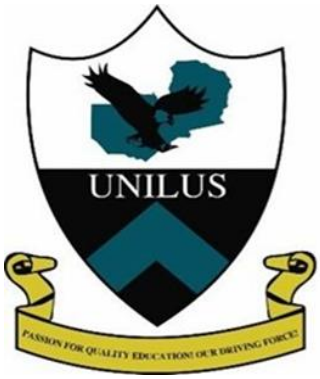


UNIVERSITY OF LUSAKA

SCHOOL OF POST GRADUATE STUDIES

ASSESSMENT OF THE CAUSES AND EFFECT OF UNACCOUNTED-FOR-STORES IN SELECTED STATUTORY PUBLIC SECTOR ORGANIZATIONS IN ZAMBIA

BY

NATASHA KASHIMOTO

SIN: MSCPLSM23119811

A DISSERTATION SUBMITTED TO THE SCHOOL OF POSTGRADUATE STUDIES, UNIVERSITY OF LUSAKA IN PARTIAL FULFILLMENT OF THE AWARD OF THE MASTER'S DEGREE IN PROCUREMENT, LOGISTICS & SUPPLY CHAIN MANAGEMENT

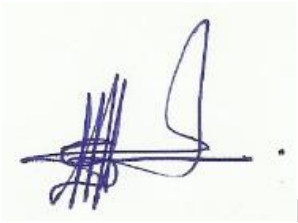
DECLARATION

I Natasha Kashimoto, declare that this Dissertation represents my own work and that all the sources I have quoted have been indicated and acknowledged by means of complete reference. I further declare that this Dissertation has not previously been submitted for a Degree or Diploma or other qualifications at this or other University.

Signed (Candidate)  **Date: 17/01/2025**

APPROVAL

The University of Lusaka approves this dissertation themed '**ASSESSMENT OF THE CAUSES AND EFFECT OF UNACCOUNTED-FOR-STORES IN STATUTORY PUBLIC SECTOR ORGANIZATIONS IN ZAMBIA**, in a partial fulfilment of the Master's Degree in Procurement, Logistics & Supply Chain Management.

Supervisor: DR S. SIKOMBE **Signature**:  **Date**: 17.01.2025

DEDICATION

This work is dedicated to my Husband and Family whose unwavering love, encouragement, and sacrifices have made this journey possible. I am also grateful to my Supervisor, Dr. Shem Sikombe, for his invaluable guidance and support throughout this research.

To my friends and family, thank you for your constant belief in me and for keeping me motivated during challenging times.

ACKNOWLEDGEMENTS

First and foremost, I thank God Almighty for his blessings and for giving me sufficient grace throughout my academic journey.

I would like to express my deepest gratitude to my supervisor, Dr. Shem Sikombe, for his continuous guidance, invaluable feedback, and constant support throughout the course of my research. His expertise and encouragement were significant in shaping the direction of this study.

My heartfelt thanks go to Choolwe Munsanje and Mubanga Kanyanta whose help made the data collection process smoother and more efficient.

I would like to extend my heartfelt thanks to my colleagues and classmate whose collaborative efforts and insightful feedback were invaluable throughout this research. Their willingness to engage in discussions and share their expertise helped to refine my ideas and strengthen the overall quality of this work.

Lastly, I am forever grateful to my family and friends for their unwavering support, patience, and encouragement throughout this journey. To my Husband Dr Chipili, your belief in me has kept me going, and I could not have done this without you.

ABSTRACT

Public sector organizations in Zambia have serious problems with accountability and efficiency due to unaccounted-for stocks. Investigating the connection between inventory management techniques (i.e., receiving and inspection, record management, storage procedures, and inventory internal controls) and unaccounted-for stores allowed this study to determine their causes and consequences. Two hundred and ten supply chain experts made up the sample for this correlational study. We used a 5-point Likert scale structured questionnaire to gather data, and then we used Pearson correlation analysis to see whether there were any connections.

The results revealed a negative relationship ($r = -0.58; p = 0.01$) between receiving and inspection practices and unaccounted-for stores, indicating that improved receiving processes reduce discrepancies. Positive relationships were observed between record management ($r = 0.65; p = 0.001$), storage practices ($r = 0.40; p = 0.045$), and inventory internal controls ($r = 0.72,; p = 0.011$) with unaccounted-for stores. These findings highlight that robust record-keeping, proper storage practices, and strong internal controls are essential for minimizing inventory discrepancies.

Improving storage conditions, investing in sophisticated record management systems, enhancing inventory internal controls, and upgrading receiving and inspection processes are among recommendations made in the report. To improve public sector inventory management even further, future studies should compare techniques across African nations, examine the impact of organizational culture, and focus on technology integration.

Keywords: *Unaccounted-for stores, inventory management, receiving and inspection, record management, storage practices, internal controls, public sector, Zambia*

TABLE OF CONTENTS

LIST OF TABLES

ACRONYMS

COSO	Committee of Sponsoring Organizations of the Treadway Commission
NPM	New Public Management
PMRC	Policy Monitoring Research Centre
SPSS	Scientific Package for Social Scientists
TOC	Theory Of Constraints
ZAMMSA	Zambia Medical Stores Agency
ZDA	Zambia Development Agency

CHAPTER ONE

1.0 Introduction

Stores play a crucial role in inventory, supply, and resource management strategies of public sector enterprises. Shagufta and Mohd (2022) emphasize that effective store management directly impacts organizational efficiency. Cyriacus and Chika (2021) outline that among the stores' numerous functions are the acquisition, upkeep, and distribution of merchandise. Furthermore, Nontuthuko and Albert (2020) highlight that many government agencies serve as point-of-sale locations where residents may purchase goods or access required services.

Active stores within government offices, healthcare facilities, and educational institutions are vital for ensuring the smooth movement of products and services. Despite their significance, public sector organizations face unique challenges due to the nature of their operations. Cyriacus and Obioma (2022) argued that store management efficiency is often severely compromised by inadequate receiving and inspection processes, inefficient inventory management, insufficient record keeping, and a lack of robust internal controls. Additionally, Shagufta and Mohd (2022) identified persistent issues such as maintaining accurate inventory records and preventing theft.

While extensive literature addresses general store operations, there's a notable scarcity of data specifically related to public sector stores. However, research conducted in retail and supply chain management offers valuable insights. Studies by Rohit and il (2023), Sergey et al. (2021), Martin et al. (2021), and Alfonso (2020) collectively stress the importance of optimizing inventory levels, enhancing customer experience, and reducing waste across industries. Conversely, Nontuthuko and Albert (2020), Sara and Joubert (2020), and Maciej (2023) point out that the understanding of inventory management within government agencies remains limited, with unresolved questions regarding inventory accuracy, service quality, and the role of technology in enhancing operational efficiency.

Moreover, investigating unregistered assets within government agencies is crucial. The operational inefficiencies in these stores can potentially cause significant service disruptions and financial losses. Addressing these deficiencies will enhance resource allocation and support evidence-based decision-making. This research intends to

highlight the need for a comprehensive analysis and propose improvements to fill the current knowledge gap in public sector store management practices.

1.1 Background of the study

Prior to defining the research problem, this section provides some context for the study. The section begins with a review of Zambia's statutory public sector institutions, which will be useful in this regard, and then goes on to stress the frequency of missing funds inside these agencies.

1.1.1 Zambia's Statutory Public Sector Organizations

The governance structure and efficient provision of services in Zambia are supported by the country's public sector entities. Formal public sector entities began to take shape immediately following independence. Zambia, upon declaring independence in 1964, adopted a central government structure that largely inherited colonial administrative frameworks. Mukwena (2001) observes that many changes have since been implemented to increase the efficiency and decentralization of government agencies.

During the 1990s, Zambia undertook New Public Management (NPM) reforms aiming to enhance productivity and quality in public services. Mulimbika et al. (2022) highlighted that these reforms resulted in the establishment of statutory bodies—semi-autonomous entities operating with greater flexibility than traditional government departments. Examples of such institutions in Zambia include entities like ZDA and ZAMMSA, which handle medicines and medical supplies.

According to the Office of the Auditor General (2022), most statutory public sector enterprises in Zambia comprise a governing board, executive management, and various operational divisions. While executive management is responsible for daily operations, governing boards establish strategic direction and oversight. WheelerBlog (2022) describes ZAMMSA as having clearly defined procurement, logistics, and quality assurance divisions, alongside an executive chief and board of directors.

Statutory public sector enterprises, especially those involved in procurement and distribution, rely significantly on effective supply chain management. WheelerBlog (2022) also notes that efficient resource management ensures improved service delivery by maintaining availability when and where needed. For example, ZAMMSA

manages distribution logistics for medical supplies across a network of over 2,600 healthcare facilities nationwide, employing both push and pull supply techniques to sustain medication availability. Nevertheless, operational efficiency can be challenged by factors like seasonality and logistical limitations.

Performance levels across Zambia's statutory public sector institutions vary considerably. While some agencies have significantly improved service delivery, others continue to face challenges such as corruption, inadequate resources, and inefficiency. Mulimbika et al. (2022) found that the application of NPM reforms yielded varied results, with entities like the Zambia Development Agency (ZDA) effectively applying NPM principles to enhance service quality and customer satisfaction. Conversely, bureaucratic inefficiencies and insufficient accountability persist within other organizations.

Despite the achieved progress, several impediments negatively impact the operational effectiveness of Zambia's statutory public sector entities. The Office of the Auditor General (2022) emphasized that financial and human resource constraints significantly hinder their operational capabilities. Furthermore, Transparency International Zambia (2021) identifies corruption as a major obstacle within certain statutory organizations, contributing to inefficient resource allocation and undermining organizational credibility. Mukwena (2001) further emphasizes that bureaucratic red tape and operational inefficiencies resulting from rigid hierarchical structures often cause slow decision-making and delayed service delivery. Mulimbika et al. (2022) argue that insufficient accountability measures further lead to poor performance and reduced transparency, highlighting the need for stronger accountability frameworks to enhance statutory agencies' effectiveness.

Several strategies could be beneficial for improving the efficiency of statutory public sector institutions in Zambia. The Office of the Auditor General (2022) suggests that enhancing governance mechanisms could substantially increase transparency and accountability, necessitating capable individuals serving on boards of directors. Mulimbika et al. (2022) propose capacity-building initiatives for personnel as a critical factor in enhancing skills and competencies, ultimately leading to improved job performance. Transparency International Zambia (2021) further stresses the importance of establishing robust financial management systems, including regular

financial reporting and audits, to promote transparency. Additionally, addressing corruption by rigorously prosecuting corrupt officials and fostering a culture of integrity remains crucial for meaningful reform and operational improvement.

