

**UNIVERSITY
OF
LUSAKA**

SCHOOL OF BUSINESS, ECONOMICS AND MANAGEMENT

**EVALUATING THE CHALLENGES FACED BY MSMEs IN IMPLEMENTING
SUPPLY CHAIN MANAGEMENT PRACTICES IN LUSAKA'S CENTRAL BUSINESS
DISTRICT (CBD)**

BY

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**A Dissertation submitted to the University of Lusaka in partial fulfilment of the
requirements for the award of the Bachelor of Science in Purchasing and Supply.**

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ABSTRACT

This study evaluated the challenges of MSMEs in the adoption of SCM practices in Lusaka CBD. MSMEs are an important part of the country's economic development because they generate employment, are sources of innovation, and help alleviate poverty. Unfortunately, most of them face operational inefficiencies due to structural limitations that militate against their growth. A mixed-methods approach was adopted, where 50 owners, managers, or supervisors were randomly sampled for quantitative and qualitative data using questionnaires and interviews.

Descriptive statistics and thematic analysis were used to analyze the data and ascertain the key drivers influencing SCM adoption. Three significant challenges were found to affect MSMEs: weak supplier relationships, financial constraints, and limited technological adoption. Although most MSMEs reported frequent supplier engagements, the lack of formalized relationships and regular communication dampened supply chain reliability.

In addition, financial constraints were found to be the biggest limitation to investing in logistics, inventory management, and technology. While a majority of MSMEs have been found to use simple digital devices, the high cost of sophisticated systems and low digital literacy hindered integrating the businesses fully into technology.

Based on this, enhancing SCM practices among MSMEs calls for improving financing gaps, enhancing supplier collaboration, and encouraging digital transformation. Accordingly, the study suggests targeted interventions through affordable financing schemes, digital literacy training, formalization of supplier agreements, and institutional support from the ZDA and the Ministry of Small and Medium Enterprise Development.

It is expected that improved SCM will enhance not only the business efficiency of MSMEs but also their competitiveness, resulting in sustainable economic growth in Zambia.

Key words: Micro, Small and Medium Enterprises (MSMEs); Supply Chain Management (SCM); Financial Constraints; Technology Adoption; Supplier Relationships

DECLARATION

I, Japhet **Daka**, do hereby declare that this dissertation is my own original work. It has been guided and marked by my supervisor in accordance with the guidelines Bachelor of Science in Purchasing and Supply at University of Lusaka. It has not been submitted elsewhere for a degree at this or any other University.

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A handwritten signature in black ink, appearing to be 'JAPHET DAKA', written over a horizontal line.

Date: 28/11/2025

DEDICATIONS

I dedicate this dissertation to my wife and children who constantly encouraged me throughout this journey despite the hiccups encountered, and the well-able lecturers that have had some input in the research for morale, support or otherwise.

ACKNOWLEDGEMENTS

I would like to acknowledge my supervisor for the guidance rendered to me throughout this research. I also would like to acknowledge that some of the information herein has been outsourced from various empirical research studies done by other researchers.

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CHAPTER ONE: INTRODUCTION

1.0 Introduction

Micro, Small, and Medium Enterprises (MSMEs) are the backbone engines of socio-economic development, particularly in emerging economies such as Zambia. MSMEs contribute to employment creation, income generation, innovation, and inclusive growth. According to the International Trade Centre (2021), MSMEs account for over 90% of total businesses and employ over 60% of the sub-Saharan African labor force. Zambia's MSMEs are projected to account for approximately 70% of the nation's Gross Domestic Product (ZDA, 2020). MSMEs form the lifeline of business activities within Lusaka's Central Business District (CBD), ranging from retail and services to light manufacturing.

In spite of their significance, most MSMEs in Zambia experience structural and operational limitations that make them unable to implement efficient supply chain management (SCM) practices. SCM entails synchronization of all the activities ranging from raw material procurement to the last delivery of products or services to the customer. Effective SCM improves cost-effectiveness, responsiveness to the market, and customer satisfaction (Chopra & Meindl, 2019). MSMEs, though, are commonly confronted with problems like restricted access to capital, poor infrastructure, low technology adoption, limited managerial capabilities, and regulatory obstacles (Nyoni, 2022). Such problems are especially pronounced in densely populated and highly competitive areas such as the Lusaka CBD.

Lack of streamlined supply chain practices among MSMEs can lead to inefficient management of inventory, delays, higher operating expenses, and decreased competitiveness. Additionally, the informality of most MSMEs worsens the scenario since they do not have formalized systems and access to support services (World Bank, 2020). This research seeks to assess the precise obstacles Lusaka's CBD MSMEs encounter in adopting SCM practices. The study will add to existing knowledge on these constraints and suggest context-specific solutions to assist MSMEs in improving their supply chain operations. This knowledge is important in guiding public policy, entrepreneurship development initiatives, and stakeholder support structures towards the growth of Zambia's MSME industry.

1.1 Background to Study

In the last decades, Micro, Small, and Medium Enterprises (MSMEs) have increasingly been recognized as impellers of growth, innovation, and poverty reduction in the majority of developing economies. In Zambia, MSMEs contribute significantly to the country's economy, with more than 90% of business ventures and employing more than 70% of the labor force (ZDA, 2020). Lusaka's Central Business District (CBD), as the hub of business activities, houses a high concentration of MSMEs that provide retail, service, and informal business services. Although economically important, the MSMEs in the CBD suffer from serious operational inefficiencies that limit their competitiveness and growth potential. One of the areas of utmost concern is the negative adoption and application of supply chain management (SCM) techniques, which are essential in coordinating production, inventory, distribution, and customer support. With a globalized and competitive business environment, effective SCM can be a strategic means of increasing efficiency, reducing costs, and enhancing delivery of service opportunities yet to be tapped by the majority of MSMEs within Lusaka's CBD.

The lack of effective SCM systems in MSMEs can be attributed to various challenges that involve limited finance access, inadequate infrastructure, technical incompetence, bad supplier relationships, and the fact that most companies are informal. Such limitations translate into inefficient control of inventory, irregular delivery schedules, and customer dissatisfaction, all of which compromise business sustainability. Moreover, most MSMEs operate in a non-formalized setup and with minimal strategic planning, leaving them vulnerable to market fluctuations and supply chain disruption (World Bank, 2020). The research views these persistent SCM issues as both a limitation and a potential: a limitation in the sense that they inhibit the development of MSMEs, and a potential in the act of resolving them, releasing considerable economic promise. This study, therefore, seeks to evaluate these challenges in an integrated manner, determine gaps in the current practices, and propose viable, scalable methods of enhancing SCM among MSMEs in Lusaka's CBD. Addressing these challenges is critical towards supporting business resilience, economic inclusion growth, and maintaining national development goals.

1.2 Statement of the Problem

Small and Medium Enterprises (SMEs) are significant contributors to the growth of Zambia's economy, especially in the Central Business District (CBD) of Lusaka, where they greatly

contribute to employment creation and business expansion. Despite being an important source, most SMEs have been struggling with chronic problems in embracing Supply Chain Management (SCM) best practices, which eventually affects their competitiveness and survival.

Poor supplier relationships, ineffective logistics and transport infrastructure, limited access to finance, and inefficient inventory and demand forecasting are some of the most prominent concerns. Moreover, regulatory issues and expensive operating costs also add to the complexity of supply chain activities for SMEs in the CBD. Inadequate adoption and integration of technology also impact the efficiency of supply chain activities, restricting the capacity of SMEs to effectively respond to market demands.

