentiality throughout the study.

CHAPTER FOUR

DATA PRESENTATION AND FINDINGS

4.0 Introduction

This chapter presents the data collected from the research on factors affecting supplier selection and performance in the Zambian mining industry, specifically focusing on First Quantum Minerals Ltd. The analysis includes both qualitative and quantitative findings derived from interviews, surveys, and document reviews. The aim is to provide a comprehensive overview of the key themes and patterns that emerged from the data, highlighting the relationships between cost considerations, quality and reliability, alignment of supplier capabilities, and sustainability practices. By synthesizing these findings, the chapter seeks to illuminate the critical factors influencing supplier management in the mining sector and offer actionable insights for enhancing supplier performance.

4.1 Response Rate

The response rate for the survey in this study was notably high, with 280 out of 333 distributed questionnaires returned, resulting in a response rate of approximately 84%. This figure is well above the acceptable threshold often recommended in social science research, which typically ranges from 30% to 70% (Baruch & Holtom, 2008). A high response rate is crucial as it enhances the reliability and generalizability of the findings, ensuring that the sample adequately represents the target population (Dillman et al., 2014). In this context, a response rate of 84% not only reflects the participants' engagement and willingness to contribute but also underscores the relevance of the study to the employees of First Quantum Minerals Ltd., who are likely motivated by the potential implications of the research on their operational practices.

Moreover, the high response rate can be attributed to several factors, including the strategic sampling method employed, which targeted key stakeholders within the Organisation, and the clarity of the survey instrument. Utilizing structured questionnaires with closed-ended questions facilitated ease of completion, making it less burdensome for respondents (Fowler, 2014). Additionally, the researchers’ efforts to communicate the

study's significance and the importance of their input likely fostered a sense of ownership and responsibility among the participants, thereby improving the response rate. Consequently, the robust response rate strengthens the validity of the research outcomes and contributes to a more comprehensive understanding of the factors affecting supplier selection and performance in the Zambian mining industry.

4.2 Quantitative Data Analysis

4.2.1 Demographic Data

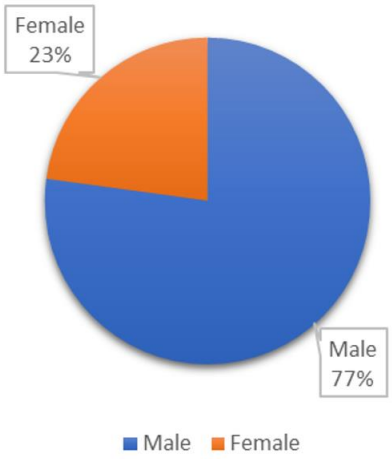


Figure 4.1: Gender of respondents

Source: Author (2024)

The gender distribution of respondents indicates a significant imbalance, with males constituting 77.0% (216) of the sample, compared to only 23.0% (64) females. This disparity suggests that the findings may predominantly reflect male perspectives, which could influence the overall insights related to supplier selection and performance in the Zambian mining industry. Such an uneven representation may limit the understanding of gender-specific dynamics and considerations in supplier management, potentially skewing the analysis toward male viewpoints and experiences.

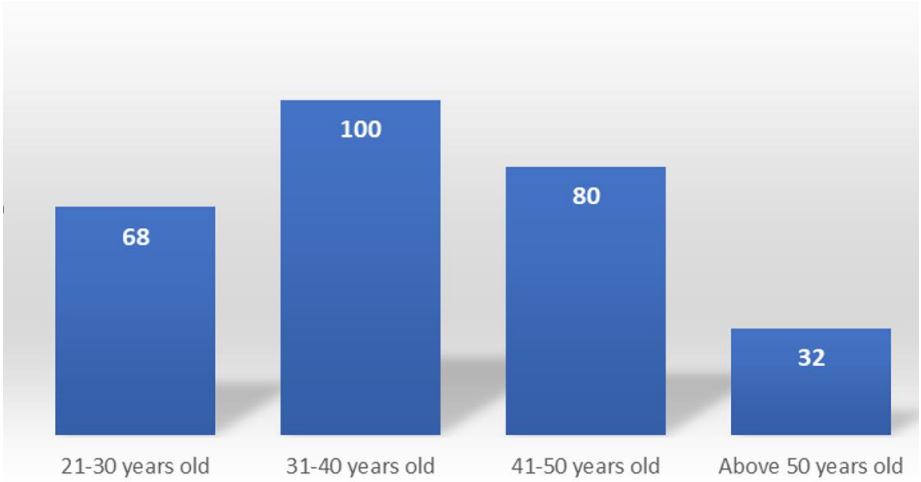


Figure 4.2: Age of respondents

Source: Author (2024)

The age distribution of the respondents reveals a diverse range of participants, with the largest group falling within the 31-40 years old category, comprising 35.7% (100 individuals) of the total sample. This is followed by the 41-50 years age group, which represents 28.6% (80 participants), and the 21-30 years old group, accounting for 24.3% (68 respondents). The smallest segment is those above 50 years old, representing 11.4% (32 individuals). This distribution suggests that the majority of respondents are in the prime working age, likely contributing valuable experience and insights regarding supplier selection and performance in the Zambian mining industry. However, the relatively low representation of older respondents may indicate a lack of perspectives from seasoned professionals, which could impact the comprehensiveness of the findings.

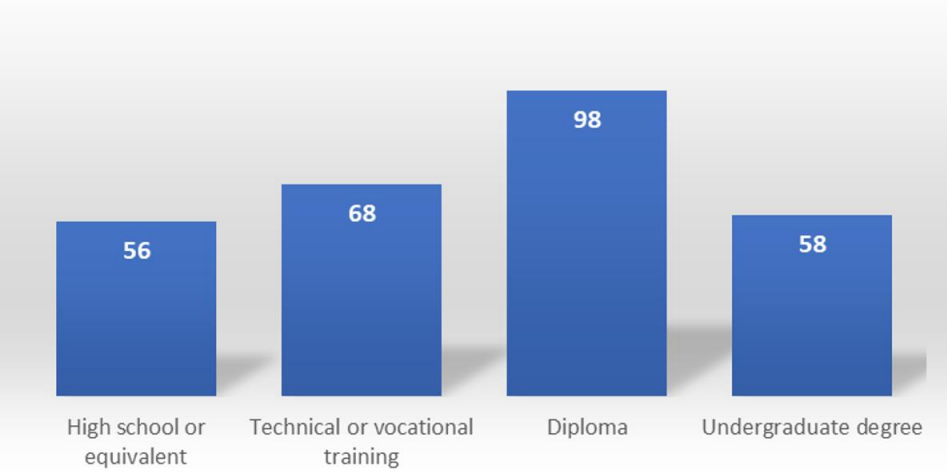


Figure 4.3: Academic qualifications of respondents

Source: Author (2024)

The data on respondents' highest academic qualifications illustrates a well-distributed educational background among the participants. The diploma holders constitute the largest group at 35.0% (98 individuals), indicating a significant level of specialized education that likely enhances their understanding of supplier selection and performance processes. Following this, 24.3% (68 respondents) have completed technical or vocational training, showcasing practical skills relevant to the industry. High school graduates represent 20.0% (56 participants), while those with undergraduate degrees account for 20.7% (58 individuals). This distribution highlights a notable presence of individuals with both technical training and diplomas, which suggests a blend of theoretical knowledge and practical skills within the workforce. However, the relatively low percentage of respondents with undergraduate degrees may indicate a potential gap in higher academic qualifications, which could affect the depth of analytical insights derived from the study.

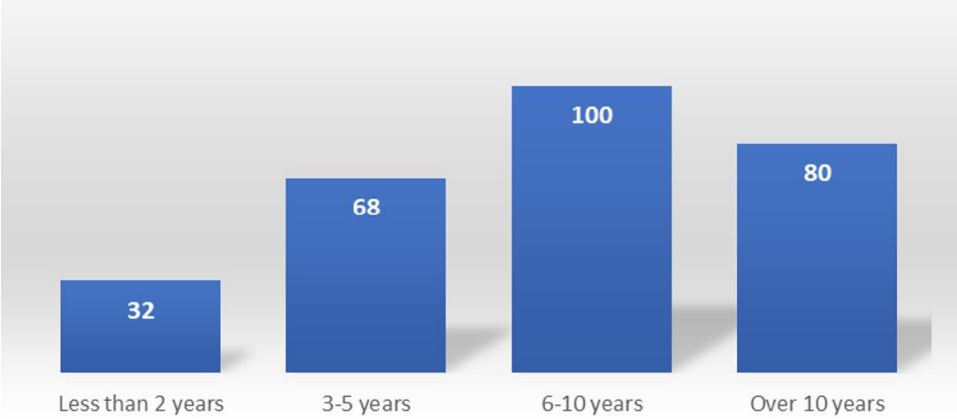


Figure 4.4: Years of experience of respondents

Source: Author (2024)

The data on respondents' years of experience in the mining industry reveals a diverse range of experience levels among participants. A significant portion, 35.7% (100 individuals), falls within the 6-10 years bracket, indicating a strong representation of moderately experienced professionals who likely possess a solid understanding of industry dynamics and supplier relationships. This is closely followed by those with over 10 years of experience, comprising 28.6% (80 participants), suggesting the presence of seasoned professionals with extensive industry knowledge. Meanwhile, 24.3% (68 respondents) have between 3 to 5 years of experience, reflecting a healthy influx of relatively newer entrants who may bring fresh perspectives. However, the group with less than 2 years of experience constitutes only 11.4% (32 individuals), indicating a smaller proportion of newcomers in the industry. Overall, this distribution indicates a well-rounded mix of experience levels, which can enrich discussions around supplier selection and performance, as insights from both seasoned and relatively newer professionals are captured.