Following Zambia's independence, the country's public sector underwent a radical transformation. While changes have led to improvements in certain areas, issues with the efficacy of service delivery and the efficiency of organizations still persist. To successfully address these difficulties, a comprehensive strategy is required, one that involves building anti-corruption programs, enhancing financial management procedures, building staff competencies, and strengthening governance structures. These changes will allow the statutory public sector institutions in Zambia to function more effectively and achieve their objectives.

1.1.2 The prevalence of unaccounted for stores in Public sector entities in Zambia

Money that has gone missing from Zambia's statutory institutions is still a major concern, according to multiple audits conducted by the country's auditor general. The term "unaccounted for shop" describes any situation in which a company or group purchases items but does not record the transaction details. As this example shows, both the inventory management procedures and the level of responsibility within the linked firms are severely deficient. A number of government departments and parastatals in Zambia have brought this issue to the attention of the Office of the Auditor General on many occasions (2022).

Stores owned by government ministries play a crucial role in the administration of resources, inventories, and supplies. Unaccounted stores, defined as items for which proper receipt and disposal records are missing, are a recurring theme in the Auditor General's reports. Unaccounted-for-stores increased significantly from K6 million in 2017 to K134 million in 2018, according to the Auditor General's report for the fiscal year ending on December 31, 2018 as noted by PMRC (2018). There was a lack of supporting paperwork for general supplies and petrol, according to the research. However, a significant irregularity equivalent to K418 million was the uncollected income for sent retailers. The growing challenge of effectively allocating public funds is illustrated by this substantial rise. Public resources must be used efficiently in view

of the current poverty and unemployment rates, as well as the persistent problem of resource wastage.

Unaccounted inputs, including bags of products valued at K1,890,929, were insufficiently documented inside warehouse systems, according to the 2019 Report of the Auditor General, which highlighted irregularities in inventory management. There were unrecorded purchases of K1.4 million, according to the report from 2021. Efforts to improve public financial management have not solved this problem. Financial accountability, service delivery, and public confidence are all severely compromised by the existence of unaccounted-for Unaccounted-for-stores. Tackling this topic effectively requires thorough monitoring, optimizing resource consumption, and maintaining openness throughout. The purpose of this research is to examine this phenomenon in depth, identify its root causes, and provide solutions for better resource management.

The frequency of unrecorded inventory inside statutory institutions in Zambia is impacted by a range of variables. Lack of sufficient internal controls is one of the main issues. The inadequacy of many organizations' internal control systems makes it difficult for them to keep proper inventory records. According to the Office of the Auditor General (2022), this vulnerability allows discrepancies in inventory paperwork to go unnoticed. The second component is a lack of proper instruction. In many cases, the people assigned to manage inventory do not have the proper education or experience to accomplish their jobs well. Inaccuracies and gaps in documentation are caused by this shortcoming as noted by PMRC (2018). Concerns about fraud and corruption make up the third component. An important factor that makes the problem worse is corruption and fraudulent actions. Dishonest people steal from the government by exploiting weak points in the system according to PMRC (2018)

Unaccounted-for-stores remains a challenge in Zambia’s public sector especially that it culminates into monetary losses. Because of untracked inventories, the government suffers huge financial losses. Critical governmental services and developmental programs have their allotted resources diminished due to financial losses as reported by the Office of the Auditor General (2022). Concerns about the decline of public trust are particularly pressing in the Zambian setting. The public's trust in government agencies is eroded by the persistent problems associated with unaccounted

inventories. The public's faith is dwindling by the day in these organizations' mandate of effectively managing and distributing resources. Consequently, PMRC (2018) laments that operational inefficiencies make it exceedingly difficult to provide public services effectively. Significant operational inefficiencies are the outcome of inadequate inventory management.

several parties have proposed several solutions to address the issue of unaccounted stockpiles. Improving internal controls is a top priority. In order to effectively oversee and monitor inventory management, organizations need set up thorough internal control systems. In order to quickly find and fix inconsistencies, this requires systematic reconciliations and audits as noted by the Office of the Auditor General (2022). Stakeholders have identified capacity building as the second measure. It is critical to provide capacity-building programs and thorough training for employees responsible for inventory management. Participants will get the necessary skills to carry out their duties effectively through this program as emphasized by PMRC (2018). The problem of unaccounted stores may be effectively and sustainably addressed through the introduction of anti-corruption measures. It is critical to prevent fraudulent actions by implementing strict anti-corruption measures.

In order to manage public resources effectively, it is vital to understand the public procurement environment in Zambia. According to the Zambia Public Procurement Authority (ZPPA) report from 2022, public procurement accounts for around 15% of Zambia's GDP. Delivery of services, improvement of infrastructure, and overall economic growth are all profoundly affected. The improvement of Zambia's procurement system has been substantial. The primary statutes that regulate procurement procedures are the Public Procurement Act No. 8 of 2020 and the Public Procurement Regulations of 2022. We must not overlook the significance of capacity-building. The ZPPA is in charge of overseeing the procurement activities as the regulating body. Honesty, openness, accountability, and justice are vital concepts.

Critical and urgent action is required due to the fact that Zambia's statutory institutions may have unrecorded inventories. Improving internal controls, training employees, and implementing thorough anti-corruption tactics are all critical for a successful resolution of this problem. Zambia may improve the administration of public funds and restore faith in its institutions by putting these policies into action. The purpose of this

research was to add to what is already known about the frequency of unrecorded funds in Zambia's statutory institutions by using a cause and effect approach.

1.2 Statement of the Problem

As a major audit finding across most government ministries, the persistent issue of unaccounted-for stores has traditionally been emphasized in the reports of the auditor general. Unreported shop sales increased from K1.4 million in 2021 to K25.5 million in 2022, indicating a substantial development of this issue, according to the research. Inadequate procedures in the areas of record keeping, storage management, receiving and inspecting shipments, and internal control implementation have been found to exacerbate the problem. Due to these shortcomings, problems including incomplete disposal paperwork, missing invoices, and unrecorded inventory have arisen. These stores' management practices result in substantial financial losses due to inefficiency. Because of inefficiency and theft, scarce resources are diverted from essential services when there is unaccounted-for inventory. Consequently, service delivery suffers. While existing rules and laws do provide necessary direction, there are still significant holes in how they are put into practice. As a result, research is carried out to identify causes, assess current approaches, and provide targeted solutions.

1.3 Research objectives

1. To ascertain the relationship between receiving and inspection and unaccounted for stores in public sector organizations
2. To determine the relationship between stores record management and unaccounted for stores in public sector organizations
3. To examine storage practices and their relationship with unaccounted for stores in public sector organizations
4. To assess the effectiveness of inventory internal controls and their relationship with unaccounted for stores in public sector organizations

1.4 Hypotheses

1. Ho: In government agencies, Unaccounted-for-stores inventory is not positively correlated with the receiving and inspection procedures.

Ha: The Unaccounted-for-stores stores inside public sector enterprises are positively correlated with the receiving and inspection processes.

2. Ho: The number of Unaccounted-for-stores stores in public sector companies is not positively correlated with the management of store records

Ha: In government agencies, the frequency of Unaccounted-for-stores stores is positively correlated with the adherence to store record management practices.

3. Ho: Government agencies' storage procedures are not positively correlated with their unaccounted-for stockpiles.

Ha: Discrepancies in inventory across public sector firms are positively correlated with storage procedures.

4. Ho: In government agencies, there is no association between inventory internal controls and unrecorded funds.

Ha: Unaccounted stores in public sector firms are positively correlated with inventory management implemented internally.

1.5 Scope of the study

Organizations in the public sector that are wholly owned and operated by the state through relevant ministries and were formed on statutory grounds were the only ones included in the research. Institutions with the largest numbers of unaccounted stores over the last five years and a history of not making their audited financial accounts publicly available were the focus of this investigation. Among these organizations are the following: The Business Regulatory Review Agency, the Citizenship Economic Empowerment Commission, the Zambia Environmental Management Agency, and the Zambia Institute of Mass Communication.

1.6 Significance of the study

Academic institutions, public sector organizations, and government agencies were among the many groups that deemed this sort of investigation crucial. A persistent problem that the auditor general has often pointed out as a major channel for the misappropriation of public funds, the results mainly pinpoint the origins of unaccounted-for-stores. Furthermore, the shortcomings in the Unaccounted-for-stores departments' internal controls are communicated to the leadership of public sector

entities. Finally, the study adds to the literature on the subject of unaccounted-for stores by shedding light on their causes and effects.

1.7 Summary of the chapter

Including the issue statement, research aims, hypotheses, scope, and importance of the study, this chapter lays forth the basic features of the research. This chapter emphasized the need of looking into missing goods from government agencies' inventory by focusing on receipt and inspection, inventory management, record keeping, and internal controls, among other store management tasks.

1.8 Report Structure

The research is structured into six chapters. The first chapter is introduction, the second chapter is literature review, the third chapter is research methodology, the fifth chapter is data analysis and findings, and the last chapter is conclusions and recommendations.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter presents a comprehensive literature review of the study, encompassing an empirical analysis, a theoretical framework, and a conceptual framework. The chapter commences by clarifying the fundamental concepts related to receiving and inspection, record management, inventory storage, and internal controls of inventory, all framed within the scope of warehousing as an integral component of logistics management. Subsequently, the empirical review will be outlined, followed by an examination of the theoretical framework, and concluding with the conceptual framework.

2.1 Non-Empirical Review

2.1.1 Principles of inspection and reception

Receiving and inspection are critical components of warehouse management, ensuring incoming commodities meet quality standards and align with purchase orders. Several essential processes must be followed to guarantee accurate inventory counts, optimize operational performance, and meet customer expectations. According to Cadre Technologies (2024), effective receiving involves anticipating the kind and quantity of incoming goods, maximizing accuracy, and preventing discrepancies through proactive planning.

Moreover, FCBCO (2024) highlights the importance of having adequate staff numbers and appropriate equipment, such as pallet jacks and forklifts, which are crucial for optimizing receiving processes. Ensuring the availability of these resources significantly contributes to operational efficiency.

Additionally, Yankee Supply (2024) emphasizes the importance of strategically managing warehouse space. Effective receiving processes may require measures such as organizing storage areas based on anticipated inventory volumes or adjusting layouts to accommodate incoming goods efficiently.

Thorough inspections and verification steps are indispensable to confirm that received goods conform precisely to specified orders and quality requirements. Axle Technologies (2024) suggests performing meticulous inspections to ensure goods

have not been damaged or tampered with during transit. Furthermore, verifying that delivered products match purchase orders by conducting detailed checks prevents discrepancies or inventory errors. According to SkuNexus (2024), comprehensive quality inspections are especially critical for sensitive items or those approaching expiration, guaranteeing accurate inventory management and maintaining high standards.