Although SCM has been identified as one of the drivers of business efficiency, little research has been conducted on how SMEs in the Lusaka CBD mitigate these challenges. Identifying these challenges and possible solutions is important to inform and develop SME guidelines and resilience. The purpose of this research was to assess the SCM specific problems of SMEs operating in the CBD of Lusaka and recommend measures to increase their supply chain effectiveness and general business performance.

1.3 Research Objectives

1.3.1 Main Objective

To Evaluate the challenges faced by MSMEs in implementing Supply Chain Management Practices in Lusaka's Central Business District (CBD).

1.3.2 Specific Objectives

- i. To examine the impact of supplier relationships on the effectiveness of supply chain management practices among SMEs in Lusaka's Central Business District (CBD).
- ii. To assess the role of financial constraints in limiting the adoption and implementation of supply chain management practices by SMEs in Lusaka's CBD.
- iii. To analyze the effect of technological adoption on supply chain efficiency and business performance among SMEs in Lusaka's CBD.

1.4 Research Questions

- i. How do supplier relationships impact the effectiveness of supply chain management practices among SMEs in Lusaka's Central Business District (CBD)?
- ii. To what extent do financial constraints limit the adoption and implementation of supply chain management practices by SMEs in Lusaka's CBD?
- iii. How does technological adoption affect supply chain efficiency and business performance among SMEs in Lusaka's CBD?

1.5 Significance of the Study

This study is significant as it addresses a key knowledge gap on MSME operational inefficiencies in Zambia's most dynamic business hub the Central Business District of Lusaka. The findings will be of great utility to MSME managers and entrepreneurs by identifying manageable issues of supply chain management and proposing feasible solutions to improve their operations. Institutions and policymakers such as the Zambia Development Agency (ZDA) and the Ministry of Small and Medium Enterprise Development can also benefit from the research by translating the findings into support policies, capacity development, and infrastructure enhancements.

Furthermore, development and finance institutions like NGOs and microfinance institutions will be well-placed to structure their services and interventions to meet the actual supply chain needs of MSMEs. Researchers and academics in business and economics will also consider the study a key reference material for future studies in enterprise efficiency and sustainable entrepreneurship in urban settings. Overall, the study contributes to enhancing MSME competitiveness, employment generation, and the overall economic growth of the country in offering insights to Zambia.

1.6 Scope of the Study

The study was geographically limited to Lusaka's Central Business District (CBD), which is the center of small and medium-scale business operations in Zambia. The study focused on Micro, Small, and Medium Enterprises (MSMEs) that are either registered or not registered but operating within the district. MSME owners, managers, and principal personnel handling logistics, purchasing, and overall operations form the study population. The sample was taken by purposive and stratified sampling to give sectoral coverage in retail, services, and small-scale industries sectors.

Ideologically, the research was guided by supply chain and operational efficiency theory that draws on principles of logistics, procurement, and resource optimization in measuring business concerns. The research did not extend its reach to big companies or MSMEs outside the Lusaka CBD, thereby enabling focused study within a high-density urban commercial setting.

1.7 Operational Definitions

Micro, Small, and Medium Enterprises (MSMEs): Businesses categorized based on the number of employees, turnover, and asset size, typically employing fewer than 100 people and with limited capital resources, as defined by the Zambia Development Agency (ZDA, 2020).

Supply Chain Management (SCM): The coordination and integration of procurement, production, inventory management, and distribution activities aimed at improving efficiency, reducing costs, and ensuring timely delivery of goods and services to customers (Chopra & Meindl, 2019).

Implementation: The process through which MSMEs adopt and put into operation specific supply chain management practices within their business processes.

Challenges: Refers to barriers or constraints financial, technical, infrastructural, or human resource-related that hinder MSMEs from effectively adopting and managing SCM practices.

Central Business District (CBD): A designated commercial zone in Lusaka that serves as the primary area for business, retail, and administrative activities.

Operational Efficiency: The ability of a business to deliver products or services in the most cost-effective manner while ensuring quality, speed, and responsiveness in its supply chain processes.

CHAPTER TWO: LITERATURE REVIEW

2.0 Introduction

This literature review examines the global, regional, and local dynamics that influence the implementation of Supply Chain Management (SCM) practices in Micro, Small, and Medium Enterprises (MSMEs), with a specific focus on the Central Business District (CBD) of Lusaka. The review draws on diverse empirical studies, theoretical frameworks, and a conceptual framework to explore critical supply chain issues, including supplier relationships, financial constraints, and the adoption of technology. It culminates in identifying gaps in the current body of literature that this study aims to address.

2.2 Non-Empirical Review

The implementation of Supply Chain Management (SCM) practices among Micro, Small, and Medium Enterprises (MSMEs) is driven not only by empirical reality but also by theory and conceptualization that better capture the forces driving supply chain performance. This section explores non-empirical perspectives, grounded in available theory and conceptual frameworks, to outline the challenges and potential of MSMEs in adopting SCM, particularly within the context of Lusaka's Central Business District (CBD).

2.2.1 SCM as a Strategic Asset

The Resource-Based View (RBV) theory situates SCM as a strategic asset that has the capacity to generate competitive advantage when MSMEs possess resources that are valuable, rare, inimitable, and non-substitutable. SCM entails capabilities such as supplier coordination, inventory management, and technological convergence, which, when integrated, enhance responsiveness and agility. MSMEs typically lack the financial, technical, and relational capital necessary to leverage these capabilities effectively. The RBV model thus highlights the importance of deliberate resource acquisition and capability development to leverage SCM's potential for strategic value. For MSMEs operating in the Lusaka CBD setting, the operating environment is highly dynamic and competitive, with resource limitations being the norm. The RBV paradigm asserts that strategic interventions, such as managerial training, exposure to low-cost technologies, and strategic partnerships, will enable MSMEs to secure the in-house capabilities necessary to maximize SCM usage.

2.2.2 Governance and Efficiency in Supply Chain

The Transaction Cost Economics (TCE) theory offers a perspective on the governance structures that influence supply chain efficiency. It is concerned with Minimising transaction costs, such as those for negotiation, monitoring, and enforcement, through formal contracts and reliable supplier relationships. MSMEs, particularly informal economies like Lusaka's CBD, are characteristically lacking such structure, resulting in high coordination costs, frequent disruptions, and low scalability.

TCE theory is conducive to institutional support for the formalisation of supply chain relationships and the reduction of uncertainty. At the grassroots level, this would involve government-led initiatives to formalise procurement processes, strengthen legal frameworks for supplier contracts, and build trust among supply chain actors. These interventions would reduce opportunism and make supply chain networks more stable and efficient.

2.2.3 Technological Integration and Innovation

Non-empirical texts also refer to the technological adoption function as a means of enhancing SCM performance. Conceptual frameworks suggest that computer platforms, such as Enterprise Resource Planning (ERP) software and mobile applications for inventory management, have the potential to increase coordination, visibility, and decision-making significantly. MSMEs often struggle to adopt best practices due to a lack of adequate technical literacy and limited financial resources.

In the CBD of Lusaka, where digital infrastructure is not evenly distributed, conceptual models propose a phased approach to technology adoption, accompanied by training and subsidies. These models recommend that even basic digital tools can contribute meaningfully to supply chain visibility and responsiveness, if they are localised and adjusted to the realities of MSMEs' operations.