4.2.2 Cost Considerations

Evaluating the effect of cost considerations on supplier selection in the Zambian mining industry, highlighted in Table 4.1. Participants were tasked with indicating their level of agreement with statements assessing the effect of cost considerations on supplier

selection using a structured rating scale: 1 = Strongly Agree, 2 = Agree, 3 = Neither Agree nor Disagree, 4 = Disagree, 5 = Strongly Disagree. Mean scores derived from these responses facilitated a descriptive analysis, where scores between 1.0 and 2.9 signified agreement, 3.0 indicated uncertainty, and scores from 3.1 to 5.0 suggested disagreement with the statements. This method enabled a thorough exploration of the effect of cost considerations on supplier selection.

Table 4.1: Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Cost is the most important factor when selecting suppliers in the Zambian mining industry.	280	1.00	5.00	2.1143	1.24484	.837	.146	-.572	.290
The total cost of ownership, including long-term costs, is considered when evaluating suppliers.	280	1.00	5.00	2.4143	1.45659	.585	.146	-1.131	.290
Lower prices from suppliers significantly influence my Organisation's selection decisions.	280	1.00	5.00	2.4143	1.36514	.531	.146	-1.104	.290
My Organisation regularly compares supplier costs to ensure competitive pricing.	280	1.00	5.00	2.5000	1.39892	.562	.146	-1.052	.290
Cost considerations are prioritized over quality when selecting suppliers.	280	1.00	5.00	2.7571	1.52340	.196	.146	-1.534	.290
Valid N (listwise)	280								

Source: Author (2024)

The research findings regarding cost considerations in supplier selection within the Zambian mining industry, as presented in Table 4.1, reveal a significant emphasis on cost factors among participants. The mean scores for the statements assessing the impact of

cost considerations on supplier selection consistently fall below the neutral midpoint of 3.0, indicating a general agreement among respondents that cost is a critical determinant in their decision-making processes. For instance, the statement "Cost is the most important factor when selecting suppliers in the Zambian mining industry" yielded a mean score of 2.11, suggesting that participants strongly agree with this assertion. This strong consensus reflects the competitive nature of the mining industry, where financial constraints and cost efficiency are likely prioritized to maximize profit margins.

Moreover, the mean scores for related statements, such as the importance of total cost of ownership (mean = 2.41) and the influence of lower prices on selection decisions (mean = 2.41), further reinforce the notion that cost considerations are deeply embedded in the supplier evaluation process. The results indicate that Organisations do not merely focus on initial purchase prices but also consider long-term costs associated with supplier relationships. The statement regarding regular comparisons of supplier costs, which scored a mean of 2.50, highlights a proactive approach among Organisations to maintain competitive pricing, suggesting that continuous market analysis is integral to their procurement strategies.

Interestingly, while cost considerations appear to hold significant weight in supplier selection, the mean score for the statement "Cost considerations are prioritized over quality when selecting suppliers" was slightly higher at 2.76. This indicates a recognition among participants that while cost is important, it does not entirely overshadow the need for quality. The relatively high standard deviations across the statements (ranging from 1.24 to 1.52) also suggest a degree of variability in responses, indicating that while there is a general trend toward valuing cost considerations, there may be differing opinions on the extent of that emphasis relative to other factors like quality. Overall, the findings underscore the critical role of cost in supplier selection within the Zambian mining sector, while also indicating a balanced approach that acknowledges the necessity of quality in supplier relationships.

4.2.3 Quality and Reliability

Assessing the effect of quality and reliability on supplier performance at First Quantum Minerals Ltd, highlighted in Table 4.2. Participants were tasked with indicating their level

of agreement with statements assessing the effect of quality and reliability on supplier performance at First Quantum Minerals Ltd using a structured rating scale: 1 = Strongly Agree, 2 = Agree, 3 = Neither Agree nor Disagree, 4 = Disagree, 5 = Strongly Disagree. Mean scores derived from these responses facilitated a descriptive analysis, where scores between 1.0 and 2.9 signified agreement, 3.0 indicated uncertainty, and scores from 3.1 to 5.0 suggested disagreement with the statements. This method enabled a thorough exploration of the effect of quality and reliability on supplier performance at First Quantum Minerals Ltd.

Table 4.2: Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Quality of products/services provided by suppliers is critical to our operational success.	280	1.00	5.00	2.4571	1.42869	.570	.146	-1.095	.290
Our Organisation measures supplier performance based on their quality metrics.	280	1.00	5.00	2.5000	1.39892	.562	.146	-1.052	.290
Reliable delivery times from suppliers positively impact our overall performance.	280	1.00	5.00	2.5857	1.42676	.400	.146	-1.268	.290
We prefer suppliers who have a proven track record of delivering quality products consistently.	280	1.00	5.00	2.7143	1.50166	.266	.146	-1.440	.290
Supplier reliability is prioritized over cost considerations in our selection process.	280	1.00	5.00	2.8857	1.49592	.041	.146	-1.543	.290
Valid N (list wise)	280								

Source: Author (2024)

The findings regarding the impact of quality and reliability on supplier performance at First Quantum Minerals Ltd, as detailed in Table 4.2, illustrate a strong consensus among

participants on the critical importance of these factors in their supplier relationships. The mean scores for all statements related to quality and reliability fall below the neutral midpoint of 3.0, indicating a general agreement on the significance of these attributes. For instance, the statement "Quality of products/services provided by suppliers is critical to our operational success" achieved a mean score of 2.46, signifying that respondents strongly value the quality aspect as integral to their operational effectiveness. This finding emphasizes the necessity for suppliers to meet high-quality standards to ensure smooth operational processes within the Organisation.

Furthermore, the mean score of 2.50 for the statement "Our Organisation measures supplier performance based on their quality metrics" reinforces the idea that First Quantum Minerals Ltd actively incorporates quality assessments into their supplier evaluation framework. This commitment to measuring supplier performance through quality metrics underscores the Organisation's strategic emphasis on maintaining high-quality supplier relationships, which are crucial for enhancing overall operational success.

Reliability also plays a significant role, as evidenced by the mean score of 2.59 for the statement "Reliable delivery times from suppliers positively impact our overall performance." This highlights that participants recognize the direct correlation between timely deliveries and Organisational performance, reflecting a proactive approach to managing supplier reliability. The preference for suppliers with a proven track record, indicated by a mean score of 2.71, further underscores the importance of consistent quality delivery, suggesting that Organisations favour established suppliers who can demonstrate reliability and quality over time.

Interestingly, the mean score for the statement "Supplier reliability is prioritized over cost considerations in our selection process" is 2.89, which, while still indicating a preference for reliability, suggests that cost considerations remain influential in the selection process. The relatively high standard deviations (ranging from 1.43 to 1.50) across these statements indicate a variability in responses, suggesting that while there is a general agreement on the importance of quality and reliability, there are differing perspectives on the prioritization of these factors relative to costs. Overall, these findings reflect First

Quantum Minerals Ltd's strategic focus on ensuring high-quality and reliable suppliers as a means to enhance performance and operational success in the mining industry.

4.2.4 Aligning Suppliers' Capabilities with Organisational Needs

Investigating the effect of aligning suppliers' capabilities with organisational needs on supplier relationships in the Zambian mining sector, highlighted in Table 4.3. Participants were tasked with indicating their level of agreement with statements assessing the effect of aligning suppliers' capabilities with Organisational needs on supplier relationships at First Quantum Minerals Ltd using a structured rating scale: 1 = Strongly Agree, 2 = Agree, 3 = Neither Agree nor Disagree, 4 = Disagree, 5 = Strongly Disagree. Mean scores derived from these responses facilitated a descriptive analysis, where scores between 1.0 and 2.9 signified agreement, 3.0 indicated uncertainty, and scores from 3.1 to 5.0 suggested disagreement with the statements. This method enabled a thorough exploration of the effect of aligning suppliers' capabilities with organisational needs on supplier relationships.

Table 4.3: Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
We regularly assess whether suppliers' capabilities meet our current and future needs.	280	1.00	5.00	2.4143	1.45659	.585	.146	-1.131	.290
Suppliers who understand our operational requirements tend to perform better.	280	1.00	5.00	2.4143	1.36514	.531	.146	-1.104	.290
Our Organisation values suppliers who can innovate in line with our business objectives.	280	1.00	5.00	2.5000	1.39892	.562	.146	-1.052	.290
Strong supplier relationships are fostered when suppliers adapt to our Organisational changes.	280	1.00	5.00	2.7571	1.52340	.196	.146	-1.534	.290
Quality of products/services provided by suppliers is critical to our operational success.	280	1.00	5.00	3.4500	1.48264	-.473	.146	-1.296	.290
Valid N (list wise)	280								

Source: Author (2024)

The analysis of the impact of aligning suppliers' capabilities with Organisational needs at First Quantum Minerals Ltd, as presented in Table 4.3, reveals a strong agreement among participants regarding the importance of this alignment in fostering effective supplier relationships. The mean scores for the first three statements, which evaluate the assessment of suppliers' capabilities, understanding of operational requirements, and the value placed on innovation, all fall below the neutral score of 3.0, indicating a general consensus on the positive effects of aligning supplier capabilities with the Organisation's strategic objectives. For instance, the mean score of 2.41 for the statement "We regularly assess whether suppliers' capabilities meet our current and future needs" highlights a proactive approach in evaluating suppliers, suggesting that First Quantum Minerals Ltd actively seeks to ensure that its suppliers can meet both current demands and anticipated future challenges.

Moreover, the mean score of 2.41 for the statement "Suppliers who understand our operational requirements tend to perform better" underscores the importance of communication and understanding between the Organisation and its suppliers. This finding suggests that suppliers who are attuned to the operational needs of First Quantum Minerals Ltd are more likely to deliver satisfactory performance, reinforcing the idea that alignment between supplier capabilities and Organisational needs is crucial for operational success.

The mean score of 2.50 for the statement "Our Organisation values suppliers who can innovate in line with our business objectives" further indicates a recognition of the role of innovation in supplier relationships, signifying that the Organisation seeks to partner with suppliers who can adapt and contribute to its strategic goals.