Advanced preparation further enhances warehouse efficiency. FCBCO (2024) argues that leveraging information from advanced shipment notifications or utilizing predictive analytics like barcoding and Advanced Warehouse Management Systems (WMS) significantly streamlines receiving processes. Yankee Supply (2024) also notes that integrating these technologies greatly improves efficiency by reducing manual tasks and minimizing errors during receiving operations. Similarly, Cadre Technologies (2024) highlights that proactive planning ensures warehouses are adequately prepared for the type and quantity of incoming goods, thereby supporting smooth operational workflows.

Finally, SkuNexus (2024) and Yankee Supply (2024) advocate for consistent implementation of barcoding integrated with WMS, significantly improving receiving efficiency. Moreover, according to FCBCO (2024), the proper application of these technologies shortens inspection timeframes and enhances inventory accuracy. Ace Technologies (2023) underscores the necessity of systematic inspections and stringent quality controls, essential in preventing inventory discrepancies.

2.1.2 Principles of record management

Receiving and inspection are integral components of warehouse management, essential for verifying that arriving commodities meet quality standards and align precisely with purchase orders. According to Cadre Technologies (2024), implementing rigorous receiving procedures is vital to accurate inventory counts, optimizing operational performance, and meeting customer expectations. Planning ahead ensures warehouses are adequately prepared for both the type and volume of incoming goods, facilitating smooth operations.

Additionally, FCBCO (2024) emphasizes the necessity of having adequate staff and the appropriate tools, such as pallet jacks and forklifts, to streamline receiving

operations. The availability of these resources significantly boosts operational efficiency.

Effective space management also greatly influences receiving processes. Yankee Supply (2024) highlights the benefit of strategies such as reorganizing storage areas based on anticipated inventory levels or adjusting warehouse layouts to efficiently handle incoming goods.

Further, thorough inspection and verification processes are crucial. SkuNexus (2024) points out that comprehensive inspections are particularly necessary for sensitive items or those with approaching expiration dates, ensuring products match specified requirements and maintain accurate inventory records. Hyland (2024) emphasizes safeguarding received goods against unauthorized alterations, ensuring that records accurately reflect actual received items.

In enhancing warehouse efficiency, advanced preparation plays a key role. FCBCO (2024) argues that Advanced Shipping Notifications (ASNs) and predictive analytics, including barcoding and Warehouse Management Systems (WMS), significantly reduce inspection and receiving times. Similarly, Yankee Supply (2024) notes that incorporating barcoding technology with WMS substantially improves receiving accuracy and efficiency.

Finally, FCBCO (2024) and SkuNexus (2024) advocate the consistent integration of technologies such as barcoding and advanced WMS. Proper utilization of these systems shortens the inspection process, enhances inventory accuracy, and streamlines warehouse operations. Additionally, Yankee Supply (2024) and Cadre Technologies (2024) stress the importance of regularly training warehouse staff in best practices to maintain high standards of compliance and operational effectiveness.

2.1.3 Principles of inventory storage

Storage of inventory must be well-organized for warehouse management to be efficient. Inventory that is well-organized, readily available, and protected from unauthorized access leads to better operational efficiency, reduced costs, and happier customers. The basics of inventory storage include making the most efficient use of space, making sure everything is secure, and keeping the products in good condition.

Forbes (2024) opines that utilizing the area to its fullest potential is of the utmost importance. A key component of this process is ensuring that inventory is well-organized to both enhance storage efficiency and facilitate simple access. Organizing items vertically, utilizing racks and shelves, and making the most of the space in the aisles may help save a lot of area

Organizing inventory is crucial for optimizing retrieval processes. To do this, you need to establish a systematic structure, which involves doing things like putting items with high demand in conveniently accessible areas and grouping things that are similar together. According to Forbes (2024), well designed labels and signage may greatly enhance accessibility.

Security of warehouse personnel and goods is of the utmost importance. Aspects of safety that must be observed include the correct way to stack things, keeping the aisles clean, and using the right storage equipment. According to Impact Analytics (2024), regular safety evaluations and employee training are essential parts of a safe storage facility.

Regular audits and cycle counts are essential for accurate inventory documentation and the rapid detection of discrepancies. This strategy ensures that physical inventory and records are in sync, which decreases the likelihood of stockouts and surplus, according to Impact Analytics (2024). Technological improvements, such as barcode scanning and warehouse management systems (WMS), may make stockroom operations more efficient. According to Forbes (2024), these solutions not only enhance accuracy and operational efficiency, but they also enable real-time inventory monitoring. The dependability and consistency of inventory storage operations may be assured by establishing and strictly following standard operating procedures. According to Sortly (2024), SOPs should include all the important parts of inventory management, such as receiving, storing, picking, and shipping, and give clear instructions for the warehouse workers. Continuous training on safe practices and protocols is essential for warehouse employees. Impact Analytics (2024) states that adequately trained workers are less likely to make careless mistakes when handling inventory, leading to more output with less risk of harm. Finally, reviewing and modifying the storage design on a regular basis can help maximize space efficiency and streamline working operations. Part of this process involves integrating feedback

from warehouse workers and modifying storage layouts in response to changes in stock volumes and types according to Forbes (2024).

2.1.4 Principles of Inventory Internal Controls

Effective internal controls in inventory management are essential for protecting organizational assets, ensuring accurate financial reporting, and enhancing operational efficiency. These controls help ensure accurate data is available for decision-making and minimize the risk of errors or fraud. According to Accounting Insights (2024), a fundamental internal control measure involves clearly separating duties, such as assigning the task of ordering inventory to a different individual from the one responsible for receiving and recording shipments. This separation of duties establishes critical safeguards against misconduct.

Moreover, designated personnel should authorize all inventory transactions, ensuring only legitimate transactions are recorded and preventing unauthorized activities. Lumen Learning (2024) highlights that careful documentation is vital to maintaining a comprehensive audit trail, essential for verifying inventory accuracy and preventing unauthorized transactions.

Physical safeguards, including locked storage areas, security cameras, and access limitations, must be implemented to protect goods from theft or loss. Additionally, Phase V (2024) emphasizes the importance of regularly conducting physical inventory counts and comparing these counts with inventory records to detect discrepancies promptly and maintain accurate records.

NetSuite (2024) notes that incorporating technologies such as barcoding and automated inventory management systems significantly increases inventory management efficiency and accuracy. These technologies provide real-time monitoring of inventory levels and reduce manual processes, thereby minimizing human errors.

Moreover, utilizing best practices in inventory management can considerably enhance reliability and operational effectiveness. According to NetSuite (2024), automation technologies, such as barcoding integrated with inventory management systems, help achieve real-time tracking and streamline inventory-related tasks. Phase V (2024)

further asserts that consistently reconciling inventory records with physical counts is essential for promptly detecting discrepancies and ensuring data accuracy.

Finally, cultivating a culture of accountability through ongoing staff training is crucial. Accounting Insights (2024) argues that clearly communicating roles and the importance of adhering to internal controls strengthens organizational accountability. Continuous assessment and evaluation of inventory management practices enable early detection of deficiencies, thus contributing to improved inventory accuracy, operational transparency, and adaptation to changing business requirements according to Lumen Learning (2024).

2.2 Empirical review

This section presents a review of empirical studies that have looked at receiving and inspection, record management, inventory management, and internal controls in stores management.

2.2.1 Receiving and Inspection

Globally, the process of receiving and inspecting goods upon arrival at a warehouse is a crucial aspect of supply chain management. According to Gill (2018), upon arrival, all products must undergo a visual inspection and verification process to ensure compliance with the bill of lading. It is vital to compare the delivered shipment with the packing slip, invoice, or bill of lading to verify accuracy. Additionally, statistical evaluations are conducted to detect any apparent defects, and discrepancies must be documented using a Non-Conformance Log. According to Johnson (2019), any apparent damages should be indicated on the carrier's delivery record and reported promptly. The packaging must be preserved to assist inspectors in identifying the source of the damage. According to Justin (2019), the receiving dock plays a fundamental role in ensuring smooth warehouse operations, requiring clerks to secure shipment documentation and maintain records for internal stakeholders.

At a regional level, the African supply chain landscape faces unique challenges in receiving and inspection. According to Affum (2022), logistical inefficiencies, poor infrastructure, and regulatory challenges hinder effective inspection procedures. In Tanzania, according to Matto (2022), procurement management units faced difficulties in maintaining accurate records of received shipments, negatively impacting

procurement performance. Similarly, according to Kimani (2023), records management practices in Kenya found that the use of electronic data management systems improved inspection accuracy, reducing discrepancies and enhancing accountability.

In Zambia, research on receiving and inspection processes remains limited. However, prevailing challenges in supply chain management, such as documentation inconsistencies and weak inventory tracking systems, suggest inefficiencies in warehouse inspection procedures. Given these challenges, improving digital record-keeping and adopting automated inventory verification systems could significantly enhance Zambia's warehouse management processes.

2.2.2 Record Management

On a global scale, record management ensures the systematic organisation, storage, and retrieval of business records. According to Wakumoya (2016), proper record-keeping is integral to business operations, facilitating compliance and efficiency. According to Hounsome (2018), filing, retaining, and retrieval processes are fundamental aspects of record management, ensuring smooth workflow and accountability. According to Salamatu and Muhammad (2021), these processes enhance organisational efficiency and facilitate compliance with industry regulations.

Within Africa, record management inefficiencies remain a significant concern. According to Affum (2022), poor filing systems hindered access to critical documents, leading to operational delays in public sector organisations. According to Matto (2022), the lack of structured training on records management in Tanzanian procurement offices adversely affected efficiency. Similarly, according to Kimani (2023), electronic data management systems in Nairobi significantly reduced data loss and improved document accessibility.

In Zambia, record management in both public and private organisations has been identified as an area needing improvement. While digital transformation initiatives have been introduced, paper-based records are still dominant, leading to inefficiencies in information retrieval. Future research should focus on the implementation of electronic records management systems tailored to Zambia's business environment.

2.2.3 Storage of Inventory

Globally, storage plays a vital role in supply chain operations, ensuring that products are held in physical form until needed. According to Frazelle (2022), efficient storage methods consider size, volume, and handling characteristics to optimise space utilisation. According to Sneha and More (2016), warehousing is essential for competitive supply chain performance, impacting customer service and cost efficiency. Effective inventory control requires access to accurate product information to facilitate planning and management. According to Habazin et al. (2016), storage constitutes the largest portion of warehouse operational costs, as pickers engage in multiple physical activities such as retrieving and arranging goods. According to Atieh et al. (2016), automating warehouse systems enhances efficiency and reduces errors in inventory sorting.

At a regional level, African warehouses face unique storage challenges, including space constraints, lack of modern storage facilities, and inefficient stock retrieval systems. According to Kimani (2023), studies in Tanzania and Kenya highlight the benefits of automating warehouse operations, improving inventory tracking, and reducing operational costs. However, financial constraints and limited technological adoption hinder progress in many African nations.