2.2.4 Institutional Support as a Moderating Variable

Across theory models, institutional support emerges as an essential moderating variable capable of increasing or decreasing SCM threats. Through either policy recommendations, funding, or capacity-building initiatives, institutions take centre stage in shaping the supply chain environment

for MSMEs. Conceptual scholarship suggests that without this support, MSMEs would become trapped in cycles of inefficiency and informality.

In Lusaka's CBD, institutional support or lack thereof may either make or break SCM programs. Conceptual frameworks propose multi-stakeholder collaboration among government, academia, and private sector stakeholders to co-design contextually appropriate and scalable solutions.

2.3 Empirical Review

2.3.1 Global Insights

Ramadhani et al. (2024) highlight the persistent challenges faced by MSMEs in Indonesia, particularly their excessive dependency on single sources of supply, low adoption of digital technologies, and inadequate supply chain transparency. These weaknesses contribute to unstable inventory levels and increased operational costs, ultimately undermining resilience. The study underscores the vulnerability of MSMEs to disruptions and inefficiencies when diversification and digital monitoring systems are absent, pointing to the urgent need for diversified supplier bases and digital integration.

Mohanty and Prakash (2014) examine green supply chain practices in India, noting that they are often externally imposed through regulatory rules and market norms rather than internally adopted. MSMEs lack the training and resources to embed sustainability into their operations, resulting in superficial compliance rather than strategic integration. This study emphasizes the importance of targeted interventions to build awareness and capacity for sustainable SCM, suggesting that without internal capabilities, sustainability remains a weakly institutionalized practice.

Annisa et al. (2024) further explore Indonesian MSMEs, finding that low adoption of SCM and innovative practices hinders competitiveness and market outcomes. Inefficiencies in inventory management, customer service, and product development stem from the absence of systematic supply chain systems and innovative strategies. The study argues for stronger policy and institutional support to drive SCM literacy and innovation, indicating that without such interventions, MSMEs remain stagnant and uncompetitive.

Abdurahim and Kusmantini (2025) investigate ICT integration in Bantul and Sleman, showing that digital platforms significantly enhance coordination, real-time access to information, and decision-making. However, adoption remains low due to deficiencies in technical capacity and financial resources. The study recommends training and affordable technology solutions as critical interventions to bridge these gaps, suggesting that even basic ICT tools can substantially improve SCM performance if properly supported.

Rahardjo et al. (2025) conduct a worldwide systematic review, identifying financial and technological limitations as common obstacles to SCM adoption among MSMEs in developing nations. These constraints prevent firms from implementing new systems or acquiring the necessary skills to use them effectively. The review emphasizes the need for contextualized solutions tailored to local conditions, warning that uniform interventions fail to capture the heterogeneity of challenges faced globally.

2.3.2 Southern & Eastern Africa

Okon (2018) highlights inefficiencies in Nigerian MSMEs, particularly the lack of trust, regulatory barriers, and inadequate logistics infrastructure. These factors hinder cooperation and integration, resulting in fragmented operations. The absence of trust among stakeholders prevents information sharing and joint problem-solving, while regulatory complexities increase compliance costs and delay transactions. The study calls for institutional reforms to build trust and reduce regulatory burdens.

In Ethiopia, MSMEs are heavily dependent on raw material availability and lack structured supplier relationships. This leads to irregular delivery schedules and inconsistent input quality, which negatively affect service reliability and customer satisfaction. The study suggests that formalizing supplier relationships and improving procurement systems would stabilize supply chains and enhance performance.

Tanzanian MSMEs face inefficient coordination between retailers and manufacturers, which results in inventory inefficiencies and customer mistrust. Without coordinated operations, firms experience frequent stockouts or overstocking, increasing costs and damaging brand reputation.

The study emphasizes the need for improved coordination mechanisms and investment in inventory management systems to promote integration.

Ugandan MSMEs are hindered by inadequate infrastructure and limited technical skills, preventing them from adopting SCM technologies. Reliance on manual handling and outdated systems makes them vulnerable to inefficiencies and errors. The study recommends investment in digital infrastructure and tailor-made training programs to build technical capabilities for effective SCM adoption.

2.3.3 Sub-Saharan Africa

In South Africa, SMEs in globally exposed sectors have begun incorporating SCM practices such as inventory management and logistics planning. However, the broader SME ecosystem remains characterized by poor digital integration, limiting real-time information sharing and responsiveness. Informal buyer-supplier arrangements dominate, leading to random delivery times, sub-standard quality, and minimal accountability. The study underscores the need for formal regulatory frameworks and digital transformation to strengthen SCM practices.

Kenyan SMEs are constrained by limited access to finance and poor transport infrastructure. The lack of capital restricts investment in advanced SCM technologies, qualified employees, and vendor expansion. Poor road networks and unreliable freight services further increase logistics costs and delays, particularly for perishable goods. The study calls for infrastructure upgrades and financing schemes tailored to SME needs.

In Ghana, informality is widespread, limiting MSMEs' access to institutional assistance, financial resources, and structured supplier networks. This results in broken supply chains and unstructured procurement patterns. Additionally, a lack of SCM knowledge among entrepreneurs leads to reactive rather than proactive management, causing frequent stockouts and missed opportunities. The study recommends tailored training and capacity-building initiatives to close knowledge gaps.

Rwanda has introduced supportive policy frameworks to promote SMEs, including improved access to finance and harmonized business registration. However, uptake of advanced SCM practices remains low due to poor capacity and training. The study highlights the gap between

policy objectives and practice, recommending mentorship programs, internet literacy campaigns, and industry-specific SCM training workshops to bridge this divide.

2.3.4* **Zambian Context*

Demberere and Kasongo (2021) study MSMEs in Lusaka's informal markets, finding that while firms appreciate the strategic benefits of SCM, practices remain limited due to structural and operational barriers. The absence of long-term supplier relationships undermines bargaining power and procurement consistency. Financial limitations and poor forecasting exacerbate stockouts and overstocking, with manual processes and informal procurement practices contributing to inefficiencies. The study calls for interventions to establish supplier relationships, provide financial mechanisms, and deliver basic SCM training.

Ismail et al. (2024) examine Zambian manufacturing MSMEs, showing that firms with SCM training achieve improved coordination, reduced waste, and better inventory turnover. However, most firms lack formal SCM frameworks, relying instead on informal agreements and ad hoc decision-making. The study emphasizes the necessity of training programs in SCM fundamentals, including demand forecasting, supplier coordination, and digital integration, to enhance performance.

Another study by Ismail et al. (2024) reveals that Lusaka SMEs lack supply chain integration strategies, with most firms unaware of SCM frameworks and reliant on informal procurement practices. This leads to fragmented operations and inefficiencies in inventory management and order fulfillment. The study identifies digital training and adoption as basic needs, stressing the importance of awareness creation and provision of low-cost digital solutions.

In Ndola, MSMEs face excessive stockouts and overstocking due to poor demand forecasting and lack of SCM software (Ismail et al., 2024). Manual processes increase lead times and wastage, negatively affecting profitability and customer satisfaction. The study recommends transitioning to mobile inventory systems to enable real-time tracking, automated alerts, and data-driven decision-making.

Kitwe's informal retail sector suffers from unreliable transport systems and ineffective supplier coordination (Ismail et al., 2024). Entrepreneurs report irregular delivery times, price instability, and insufficient storage facilities, which disrupt operations and reduce profits. The study proposes improved transport infrastructure and centralized warehousing solutions, alongside digital platforms or cooperative models to enhance coordination.