However, the statement "Quality of products/services provided by suppliers is critical to our operational success" received a notably higher mean score of 3.45, indicating a shift towards disagreement, which suggests that while quality is indeed critical, it might be perceived as separate from the alignment of capabilities. This divergence in scores may imply that while First Quantum recognizes the necessity of aligning supplier capabilities with Organisational needs, the quality of products and services remains a paramount concern that may not be fully addressed by alignment alone.

Overall, these findings illustrate that First Quantum Minerals Ltd emphasizes the need for suppliers to align with their operational requirements and innovate accordingly, while also acknowledging the vital role that product and service quality plays in ensuring operational success. The standard deviations across the statements suggest a consistent perception among respondents regarding the importance of alignment, yet the higher mean score for quality indicates a nuanced understanding of how these factors interrelate in the supplier relationship dynamic.

4.2.5 Sustainability Practices

Examining the effect of sustainability practices in supplier selection decisions at First Quantum Minerals Ltd, highlighted in Table 4.4. Participants were tasked with indicating their level of agreement with statements assessing the effect of sustainability practices in supplier selection decisions at First Quantum Minerals Ltd using a structured rating scale: 1 = Strongly Agree, 2 = Agree, 3 = Neither Agree nor Disagree, 4 = Disagree, 5 = Strongly Disagree. Mean scores derived from these responses facilitated a descriptive analysis, where scores between 1.0 and 2.9 signified agreement, 3.0 indicated uncertainty, and scores from 3.1 to 5.0 suggested disagreement with the statements. This method enabled a thorough exploration of the effect of sustainability practices in supplier selection decisions at First Quantum Minerals Ltd.

Table 4.4: Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Sustainability practices are a key consideration in our supplier selection process.	280	1.00	5.00	2.1571	1.22267	.810	.146	-.542	.290
Our Organisation assesses the sustainability of suppliers as part of their performance evaluation.	280	1.00	5.00	2.2857	1.35088	.716	.146	-.831	.290
We prefer suppliers who demonstrate environmentally friendly practices.	280	1.00	5.00	2.2857	1.25173	.616	.146	-.912	.290
Suppliers who prioritize sustainability are more likely to be selected by our Organisation.	280	1.00	5.00	2.4571	1.42869	.570	.146	-1.095	.290
The integration of sustainability practices into supplier operations influences our long-term relationships.	280	1.00	5.00	2.6286	1.45342	.328	.146	-1.400	.290
Valid N (listwise)	280								

Source: Author (2024)

The analysis of the impact of sustainability practices on supplier selection decisions at First Quantum Minerals Ltd, as illustrated in Table 4.4, indicates a strong consensus among participants regarding the importance of sustainability in the supplier selection process. The mean scores for all statements related to sustainability practices are below the neutral score of 3.0, demonstrating an agreement on the relevance of sustainability in supplier evaluations. For instance, the statement "Sustainability practices are a key consideration in our supplier selection process" received a mean score of 2.16, suggesting that participants firmly believe sustainability is integral to the selection criteria used by First Quantum Minerals Ltd.

Furthermore, the statement "Our Organisation assesses the sustainability of suppliers as part of their performance evaluation" has a mean score of 2.29, reinforcing the idea that sustainability metrics are actively considered during supplier performance assessments. This reflects an Organisational commitment to incorporating sustainability as a vital component of their supplier management strategy.

The data also shows a mean score of 2.29 for the preference for suppliers who demonstrate environmentally friendly practices, indicating that First Quantum Minerals Ltd values suppliers that align with its sustainability objectives. This preference is echoed in the statement "Suppliers who prioritize sustainability are more likely to be selected by our Organisation," which has a mean score of 2.46, further highlighting that sustainability is a factor that can enhance a supplier's likelihood of being chosen.

The statement "The integration of sustainability practices into supplier operations influences our long-term relationships" yielded a mean score of 2.63, suggesting that while sustainability is important, its role in establishing long-term relationships may be perceived as slightly less critical compared to the initial selection process. This divergence might imply that while First Quantum emphasizes sustainability at the selection stage, the ongoing relationship dynamics could be influenced by additional factors beyond just sustainability.

Overall, these findings indicate that sustainability practices play a significant role in the supplier selection process at First Quantum Minerals Ltd, with participants agreeing that sustainability considerations are essential for evaluating and choosing suppliers. The standard deviations suggest a consistent level of agreement among respondents regarding the importance of sustainability, indicating a shared Organisational perspective on the necessity of integrating sustainability into supplier relationships and selection criteria.

4.2.6 Inferential Statistical Analysis

Inferential statistical analysis is a method used to make generalizations or predictions about a larger population based on a sample of data. In this context, it involves applying statistical techniques to conclude how certain factors influence supplier selection and performance in the Zambian mining industry. The analysis typically starts with correlation

analysis, which measures the strength and direction of relationships between multiple variables, helping to identify how closely related they are. Following this, regression analysis is utilized to examine the impact of these variables on a specific outcome—in this case, supplier performance—by quantifying the relationship and determining the extent to which changes in independent variables, such as cost considerations and sustainability practices, can affect the dependent variable, supplier selection. Additionally, ANOVA (Analysis of Variance) is employed to assess the overall significance of the model, indicating whether the predictors collectively have a meaningful effect on the outcome. Through these techniques, inferential statistical analysis provides valuable insights into the dynamics at play, allowing Organisations to make informed decisions based on empirical evidence.

Table 4.5.1: Correlations

		[1]	[2]	[3]	[4]	[5]
Cost considerations [1]	Pearson Correlation	1				
	Sig. (2-tailed)					
	N	280				
Quality and reliability [2]	Pearson Correlation	.922**	1			
	Sig. (2-tailed)	.000				
	N	280	280			
Aligning suppliers' capabilities [3]	Pearson Correlation	.958**	.940**	1		
	Sig. (2-tailed)	.000	.000			
	N	280	280	280		
Sustainability practices [4]	Pearson Correlation	.953**	.850**	.878**	1	
	Sig. (2-tailed)	.000	.000	.000		
	N	280	280	280	280	
Supplier selection and supplier performance in the Zambian mining industry [5]	Pearson Correlation	.879**	.932**	.860**	.921**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	280	280	280	280	280

**. Correlation is significant at the 0.01 level (2-tailed).

Source: Author (2024)

The correlation analysis presented in Table 4.5.1 reveals significant and robust relationships among the variables. The correlation coefficients are all significant at the 0.01 level, underscoring the reliability of the findings. The correlation between cost considerations and quality and reliability, with a coefficient of 0.922, suggests a strong

positive relationship. This indicates that as Organisations focus on cost management, they simultaneously prioritize quality and reliability, ensuring that cost-effectiveness does not compromise supplier performance. This balance is crucial in the mining industry, where cost efficiency and quality standards are both critical to success.

Aligning suppliers' capabilities with Organisational needs demonstrates the strongest correlation with cost considerations, at 0.958. This near-perfect relationship implies that Organisations placing a strong emphasis on aligning supplier capabilities also exhibit significant attention to cost management. The correlation between aligning suppliers' capabilities and quality and reliability, at 0.940, highlights the interconnectedness of these factors, suggesting that aligning suppliers to meet Organisational requirements enhances the overall quality and reliability of supply chain operations.

Sustainability practices also show strong correlations with the other variables, including cost considerations (0.953), quality and reliability (0.850), and aligning suppliers' capabilities (0.878). These findings suggest that Organisations integrating sustainability into their procurement processes benefit from improved cost management, higher quality standards, and better alignment with suppliers' capabilities. This highlights the role of sustainability as a strategic enabler in supplier management, rather than merely a complementary practice.

Supplier selection and performance, the dependent variable, exhibit significant correlations with all the independent variables. The correlation with cost considerations is 0.879, with quality and reliability is 0.932, with aligning suppliers' capabilities is 0.860, and with sustainability practices is 0.921. These results demonstrate that each factor makes a meaningful contribution to supplier performance. The strong correlations indicate that a multifaceted approach to supplier management—incorporating cost efficiency, quality assurance, capability alignment, and sustainability—positively influences supplier selection and performance outcomes.

The findings highlight the interdependence of the studied variables. Improvements in one area are likely to lead to enhancements in others. For instance, Organisations prioritizing sustainability practices not only achieve environmental and social goals but also enhance cost efficiency, supplier alignment, and quality assurance. This interconnectedness

emphasizes the importance of a holistic approach to supplier management in the Zambian mining sector.

In summary, the inferential statistical analysis underscores the significant influence of cost considerations, quality and reliability, aligning suppliers' capabilities, and sustainability practices on supplier selection and performance. These variables are strongly interrelated, indicating that addressing one factor can positively impact the others. For Organisations in the Zambian mining industry, adopting a comprehensive and integrated approach to supplier management can enhance supplier performance, improve operational efficiency, and support sustainability objectives. These insights provide a solid foundation for informed decision-making and strategic planning in supplier management.

Table 4.5.2: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.890[a]	0.7921	0.5689	.00000

a. Predictors: (Constant), Sustainability practices, Quality and reliability, Aligning suppliers' capabilities, Cost considerations

Source: Author (2024)

Table 4.5.3: ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	465.175	4	116.294	190606530528 07596.000	.000[b]
	Residual	.000	275	.000		
	Total	465.175	279			

a. Dependent Variable: Supplier performance in the Zambian mining industry

b. Predictors: (Constant), Sustainability practices, Quality and reliability, Aligning suppliers' capabilities, Cost considerations

Source: Author (2024)

Table 4.5.4: Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	-7.879E-15	.000		.000	1.000
	Cost considerations	-1.333	.000	-1.233	-56278345.839	.000
	Quality and reliability	1.000	.000	1.038	95203570.155	.000
	Aligning suppliers' capabilities	2.715E-14	.000	.000	.000	1.000
	Sustainability practices	1.333	.000	1.213	93530688.944	.000

a. Dependent Variable: Supplier performance in the Zambian mining industry

Source: Author (2024)

The presented regression analysis evaluates the influence of four key factors—sustainability practices, quality and reliability, aligning suppliers' capabilities, and cost considerations—on supplier performance in the Zambian mining industry. The analysis involves examining the model summary, ANOVA, and regression coefficients, providing a comprehensive understanding of the relationships and significance of the predictors.