In Zambia, warehouse storage remains a critical concern, particularly in the public sector. Manual stock tracking methods lead to inventory mismanagement, increasing risks of damage and theft. Introducing automated storage systems and investing in modern warehouse infrastructure could significantly improve Zambia’s inventory storage capabilities.

2.2.4 Inventory Internal Controls

Internationally, internal controls in inventory management are essential in mitigating business risks and ensuring asset protection. According to Karim (2018), internal control systems help organisations implement policies that safeguard assets and evaluate performance effectively. According to Puspasari (2019), internal controls enable businesses to establish policies that safeguard assets and evaluate performance effectively. According to Feng et al. (2013), weak internal controls can lead to excessive stock levels, increased holding costs, and higher risks of impairment.

Across Africa, internal control challenges in inventory management persist due to inadequate monitoring mechanisms and poor compliance with established policies. According to Matto (2022), procurement inefficiencies, corruption, and lack of accountability hinder effective internal control systems. According to Kimani (2023), weak inventory control mechanisms result in substantial financial losses and stock mismanagement in Kenya.

In Zambia, internal control weaknesses in inventory management have led to frequent audit concerns in both public and private sectors. Many organisations rely on manual stock verification methods, increasing the likelihood of errors and fraudulent activities. Strengthening internal control mechanisms through automated inventory tracking systems and regular audits could enhance transparency and efficiency in Zambia's inventory management practices.

2.3 Theoretical framework

The theoretical framework of the study was anchored on six theories namely: systems theory; COSO Framework of internal controls; inventory theory; theory of constraints; principle agent theory; and contingency theory.

2.3.1 Systems Theory

Organizational record-keeping and understanding have been significantly impacted by systems theory. In all four of these dimensions, systems communicate with one another. Rudolf (2011) stated that for a business whose inputs include things like raw materials, money, technology, and people, to accomplish the organization's goals, the inputs go through a methodical process that includes organizing, motivating, planning, and controlling. Everything offered to a market as a product or service would be considered a deliverable. Customers and clients should expect a higher standard of living and more productivity as a result. Documents such as purchase orders rely on the data included in the buying information record as a standard reference. Lysons (2006) pointed out that true information about the supplier and the goods bought from them in the past must be included in the purchase record.

In relation to the research objectives, systems theory is relevant to the study of receiving and inspection, as it highlights the interconnected nature of processes within public sector organizations. The efficiency of receiving and inspection directly

influences the accuracy of inventory records and the occurrence of unaccounted-for stores. A weak receiving and inspection process disrupts the flow of information within the system, leading to gaps in accountability.

2.3.2 COSO Framework of Internal Controls

The Treadway Commission's Committee of Sponsoring Organizations (COSO) created this structure. It defines internal control as a procedure that an organization's leadership, managers, and employees follow in a methodical way. Achieving objectives related to operational efficiency, financial correctness, and compliance with legal and regulatory norms requires a framework that provides sufficient security. Five interrelated components of internal controls are highlighted in the updated 2013 framework: Control Environment - The general climate set by upper management with regard to honesty, morality, and commitment to control systems; In order to achieve goals, it is necessary to identify and assess any risks that might be a hindrance. Everything from rules and procedures to practices is part of control activities, which aim to make operations more effective and efficient. A dependable flow of information is the primary emphasis of information and communication in order to support decision-making and maintain responsibility. Ongoing assessment of how well internal controls are working.

The Control Activities section of the COSO Framework is applicable to this study, as it stresses the need for thorough control mechanisms to successfully close any possible gaps in inventory management systems. This framework is directly linked to assessing the effectiveness of inventory internal controls and their relationship with unaccounted-for stores in public sector organizations. COSO (2013) emphasized that effective internal controls, such as accurate recording, cycle counts, and reconciliations, are necessary to mitigate inventory discrepancies and improve accountability.

2.3.3 Inventory Theory

Scarf (2002) asserted that inventory theory represents a distinct area of focus within the realms of operations research and operations management. The emphasis is on the strategic design of production and inventory systems aimed at cost minimization. Porteus (1990) highlighted that this focuses on the strategic choices associated with production, storage, logistics networks, and the distribution of spare components.

Zappone (2006) explained that the objective is to enhance inventory management processes while effectively satisfying product demand.

In this study, unaccounted-for stores denote items or materials that are either missing, misplaced, or inadequately documented within inventory records. Geisler (1963) argued that inventory theory provides a framework for analyzing the underlying reasons for these discrepancies, such as theft, insufficient record-keeping, or inefficiencies in storage management. The theory is crucial in determining the relationship between storage practices and unaccounted-for stores, as it helps in identifying operational disruptions and resource misallocations that may lead to inventory discrepancies.

2.3.4 Theory of Constraints (TOC)

Goldratt (1984) proposed that the Theory of Constraints (TOC) focuses on identifying the constraints holding a company back and implementing solutions to remove those obstacles. Identifying the constraint, using it to one's advantage, making other processes subordinate to it, elevating it, and then repeating this process for continuous improvement are the core principles of TOC.

Applying TOC to unaccounted-for stores in public sector organizations, this study can identify major bottlenecks in inventory management. If inadequate inventory tracking is the primary constraint, then improving tracking mechanisms can significantly reduce missing stores. This theory is closely linked to the research objective of examining storage practices and their relationship with unaccounted-for stores, as it helps in identifying and mitigating key inefficiencies in warehouse operations.

2.3.5 Principal-Agent Theory

Jensen and Meckling (1976) suggested that the Principal-Agent Theory highlights the difficulties caused by agents perhaps putting their own interests ahead of the principals' and by knowledge asymmetry.

Principal-Agent Theory provides a useful framework for investigating unrecorded assets by analyzing the effects of conflicting goals and inadequate supervision. Errors in inventory might arise from public sector personnel's behavior caused by a lack of adequate control. This theory is linked to assessing the effectiveness of inventory internal controls and their relationship with unaccounted-for stores, as it suggests that

proper oversight and control measures are essential in minimizing discrepancies and improving accountability in inventory management.

2.3.6 Contingency Theory

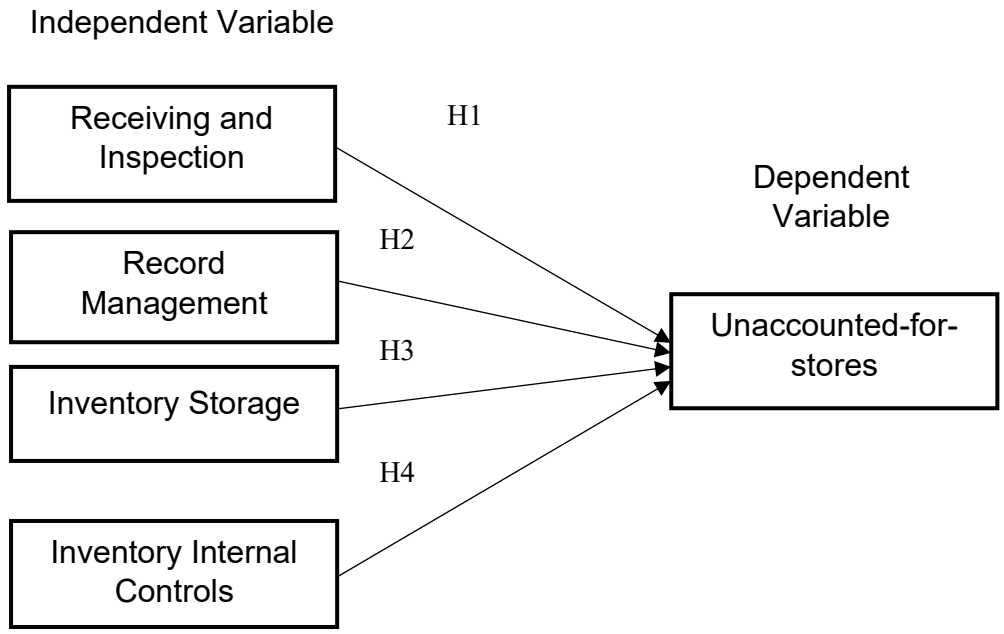
Woodward (1958) and Lawrence & Lorsch (1967) posited that there is no one best way to manage an organization. Numerous internal and external factors, such as the organization's size and complexity and the level of environmental uncertainty, determine the optimal management approach.

The management practices of public sector store in Zambia can be better understood by applying Contingency Theory, which provides a useful framework for investigating the effects of different contextual circumstances. Structured inventory management systems are typically required by larger enterprises, while smaller firms may benefit from more flexible techniques. This theory is linked to determining the relationship between stores record management and unaccounted-for stores, as it highlights the need for context-specific inventory management strategies to improve record accuracy and reduce discrepancies.

2.4 Conceptual Framework

The conceptual framework depicts the interaction of the study variables. Our independent variables in the study are: receiving and inspection; record management; inventory storage; and inventory internal controls. The dependent variable is unaccounted for stores as depicted in Figure 2.1.

Figure 2.1: Conceptual Model



2.5 Development of Hypotheses

The development of the hypotheses for this study is grounded in the theoretical framework of inventory management and supported by empirical findings in existing literature. Each hypothesis explores the relationship between inventory management practices and unaccounted-for stores in the public sector.

2.5.1 Hypothesis 1: Receiving and Inspection Procedures

Receiving and inspection are critical processes in inventory management, as they ensure that goods delivered meet quality and quantity requirements as noted by Coyle et al. (2016). According to the Resource-Based View (RBV) theory, robust operational processes like receiving and inspection contribute to organizational efficiency by reducing discrepancies in inventory as pointed out by Barney (1991). Empirical evidence from Chikweche and Fletcher (2017) highlights the challenges in African public sectors, where poor receiving procedures often lead to inventory mismanagement and unaccounted-for stores. The study thus hypothesised as follows:

Ho: In government agencies, unaccounted-for stores inventory is not positively correlated with the receiving and inspection procedures.

Ha: The unaccounted-for stores inside public sector enterprises are positively correlated with the receiving and inspection processes.

2.5.2 Hypothesis 2: Record Management

Record management ensures accuracy, transparency, and accountability in inventory systems. The Agency Theory as proposed by Jensen & Meckling (1976) suggests that proper record management aligns the interests of stakeholders by minimizing discrepancies through accountability mechanisms. Studies by Agaba and Shipman (2007) in African contexts reveal that inadequate record-keeping is a major contributor to unaccounted-for inventory in public sector. Additionally, real-time and accessible inventory records reduce delays and discrepancies as was observed by Kogan & Tian, (2014). The study hypothesised as follows:

Ho: The number of unaccounted-for stores in public sector companies is not positively correlated with the management of store records.

Ha: In government agencies, the frequency of unaccounted-for stores is positively correlated with the adherence to store record management practices.