Livingstone MSMEs show openness to adopting SCM technologies but face challenges related to digital literacy and internet infrastructure (Ismail et al., 2024). Many entrepreneurs lack basic competencies in data entry and inventory management, limiting effective use of digital platforms. The study recommends mobile-based SCM systems, digital skills training, and access to microfinancing to overcome technological and financial barriers.

2.4 Theoretical Framework

2.4.1 Resource-Based View (RBV) Theory

The Resource-Based View (RBV) theory presumes that businesses acquire a competitive edge by leveraging unique resources and capabilities that are valuable, rare, inimitable, and non-substitutable. These resources could range from supply chain networks and managerial competence to technological adoption, all of which contribute to operational effectiveness and market responsiveness. Supply chain management (SCM) may be considered a strategic resource for Micro, Small, and Medium Enterprises (MSMEs) to optimise agility and competitiveness in uncertain markets (Ramadhani et al., 2024).

However, MSMEs often undergo significant constraints in exploiting SCM effectively due to limited access to relational, technical, and financial capital. Such limitations negate their ability to invest in new technologies, establish solid supplier relationships, and internalise competencies. As a result, the maximum potential of SCM as a strategic asset is unexploited, weakening the competitive positioning of MSMEs. The RBV model thus highlights the importance of building capability and accumulating resources as prerequisites for the effective implementation of SCM in MSMEs (Annisa et al., 2024).

2.4.2 Transaction Cost Economics (TCE) Theory

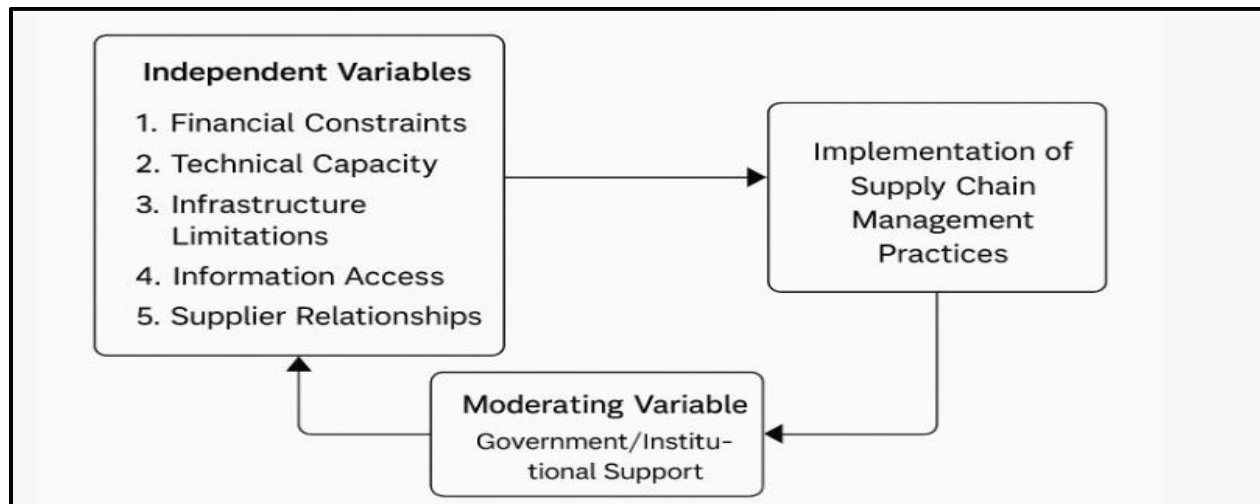
Transaction Cost Economics (TCE) theory emphasises maintaining low transaction costs through efficient coordination and governance structures in business relationships. These costs include those associated with negotiating, monitoring, and enforcing contracts, particularly in cases of high uncertainty and opportunism. Formal contract formation and credible supplier relationships are necessary for MSMEs to reduce such costs and improve supply chain performance (Okon, 2018).

MSMEs, however, are typically in informal settings with limited contractual protections and suboptimal supplier networks. This leads to excessive transaction costs in the form of inefficient coordination, distrust, and recurrent interruptions. Inadequate formal governance systems also exacerbate inefficiencies and the pace of supply chain activities. TCE theory thus emphasises the provision of institutional assistance and capacity building to enable MSMEs to engage in more formalised and efficient supply chain processes (Rahardjo et al., 2025).

2.5 Conceptual Framework

This conceptual framework illustrates how various internal and external factors (independent variables) directly influence the ability of MSMEs to implement SCM practices (dependent variable). Financial limitations limit investment in logistics machinery and inventory systems. Shortages in technical capacity hinder effective supply planning and forecasting. Infrastructure shortcomings, such as poor road networks and inadequate storage facilities, disrupt timely delivery. Inadequate access to supplier and market information compromises decision-making. Ineffective supplier relationships increase risks and transaction costs.

Figure 1: Conceptual Framework



Source: Author, 2025.

Government or institutional assistance is a moderating variable which can enhance or cushion the effect of these problems. For instance, if the government provides capacity development programs, MSMEs will be able to address technical voids effectively. Lacking assistance, the issues would compound, and SCM inefficiencies would increase. This model guides the investigation of what variables play the most significant role and where intervention is most needed.

2.6 Literature Gaps

Though regional and international literature confirms the experience of SCM problems by MSMEs, most of such research considers overall business limitations or is conducted in more formalised economies. Local-level research has primarily focused on MSME competitiveness and growth, while paying little attention to SCM practices in urban business districts, such as Lusaka's CBD. There is a clear need for a comprehensive, location-based examination of the issues MSMEs face in implementing SCM in Lusaka's CBD to guide targeted interventions and support strategies.

Furthermore, there is a notable lack of studies that assess how informal procurement and supplier relationship patterns specifically affect operational performance within Lusaka's MSMEs. Much of the Zambian literature focuses on broader industrial contexts (e.g., manufacturing), while the retail and informal service sectors, which are dominant in the CBD, remain understudied.

There is also insufficient investigation into the role of digital technology readiness and its contextual barriers, such as low digital literacy, cost of adoption, and infrastructure gaps in Lusaka's MSMEs. While some studies mention digital solutions broadly, few offer in-depth, locally grounded analyses of how these technologies are adopted or resisted in daily operations.

Another under-explored area is the intersection between institutional support and supply chain formalisation. Though institutional interventions are often recommended, there is little empirical work detailing which specific types of government or third-party support (e.g., training, funding, legal aid) have been most effective in enabling SCM adoption among MSMEs in Zambia.

Finally, limited attention has been given to gender dynamics and how they influence supply chain practices in MSMEs within Lusaka's CBD. This includes access to capital, technological tools, and supplier networks, factors that may differ significantly for male- and female-led businesses, yet remain under-researched.

CHAPTER THREE: METHODOLOGY

3.0 Introduction

This chapter outlined the research methodology used in the study. It explained the research design, approach, target population, sampling procedures, data gathering tools, and analysis techniques. It also described how issues of reliability and validity were addressed, as well as the ethical standards followed during the research process. The methodology was designed to ensure that the data collected were reliable, valid, and capable of addressing the research objectives.

3.1 Research Approach

The study employed a mixed-methods approach, collecting both quantitative and qualitative data. This approach was used to ensure completeness and a meaningful understanding of the issues MSMEs face in adopting supply chain management (SCM) practices. Quantitative data provided measurable and factual insights, while qualitative data provided deeper explanations and contextual understanding of the challenges faced by MSMEs.

The mixed methods approach also enabled triangulation, in which findings from quantitative and qualitative data complemented and validated one another. This enhanced the credibility and robustness of the results.