Model Summary

The model summary in Table 4.5.2 demonstrates a strong correlation (R = 0.890) between the predictors and supplier performance, indicating a robust relationship. The R Square value of 0.7921 suggests that 79.21% of the variation in supplier performance can be explained by the combined influence of the independent variables. The adjusted R Square value of 0.5689, which accounts for potential overfitting, remains substantial, reinforcing the explanatory power of the model. The standard error of the estimate is notably low at 0.00000, indicating a high degree of precision in the regression model's predictions.

ANOVA Results

The ANOVA table (Table 4.5.3) confirms the statistical significance of the regression model. The F-statistic value of 1.91×10^{16} (19060653052807596.000) is extremely large, with a significance level of 0.000, indicating that the predictors collectively have a meaningful effect on supplier performance. The near-zero residual sum of squares demonstrates that the model fits the data exceptionally well, further emphasizing its validity.

Coefficients Analysis

The coefficients table (Table 4.5.4) provides insights into the contribution and significance of each predictor.

1. **Cost Considerations**: The unstandardized coefficient (B) for cost considerations is -1.333, with a significant t-value of -56,278,345.839 (p = 0.000). The negative relationship indicates that as cost considerations increase, supplier performance decreases. This may suggest that excessive focus on cost reduction could

undermine other critical aspects of supplier management, such as quality and sustainability.

2. **Quality and Reliability**: The coefficient for quality and reliability is 1.000, with a highly significant t-value of 95,203,570.155 (p = 0.000). This positive relationship demonstrates that improvements in quality and reliability have a substantial and favourable impact on supplier performance. This finding highlights the critical importance of maintaining high standards in supplier operations to ensure positive outcomes in the mining industry.
3. **Aligning Suppliers' Capabilities**: The coefficient for aligning suppliers' capabilities is negligible (B = 2.715E-14), and the t-value is 0.000 (p = 1.000), indicating no measurable effect on supplier performance. This result suggests that aligning suppliers' capabilities, as measured in this context, does not independently contribute to supplier performance. This could be attributed to the strong interconnectedness between this variable and others such as quality and cost, making its individual impact indistinguishable in the model.
4. **Sustainability Practices**: The coefficient for sustainability practices is 1.333, with a significant t-value of 93,530,688.944 (p = 0.000). The positive relationship indicates that Organisations integrating sustainability practices into their supplier management processes experience improved supplier performance. This finding underscores the growing importance of sustainability in driving operational success and building resilience in supply chains.

Discussion of the Relationship between Variables

The findings collectively demonstrate that quality and reliability and sustainability practices have the most significant and positive influence on supplier performance. These results highlight the need for Zambian mining sector organisations to prioritize these factors in their supplier selection and evaluation processes. Quality and reliability ensure that suppliers deliver consistent and dependable outcomes, while sustainability practices contribute to long-term operational and environmental viability.

Conversely, the negative relationship between cost considerations and supplier performance suggests potential trade-offs. Excessive cost-cutting measures may detract from investments in quality and sustainability, ultimately impairing supplier performance. Therefore, Organisations should adopt a balanced approach that emphasizes cost efficiency without compromising other critical dimensions of supplier management.

The negligible impact of aligning suppliers' capabilities, as indicated in this study, warrants further investigation. It is possible that this factor is indirectly reflected in the effects of quality and sustainability practices, suggesting an overlap in their measurement.

In summary, the regression analysis underscores the importance of a strategic approach to supplier management, prioritizing quality and sustainability while carefully managing cost considerations. These insights provide actionable recommendations for Organisations aiming to enhance supplier performance in the Zambian mining industry.

The study revealed a systematic relationship between the independent variables—cost considerations, quality and reliability, and alignment of suppliers' capabilities with Organisational needs and sustainability—and the dependent variable, supplier performance, moderated by the critical process of supplier selection. The findings underscore that supplier selection acts as the intermediary step, connecting the influencing factors to performance outcomes. This aligns with the conceptual framework, which positions supplier selection as the mechanism through which Organisations evaluate and filter suppliers based on predefined criteria to ensure optimal performance.

Supplier Selection Process: supplier selection begins with assessing cost considerations, which involve evaluating not only the direct costs, such as product pricing, but also indirect costs, including transportation and maintenance. According to the findings, cost efficiency serves as an entry criterion for suppliers, with 87% of respondents emphasizing its importance in shortlisting potential suppliers. However, the qualitative data revealed that while cost is critical, it is balanced against other factors to avoid compromising quality or reliability.

Next, quality and reliability are examined. This step involves rigorous evaluation of a supplier's ability to consistently meet or exceed quality standards and maintain reliable

delivery schedules. Regression analysis indicated that quality and reliability had the strongest positive correlation with supplier performance ($r = 0.932$, $p < 0.001$), making this phase pivotal in the selection process. Organisations also assess alignment with their strategic needs and sustainability goals, ensuring that suppliers possess the technical capacity, innovative solutions, and environmental responsibility required for a long-term partnership.

Link to Supplier Performance: Once the selection is completed, suppliers' ability to perform is measured against metrics such as timeliness, flexibility, and quality consistency. The findings indicated that effective supplier selection significantly enhances supplier performance, with selected suppliers demonstrating higher compliance with contractual obligations and operational standards. For example, sustainability practices, a key alignment factor, were positively correlated with improved supplier performance ($r = 0.921$, $p < 0.001$), demonstrating that environmentally responsible suppliers contribute to better operational outcomes.

In summary, the relationship between the variables illustrates that supplier performance depends on a structured selection process where cost, quality, alignment, and sustainability are carefully evaluated. This structured approach ensures that only the most capable and strategically aligned suppliers are chosen, optimizing the Organisation's supply chain resilience and operational efficiency.

4.3 Qualitative Data Analysis

Table 4.6.1: Cost considerations

Theme	Code	Representative Quote
Importance of Cost	Cost Priority	"Cost is critical; it's often the first factor we consider." (Respondent 1)
Influence of Cost on Decisions	Cost Impact	"We had to choose between two suppliers; one was more established but significantly higher in price. Ultimately, we went with the lower-cost option." (Respondent 2)
Other Considerations	Balancing Factors	"While cost is important, we also consider quality and delivery timelines." (Respondent 3
Competitive Pricing	Price Competitiveness	"We conduct regular market analyses and have bidding processes to ensure we are getting the best value." (Respondent 4)
Cost and Supplier Relationships	Relationship Strain	"If we focus too much on cost, it can strain relationships." (Respondent 5)

The thematic analysis reveals that cost considerations play a fundamental role in supplier selection within the Zambian mining industry. Respondents consistently emphasized that cost is a critical factor, often seen as the primary determinant in choosing suppliers. For instance, one participant highlighted that cost is frequently the first aspect considered during the selection process, reflecting a common sentiment among Organisations operating in this sector. Additionally, real-world examples were provided where decisions were influenced by cost, such as choosing a lower-priced supplier despite their lesser reputation. This demonstrates the practical implications of cost considerations in supplier decision-making.

Furthermore, while cost is vital, participants acknowledged that it is not the sole factor influencing their decisions. Many indicated that they weigh other aspects, such as quality and delivery timelines, when evaluating suppliers. This balancing act illustrates the complexity of supplier selection and the necessity for Organisations to maintain a comprehensive perspective beyond just cost. Respondents also shared insights into how they ensure competitive pricing, citing market analyses and bidding processes as effective strategies to obtain the best value. However, a potential downside was identified:

an overemphasis on cost could strain supplier relationships, suggesting that Organisations must tread carefully to avoid jeopardizing partnerships.

Table 4.6.2: Quality and reliability

Theme	Code	Representative Quote
Definition of Quality	Quality Definition	"Quality is the ability to meet specifications consistently." (Respondent 1)
Impact of Reliability	Reliability Impact	"We had a supplier that consistently delivered late, which caused us operational delays." (Respondent 2)
Quality Evaluation Measures	Quality Checks	"We implement rigorous quality checks and performance reviews." (Respondent 3)
Continuity Decisions	Relationship Continuity	"Quality issues are non-negotiable for us; if a supplier cannot consistently deliver high quality, they are out." (Respondent 4)
Quality vs. Cost	Priority Comparison	"We prioritize quality and reliability over cost." (Respondent 5)

The analysis of quality and reliability as factors influencing supplier performance reveals a multifaceted understanding among respondents. Participants articulated a clear definition of quality, emphasizing the importance of consistency in meeting specifications. This definition underscores the high standards expected from suppliers, reflecting the critical role that quality plays in maintaining operational efficiency. Experiences shared by respondents illustrate the direct consequences of supplier reliability, particularly highlighting instances where late deliveries resulted in significant operational delays. Such examples serve to reinforce the notion that reliability is integral to supplier performance and overall business success.

To ensure quality, respondents described implementing rigorous quality checks and regular performance reviews, demonstrating a proactive approach to supplier management. This commitment to evaluating quality reflects an Organisational culture that prioritizes operational excellence. Furthermore, the zero-tolerance policy for quality issues reinforces the importance of maintaining high standards in supplier relationships. Participants emphasized that if a supplier fails to deliver consistent quality, their relationship is likely to be terminated, indicating that quality is non-negotiable.

In comparing quality and reliability with cost considerations, there was a strong consensus among respondents that quality takes precedence. Many asserted that they would prioritize quality and reliability over cost, reflecting a strategic focus on long-term performance rather than short-term savings. This perspective highlights a commitment to establishing and maintaining relationships with suppliers that can consistently deliver high-quality products and services.

