The Effect of Inventory Management Practice on Organizational Performance: The Case of Inventory Management Department of Commercial Bank of Ethiopia

By: Sirgut Belachew

A Thesis Submitted to Addis Ababa University School of Commerce

In Presented in Partial Fulfillment of the Requirements of Masters of Arts Degree in Logistics and Supply Chain Management

Advisor: Zelalem Bayisa (PhD)

June, 2024

Addis Ababa, Ethiopia

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Declaration

This thesis, “The Effect of Inventory Management Practice on Organizational Performance: The Case of Inventory Management Department of Commercial Bank of Ethiopia”, is submitted by me, Sirgut Belachew Tufa, undersigned. With the support and direction of the research advisor, I have conducted the research on my own. No degree or diploma program at this or any other school has accepted this study, and all sources of information used in the thesis have been duly acknowledged.

Declared by ;

Name: Sirgut Belachew Tufa

ID: GSR/3741/15

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Date: _____

Department: Logistics and Supply Chain Management

STATEMENT OF CERTIFICATION

This is to certify that, this thesis "The Effect of Inventory Management Practice on Organizational Performance: In Case of Inventory Management Department of Commercial Bank of Ethiopia", undertaken by Sirgut Belachew Tufa in partial fulfillment of the requirements for Master of Arts in Logistics and Supply Chain Management at Addis Ababa University School of Commerce, is an original work and not submitted earlier for any Degree either at this university or any other university.

_____

Zelalem Bayisa (PhD)

Research advisor

Certificate of Approval of Thesis

Addis Ababa University

School of Commerce

Approved Board of Examiners

This is to certify that the thesis prepared by **Sirgut Belachew Tufa**, entitled " **The Effect of Inventory Management Practice on Organizational Performance: The Case of Inventory Management Department of Commercial Bank of Ethiopia"**, and submitted in partial fulfillment of the requirements for the Degree of Master of Art in Logistics And Supply Chain Management complies with the regulations of the University and meets the accepted standards concerning originality and quality.

Advisor _____Signature _____ Date_____

Examiner (Internal) _____Signature _____ Date _____

Examiner (External) _____Signature _____ Date _____

Acknowledgment

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List of Acronyms

BOP	Bought-out-parts
CBE	Commercial Bank Of Ethiopia
DOI	Diffusion of innovations
ERP	Enterprise Resource Planning
EOQ	Economic Order Quantity
IMTs	Inventory Management Techniques
IT	Information Technology
JIT	Just In Time
KPI	Key Performance Indicator
MRP	Material Resource Planning
SPSS	Statistical Package for Social Science
VIM	Vendor Managed Inventory
WIP	Work-in-progress

ABSTRACT

The purpose of this study is to analyze how inventory management practices affect an organization's performance within a bank. One of the biggest and most established banks in Ethiopia, Commercial Bank of Ethiopia, is the study's location. The organization responded to the questionnaire using a systematic five-point Likert scale questionnaire, performance was evaluated quantitatively. Descriptive and explanatory research designs were used. Regarding the research approach, the researcher used a mixed technique employing a questionnaire to meet the study's specific and overall objectives. The target population was conducted at the Inventory department of CBE, Addis Ababa. Concerning the sampling technique, a purposive sampling technique was used. About methods of data analysis descriptive and regression data analysis was used. The data was analyzed using SPSS ver 16.00. There was a finding that both the independent and the independent variables have a mean score below 3.40 which is considered high. The second finding is that among the four independent variables which are, Information Technology, Inventory Control Techniques, and Inventory Cycle counting had a p-value greater than 0.005 which shows an insignificant value. Lastly, the warehouse management was found to be significant and positive with a sig value of 0.00 and a beta value of 0.77. It is concluded that the dimensions that measure the independent variables and the dependent variable have a mean score of below 3.40, which signifies a "high level" of inventory management practice and a "high level" of organizational performance respectively. The regression analysis reveals a significant, positive effect of warehouse management on organizational performance. This implies that increasing warehouse management could positively affect performance, this data supports the hypotheses (H4). It is recommended that the organization takes more action on the warehouse to upgrade the performance of the organization. Further research should be carried out in other banks to find out if the same results can be obtained.