3.2 Research Design

A descriptive survey design was used in this study. This design was appropriate because it enabled systematic data collection and analysis to describe the nature and extent of SCM challenges faced by MSMEs. The descriptive survey design enabled comparisons across different business sectors within Lusaka's Central Business District (CBD) and facilitated both qualitative and quantitative data collection.

Alternative designs, such as case studies or experimental designs, were considered but deemed less appropriate. A case study would have provided in-depth information but limited generalizability, while an experimental design was not suitable given the non-manipulative nature of the research problem.

3.3 Study Population

The study population was determined by first identifying the specific category of businesses relevant to the research focus, Micro, Small, and Medium Enterprises (MSMEs) operating within

Lusaka's Central Business District (CBD). MSMEs were selected because they represented the most significant proportion of active businesses in CBD and were directly involved in day-to-day operations and supply chain activities. Owners, managers, and operations/logistics personnel were included because they possessed firsthand knowledge of business processes, challenges, and the decision-making frameworks required for the study.

The estimate of approximately 37,000 MSMEs in Lusaka's CBD was obtained from secondary data reported in the Journal of Economics, Finance and Management (2025). This figure represented the total number of MSMEs operating in the broader CBD area, not the number required for the study. Therefore, it served only as a sampling frame, helping define the total possible population from which a sample could be drawn.

However, the full population of 37,000 MSMEs was too large to study directly due to time, financial, and logistical constraints. Surveying the entire MSME population was also unnecessary, as statistically valid findings could be obtained from a much smaller sample using appropriate sampling techniques. Consequently, a representative subset of MSMEs was selected through sampling procedures, ensuring generalisability while keeping the study manageable.

3.4 Sample Size

The sample comprised 396 respondents from MSMEs operating in the Lusaka CBD. While the Yamane (1967) formula was used to determine a statistically appropriate sample size, practical limitations — such as time, accessibility, and resource constraints necessitated the selection of a smaller yet representative group.

The Yamane (1967) formula used was:

$$n = \frac{N}{1 + Ne^2}$$

Where:

- n = Sample size
- N = Total population
- e = Level of precision (sampling error), usually set at 0.05

Substituting the values:

$$n = \frac{37,000}{1 + 37000(0.05)^2}$$

$$n = 37,000 / 93.5 = \mathbf{395.7}$$

Although the calculated sample size was approximately 396 respondents, 50 respondents were selected to allow for in-depth data collection and closer supervision within the limited study timeframe and budget. The chosen number still yielded meaningful and credible results, as respondents were carefully stratified and purposively selected to reflect diversity across MSME types and sectors.

3.5 Sampling Methods

Both purposive and stratified random sampling techniques were used. Purposive sampling filtered MSMEs that were actively engaged in procurement, inventory management, or logistics to ensure relevance. Stratified random sampling was then employed to guarantee representation across various sectors such as retail, services, and small-scale manufacturing. This combination enhanced representativeness and minimised sampling bias.

3.6 Data Collection Instruments

Semi-structured questionnaires and key informant interviews served as the primary data collection instruments. The questionnaire included both closed and open-ended questions to gather quantitative and qualitative information. The interview guide provided flexibility for deeper exploration of issues.

The instruments were developed based on previous literature, theoretical frameworks, and research objectives. Academic experts reviewed them and pilot-tested them among five MSMEs in Lusaka to ensure clarity and reliability. Feedback from the pilot test led to minor adjustments in wording and structure before the actual data collection.

3.7 Data Analysis

Quantitative data were analysed using descriptive statistics, including frequencies, percentages, and means, in Microsoft Excel and SPSS version 27. This facilitated summarising and presenting findings in tables and charts. Qualitative data obtained from open-ended questions and interviews were analysed using thematic analysis. Emerging themes and patterns were identified through careful coding and categorisation.

Triangulation was employed to ensure that insights from both qualitative and quantitative analyses were mutually reinforcing. This integration enhanced the validity and interpretative depth of the findings.

3.8 Issues of Reliability and Validity

Reliability was ensured through pilot testing of the questionnaire among 5 MSMEs, and internal consistency was assessed using Cronbach's alpha. A reliability coefficient (α) value above 0.7 was considered acceptable. Validity was maintained through content and face validity checks conducted by research experts to ensure that the instruments adequately captured the constructs under study. Construct validity was achieved by aligning the research questions with theoretical concepts and the conceptual framework. External validity was supported by including diverse participants from multiple sectors within the CBD, enhancing generalizability.

3.9 Ethical Considerations

The research adhered to fundamental ethical principles, including informed consent, confidentiality, voluntary participation, and institutional approval. Participants were fully informed about the study's purpose, potential risks, and benefits before providing consent. Confidentiality and anonymity were maintained by coding all responses without attaching names or identifiable information. Participants volunteered and were free to withdraw at any time without penalty. Ethical clearance was obtained from the University of Lusaka Research Ethics Committee before data collection commenced.

CHAPTER FOUR: DATA PRESENTATION AND ANALYSIS

4.0 Introduction

In this chapter, we will explore an important part of this research which will contain its findings. The data that was collected will be presented using Tables, and Figures such as Pie Charts and Bar charts.

4.1 Demographic Information

Table 1: Position in the enterprise

Position	Count	Percentage
Owner	26	52%
Manager	17	34%
Supervisor	6	12%
Other	1	2%

Source: Research Data, 2025.

The research had revealed that most MSMEs are owner-run, reflecting the entrepreneurial nature of Lusaka's CBD. Managers form a significant portion, while supervisors and other roles are less common.

Table 2: Age of the business

Age of Business	Count	Percentage
Less than 1 year	3	6%
1–3 years	12	24%
4–6 years	15	30%
More than 6 years	20	40%

Source: Research Data, 2025.

The research revealed that the majority of the businesses are well-established, with 40% operating for more than six years. However, nearly one-third are in the 1 to 6 years of growth phase, showing a mix of maturity and new entrants.

Table 3: Type of business

Type of Business	Count	Percentage
Retail	20	40%
Service	17	34%
Manufacturing	12	24%
Other	1	2%

Source: Research Data, 2025.

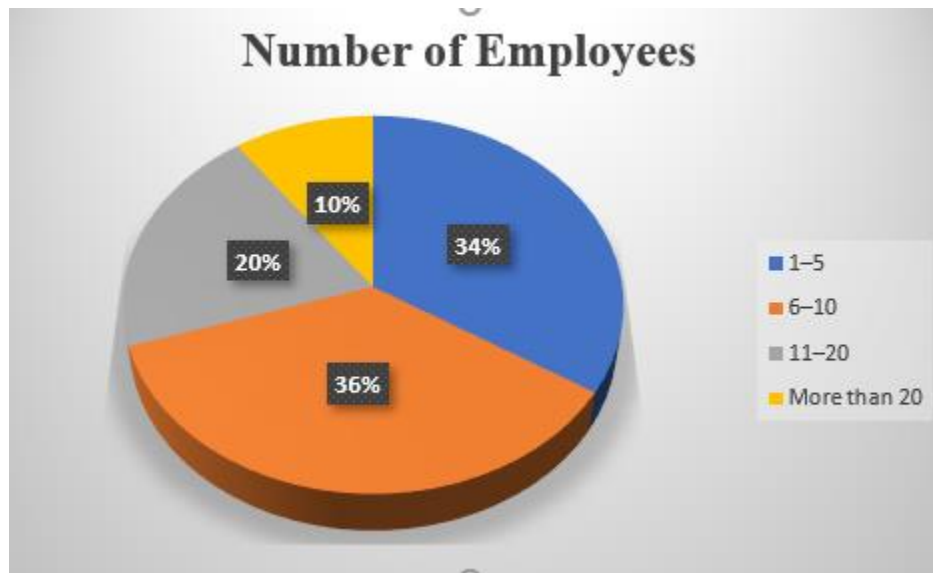
The research had revealed that retail businesses dominate the CBD, followed by service enterprises such as salons, restaurants, and consultancies. Manufacturing is smaller but still significant, while “Other” includes niche businesses like creative studios.