2.5.3 Hypothesis 3: Inventory Storage

Effective storage practices safeguard inventory and minimize losses due to theft, deterioration, or misplacement. The Contingency Theory emphasizes that organizational practices, such as inventory storage, must adapt to environmental and operational conditions to achieve efficiency according to Donaldson (2001). Studies by Nyaribo et al. (2016) in Kenya reveal that poorly organized and unsecured storage areas in public institutions often lead to unaccounted-for stores. Proper storage systems, including regular checks and restricted access, are associated with improved inventory accuracy. The study hypothesised as follows:

Ho: Government agencies' storage procedures are not positively correlated with their unaccounted-for stockpiles.

Ha: Discrepancies in inventory across public sector firms are positively correlated with storage procedures.

2.5.4 Hypothesis 4: Inventory Internal Controls

Internal controls are critical for ensuring that inventory systems are secure and discrepancies are identified and resolved promptly. The COSO framework as proposed by Cressey (1953) explains how weak internal controls increase the

opportunity for inventory mismanagement and fraud. Empirical evidence from Mulwa and Waiganjo (2020) in Zambia shows that robust internal controls, such as inventory reconciliations and theft prevention measures, significantly reduce unaccounted-for stores. Moreover, regular reviews of internal controls are necessary to adapt to emerging challenges in inventory management. The study hypothesised as follows:

Ho: In government agencies, there is no association between inventory internal controls and unrecorded funds.

Ha: Unaccounted-for stores in public sector firms are positively correlated with inventory management implemented internally.

2.9 Chapter summary

This chapter discussed the empirical review of studies conducted on the independent variables depicted in the conceptual framework. The chapter further presented three theories on which the study is anchored namely: systems theory; COSO Framework of internal controls; the inventory theory; theory of constraints; principle agent theory; and contingency theory.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

The methodology that was employed in this study is explained in depth in this chapter. Study design, population, sample size, sampling procedures, collection methods and tools, data analysis processes, and any relevant ethical issues are all integral to the research methodology discussed in this chapter.

3.1 Research approach

The researchers in this study used a deductive strategy within the framework of quantitative research. Researchers can corroborate the examination of ideas via positivist and empiricist philosophical lenses by collecting numerical evidence through the application of a quantitative technique. The quantitative approach, according to Mugenda and Mugenda (2003), involves collecting numerical data and then using mathematical processes to draw conclusions and achieve the study's objective.

3.2 Research design

To find out how the independent factors affected the outcomes, the researchers used a correlational approach. Examining the nature and strength of a connection between two variables is the fundamental goal of correlational research. Coefficients close to 1 imply a strong association, which might be positive or negative, according to Saunders, Thornhill, and Lewis (2016). The primary goal of a correlational design is to find out whether there is a link between two variables, not to prove that one causes the other.

3.3 Population

The research was carried out across five chosen public institutions, specifically: Zambia Institute of Mass Communication, Zambia Environmental Management Agency, Citizenship Economic Empowerment Commission, and Business Regulatory Review Agency. It is important to note that information regarding employees within the supply chain of these institutions was not easily accessible through their websites or published annual reports. Consequently, the researcher depended on employee registers acquired from the Human Resource department. The analysis utilized

employee registers from each institution, revealing a total of 940 employees engaged at different stages of the supply chain, thereby constituting the study's population.

3.4 Sample

The sample size of the study was 210 which was computed using Slovines formula as follows.

$$n = \frac{N}{1 + N(e)^2} = \frac{704}{1 + 704(0.05)^2} = \frac{704}{3.35} = 210$$

The sample size was recruited from the supply chain of each institution as depicted in Table 3.1.

Table 3.1: Respondent selection

Institution	Total Population	HR Department	Finance Department	Other Departments	Supply Chain (Respondents)
Zambia Institute of Mass Communication	250	55	75	67	**53**
Zambia Environmental Management Agency	240	50	60	77	**53**
Citizenship Economic Empowerment Commission	220	45	65	64	**52**
Business Regulatory Review Agency	174	48	70	57	**52**
Total	**704**	**155**	**260**	**271**	**210**

3.5 Sampling technique

The purposive sampling approach was employed to select respondents due to its suitability in gathering targeted information essential to the research objectives. According to Taherdoost (2022), purposive sampling allows researchers to deliberately choose respondents based on specific characteristics relevant to study objectives. Given that the investigation primarily targeted unaccounted-for stores highlighted in the Auditor General's report (Office of the Auditor General, 2022), this method was particularly suitable. Thus, employees from the stores departments were

intentionally selected as key respondents since they possessed exclusive access to and knowledge of inventory-related data, justifying the application of purposive sampling (Mulimbika et al., 2022).

3.6 Data collection

The data collection process involved the distribution of a questionnaire, which was administered in person to employees within the supply chain of each of the four institutions. The research was conducted solely using primary data sources. Table 3.1 presents the items included in the questionnaire for the study along with their respective sources.

Table 3.1: Questionnaire items and source

Variable	Items	Source
Receiving and Inspection	1. The receiving process is well documented and followed consistently. 2. All received goods are inspected for quality and quantity before acceptance. 3. Discrepancies found during inspection 4. The receiving area is adequately equipped to handle incoming goods. 5. Staff involved in receiving and inspection are adequately trained.	Panigrahi, R.R., Shrivastava, A.K., & Kapur, P.K. (2024). Impact of inventory management practices on the operational performances of SMEs. International Journal of System Assurance Engineering and Management, 15, 1934-1955.
Record Management	1. Inventory records are updated in real-time. 2. There is a clear policy for record-keeping and documentation. 3. Inventory records are regularly audited for accuracy. 4. Discrepancies in inventory records are investigated and corrected promptly. 5. The record management system is user-friendly and accessible.	Mason, A.N. (2020). Pharmacy internal controls: A call for greater vigilance during the COVID-19 pandemic. Pharmacy, 8(4), 216.
Storage of Inventory	1. Inventory storage areas are secure and access is restricted. 2. Storage conditions are appropriate for the types of inventory held. 3. Inventory is organized in a manner that facilitates easy retrieval. 4. Regular checks are conducted to ensure the condition of stored inventory. 5. There is adequate space for current and anticipated inventory levels.	Panigrahi, R.R., Shrivastava, A.K., & Kapur, P.K. (2024). Impact of inventory management practices on the operational performances of SMEs. International Journal of System Assurance Engineering and Management, 15, 1934-1955.
Inventory Internal Controls	1. There are clear procedures for inventory handling and movement. 2. Inventory counts are regularly reconciled with records. 3. There are measures in place to prevent theft and loss of inventory. 4. Internal controls are regularly reviewed and updated. 5. Staff are trained on the importance and implementation of internal controls.	Mason, A.N. (2020). Pharmacy internal controls: A call for greater vigilance during the COVID-19 pandemic. Pharmacy, 8(4), 216
Un-accounted-for-stores	1. There is a significant amount of inventory that goes unaccounted for annually. 2. Unaccounted for stores have a noticeable impact on the organization's financial performance.	Beck, A., & Peacock, C. (2017). Moving beyond shrinkage: Developing a definition and typology of total retail loss. Security Journal, 31, 93-110.

	3. The organization has effective measures in place to minimize unaccounted for stores. 4. Unaccounted for stores are regularly investigated and reported. 5. The causes of unaccounted for stores are well understood within the organization.	

3.7 Reliability

Reliability denotes the consistency and dependability of the research outcomes. The survey employed in this research incorporated various questions aimed at assessing the same fundamental concepts, including the factors contributing to unaccounted-for stores. To evaluate the internal consistency of the questions, statistical tests including Cronbach's alpha was used, drawing on data gathered from a pilot study that was conducted. A pilot study was conducted to pre-test the survey instrument. Using Cronbach's alpha, we checked the survey questions' internal consistency and found that they consistently measured the same construct as evidenced by Tavakol & Dennick (2011). The findings from the pilot study are illustrated in the table below.

Table 2: Reliability results

Likert scale	Cronbach's Alpha	N of Items
Receiving and Inspection	.805	5
Record Management	.844	5
Storage of Inventory	.702	5
Inventory Internal Controls	.807	5
Un-accounted-for-stores	.708	5

According to the reliability results shown in Table 2, the research instrument's scales function exceptionally well according to the standards set by Doarne and Seward (2016). For this purpose, a Cronbach alpha coefficient below 0.7 is considered undesirable, an acceptable range is from 0.7 to 0.85, and an outstanding range is beyond 0.85. To ensure the survey and interview questions were relevant and easy to understand, experts in community development reviewed them to confirm content validity.

3.9 Data analysis

For the purpose of determining the nature of the connection that exists between the independent variables and the dependent variables, the study utilized the Pearson product moment correlation coefficient, which is utilized within the Statistical Package for the Social Sciences (SPSS) program version 23. This package was suitable as it allowed the researcher to code qualitative and quantitative data in the same file and store it for quick data screening and clean up. In addition, the program allowed the

researcher to performa inferential statistical anlyses at a fast pace than would have been possible using other platforms such as excel. Following that, an examination of the link between the independent factors and the dependent variables was carried out in order to evaluate the research hypotheses.

3.10 Ethical considerations

Research projects that include human participants and the collection of primary data are extremely important in terms of the ethical issues that must be taken into account. In this particular setting, obtaining the requisite license from the University is absolutely important in order to carry out the research. Parallel to this, the researcher will make sure to get authorization from every single manufacturing organization that has been chosen in order to make the data gathering process easier. The distribution of consent paperwork to each participant will take place concurrently with the approval procedure. This will ensure that their participation in the study is entirely voluntary. The researcher will make certain that the norms of anonymity and secrecy are adhered to in a completely stringent manner.

3.11 Chapter summary

This chapter provides an overview of the research methods that will be taken into consideration for the investigation. The study methodology, the design framework, the target population, the sample dimensions, the sampling methods, the procedures and instruments for data collection, the analytical processes, and the ethical implications are the primary areas of focus.

CHAPTER FOUR

DATA ANALYSIS AND FINDINGS

4.0 Introduction

In this chapter, the findings of the study that were discovered via the analysis of the data are being presented. The findings of the response rate are reported at the beginning of the chapter, followed by the presentation of the demographic information. In addition to this, the chapter offers the results of the Pearson correlation analysis, which are utilized in the process of testing the hypotheses that were developed for the study. Last but not least, the chapter concludes with a discussion of the findings, considering them in conjunction with the observations that other researchers have made on unaccounted-for stores world over.

4.1 Response rate

With the help of five research assistants, the study sent out 210 questionnaires to different supply chain professionals and collected all of the completed surveys in under 30 days. The response rate for the study was 100%.