KEY WORDS- *Performance, information technology, inventory control technique, inventory cycle counting, warehouse*

CHAPTER ONE

1. INTRODUCTION

1.1. Background of the study

Governmental organizations and multinational corporations alike are keen to control inventory to save operational costs. Business logistics expenses as a percentage of US GDP climbed to 9.5 percent, according to (Chan & Wu, 2015). More than thirty-three percent of the $1 trillion allotted to logistics was used for inventory costs. Furthermore, Markland (2014) made the point that while inventory is required for manufacturing, its storage is expensive and uses up valuable capital. Inventory management is an essential function for any type of business for several reasons. First of all, because of their significant economic effect, performance outlays need to be carefully managed.

As to Kannan and Senthikumar (2013), this suggests that clients are content with the enhanced level of service as well as the organization's prompt responsiveness to their evolving requirements. Using the right inventory control systems can help a business maintain a competitive advantage. As a tactic to boost their competitiveness, businesses are finding that they must use efficient inventory management procedures (Muiruri, 2015). Inventory is significant to the banking sector since it accounts for about 56% of annual turnover (Abdifatah, 2012). These days, Ethiopian companies compete fiercely in the market. To eliminate any waste in the value chain, it is now essential to develop more efficient methods for tracking and managing the allocation of resources among various jobs or products.

Assuring that a particular group of goods is kept in stock at the lowest feasible cost while meeting other pertinent management aims and objectives is the art and science of inventory management (Otto & Kotzab, 2014). For managers of companies that handle inventory, fulfilling customer requests and reducing inventory costs should be their primary priorities.

1.2. Statement of Problem

Inventory is a very critical component of current assets, huge sums of money are invested in inventory to maintain a steady flow of manufacturing and fulfill customer demand. However, maintaining goods incurs opportunity costs, holding charges, and carrying costs. Inventory management is necessary to balance the advantages and disadvantages of keeping inventory. Stock-outs, a drop in productivity and profitability, customer dissatisfaction, order delays, wasted time, and missed sales opportunities are all predictable when companies fail to manage their inventory appropriately, and all of this affects the company's performance (Ackah & Ghansah (2016).

Companies' effective and efficient inventory management is critical to companies' profitability and overall growth. In our case in CBE, there are gaps in the way the function is managed from the point of need identification, supplier sourcing, need delivery, and need after-delivery activities because management in the banking industry does not acknowledge the contribution of inventory management (Wambui, 2010). Consequently, the function itself has raised organizational costs because it is not managed well. These costs include stock-outs, inflated pricing by dishonest purchasing officers, poor quality that lowers customer service, impulsive purchases, and inefficiencies in the supply chain, among other things. Inventory management is inadequate, Systems cause the majority of finished items to remain in the warehouse before being delivered to their final destination, resulting in organizational inefficiency (Yvonne & Ngugi, 2019).

Since the banking industry relies heavily on trained labor in our case the CBE, it should have been oriented toward developing appropriate amounts of human capital. We haven't seen any skilled labor progress in our banking sector until recently. That being said, the absence of highly qualified labor had lessened the performance of the CBE. Also Despite the availability of numerous studies demonstrating the benefits of inventory management, the banking industry has received little attention.

This study aims to close the knowledge gap by examining the effect of inventory management practices on the performance of the Commercial Bank of Ethiopia and also suggest some recommendations by examining the effect of inventory management practices on the performance of the Commercial Bank of Ethiopia.

1.3. Research Question

1. What is the level of inventory management practice in CBE?
2. What is the level of organizational performance at CBE?
3. How does information technology affect the performance of the Commercial Bank of Ethiopia?
4. How do inventory control techniques influence the performance of the Commercial Bank of Ethiopia?
5. How does inventory cycle counting affect the performance of the Commercial Bank of Ethiopia?
6. How does the warehouse management system affect the performance of the Commercial Bank of Ethiopia?

1.4. Objectives of the study

The objectives of this study are classified as general and specific objectives. The general objectives specify the general purpose of the study and then based on these general objectives; the specific objectives are included to satisfy the research questions.

1.4.1 General objectives

The General Objective of this research is to analyze the effect of inventory management practices on the organizational performance: In the case of Inventory Management Department of Commercial Bank of Ethiopia.

1.4.2 Specific objectives

In line with the general objective, and to satisfy the research questions the specific objectives include;

1. To examine level of inventory management practice in CBE.
2. To analyze the level of organizational performance at CBE.
3. To examine the effect of information technology on the performance of the Commercial Bank of Ethiopia.
4. To analyze the effect of inventory control techniques on the performance of the Commercial Bank of Ethiopia.