Table 4: Number of full-time employees

Employees	Count	Percentage
1–5	17	34%
6–10	18	36%
11–20	10	20%
More than 20	5	10%

Source: Research data, 2025.

Figure 2: Number of full-time employees.

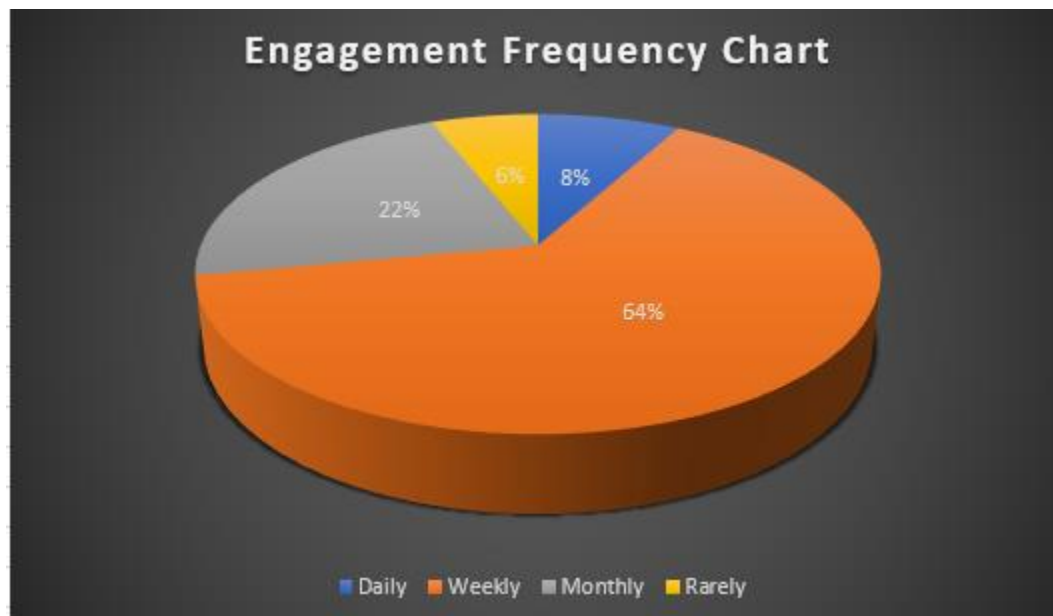


Source: Authour, 2025.

The study revealed that most MSMEs are small, with fewer than 10 employees. Only 10% employ more than 20 staff, reflecting the limited scale of operations typical of MSMEs in Lusaka's CBD.

4.2. Objective 1: Supplier Relationships

Figure 3: Engagement Frequency



Source: Author, 2025.

The study revealed that MSMEs in Lusaka CBD frequently engage suppliers but mostly through informal arrangements. These relationships lack structured contracts, trust-building mechanisms, and consistent communication. As a result, MSMEs experience irregular deliveries, poor bargaining power, and vulnerability to opportunistic supplier behavior. This weak relational capital undermines supply chain reliability and scalability.

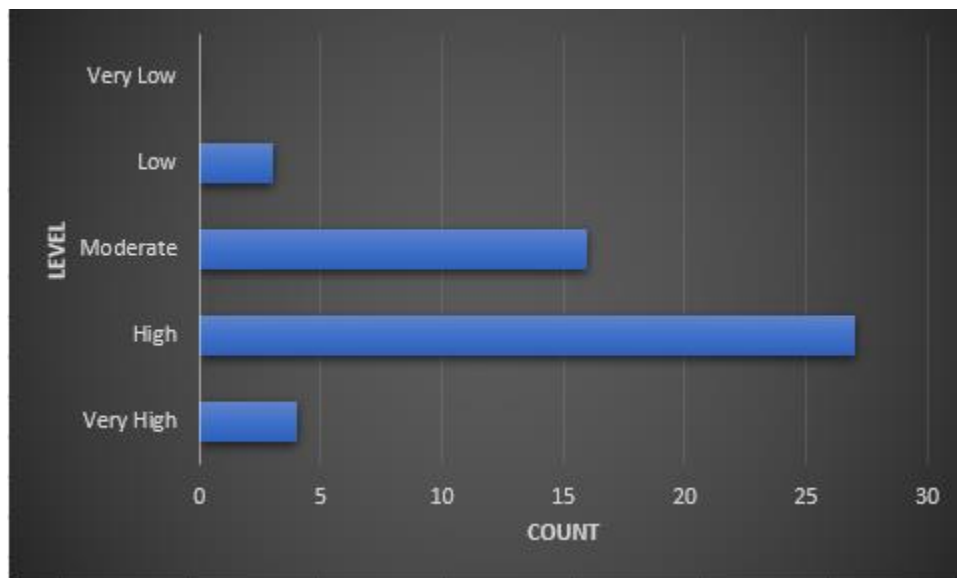
Table 5: Contracts with Suppliers

Contracts	Count	Percentage
Yes	34	68%
No	16	32%

Source: Research Data, 2025.

The research had revealed that two-thirds (which is 68 percent) of MSMEs formalize supplier relationships, but a significant minority still operate informally, exposing their businesses to risks.

Figure 4: Trust and Communication

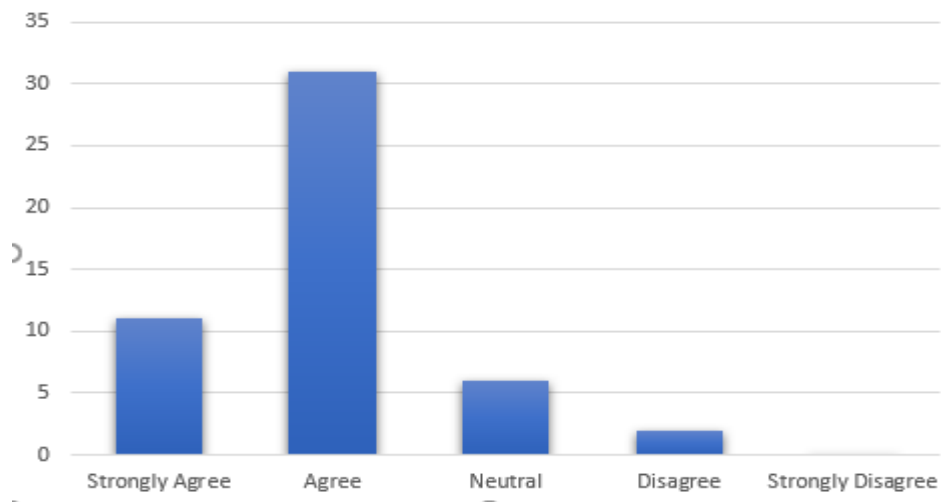


Source: Author, 2025.

The findings showed that trust is generally positive, but one-third of MSMEs reported only moderate levels, showing room for improvement from both the suppliers and the MSMEs.

4.3. Objective 2: Financial Constraints

Figure 5: Financial Limitations



Source: Author, 2025.