4.2 Demographic results

For the purpose of contextualizing the findings of the research, this study made use of demographic factors. This allowed for a more in-depth knowledge of patterns and trends within particular subgroups. A number of demographic factors, including age, gender, educational level, experience in supply chain management, and organizational position, were taken into consideration over the course of our research effort. At the outset, the examination of the variable Age reveals that a sizeable proportion of the respondents, particularly fifty percent, fall between the age range of thirty-one to forty years old. This is followed by 25% of people in the age range of 41–50, 15% of people in the age range of 20–30, and 10% of those who are beyond the age of 50. The presence of a workforce that is relatively young means that there is a great possibility for activities that are specifically geared toward training and development. Those respondents who are older may be able to provide insightful feedback that is gained from their significant expertise in inventory management procedures.

The second finding is that the analysis of the variable Gender reveals that the majority of respondents are male, which accounts for 65% of the total, while females make up 35% of the total. It is possible that this gender difference is an indication of the prevalent labour trends in supply chain roles in the public sector. Positive effects could be achieved through the implementation of initiatives that aim to increase gender diversity in these occupations.

Third, the examination of the variable education level indicates that sixty percent of the respondents have a bachelor's degree, twenty-five percent have a postgraduate qualification (Master's or equivalent), and fifteen percent have obtained a diploma or certificate in supply chain management. This is a considerable majority. When we talk about a workforce that is educated, we mean that the majority of the participants have the theoretical basis that is required to grasp and effectively apply inventory management concepts.

A large proportion of respondents, particularly forty percent, had between six and ten years of experience in supply chain management, as revealed by the study of the variable Work Experience in Supply Chain Management. In addition, thirty percent of the respondents had over fifteen years of experience, while twenty percent have more than fifteen years of experience. Ten percent of those who participated in the survey stated that they have fewer than five years of experience working in the sector. A big number of seasoned specialists are present, which is a strong indication that the findings are founded on a substantial amount of empirical information. This not only improves the trustworthiness of the replies, but it also offers vital insights into issues that have persisted over time, such as inventory that has not been accounted for.

As a last point of interest, the examination of the variable Position Within the Organization indicates that the procurement officers constitute the largest section, accounting for thirty percent of the total. With a percentage of twenty-five percent, this is followed by managers or officers of warehouses, twenty percent for logistics or supply chain managers, ten percent for other staff members participating in inventory procedures, and five percent for senior management jobs. When there is a diverse representation across jobs, it ensures that there is a comprehensive understanding of the many stages of inventory management, which range from the operational to the strategic levels.

Table 3: Demographic results

Variable	Category	Frequency	Percentage (%)
Age	20–30 years	31	15%
	31–40 years	105	50%
	41–50 years	52	25%
	Above 50 years	21	10%
Gender	Male	137	65%
	Female	73	35%
Education Level	Diploma/Certificate	31	15%
	Bachelor's Degree	126	60%
	Postgraduate	53	25%
Work Experience	Less than 5 years	21	10%
	6–10 years	84	40%
	11–15 years	63	30%
	More than 15 years	42	20%
Position	Procurement Officer	63	30%
	Warehouse Manager/Officer	53	25%
	Logistics/Supply Chain Manager	42	20%
	Senior Management	32	15%
	Other	21	10%

4.4 Pearson correlation analysis results

Pearson correlation analysis was the major way of analysis that was utilized in order to address each of the study objectives to be accomplished. There were three main steps that formed the analysis. The initial phase consisted of collecting data by means of the distribution of a structured questionnaire to 210 professionals who were active in supply chain operations inside businesses that were part of the public sector in Zambia. A Likert scale of five points was used to collect the data, with one representing Strongly Disagree and five representing Strongly Agree for each individual item.

In the succeeding step, the preparation of data was what was entailed. In a methodical manner, the data for each independent variable, such as Receiving and Inspection and Record Management, as well as the data for the dependent variable, Unaccounted-for Stores, were compiled. When it came to these characteristics, the mean scores for each participant were determined and tallied.

The third phase consisted of carrying out statistical analysis with the help of SPSS, which stands for the Statistical Package for the Social Sciences computer program. For the purpose of determining the strength and direction of the associations that were involved, the correlation coefficient (r) was computed for each independent variable in respect to the dependent variable. A negative relationship is indicated by a value of r that is less than zero, a positive relationship is shown by a value that is greater than zero, and a relationship that is not present is indicated by a value of r that is equal to zero. In addition, the significance (p-value) was evaluated in order to ascertain the dependability of the correlations. In order to determine whether or not the observed associations were statistically significant at a confidence level of 95%, a threshold of 0.05 was established. In Table 4, the results of the investigation are presented.

Table 4: Pearson Correlation Results

Variable	Mean	SD	Unaccounted-for Stores (Correlation coefficient)	Significance
Receiving and Inspection	3.85	0.75	-0.58*	.01
Record Management	4.10	0.80	0.65*	.001
Storage Practices	3.95	0.7	0.40*	.045
Inventory Internal Controls	4.25	0.85	0.72*	.011

4.4.1 Relationship between receiving and inspection and unaccounted-for stores

The findings that are provided in Table 4 demonstrate a strong inverse correlation (r = -0.58, p = 0.01), which suggests that improvements in receiving and inspection procedures, such as consistent documentation, comprehensive inspection, and effective training, are associated with a significant reduction in the amount of inventory that cannot be accounted for. It is clear from this that irregularities in inventory are

directly connected to flaws in the methods that are used to receive goods. The findings that are shown in Table 4 demonstrate a strong inverse correlation ($r = -0.58$, $p = 0.01$), which suggests that improvements in receiving and inspection procedures, such as consistent documentation, comprehensive inspection, and effective training, are associated with a significant reduction in the number of stores that cannot be accounted for. In light of this, it may be deduced that inadequacies in the procedures of receiving are a direct contributor to the inconsistencies in inventory.

Furthermore, based on the results of the Pearson analysis, it was determined that the correlation coefficient was -0.58, and the level of significance was discovered to be $p=0.01$. The correlation that was detected is negative, which indicates that there is insufficient evidence to support the assumption that there is a positive association. There is a strong inverse link, which is demonstrated by the data, which are statistically significant. As a result, the study did not reject the null hypothesis and came to the conclusion that there is not a positive connection between Receiving and Inspection and Unaccounted-for Stores; rather, there is a substantial negative correlation that exists between the two variables.

4.4.2 Relationship Between Record Management and Unaccounted-for Stores

Reduced unaccounted-for inventory is related with better record management procedures, such as real-time updates, frequent audits, and clearly defined policies, according to Table 4's substantial positive connection ($r = 0.65$, $p = 0.001$). To minimize discrepancies, reliable and timely record-keeping is crucial.

In addition, the study sought to test the following hypotheses: the null hypothesis stated that there is no positive relationship between Record Management and Unaccounted-for Stores. The alternative hypothesis stated that there is a positive link between record management and unaccounted-for-stores.

A Pearson correlation coefficient of 0.65 and a p-value of 0.001 are obtained from the analysis. The positive correlation is statistically significant ($p<0.05$). The results provide credence to the counterargument, which states that better Record Management is linked to less unaccounted storage. The study found a strong positive correlation between record management and unreported stores, thereby rejecting the null hypothesis.

4.4.3 Relationship Between Storage Practices and Unaccounted-for Stores

Improved storage procedures, including safe storage, adequate space, and effective organization, significantly contribute to lowering unaccounted-for inventory, according to the data shown in Table 4, which demonstrate a moderate positive correlation (r=0.40, p=0.05). Despite a weaker link than in record management, the approaches used in storage practices are nevertheless quite essential.

Furthermore, the following hypotheses were posited: the null hypothesis stated that there is no positive relationship between inventory storage and unaccounted-for-stores. The alternative hypothesis stated that there is a positive relationship between inventory storage and unaccounted-for-stores.

A correlation coefficient of r=0.40 and a p-value of 0.045 were found in the results of the Pearson Analysis which is statistically significant ($p<0.05$). These findings lend credence to the counterargument, suggesting that better storage techniques are associated with less missing stock. A strong positive association between storage practices and unaccounted-for stores has been found, leading to the rejection of the null hypothesis.

4.4.4 Effectiveness of Inventory Internal Controls and Unaccounted-for Stores

A substantial positive connection ($r = 0.72$, $p < 0.05$) is demonstrated in Table 4, indicating that efficient inventory internal controls, such as training, theft prevention measures, and frequent reconciliations, considerably decrease the amount of unaccounted-for stores. The need of internal controls for effective inventory management is highlighted here.

Based on the research, the following theories were put forth: In this study, we tested two hypotheses: one proposed that inventory internal controls had no positive correlation with unaccounted-for Unaccounted-for-stores, and the other proposed that the opposite is true.

According to the study's findings, the Pearson analysis yielded statistically significant results with a p-value of 0.011 and a correlation coefficient of r=0.72. The significance threshold was set at 5%. This data lends credence to the alternative hypothesis, which states that strong internal controls play a crucial role in minimizing missing inventory.

4.5 Discussion of findings

This section presents a discussion of the findings of the study emerging from the Pearson correlation analysis.

4.5.1 To Ascertain the Relationship Between Receiving and Inspection and Unaccounted-for Stores in Public Sector Organizations

The analysis shows a strong negative correlation $(r = -0.58;\ p = 0.01)$ between Receiving and Inspection processes and Unaccounted-for Stores. This indicates that receiving process issues, such as incomplete product inspections, are the most common cause of missing inventory. This contradicts the hypothesis that a thorough receiving and inspection method will reduce the possibility of missing inventory by quickly identifying discrepancies in quantity and quality. Contrary to this, research conducted in East and West Africa has demonstrated that public sector organizations may effectively eliminate stock discrepancies through the implementation of tight receiving processes. Omran and Al-Khouri (2021) found that when the receiving method is well-documented and organized, inventory errors are far less likely to occur. Our findings are in line with those of Chien (2018), who discovered that reception and inspection processes in Zambia effectively eradicated government warehouse anomalies. In the Zambian context, there are specific challenges. Kamwaza and Chileshe (2020) noted that problems with inventory management can go undetected due to discrepancies and abnormalities in inspection processes.

4.5.2 To Determine the Relationship Between Store Record Management and Unaccounted-for Stores in Public Sector Organizations

A strong positive correlation $(r = 0.65;\ p = 0.001)$ was found between record management practices and unaccounted-for stores. There is less room for error during audits and inspections when inventory records are kept accurate and updated promptly, which in turn leads to fewer missing items. The importance of record-keeping systems for accurate inventory counts is highlighted by this conclusion, which is in line with other research conducted in Africa. Mhlanga and Zvinorasanganwa (2020) discovered that meticulous record-keeping substantially decreased inventory theft and errors in Zimbabwe's public sector inventory systems. According to Ogunyemi and Olorunfemi (2018), unaccounted-for inventory was decreased in Nigerian enterprises by regular audits and constant record updating. Researchers in Zambia have found

that inefficient record-keeping due to out-of-date information or a lack of technology is the primary cause of the country's difficulties in tandem with Mwansa & Ngulube (2021).