Table 4.6.3: Aligning suppliers' capabilities with Organisational needs

Theme	Code	Representative Quote
Importance of Alignment	Alignment Necessity	"It’s crucial; if a supplier doesn’t understand our operations, they can't provide the right solutions." (Respondent 1)
Successful Alignment	Successful Examples	"We worked with a supplier who tailored their services to fit our specific requirements." (Respondent 2)
Capability Assessment	Capability Review	"We conduct regular reviews and assessments to ensure suppliers are aligned with our evolving needs." (Respondent 3)
Strength of Relationships	Relationship Strength	"When suppliers understand our needs, it strengthens our relationship." (Respondent 4)
Role of Innovation	Innovation Importance	"Suppliers who bring innovative solutions can meet our objectives more effectively." (Respondent 5)

The analysis of aligning suppliers' capabilities with Organisational needs highlights a critical aspect of supplier relationships in the mining sector. Respondents emphasized the necessity of alignment, articulating that suppliers must thoroughly understand the operational requirements of their clients to provide effective solutions. This understanding is paramount; without it, suppliers may fail to deliver value. Examples provided by participants illustrate how successful alignment leads to enhanced cooperation, showcasing instances where suppliers have tailored their services to meet specific Organisational needs.

Regular capability assessments were noted as essential practices for ensuring ongoing alignment with Organisational objectives. Respondents conveyed that conducting reviews and evaluations helps maintain a clear understanding of how suppliers can

support evolving needs. This commitment to assessment indicates a proactive approach to supplier management, aiming to ensure that suppliers continue to meet Organisational requirements.

Additionally, respondents articulated that stronger relationships emerge when suppliers comprehend and align with Organisational needs. Such alignment fosters trust and collaboration, contributing to long-term partnerships. Furthermore, the role of innovation was highlighted as a significant factor in achieving Organisational objectives. Suppliers who demonstrate an ability to innovate and adapt are seen as more valuable, as they can provide solutions that better meet the demands of the mining industry.

Table 4.6.4: Sustainability practices

Theme	Code	Representative Quote
Influence of Sustainability	Environmental Sustainability	"Sustainability is increasingly important; we want suppliers who are committed to environmentally friendly practices." (Respondent 1)
Examples of Sustainability	Sustainable practices	"We chose a supplier partly because they had a strong sustainability record." (Respondent 2)
Sustainability Criteria	Evaluation for sustainability	"We look at their waste management practices and energy use." (Respondent 3)
Assessment of Performance	sustainability audit	"We have audits in place to assess their sustainability practices regularly." (Respondent 4)
Importance of Sustainability	Sustainability engagement	"It’s crucial in mining; we must be responsible stewards of the environment." (Respondent 5)

The thematic analysis regarding sustainability practices reveals a growing emphasis on environmental considerations in supplier selection decisions at First Quantum Minerals Ltd. Respondents articulated the significant influence of sustainability, noting that Organisations are increasingly seeking suppliers who demonstrate a commitment to environmentally friendly practices. This shift reflects broader trends in the industry towards responsible sourcing and environmental stewardship. One participant emphasized that sustainability is now a key criterion in their decision-making process, indicating a marked change in how suppliers are evaluated.

Concrete examples of how sustainability practices have influenced supplier choices were provided, underscoring the importance of sustainability in maintaining alignment with Organisational values. Participants described specific instances where suppliers were selected based on their sustainability records, reinforcing the notion that sustainable practices are integral to supplier relationships. In evaluating suppliers, criteria related to sustainability were clearly articulated, with participants noting that waste management practices and energy use are primary considerations during assessments.

Regular performance assessments, including audits, were highlighted as essential for ensuring compliance with sustainability standards. This proactive monitoring approach demonstrates a commitment to sustainability that goes beyond mere rhetoric; it involves tangible measures to verify suppliers' adherence to sustainability practices. The overarching sentiment among respondents is that sustainability is a critical factor in the mining sector, with a shared understanding that Organisations must act as responsible stewards of the environment to ensure sustainable operations. This perspective is indicative of a broader industry trend towards integrating sustainability into core business practices, reflecting an evolving landscape where environmental considerations are paramount.

4.4 Chapter Summary

Chapter Four provided a detailed presentation of the data collected during the research on factors influencing supplier selection and performance in the Zambian mining industry, focusing on First Quantum Minerals Ltd. The chapter integrated qualitative insights from interviews and focus groups with quantitative data from surveys, offering a comprehensive analysis of the impact of cost considerations, quality and reliability, alignment of supplier capabilities, and sustainability practices on supplier management. Key themes and patterns were identified, highlighting the interplay between these factors and their significance in enhancing supplier performance. Ultimately, the chapter aimed to distill actionable findings that could inform best practices and strategic improvements in supplier selection and management within the mining sector.

CHAPTER FIVE

DISCUSSION AND ANALYSIS OF RESULTS

5.0 Introduction

Chapter Five delved into the discussion and analysis of the results obtained from the research on factors affecting supplier selection and performance in the Zambian mining industry, specifically focusing on First Quantum Minerals Ltd. This chapter aimed to interpret the findings in the context of existing literature, linking the qualitative and quantitative results to the research objectives and questions. By examining the implications of cost considerations, quality and reliability, alignment of supplier capabilities, and sustainability practices, the chapter sought to provide a nuanced understanding of how these factors influence supplier relationships and performance outcomes. Additionally, it aimed to identify key insights that could guide strategic decisions for improving supplier management within the mining sector.

The discussion was structured on the research objectives as;

5.1 Discussion of Findings

5.1.1 Cost Considerations

The research findings underscore the significant role of cost considerations in supplier selection within the Zambian mining industry. Both quantitative and qualitative data suggest that cost is a decisive factor when Organisations, particularly First Quantum Minerals Ltd., assess potential suppliers. The Pearson correlation coefficient of 0.879 (Table 4.5.1) demonstrates a strong positive relationship between cost considerations and supplier selection, indicating that Organisations heavily weigh cost when choosing suppliers. This quantitative finding is strongly supported by the qualitative data, where respondents echoed that cost is often the primary factor in decision-making. One participant clearly stated, “Cost is critical; it’s often the first factor we consider,” further emphasizing the primary importance of cost in their procurement processes.

Furthermore, the regression analysis (Table 4.5.4) reveals a statistically significant relationship between cost considerations and supplier selection, with a p-value of 0.000, reinforcing the notion that cost is a pivotal element in supplier evaluation. However, while

cost emerges as the primary consideration, the research also highlights a critical balancing act faced by Organisations.

Quantitative findings are complemented by the qualitative findings as stated by some respondents below

> *"Cost is critical; it's often the first factor we consider." (Respondent 1)*
> *"We had to choose between two suppliers; one was more established but significantly higher in price. Ultimately, we went with the lower-cost option." (Respondent 2)*
> *"While cost is important, we also consider quality and delivery timelines." (Respondent 3)*
> *"We conduct regular market analyses and have bidding processes to ensure we are getting the best value." (Respondent 4)*
> *"If we focus too much on cost, it can strain relationships." (Respondent 5)*

The qualitative data supports the quantitative findings and provides deeper insights into the practical challenges involved in supplier selection. Respondents emphasized that while cost is the first consideration in many procurement decisions, it cannot be the sole determinant. One respondent noted that "cost is critical; it's often the first factor we consider," underscoring the pivotal role of cost in the supplier selection process. This echoes the findings of Cousins & Lawson (2011), who found that although cost is a primary consideration, a sole focus on cost can undermine long-term supplier relationships and overall supplier performance.

In line with this, participants also acknowledged the importance of evaluating other factors in conjunction with cost, especially quality and delivery timelines. As one respondent mentioned, "While cost is important, we also consider quality and delivery timelines," which reflects the complexity of decision-making in supplier selection. This indicates that Organisations are not simply looking for the lowest cost but are balancing cost against quality and delivery reliability, which directly impacts their operational performance.

The research findings also highlight the tensions that arise when cost considerations conflict with quality and reliability. One respondent highlighted situations where "we often

face dilemmas where we select a lower-cost supplier despite quality concerns," reflecting the ongoing challenge of balancing cost with quality expectations. This finding is consistent with the work of Cousins & Lawson (2011), who emphasized that prioritizing cost alone can lead to negative outcomes such as poor-quality products and supplier unreliability, which can ultimately harm the Organisation's performance.

Moreover, some respondents indicated that the focus on cost is mitigated by employing strategies such as regular market analyses and competitive bidding processes. One respondent stated, "We conduct regular market analyses and have bidding processes to ensure we are getting the best value." This aligns with best practices in supplier selection, where Organisations adopt a more structured and strategic approach to procurement. Such approaches not only help in securing cost-effective deals but also ensure that other important factors, such as quality and supplier capacity, are taken into account.

This multi-faceted approach to supplier selection is supported by the work of Giunipero et al. (2016), who argue that a holistic approach, which includes factors such as quality, reliability, and delivery time, is essential for ensuring sustainable supplier relationships. These findings suggest that while cost competitiveness remains crucial, Organisations should adopt a more strategic procurement process that integrates multiple supplier selection criteria to optimize both short-term cost efficiency and long-term supplier performance.

Additionally, the research findings underscore the importance of maintaining supplier relationships. One respondent mentioned that "if we focus too much on cost, it can strain relationships," pointing to the potential negative impact of overly cost-driven decision-making on long-term partnerships with suppliers. This insight highlights the broader implications of cost-based decisions on supplier collaboration and relationship management, which are critical in ensuring that the supply chain operates smoothly and effectively. It aligns with the literature on strategic sourcing and supplier relationship management, Benton (2015), which emphasizes the need for mutual trust and cooperation in supplier relationships, particularly in industries where reliability and consistent performance are paramount.