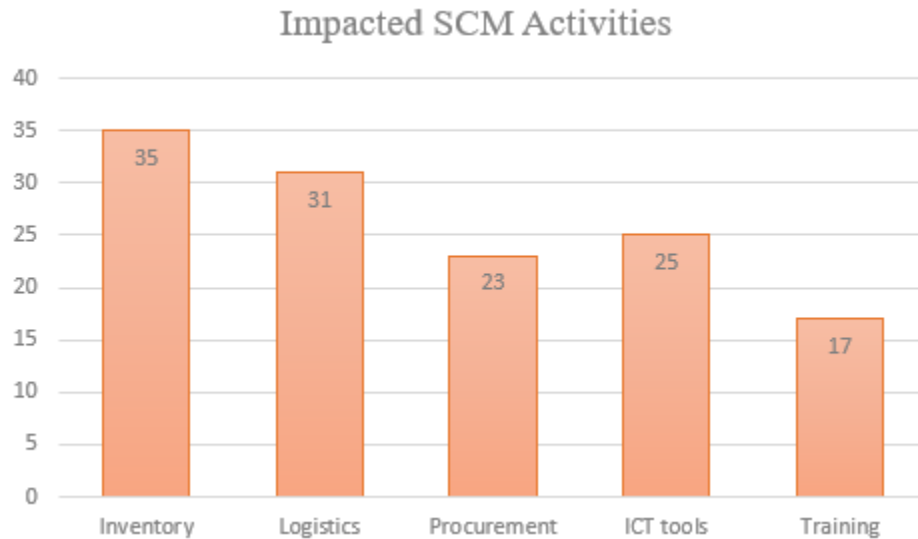
Table 6: Financial Limitations

Response	Count	Percentage
Strongly Agree	11	22%
Agree	31	62%
Neutral	6	12%
Disagree	2	4%
Strongly Disagree	0	0%

The findings showed that over 80% of the respondents confirmed that finances restrict SCM investment, showing widespread capital challenges.

Financial limitations emerged as the most significant barrier to SCM adoption. MSMEs rely heavily on personal savings and informal credit, which restricts investment in logistics, inventory systems, and technology. This financial gap translates into frequent stockouts, overstocking, and inability to adopt digital tools. The lack of affordable financing options directly hinders operational efficiency and competitiveness.

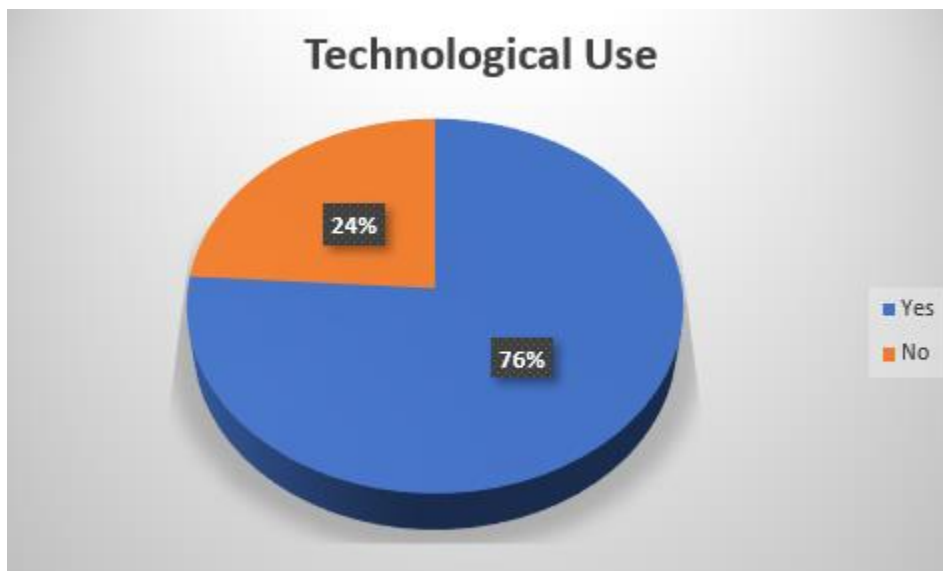
Figure 6: Impacted SCM Activities



The study revealed that inventory and logistics are most affected, reflecting high working capital and transport costs. The ICT tools are also affected but only up to 50 percent showing that there is an improvement in the technological area.

4.4. Objective 3: Technology Adoption

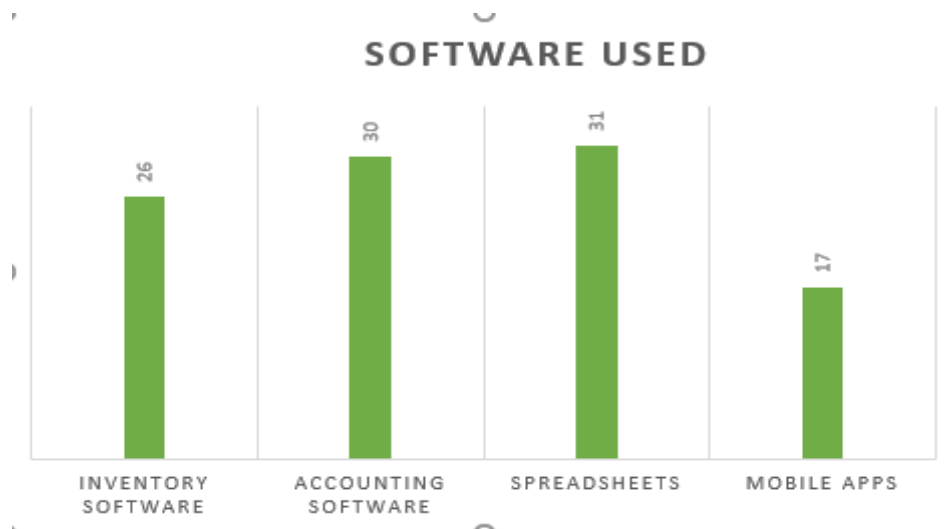
Figure 7:3.1 Technology Use



Source: Author, 2025.

The study revealed that 76 percent of MSMEs thus the majority of them are using technology, but nearly a quarter remain without digital tools.

Figure 8: Types of Technology Used

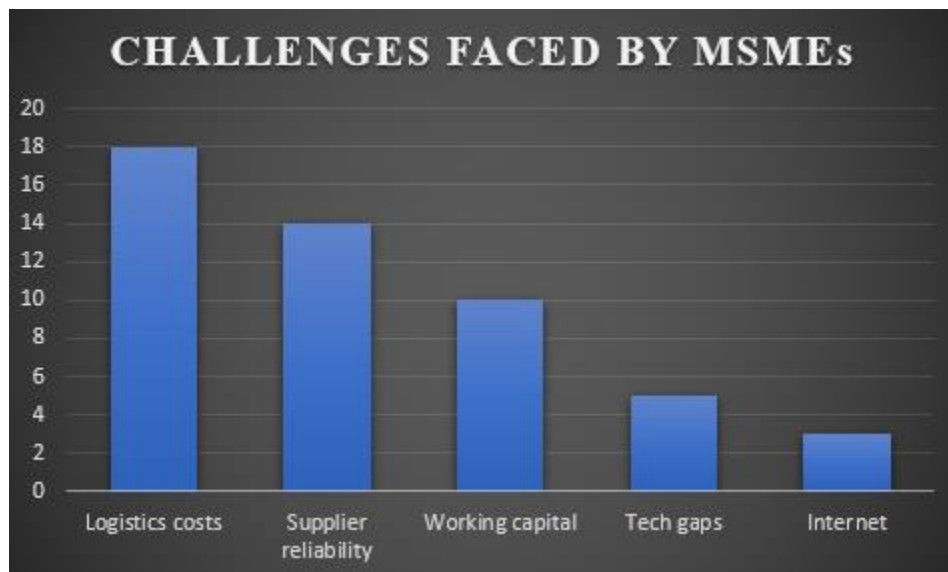


The study revealed that most MSMEs rely heavily on spreadsheets and accounting software, with limited adoption of advanced SCM systems.