4.5.3 To Examine Storage Practices and Their Relationship with Unaccounted-for Stores in Public Sector Organizations

The moderate positive correlation $(r = 0.4;\ p = \ 0.045)$ between storage practices and unaccounted-for stores suggests that effective storage management practices are associated with fewer unaccounted-for stores. Incorporating measures such as specific locations for fragile goods, well-structured processes, and routine inspections into storage facilities allows for more accurate inventory tracking and the detection of discrepancies. Tadele and Ouma (2020) and other regional studies found that public sector warehouses in Ethiopia had reduced theft and inventory discrepancies due to the secure storage conditions, so these findings are consistent with their findings. In Nigeria, Chima and Adigun (2019) noted that having neat and secure inventory facilities is a key component in lowering inventory discrepancies. The findings of Kangwa and Ngalande (2017), who also discovered that the number of unaccounted-for-stores was significantly higher in government warehouses in Zambia due to a lack of space and ineffective management, are consistent with our own findings. Even with best practices in place, inventory difficulties persist in government storage facilities as also observed by Akinyele & Adebayo (2018). This proves that audit checks and frequent monitoring are still missing from effective storage solutions.

4.5.4 To Assess the Effectiveness of Inventory Internal Controls and Their Relationship with Unaccounted-for Stores in Public Sector Organizations

A strong positive correlation $(r = \ 0.72, p = \ 0.011)$ was found between inventory internal controls and unaccounted-for stores. Reduced unaccounted-for inventory is strongly correlated with strong internal controls, such as frequent audits, strict inventory management rules, and theft prevention measures. This finding provides support for the study of Oshungade and Adebayo (2019), which suggests that if public sector enterprises in Nigeria establish transparent and well-executed internal controls, the frequency of missing cash may be reduced. Kanyan and Murwa (2017) found that public sector companies in Uganda with strong internal control systems had far lower inventory discrepancies. Implementing internal controls including inventory audits,

reconciliations, and access constraints resulted in fewer unaccounted-for stores, according to Zimba and Sitali (2021) and other researchers from Zambia. The existence of internal controls does not guarantee that they will prevent discrepancies if they are not well implemented and monitored in line with Njiru and Odhiambo (2020).

4.6 Chapter summary

The chapter focused on vital inventory management practices and missing material in public sector companies in Zambia. The findings of the Pearson correlation investigation indicated that unrecorded inventory was negatively correlated with receiving and inspection methods. Improving the efficiency of receipt and inspection procedures reduces the amount of missing inventory. Reliable receiving processes, including assessing quantity and quality, are critical for keeping inventory variances to a minimum. Secondly, record management practices were positively correlated with missing inventories. Comprehensive inventory documentation, regular audits, and excellent record-keeping are associated with fewer unaccounted-for Unaccounted-for-stores. Proper record management enables the early discovery of discrepancies, which may help avoid inventory management errors. Thirdly, there was a weak positive correlation between storage methods and unrecorded inventory. A well-organized storage system in a secure environment can help reduce inventory discrepancies. The study did conclude, however, that a lack of space to store things and inadequate organization might be to blame for missing objects. Lastly, the effectiveness of inventory internal controls was positively correlated with the number of unaccounted-for stores.

CHAPTER FIVE

CONCLUSION AND RECOMMENDATIONS

5.0 Introduction

This chapter presents the conclusions and recommendations drawn from the findings of the study. The chapter also provides a direction for future studies.

5.1 Conclusions

This study aimed to explore the relationship between various inventory management practices and unaccounted-for stores in public sector organizations in Zambia. Based on the findings, the study concludes as follows:

5.1.1 Relationship Between Receiving and Inspection and Unaccounted-for Stores

The research indicated that more stringent inspection and reception protocols resulted in a reduction in unreported inventory items. This supports the notion that more stringent and standardized inspection and reception protocols might reduce inventory discrepancies. Organizations with dependable receiving protocols will have a reduced incidence of unaccounted inventory. These measures are essential for minimizing inventory discrepancies.

5.1.2 Relationship Between Record Management and Unaccounted-for Stores

Fewer unaccounted-for stores are related with good record-keeping, as shown by a positive correlation between record-management techniques and unaccounted-for stores. Important factors in avoiding inconsistencies were audits, accurate documentation, and regular updates. The quantity of missing stores could rise if records are not consistently managed.

5.1.3 Relationship Between Storage Practices and Unaccounted-for Stores

Research indicates a weak positive association between storage methods and unreported purchases, which may lead to a decline in unreported items if proper storage conditions and management are in place. Inadequate storage space and negligent administration might worsen inventory disparities.

5.1.4 Relationship Between Inventory Internal Controls and Unaccounted-for Stores

According to the study's findings, the efficacy of inventory internal controls is proportional to the amount of missing inventory. Reducing the quantity of unrecognized outlets is highly connected with robust internal controls, which include steps to prevent theft, frequent audits, and inventory reconciliation. Stricter internal controls make it considerably easier to improve inventory management and reduce inconsistencies.

5.2 Recommendations

Based on the research findings, the following targeted recommendations address critical policy areas for immediate action and implementation by the institutions under review, particularly the Zambia Environmental Management Agency (ZEMA), Zambia Institute of Mass Communication (ZAMCOM), Citizenship Economic Empowerment Commission (CEEC), and Business Regulatory Review Agency (BRRA):

5.2.1 Strengthening Receiving and Inspection Procedures

Institutions, particularly ZEMA and ZAMCOM, should implement standardized and clearly defined receiving and inspection processes. The procedures must ensure that employees are adequately trained to detect discrepancies effectively. To achieve consistency, internal audits of the receiving function should be conducted quarterly, accompanied by routine monitoring to ensure compliance.

5.2.2 Enhancing Inventory Record Management

BRRA and CEEC should invest in robust, real-time inventory record management systems. These systems must facilitate accurate, transparent, and easily auditable records. Regular reconciliations of physical stock with system records must be conducted monthly. Implementing integrated technology solutions, such as barcode scanning linked to inventory databases, will significantly enhance accuracy and accountability.

5.2.3 Improving Storage Conditions and Security

All targeted institutions, particularly ZEMA, should prioritize enhancing the physical conditions of storage facilities. This involves regular maintenance checks, clearly labeled storage areas for efficient retrieval, and strict physical access controls. Management should allocate sufficient budgetary resources annually to ensure storage facilities adequately accommodate current and anticipated inventory levels.

5.2.4 Comprehensive Staff Training and Capacity Building

The Ministries overseeing CEEC and BRRA must establish mandatory, periodic training programs for all personnel involved in store operations, with a specific focus on internal controls, record keeping, and inventory management best practices. Training initiatives should incorporate measures aimed at cultivating transparency, accountability, and compliance. Annual refresher training programs should be institutionalized to sustain improved operational performance.

5.3 Direction for Future Studies

Based on findings from this study, future research should precisely examine the role and effectiveness of technology in mitigating inventory discrepancies within Zambia's public sector institutions. Specifically, studies could investigate how integrating electronic inventory management systems, such as RFID tags and barcode scanners, affects the accuracy and reliability of inventory records. Additionally, comparative research examining inventory management best practices in public sector entities of other African countries versus Zambia could offer valuable insights into region-specific strategies that effectively reduce cases of missing products.

5.4 Chapter summary

This chapter discussed the conclusions drawn by the study on the research objectives and the recommendations made for public sector organizations. The chapter also discussed the direction for future studies focusing on the key knowledge gaps in the literature reviewed by the study as well as critical areas that were not addressed by the study.

REFERENCES

Accounting Insights. (2024). Effective Internal Controls for Modern Inventory Management.

Adom-Nyankey, K. and Andoh, R.P.K. (2022), "Effectiveness of human resource records management strategies at a university in Ghana", *Global Knowledge, Memory and Communication, 71* (8/9), pp. 972-985. https://doi.org/10.1108/GKMC-04- 2021- 0059

Affum M. Q (2022). Organizational records management at Effia Nkwanta Regional, Takoradi. *International Journal of Cloud Computing and Database Management, 3*(2): 18-25

Agaba, E., & Shipman, N. (2007). Public procurement reform in developing countries: The Ugandan experience. *Advancing Public Procurement: Practices, Innovation, and Knowledge-Sharing*, 373-391.

Akinyele, O., & Adebayo, A. (2018). "The role of storage practices in inventory management: A case of Nigerian public sector." *Nigerian Journal of Supply Chain Management*.

Akinyele, O., & Adebayo, A. (2018). "The role of storage practices in inventory management: A case of Nigerian public sector." *Nigerian Journal of Supply Chain Management*.

Alfonso. (2020). *Sustainability governance mechanisms in supply chains: An application in the retail sector*.

Archive Corporation. (2023). The Ultimate A-Z Records Management Checklist.

ARMA International. (2024). The Principles® - Generally Accepted Recordkeeping Principles®.

Axacute. (2023). The Warehouse Receiving Process: Challenges and Best Practices.

Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17(1), 99-120.

Beck, A., & Peacock, C. (2017). Moving beyond shrinkage: Developing a definition and typology of total retail loss. *Security Journal*, 31, 93-110.

Cadre Technologies. (2024). The Warehouse Receiving Process and Best Practices.

Chien, M. (2018). "Effective receiving practices in Zambian government inventory systems." *Zambia Journal of Management Studies*.

Chien, M. (2018). "Effective receiving practices in Zambian government inventory systems." *Zambia Journal of Management Studies*.

Chikwe, K., & Uzochukwu, C. (2021). "Storage management practices and their effects on public sector supply chains in Sub-Saharan Africa." *African Journal of Public Sector Supply Chain Management*.

Chikweche, T., & Fletcher, R. (2017). Managing resource constraints in emerging markets: The strategic role of business networks. *Industrial Marketing Management*, 70, 109-121.

Chima, E., & Adigun, A. (2019). "Storage practices and inventory management in Nigerian public sector organizations." *Journal of African Business Studies*.

Chima, E., & Adigun, A. (2019). "Storage practices and inventory management in Nigerian public sector organizations." *Journal of African Business Studies*.

Coyle, J. J., Langley, C. J., Novack, R. A., & Gibson, B. J. (2016). *Supply Chain Management: A Logistics Perspective*. Cengage Learning.

Cyriacus, & Chika. (2021).. *Of Application Of Inventory Management Practices By Stores Officers In Public Tertiary Educational Institutions In South-East . . ..*

Cyriacus, & Obioma. (2022). *Perpetual inventory management practice applied by stores officers in public tertiary educational institutions in South-East Nigeria*.

Donaldson, L. (2001). *The Contingency Theory of Organizations*. Sage Publications.