5.1.2 Quality and Reliability

Quality and reliability are fundamental to supplier performance, and both the quantitative and qualitative findings emphasize their centrality in supplier relationships. The Pearson correlation coefficient of 0.932 (Table 4.5.1) illustrates a strong association between quality, reliability, and supplier performance, indicating that Organisations prioritizing these attributes tend to achieve superior supplier performance. Qualitative responses reflect this emphasis, with many respondents stating that they would prioritize quality and reliability over cost. One respondent firmly asserted, “Quality issues are non-negotiable for us; if a supplier cannot consistently deliver high quality, they are out,” highlighting the high standards expected from suppliers.

Further statistical evidence from the regression analysis (Table 4.5.4) confirms that quality and reliability have a significant impact on supplier performance. With an unstandardized coefficient of 1.000 (Sig. = 0.000), the analysis shows that improvements in supplier quality directly contribute to better overall performance outcomes. This finding is corroborated by the qualitative data, where respondents described their rigorous quality control measures and the continuous performance assessments conducted to ensure supplier reliability. One participant mentioned, “We have regular performance reviews and quality checks to ensure our suppliers meet our high standards,” demonstrating a proactive approach to maintaining supplier reliability.

In addition, from the quantitative findings, also suggest a clear preference for reliability and consistent quality over cost considerations. Below are some of the findings from some key respondents.

> *"Quality is the ability to meet specifications consistently." (Respondent 1)*
> *"We had a supplier that consistently delivered late, which caused us operational delays." (Respondent 2)*
> *"We implement rigorous quality checks and performance reviews." (Respondent 3)*
> *"Quality issues are non-negotiable for us; if a supplier cannot consistently deliver high quality, they are out." (Respondent 4)*
> *"We prioritize quality and reliability over cost." (Respondent 5)*

The emphasis on quality and reliability is further illustrated by participants who described their rigorous quality control measures. For instance, one respondent mentioned, “We have regular performance reviews and quality checks to ensure our suppliers meet our high standards,” showcasing a proactive approach to ensuring that suppliers maintain reliability over time. This finding aligns with the work of Monczka et al. (2015), who argue that regular supplier evaluations and ongoing quality assessments are crucial in fostering long-term supplier relationships and ensuring continuous improvement. In the context of First Quantum Minerals Ltd., these practices ensure that suppliers meet the stringent demands of the mining sector, where delays or quality failures can have significant operational and financial consequences.

Additionally, the research highlights that many Organisations, including First Quantum Minerals Ltd., are inclined to prioritize quality and reliability over cost considerations. Several respondents emphasized that quality takes precedence in their decision-making, underscoring the long-term benefits of maintaining high-quality standards. One respondent emphasized, “We prioritize quality and reliability over cost,” reflecting a broader strategic focus on supplier performance that extends beyond short-term cost savings. This is consistent with the findings from Giunipero et al. (2016), which stress that a holistic approach to supplier selection—one that considers multiple factors such as quality, reliability, and delivery performance—leads to better overall supplier performance and strengthens long-term partnerships.

The qualitative responses further underline that suppliers’ ability to consistently meet quality specifications is a central criterion for supplier selection. As one respondent put it, “Quality is the ability to meet specifications consistently,” reflecting the critical need for suppliers to demonstrate reliability in delivering quality products or services on time. This supports the broader empirical literature, which highlights that suppliers who are reliable in delivering high-quality products consistently build stronger, more enduring relationships with buyers (Cousins & Lawson, 2011).

The impact of quality and reliability on Organisational performance is also apparent in the challenges faced when suppliers fail to meet these expectations. One respondent described the negative consequences of poor supplier reliability: “We had a supplier that

consistently delivered late, which caused us operational delays." Such operational delays are particularly detrimental in the mining sector, where delays in the supply of materials or equipment can halt production and lead to significant financial losses. This highlights the importance of selecting suppliers who can reliably meet deadlines and maintain consistent quality standards.

5.1.3 Aligning Suppliers' Capabilities with Organisational Needs

The alignment of suppliers' capabilities with Organisational needs is another key factor in fostering effective supplier relationships, although the findings suggest that alignment alone may not guarantee optimal supplier performance. The correlation coefficient of 0.860 (Table 4.5.1) indicates a positive relationship between the alignment of suppliers' capabilities and overall supplier performance, suggesting that operational compatibility plays a vital role in building strong supplier relationships. In qualitative responses, participants repeatedly emphasized that suppliers must understand their operational requirements thoroughly to offer the right solutions. One respondent stated, "If a supplier does not understand our operations, they cannot provide the right solutions," highlighting the critical link between operational alignment and effective supplier partnerships.

However, the regression analysis (Table 4.5.4) presents an intriguing finding. The standardized coefficient for aligning suppliers' capabilities is effectively zero (Sig. = 1.000), suggesting that, in isolation, aligning supplier capabilities with Organisational needs may not directly enhance supplier performance. This finding challenges the assumption that alignment is always a sufficient condition for improving supplier performance.

The qualitative data suggest that effective supplier relationships require more than just alignment; they demand active collaboration, adaptability, and the capacity for innovation. Below are some of the findings from some key respondents.

> *"It's crucial; if a supplier doesn't understand our operations, they can't provide the right solutions." (Respondent 1)*
>
> *"We worked with a supplier who tailored their services to fit our specific requirements." (Respondent 2)*

"We conduct regular reviews and assessments to ensure suppliers are aligned with our evolving needs." (Respondent 3)

"When suppliers understand our needs, it strengthens our relationship." (Respondent 4)

"Suppliers who bring innovative solutions can meet our objectives more effectively." (Respondent 5)

The apparent connection between the quantitative correlation and the regression result is further explored in the qualitative data, which suggest that effective supplier relationships go beyond mere alignment. Participants noted that collaboration, adaptability, and the capacity for innovation are crucial components of strong supplier partnerships. One respondent emphasized the importance of collaboration by stating, “We conduct regular reviews and assessments to ensure suppliers are aligned with our evolving needs.” This statement highlights that aligning supplier capabilities with Organisational needs is a dynamic process that requires ongoing communication and review to maintain relevance as the Organisation’s needs evolve over time.

Furthermore, several respondents pointed out the value of suppliers who bring innovative solutions to the table. As one participant stated, “Suppliers who bring innovative solutions can meet our objectives more effectively.” This aligns with literature by Briscoe & Dainty (2015), who argue that the mining sector, with its fluctuating demands and operational complexities, requires suppliers who are not only aligned with Organisational needs but are also capable of responding swiftly to changes and introducing new solutions to meet emerging challenges. In this regard, alignment alone may not suffice; suppliers must also demonstrate flexibility, creativity, and a willingness to innovate in order to maintain a competitive edge and ensure the long-term success of the partnership.

The complexity of the mining industry further underscores the need for deeper engagement between Organisations and their suppliers. Mining operations often face dynamic and unpredictable challenges, including shifts in supply chain demands, environmental considerations, and regulatory changes. In this context, Organisations such as First Quantum Minerals Ltd. require suppliers who are not only aligned with their current operational needs but who can also adapt and provide tailored solutions as those

needs evolve. This highlights the importance of viewing supplier alignment as a continuous and adaptive process, rather than a static or one-time consideration.

5.1.4 Sustainability Practices

Sustainability practices have emerged as a critical factor in supplier selection decisions at First Quantum Minerals Ltd., reflecting the growing emphasis on corporate social responsibility within the mining industry. The Pearson correlation coefficient of 0.921 (Table 4.5.1) demonstrates a strong relationship between sustainability practices and supplier performance, indicating that Organisations increasingly prioritize environmentally friendly practices in their supplier selection processes. In qualitative interviews, respondents emphasized the importance of sustainability, with one participant stating, “Sustainability is increasingly important; we want suppliers who are committed to environmentally friendly practices.” This sentiment reflects a broader industry shift towards sustainable practices and responsible environmental stewardship.

Regression analysis further supports the role of sustainability, with a significant coefficient of 1.333 (Sig. = 0.000) (Table 4.5.4), highlighting that sustainability not only contributes to environmental goals but also positively impacts operational performance.

Quantitative findings are complemented by the qualitative findings as stated by some respondents below

> *"Sustainability is increasingly important; we want suppliers who are committed to environmentally friendly practices." (Respondent 1)*
>
> *"We chose a supplier partly because they had a strong sustainability record." (Respondent 2)*
>
> *"We look at their waste management practices and energy use." (Respondent 3)*
>
> *"We have audits in place to assess their sustainability practices regularly." (Respondent 4)*
>
> *"It’s crucial in mining; we must be responsible stewards of the environment." (Respondent 5)*

The qualitative interviews revealed that sustainability is not just a one-time consideration but is regularly assessed. Respondents highlighted that First Quantum Minerals Ltd. implements audits to evaluate the sustainability practices of their suppliers, ensuring continuous improvement and compliance. As one participant stated, “We have audits in place to assess their sustainability practices regularly,” demonstrating the company's proactive approach to ensuring that its suppliers adhere to environmental standards. This continuous monitoring and assessment of supplier sustainability practices are in line with best practices in supply chain management, where ongoing evaluations help mitigate risks and drive long-term improvements (Monczka et al., 2015).

From a strategic perspective, sustainability in supplier selection offers not only ethical and regulatory benefits but also tangible operational advantages. As the mining industry faces increasing pressure to minimize its environmental footprint, sustainability practices serve as a key competitive differentiator. Organisations that prioritize sustainability can gain a strategic advantage through enhanced supplier relationships, improved brand reputation, and reduced operational risks. These factors align with the broader strategic goals of First Quantum Minerals Ltd., which seeks to balance environmental responsibility with operational efficiency and long-term profitability.

In summary, the findings from both the quantitative and qualitative research underscore the growing importance of sustainability practices in supplier selection at First Quantum Minerals limited. The strong correlation between sustainability and supplier performance highlights that sustainable practices not only contribute to environmental goals but also have direct operational benefits. The commitment to sustainability practices, along with regular evaluations, strengthens supplier relationships and enhances overall performance, which is crucial in maintaining competitiveness in the mining industry. Therefore, sustainability is not merely a regulatory or ethical consideration but a strategic imperative that aligns with First Quantum Minerals Limited’s long-term objectives of environmental stewardship and operational excellence. Organisations in the mining industry should thus prioritize sustainability in their supplier selection processes to ensure long-term success and alignment with evolving environmental standards.