Most MSMEs use basic digital devices such as mobile phones and spreadsheets, but they lack access to affordable SCM software and digital literacy. High costs of ERP systems, poor internet infrastructure, and limited technical skills prevent full integration of digital solutions. Consequently, MSMEs struggle with inventory tracking, demand forecasting, and customer service, leaving them less responsive to market dynamics.

4.5 General Opinion

Figure 9 :Biggest Challenges



Source: Author, 2025.

The research revealed that logistics costs and supplier reliability dominate as the biggest challenges faced by most of the MSMEs, followed by financial and technology gaps. Internet came in last showing that most MSMEs in the CBD of Lusaka have got access to the internet.

4.6 Conclusion of the Findings

The study identifies three major issues MSMEs encounter in the Central Business District of Lusaka: supplier reliability, financial constraints, and technology barriers. Among the issues identified were supplier reliability, delays, inconsistency in deliveries, and stock-outs, which affect the ability of a business to serve their customers. These disturbances weaken trust between MSMEs and their suppliers, making it difficult to maintain smooth operations and meet customer expectations. Strong supplier relationships are therefore seen as vital, yet many enterprises still lack formal contracts or structured communication channels to safeguard against these risks.

Another major limiting factor is financial constraints. Most MSMEs depend on the owner's savings or bank loans to arrange finance for supply chain activities, with rather limited access to

reasonable credit or microfinance facilities. The inability to secure enough financing prohibits them from making sufficient investment in inventory management, logistics, and employee training, and often causes a mismatch in customer demand. High operating expenses, especially transportation and procurement costs, put extra pressure on working capital, hence making firms susceptible to cash shortages. Without adequate financial support, MSMEs are unable to scale up their operations or adopt modern supply chain practices that could bring efficiency.

Technology adoption is beneficial, yet it remains unaffordable and requires skills that are not readily available. Most MSMEs engage in the use of simple tools like spreadsheets and some accounting software; very few have invested in advanced inventory management systems or mobile apps. Limited affordability of such services, inadequacy in terms of technical skills, and variable access to the internet restrain their full use of digital solutions. Many MSMEs, despite these barriers, were willing to adopt more technology if training and funding support were in place, indicating strong potential for digital transformation. Generally speaking, while MSMEs affirmed the importance of supplier relationships and technology adoption, the leading challenges to this effective supply chain management were attributed to a lack of financing and high costs within Lusaka's CBD.

CHAPTER FIVE: SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

5.0 Introduction

In this chapter, it will consist of a summary of the major findings of the research that was conducted, conclusions drawn from the study and the recommendations.

5.1 Summary

The study "Evaluating the Challenges Faced by MSMEs in Implementing Supply Chain Management Practices in Lusaka's CBD" aimed to determine major barriers that MSMEs face in adopting and implementing effective SCM practices. MSMEs, representing more than 90% of Zambia's business population and playing a vital role in creating jobs and contributing to economic development, still face structural and operational challenges which impede the efficient adoption of SCM. The study adopted a mixed-methods approach, integrating quantitative and qualitative data obtained through surveys and interviews from 50 MSMEs within Lusaka's CBD.

It was established that the key challenges facing MSMEs relate to weak supplier relationships, inadequate access to finance, and low levels of adoption of technology. Although 68% of MSMEs have some level of formal supplier engagement, supplier inconsistency, a lack of trust, and informal communication channels negatively affect the reliability of supplies. Financial constraints were found to be one of the key limitations; more than 80% of the respondents indicated that restricted access to affordable financing inhibits their ability to invest in inventory management, logistics, and employees' training.

On the other hand, despite about 76% of MSMEs adopting basic digital tools such as spreadsheets and accounting software, the use of advanced SCM technologies remains at a minimal level because of high costs and low digital literacy. All these challenges collectively lead to a reduction in operational efficiency and competitiveness among MSMEs in Lusaka's CBD.

5.2 Conclusion

The study concluded that MSMEs in Lusaka's CBD operate within a complex environment characterized by financial, technological, and relational constraints that severely limit the possibility of implementing effective SCM practices. Supplier reliability and trust remain inconsistent, while access to finance continues to be the most critical challenge. Most MSMEs therefore rely on personal savings or informal credit systems rather than institutional financing, which constrains their capacity to invest in modern supply chain systems.

A low adoption of technology is further weakened by low technical expertise and inadequate infrastructure. Despite these challenges, this study noted that MSMEs are conscious of the importance of SCM and willing to adopt modern practices once supported with training, policy incentives, and access to financial and technological resources. Overall, the study underscores that improving SCM among MSMEs is essential not only for firm performance but also for strengthening Zambia's broader economic resilience and competitiveness.

5.3 Recommendations

The study recommended a number of strategic interventions based on the findings. MSMEs should focus on creating strong relationships with suppliers through formalized contracts, building trust, and putting in place mechanisms that ensure smooth communication to improve the level of collaboration.

To strengthen supplier relationships, MSMEs in Lusaka's CBD should be encouraged to move beyond informal arrangements by adopting simplified contract templates that formalize agreements and reduce opportunism. Supplier cooperatives can be promoted to pool bargaining power, negotiate better terms, and stabilize procurement processes. In addition, regular trust-building workshops and forums between MSMEs and suppliers would foster transparency, improve communication, and enhance long-term collaboration, thereby reducing disruptions in supply chain operations.

Addressing financial constraints requires targeted interventions that provide MSMEs with affordable and accessible financing options. Micro-financing schemes specifically earmarked for

supply chain investments, such as inventory systems and logistics tools, should be introduced to bridge the financing gap. Partnerships between local banks and the Zambia Development Agency (ZDA) could facilitate low-interest SME supply chain loans, while financial literacy programs would equip MSMEs with the skills to forecast demand, manage working capital, and reduce reliance on informal credit sources. These measures would enable MSMEs to invest in efficiency-enhancing practices and improve their competitiveness.

Promoting technology adoption is essential for modernizing MSME supply chains. Mobile-based inventory management applications, designed with offline functionality to accommodate areas with poor connectivity, should be introduced as affordable alternatives to costly ERP systems. Digital literacy training hubs in Lusaka CBD, supported by the Ministry of Technology and private partners, would help entrepreneurs acquire the skills necessary to use these tools effectively. Furthermore, subsidized licenses for lightweight SCM software, provided through public-private partnerships, would lower adoption costs and encourage wider integration of digital solutions into MSME operations.

Institutional support must cut across all these interventions to ensure sustainability. The ZDA and the Ministry of Small and Medium Enterprise Development should co-design training and financing programs that are context-specific and scalable. Universities and training institutes should embed SCM modules into entrepreneurship curricula to build long-term capacity among future business leaders. Regional collaboration with other African countries facing similar challenges, such as Nigeria, Kenya, and South Africa, would allow Zambia to learn from best practices and pilot formalization initiatives that can be replicated across the continent. Finally, sustainability practices should be integrated into MSME training programs, moving beyond compliance to strategic adoption of green supply chain management, thereby positioning MSMEs for long-term competitiveness in both local and global markets..

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