Dube, E., & Nyembe, A. (2019). "Effectiveness of internal controls in public sector organizations in Southern Africa." African Journal of Business and Management Studies.

FCBCO. (2024). Warehouse Receiving Processes and Best Practices.

Forbes. (2024). How To Manage Inventory Effectively.

Goldratt, E. M. (1984). The Goal: A Process of Ongoing Improvement. North River Press.

Hyland. (2024). Best Practices for Records Management Process.

IDM. (2019). 9 Principles for Records Management Best Practices.

Impact Analytics. (2024). Inventory Management Techniques & Best Practices.

Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs, and ownership structure. *Journal of Financial Economics*, 3(4), 305-360.

Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics, 3*(4), 305-360.

Kaggwa, R. (2019). "Record keeping and stock control in Ugandan government departments." Uganda Journal of Public Sector Economics.

Kamwaza, A., & Chileshe, P. (2020). "Inventory management challenges in public sector organizations in Zambia." *African Journal of Business Management*.

Kamwaza, A., & Chileshe, P. (2020). "Inventory management challenges in public sector organizations in Zambia." *African Journal of Business Management*.

Kangwa, P., & Ngalande, C. (2017). "Assessing storage practices in Zambian public sector warehouses." *Zambian Journal of Logistics and Supply Chain Management*.

Kangwa, P., & Ngalande, C. (2017). "Assessing storage practices in Zambian public sector warehouses." *Zambian Journal of Logistics and Supply Chain Management*.

Kanyan, K., & Murwa, A. (2017). "The effect of internal controls on inventory management in Uganda's government agencies." Uganda Journal of Financial and Supply Chain Management.

Kanyan, K., & Murwa, A. (2017). "The effect of internal controls on inventory management in Uganda's government agencies." *Uganda Journal of Financial and Supply Chain Management*.

Kibe, L.W., Kwanya, T. and Owano, A. (2020), "Relationship between big data analytics and organisational performance of the Technical University of Kenya and Strathmore University in Kenya", *Global Knowledge, Memory and Communication, 69*(6/7), 537-556.

Kogan, L., & Tian, C. (2014). *Inventory management and firm value*. Working paper.

Lawrence, P. R., & Lorsch, J. W. (1967). *Organization and Environment: Managing Differentiation and Integration.* Harvard Business School Press.

Lumen Learning. (2024). Internal Control Issues and Procedures for Inventory.

Lutans, F., (2011). *Organizational Behaviour,* 12th edition. Tata McGraw Hill.

Lysons K. and Farrington.B. (2006). *Purchasing and supply chain Management,* 7th Edition. London: Prentice Hall.

Maciej. (2023). *Understanding public service supply chain management: a systematic literature review*.

Martin, Stefan, Alexander, & Duncan. (2021). *Pandemic-induced knowledge gaps in operations and supply chain management: COVID-19's impacts on retailing*.

Mason, A.N. (2020). Pharmacy internal controls: A call for greater vigilance during the COVID-19 pandemic. *Pharmacy, 8*(4), 216.

Matto, M.C. (2022), "Records management and performance of procurement management units in Tanzania: a case study", *Records Management Journal, 32*(1), 75- 95.

Mavhunga, H., & Nyasha, N. (2017). "Inventory control and receiving processes in government institutions in Sub-Saharan Africa." *African Journal of Supply Chain Management*.

Mavhunga, H., & Nyasha, N. (2017). "Inventory control and receiving processes in government institutions in Sub-Saharan Africa." *African Journal of Supply Chain Management*.

Mhlanga, D., & Zvinorasanganwa, D. (2020). "Impact of record management on reducing inventory discrepancies in Zimbabwean public sector." Zimbabwe Journal of Accounting and Management.

Mhlanga, D., & Zvinorasanganwa, D. (2020). "Impact of record management on reducing inventory discrepancies in Zimbabwean public sector." *Zimbabwe Journal of Accounting and Management*.

Morgan, G. (2007). *Images of organization.* Thousand Oaks: Sage.

Mulwa, J., & Waiganjo, E. (2020). Effect of internal controls on financial performance of public sector entities in Zambia. *Journal of Finance and Accounting*, 8(1), 45-54.

Mwamba, K., & Sinyangwe, J. (2017). "The role of record management in inventory control in government ministries in Zambia." Zambian Journal of Public Administration.

Mwansa, D., & Ngulube, P. (2021). "Challenges in public sector inventory record management in Zambia." International Journal of Record Management.

Mwansa, D., & Ngulube, P. (2021). "Challenges in public sector inventory record management in Zambia." *International Journal of Record Management*.

NetSuite. (2024). Inventory Control Defined: Best Practices, Systems, & Management.

Njiru, B., & Odhiambo, P. (2020). "Challenges in the enforcement of internal controls in the public sector inventory systems of Kenya." Kenyan Journal of Public Finance and Management.

Njoroge, J., & Ndirangu, M. (2019). "Effects of receiving practices on inventory management in government organizations in Kenya." *East African Business Review*.

Njoroge, J., & Ndirangu, M. (2019). "Effects of receiving practices on inventory management in government organizations in Kenya." *East African Business Review*.

Nontuthuko, & Albert. (2020). *The effect of supply chain management in governance: Public sector perspectives*.

Nyaribo, W., Nyongesa, W., & Munyao, E. (2016). Inventory management practices and supply chain performance in Kenyan public institutions. *International Journal of Business and Management Review*, 4(3), 49-60.

Ogunyemi, T., & Olorunfemi, D. (2018). "Improved record management and inventory control in Nigeria's public sector organizations." Journal of Public Sector Management in Nigeria.

Omran, A., & Al-Khouri, A. (2021). "The impact of inventory management on public sector organizations in Sudan." *International Journal of Public Sector Management*.

Oshungade, F., & Adebayo, A. (2019). "The role of internal controls in preventing inventory discrepancies in the Nigerian public sector." Nigerian Journal of Public Sector Finance.

Panigrahi, R.R., Shrivastava, A.K., & Kapur, P.K. (2024). Impact of inventory management practices on the operational performances of SMEs. *International Journal of System Assurance Engineering and Management*, 15, 1934-1955.

Phase V. (2024). Effective Inventory Control: Best Practices and Management Strategies.

Rohit, & il. (2023). *Supply chain management practices, retail outlets attributes and organisational performance: a case of organised food retailers in India*.

Rudolf, S. (2011). *Systems theory International Encyclopaedia of Political Science*. Sage New York

Sara, & Joubert. (2020). *Best practices for demand-driven supply chain management in public healthcare sector: a systematic literature review*.

Sergey, Tatiana, Valery, & Dmitry. (2021). *Supply chain management and risk management in an environment of stochastic uncertainty (Retail)*. https://www.mdpi.com/2227-9091/9/11/197

Shagufta, & Mohd. (2022). *Inventory Management and Organizational Performance: Evidence from Ethiopian Public Sector Organizations*.

Shopventory. (2024). The Best Inventory Storage Strategies For Small Businesses.

SkuNexus. (2024). Complete Blueprint to Warehouse Receiving Process.

Sortly. (2024). 7 Essential Inventory Management Best Practices.

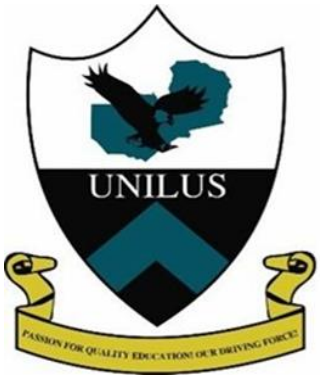
Tadele, S., & Ouma, G. (2020). "Effect of storage practices on inventory management in Ethiopian public sector." *Ethiopian Journal of Business and Management*.

Woodward, J. (1958). *Management and Technology*. Her Majesty's Stationery Office.

Yankee Supply. (2024). Streamline Your Warehouse Receiving Process.

Zimba, B., & Sitali, M. (2021). "Internal controls and inventory management in Zambia's public sector." Zambia Journal of Public Sector Governance.

APPENDIX I: RESEARCH INSTRUMENT



UNIVERSITY OF LUSAKA

Dear respondent,

My name is **Natasha Kashimoto** a student at the University of Lusaka pursuing a Master's Degree in Procurement and Logistics Management. I am currently conducting a study themed '**ASSESSMENT OF THE CAUSES AND EFFECT OF UNACCOUNTED-FOR-STORES IN STATUTORY PUBLIC SECTOR ORGANIZATIONS IN ZAMBIA'** and you have been identified as a crucial participant in this study given the nature of your job in your organization particularly because you work in the stores department. I therefore invite you to participate in this study voluntarily and I have attached a consent form which you can fill up should you choose to take part. Be further advised that as stated in the consent form attached, you are at liberty whether to choose to participate or decline based on any reason that is incidental to you. Otherwise, I thank you in anticipation.

INSTRUCTIONS

Please tick the appropriate box that suits your response to each statement tabulated in the tables below. Be further informed that the statements are set up based on 5-point Likert scale whereby: 1-Strongly disagree; 2-Disagree; 3-Neutral; 4-Agree; and 5-Strongly agree.

Receiving and Inspection

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1. The receiving process is well documented and followed consistently.					
2. All received goods are inspected for quality and quantity before acceptance.					
3. Discrepancies found during inspection					
4. The receiving area is adequately equipped to handle incoming goods.					
5. Staff involved in receiving and inspection are adequately trained.					

Record Management

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1. Inventory records are updated in real-time.					

2. There is a clear policy for record-keeping and documentation.					
3. Inventory records are regularly audited for accuracy.					
4. Discrepancies in inventory records are investigated and corrected promptly.					
5. The record management system is user-friendly and accessible.					

Inventory Storage

Statement	**Strongly disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly agree**
1. Inventory storage areas are secure and access is restricted.					
2. Storage conditions are appropriate for the types of inventory held.					
3. Inventory is organized in a manner that facilitates easy retrieval.					
4. Regular checks are conducted to ensure the condition of stored inventory.					

5. There is adequate space for current and anticipated inventory levels.					

Inventory Internal Controls

Statement	**Strongly disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly agree**
1. There are clear procedures for inventory handling and movement.					
2. Inventory counts are regularly reconciled with records.					
3. There are measures in place to prevent theft and loss of inventory.					
4. Internal controls are regularly reviewed and updated.					
5. Staff are trained on the importance and implementation of internal controls.					

Un-accounted-for-stores

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1. There is a significant amount of inventory that goes unaccounted for annually.					
2. Unaccounted for stores have a noticeable impact on the organization's financial performance.					
3. The organization has effective measures in place to minimize unaccounted for stores.					
4. Unaccounted for stores are regularly investigated and reported.					
5. The causes of unaccounted for stores are well understood within the organization.					

Thank you for participation

APPENDIX II: PLAGIARISM REPORT