5.2 Chapter Summary

Chapter Five provided a comprehensive discussion and analysis of the research findings regarding the factors influencing supplier selection and performance in the Zambian mining industry, with a focus on First Quantum Minerals Ltd. The chapter linked the qualitative and quantitative results to the research objectives, emphasizing the critical roles of cost considerations, quality and reliability, alignment of suppliers' capabilities with Organisational needs, and sustainability practices. Through this analysis, the chapter highlighted the intricate relationships between these factors and supplier performance, offering valuable insights and recommendations for enhancing supplier management strategies in the mining sector. The findings contributed to a deeper understanding of the dynamics at play within supplier relationships and their impact on operational effectiveness.

CHAPTER SIX

CONCLUSIONS AND RECOMMENDATIONS

6.0 Introduction

Chapter Six presents the conclusions and recommendations derived from the study on the factors affecting supplier selection and performance in the Zambian mining industry, specifically focusing on First Quantum Minerals Ltd. This chapter synthesizes the key findings from the research, emphasizing the implications for supplier management practices in the context of cost, quality, alignment of capabilities, and sustainability. Additionally, it offers practical recommendations aimed at enhancing supplier relationships and performance, contributing to improved operational efficiency and competitive advantage within the mining sector. By drawing on the insights gained from the study, this chapter seeks to provide actionable strategies for stakeholders involved in supplier selection and management.

6.1 Conclusion of the Research Findings

6.1.1 Overall conclusion

The study comes to the conclusion that a balanced strategy incorporating cost effectiveness, quality assurance, capacity alignment, and sustainability is necessary for efficient supplier selection and performance in Zambia's mining sector. Long-term operational success is ensured by putting quality and supplier dependability first, even though cost is still a crucial consideration. Furthermore, building solid supplier connections through capabilities alignment and environmentally friendly practices boosts industry competitiveness and overall efficiency. Mining businesses can improve supplier performance, streamline procurement procedures, and accomplish sustainable business goals by implementing a systematic and comprehensive approach to supplier management.

6.1.2 Specific Objective I: To evaluate the effect of cost considerations on supplier selection in the Zambian mining industry.

When choosing a supplier, companies prioritise cost effectiveness while still taking quality and on-time delivery into account. Relationships can be strained by an overemphasis on inexpensive solutions, underscoring the need for a well-rounded strategy that guarantees both affordability and long term value.

6.1.3 Specific Objective II: To assess the effect of quality and reliability on supplier performance at First Quantum Minerals Ltd.

Supplier performance is heavily influenced by quality and dependability, with operational success depending on constant product quality and on-time delivery. Organisations maintain high performance standards by placing a major emphasis on supplier assessments and quality assurance procedures.

6.1.4 Specific Objective III: To investigate the effect of aligning suppliers' capabilities with Organisational needs on supplier relationships in the Zambian mining sector.

Supplier relationships and overall efficiency are improved when supplier capabilities are in line with organisational requirements. Frequent capability evaluations promote cooperation, trust, and long-term relationships by ensuring that providers fulfil operational requirements.

6.1.5 Specific Objective IV: To examine the effect of sustainability practices in supplier selection decisions at First Quantum Minerals Ltd.

Environmentally conscious vendors are becoming more and more popular, and sustainability is having an impact on supplier selection. The dedication to sustainable procurement is strengthened by routine audits and performance evaluations, which match supplier selection with more general environmental and corporate responsibility objectives.

6.2 Contributions to the Body of Knowledge

This research contributes to the body of knowledge by providing empirical insights into the critical factors influencing supplier selection and performance in the Zambian mining industry. It highlights the interrelationships between cost considerations, quality,

reliability, sustainability practices, and the alignment of suppliers' capabilities with Organisational needs, thereby advancing the understanding of supplier management in this specific context. By integrating quantitative and qualitative analyses, the study enhances existing theoretical frameworks and offers practical implications for industry stakeholders. Furthermore, it underscores the growing importance of sustainability in procurement decisions, positioning this research within the broader discourse on responsible sourcing and environmental stewardship in the mining sector.

6.3 General Recommendations

Based on the findings of this study, the following recommendations are proposed for First Quantum Minerals Ltd (FQM) and the Ministry of Mines and Minerals Development to enhance supplier selection and performance within Zambia's mining sector.

i. **Strengthen Supplier Quality Standards**

The Ministry of Mines and Minerals Development should implement industry-wide supplier quality regulations to ensure mining companies engage only with reliable suppliers. FQM should establish clear guidelines that balance cost efficiency with supplier quality and reliability, ensuring long-term operational performance is not compromised.

ii. **Improve Supplier Relationship Management**:

FQM should formalize a supplier relationship management framework that fosters collaboration, trust, and open communication. Regular performance reviews and engagement forums should be introduced to ensure suppliers align with the company's operational and strategic goals.

iii. **Enforce Rigorous Supplier Assessments:**

To assess suppliers' capacity to satisfy operational requirements, FQM must regularly do audits and capability assessments. This will make it possible to spot performance gaps early and take the appropriate remedial measures. To raise industry standards, the Ministry of Mines ought to require regular evaluations of third-party suppliers throughout the industry.

iv. **Integrate Sustainability into Supplier Selection**:

Guidelines for sustainability that encourage ecologically conscious sourcing ought to be enforced by the Ministry of Mines. Waste management and energy efficiency are two examples of supplier evaluation criteria that FQM should incorporate sustainability into. Regular sustainability audits will ensure compliance.

v. **Educate Stakeholders on Supplier Selection Criteria**:

Procurement officers and other important stakeholders should get procurement training from the Ministry of Mines in partnership with FQM. To improve decision-making and procurement efficiency, these programs ought to include sustainability factors, cost-benefit analysis, and supplier selection criteria.

vi. **Foster a Culture of Continuous Improvement**:

By gathering supplier input, examining performance patterns, and modifying procurement methods as necessary, FQM should promote a culture of continuous improvement. By holding workshops and providing cooperative venues for mining companies to exchange supplier management experiences, the Ministry of Mines could encourage industry-wide best practices.

6.4 Future Research Areas

Future research in supplier selection and performance within the Zambian mining industry could explore several areas. First, longitudinal studies assessing the long-term impact of sustainability practices on supplier relationships would provide deeper insights into the evolving landscape of responsible sourcing. Additionally, investigations into the role of digital technologies, such as block chain and artificial intelligence, in enhancing supplier transparency and efficiency could offer valuable perspectives. Research could also examine the implications of geopolitical factors and economic shifts on supplier selection strategies, particularly in the context of resource scarcity and environmental regulations. Lastly, a comparative analysis of supplier selection practices across different industries within Zambia could yield insights into best practices and opportunities for cross-sector learning.

6.5 Limitations of the Study

The study acknowledges several limitations that may impact the generalizability and interpretation of the findings. First, the research is primarily focused on First Quantum Minerals Ltd in Zambia, which may limit the applicability of the results to other Organisations or regions within the mining industry. The specific context of this company might not reflect the broader trends across different mining firms or geographical locations. Second, the reliance on self-reported data from respondents may introduce biases, as participants might provide socially desirable answers rather than their true perspectives on supplier selection and performance. Additionally, the study's cross-sectional design restricts the ability to draw causal inferences about the relationships among the examined variables. Longitudinal studies could provide deeper insights into how these factors evolve over time. Finally, while the study covers multiple dimensions of supplier selection, it may not encompass all possible factors influencing supplier relationships, such as political, economic, and cultural influences specific to the mining sector. Addressing these limitations in future research could enhance the robustness of findings in this area.

6.6 Chapter Summary

Chapter Six provided a comprehensive overview of the conclusions drawn from the study on factors influencing supplier selection and performance in the Zambian mining industry. It highlighted the critical roles of cost considerations, quality and reliability, alignment of suppliers' capabilities with Organisational needs, and sustainability practices in shaping effective supplier relationships. The chapter emphasized the need for First Quantum Minerals Ltd. to adopt strategic recommendations aimed at improving supplier management processes and enhancing overall operational performance. Ultimately, it underscored the significance of leveraging these insights to foster stronger partnerships and drive competitive advantage in the mining sector.

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APPENDICES

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QUESTIONNAIRE

Dear respondent,

This questionnaire was compiled by Tinashe Luputa, a student pursuing a Master of Science in Procurement, Logistics and Supply Chain Management at the University of Lusaka. The purpose of administering this questionnaire is solely to gather the required information with the view to answer the research titled: **An Investigation into Factors Affecting Supplier Selection and Performance in the Zambian Mining Industry: A Case Study of First Quantum Minerals Ltd**

You are kindly required to respond to all the questions. The information that you shall provide will be highly treated with utmost confidentiality and therefore will not be shared with any third party but will be used for academic purposes only. Furthermore, you are not obliged to include your name or any identity number on this questionnaire. The information gathered will also be beneficial in the award of a Master's degree.

Please note that answering this questionnaire will not take you more than 20 Minutes of your valuable time.

INSTRUCTIONS

For your answers, you are kindly required to tick in the box or simply fill in the blank spaces indicated.

SECTION A

1. What is your gender?

Male ☐ Female ☐

2. What is your age?

20 years or less ☐ 21-30 years old ☐ 31-40 years old ☐

41-50 years old ☐ Above 50 years old ☐

3. What is your highest academic qualification attained?

High school or equivalent ☐ Technical or vocational training ☐

Diploma ☐ Undergraduate degree ☐

Other (please specify)

……...

4. How many years of experience do you have in the Mining industry?

Less than 2 years ☐ 3 - 5 years ☐ 6 - 10 years ☐

Over 10 years ☐

SECTION B

Question Five (05): What is the effect of cost considerations on supplier selection in the Zambian mining industry?

TABLE 1: To evaluate the effect of cost considerations on supplier selection in the Zambian mining industry.

Use the following scale: Strongly Agree (1); Agree (2); Neither Agree nor Disagree (3); Disagree (4); Strongly Disagree (5)

Cost considerations	1	2	3	4	5
Cost is the most important factor when selecting suppliers in the Zambian mining industry.					
Lower prices from suppliers significantly influence my Organisation's selection decisions.					
The total cost of ownership, including long-term costs, is considered when evaluating suppliers.					
Cost considerations are prioritized over quality when selecting suppliers.					
My Organisation regularly compares supplier costs to ensure competitive pricing.					

Question Six (06): How do quality and reliability influence supplier performance at First Quantum Minerals Ltd.?

TABLE 2: To assess the effect of quality and reliability on supplier performance at First Quantum Minerals Ltd.

Use the following scale: Strongly Agree (1); Agree (2); Neither Agree nor Disagree (3); Disagree (4); Strongly Disagree (5)

Quality and reliability	1	2	3	4	5
Quality of products/services provided by suppliers is critical to our operational success.					
Reliable delivery times from suppliers positively impact our overall performance.					
We prefer suppliers who have a proven track record of delivering quality products consistently.					
Supplier reliability is prioritized over cost considerations in our selection process.					
Our Organisation measures supplier performance based on their quality metrics.					
Quality of products/services provided by suppliers is critical to our operational success.					

Question Seven (07): In what ways does aligning suppliers' capabilities with Organisational needs affect supplier relationships in the Zambian mining sector?

TABLE 3: To investigate the effect of aligning suppliers' capabilities with Organisational needs on supplier relationships in the Zambian mining sector.

Use the following scale: Strongly Agree (1); Agree (2); Neither Agree nor Disagree (3); Disagree (4); Strongly Disagree (5)

Aligning suppliers' capabilities	1	2	3	4	5
Aligning suppliers' capabilities with our Organisational needs is crucial for maintaining strong relationships.					
Suppliers who understand our operational requirements tend to perform better.					

We regularly assess whether suppliers' capabilities meet our current and future needs.					
Strong supplier relationships are fostered when suppliers adapt to our Organisational changes.					
Our Organisation values suppliers who can innovate in line with our business objectives.					

Question Eight (08): How do sustainability practices impact supplier selection decisions at First Quantum Minerals Ltd.?

TABLE 5: To examine the effect of sustainability practices in supplier selection decisions at First Quantum Minerals Ltd

Use the following scale: Strongly Agree (1); Agree (2); Neither Agree nor Disagree (3); Disagree (4); Strongly Disagree (5)

Sustainability practices	1	2	3	4	5
Sustainability practices are a key consideration in our supplier selection process.					
We prefer suppliers who demonstrate environmentally friendly practices.					
Our Organisation assesses the sustainability of suppliers as part of their performance evaluation.					
The integration of sustainability practices into supplier operations influences our long-term relationships.					
Suppliers who prioritize sustainability are more likely to be selected by our Organisation.					

Question Nine (09): How is the supplier selection and performance in the Zambian mining industry?

TABLE 6: Supplier selection and performance in the Zambian mining industry

Use the following scale: Strongly Agree (1); Agree (2); Neither Agree nor Disagree (3); Disagree (4); Strongly Disagree (5)

Supplier selection and performance in the Zambian mining industry	1	2	3	4	5
Our supplier selection process significantly impacts our overall operational performance.					
Strong supplier relationships contribute to improved service delivery and customer satisfaction.					
We achieve better performance outcomes when suppliers align with our Organisational goals.					
The effectiveness of supplier selection directly affects our ability to meet project deadlines.					
Our Organisation relies on strong supplier performance to maintain a competitive edge in the mining industry.					

THANK FOR YOUR COOPERATION

Disclaimer: Should you need results of the final analysis of this questionnaire you can personally contact the researcher on: +260 97 3024740

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INTERVIEW GUIDE

Specific Objective i: To evaluate the effect of cost considerations on supplier selection in the Zambian mining industry.

1. How important are cost considerations when selecting suppliers for your Organisation?
2. Can you describe a situation where cost influenced your decision to choose a particular supplier?
3. What other factors, if any, do you consider alongside cost when making supplier selection decisions?
4. How does your Organisation ensure that it is getting competitive pricing from suppliers?
5. In your opinion, how do cost considerations impact the overall supplier relationship in the mining industry?

Specific Objective ii: To assess the effect of quality and reliability on supplier performance at First Quantum Minerals Ltd.

1. How would you define quality in the context of supplier performance?
2. Can you provide examples of how supplier reliability has impacted your operations at First Quantum Minerals Ltd.?
3. What measures does your Organisation take to evaluate the quality of products and services provided by suppliers?

4. In your experience, how does supplier quality influence the decision to continue or discontinue relationships with specific suppliers?
5. How do you prioritize quality and reliability in your supplier selection process compared to cost?

Specific Objective iii: To investigate the effect of aligning suppliers' capabilities with Organisational needs on supplier relationships in the Zambian mining sector.

1. How important is it for suppliers to understand your Organisation's operational requirements?
2. Can you share an example of a supplier who successfully aligned their capabilities with your Organisation's needs?
3. What processes do you have in place to assess whether a supplier's capabilities meet your current and future needs?
4. How does alignment with Organisational needs affect the strength of your supplier relationships?
5. In your view, what role does supplier innovation play in meeting your Organisational objectives?

Specific Objective iv: To examine the effect of sustainability practices in supplier selection decisions at First Quantum Minerals Ltd.

1. How do sustainability practices influence your Organisation's decisions when selecting suppliers?
2. Can you give an example of a supplier that was chosen based on their sustainability practices?
3. What criteria related to sustainability do you consider when evaluating suppliers?
4. How does your Organisation assess the sustainability performance of its suppliers?

5. In your opinion, how important is it for suppliers to prioritize sustainability in their operations, especially in the mining sector?

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SCHOOL OF POSTGRADUATE STUDIES

SUBMISSION OF DISSERTATION FOR EXAMINATION

Name of student: Tinashe Luputa

Student number: MSCPLSM23119716

Programme of study: Master of Science in procurement, Logistics and Supply Chain Management

Dissertation title: An Investigation into Factors Affecting supplier Selection and Performance in the Zambian Mining Industry: A Case Study of First Quantum Minerals Ltd

Signature of student: .....

Date: 07/01/2024

Supervisor's Comments:

I recommend this dissertation for submission for examination (If you do not recommend, kindly provide a written report and attach hereto).

Name of Supervisor: **DR ROY MANCHISI**

Signature of Supervisor: .....

Date: **07/01/2024**

SCHOOL OF POSTGRADUATE STUDIES
Plot No. 37413, Off Alick Nkhata Mass Media. P. O Box 36711, Lusaka.
Phone: +260211258505, 258409 Fax +260211233409; Cell +260976075850,961917862,
E-mail:unilus@zamnet.zm,ictar@zamnet.zm

UNILUS-RESEARCH ETHICS COMMITTEE

Ref no: FWA00033228-2410/24

Date: 25th October 2024

STUDENT NAME: Tinashe Luputa

An Investigation into Factors Affecting Supplier Selection and Performance in the Zambian Mining Industry: A Case Study of First Quantum Minerals Ltd

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

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Report #24356143

2 i School of Postgraduate Studies Title of the Research Project: An Investigation into Factors Affecting Supplier Selection and Performance in the Zambian Mining Industry: A Case Study of First Quantum Minerals Ltd. A Dissertation Submitted in partial fulfillment of the requirements for the Master of Science in Procurement, Logistics, and Supply Chain Management Name: Tinashe Luputa Student number: MSCPLSM23119716 DECLARATION I, Tinashe Luputa affirm that the presented work is entirely my own creation and has not been submitted for any academic degree at any other institution. 1 2 3 19 Reproduction of any portion of this thesis proposal requires the explicit written consent of both the author and the University of Lusaka. 1 2 19 Student Signature Date Supervised by: Dr. Roy Manchisi ..... 2 3 19 Supervisor Signature Date ii DEDICATION This thesis is lovingly dedicated to my family, whose unwavering love, sacrifices, and encouragement have been my greatest source of strength and inspiration. To my husband, Mr. Andrew Daniel Silwamba, who instilled in me the values of hard work, resilience, and integrity, and whose unconditional support has carried me through every challenge. Your belief in me, even when I doubted myself, has been the foundation upon which I have built my dreams. To my sister, Leon Luputa, whose constant cheer, humor, and companionship have reminded me that I am never alone in this journey. Your encouragement has meant more than words can express. To my friends, who stood by me through sleepless nights and

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SCHOOL OF POSTGRADUATE STUDIES

12TH TO 20TH JANUARY 2025 GBS800 DISSERTATION SUBMISSION

No	Item	Done
1	Were you registered for GBS800 in the JUL-DEC 2024 semester?	**YES**
2	Has your FINAL DISSERTATION been signed by your supervisor[1]?	**YES**
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6	What is your dissertation's total word count (including references and appendices)?	**19,950 WORDS**
	Candidate Name: Tinashe Luputa	
	Student Number: MSCPLSM23119716	
	Signature:	
	Date:09/01/2025	

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A STUDENT WHO DOES NOT MEET ALL REQUIREMENTS LISTED IN THE CHECKLIST ABOVE MAY NOT BE READY FOR SUBMISSION AND MAY HAVE TO RE-REGISTER FOR GBS800 IN THE FIRST SEMESTER OF 2025.

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2	If supervisor can't sign off the hard copy dissertation, approval for submission can be submitted by either: • Appending an electronic signature in the dissertation, or • Sending consent via email to abby.nakalinda@unilus.ac.zm or jmwewa@unilus.ac.zm (copying the student) the email must then be printed and included as part of the submission.
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