5. To determine the effect of inventory cycle counting on the performance of the Commercial Bank of Ethiopia.
6. To examine the effect of the warehouse management system on the performance of the Commercial Bank of Ethiopia.

1.5. Significance of the study

Inventory management in Bank organizations is concerned with having the correct things in the right place at the right time, as well as stock that is neither overstocked nor understocked. The research offers potential recommendations for the Commercial Bank of Ethiopia inventory management practices system. The results of this study were useful for practice, particularly for the Commercial Bank of Ethiopia, since they helped to clarify management techniques and their kind of operation as well as their functional significance to the company. The findings of the study give the Commercial Bank of Ethiopia and other stakeholders a foundation upon which to decide on appropriate inventory management practices. In addition, this study increased the amount of scholarly research on stock management, which was already increasing. Large researchers will be able to use it as a source of information and expertise for queries connected to the research area.

This study informs various inventory managers in understanding how inventory management if properly done can immeasurably reduce organizational costs improve the overall organizational operational performance and help to achieve strategic objectives. The study is also essential to provide additional findings on the issue and can also be used as groundwork to do other related research issues.

1.6. Scope of the Study

1.6.1.Conceptual Scope

Conceptually, the study took place on four dimensions of the independent variables which are Information Technology, Inventory Control technique, Inventory Cycle Counting, and Wearhouse Management . Regarding the dependent variable the study focused mainly on dimension's of customer perspective, learning and growth perspective and internal process perspective .In this study an effort was made to determine how CBE inventory management practices affected the company’s performance based on the independent variables. Company performance relies on many other factors, inventory management practice is the main one.

1.6.2.Methodological Scop

Methodologically, the research was conducted in a mixed approach using both the quantitative and qualitative approaches.

1.6.3. Geographical Scope

This study was focused on the inventory management practice of Commercial Bank of Ethiopia and its effect on the organization's performance based on geographic address Addis Ababa Ethiopia, Jati Kidanemehiret Kaliti, and Maseltegna branch.

1.6.4. Time Scope

This study took about one year for the completion of the research from title approval, proposal approval, and the final research approval.

1.7. Limitation of the study

The majority of the obstacles the researcher had when attempting to ascertain inventory management practices and CBE performance were caused by the lack of relevant literature that was especially applicable to bank organizations in this field. This research was limited to CBE inventory managers and employees under them due to their specialized knowledge of the subject. Furthermore, no interviews were undertaken as part of the research; instead, only closed-ended survey questions were used. This decreases the level of deep information obtained from the respondents as a result this restricts how far the results can be applied.

1.8. Definition of Terms

1.8.1 Conceptual definition

This aspect was designed to explain all the languages and terminology that were used during the exercise.

Inventory: Inventory is the accounting of items, component parts and raw materials that a company either uses in production or sells (Jones, 2018).

Management: the process of guiding the development, maintenance, and allocation of resources to attain organizational goals (Kottler, 2018)

Inventory control; Inventory control is the activity which organizes the availability of items to the customers of the organization (AI Ogbo 2014).

Performance: According to Mhike (2016) performance is the quality of execution of such an action, operation, or process; the competence or effectiveness of a person or thing in performing an action; especially the capabilities, productivity, or success of a machine, product, or person when measured against a standard.

1.9. Organization of the paper

Organization of the Study The study is organized into chapters. Chapter one provides brief background information on the study, an overview of the company under the case study, and discusses the research problem, objective of the study, scope, and limitations, and the significance of the study. Chapter two reviews detailed literature, empirical studies, and conceptual frameworks that are related to the study. Chapter three provides the Research Design and Methodology used to carry out the study. Chapter four contains the data that is gathered which is analyzed using the descriptive and inferential methods. And lastly, the last one chapter five contains the summaries of the results, Conclusion, and Recommendation.

CHAPTER TWO

2. REVIEW OF RELATED LITERATURE

2.1. Introduction

Dynamic inventory is essential to corporate success when planning, executing, and overseeing a supply chain network, and it may be reduced with a truly effective inventory management system. A company's button lines' business performance will be significantly improved by the incentive created by better inventory management. Examining inventory definitions, forms, classifications, purposes, and controls is the goal of this chapter. It also covers inventory, inventory models, and costs associated with inventory levels. In addition, it includes the theoretical and methodological framework.

2.2. Theoretical Review

2.2.1. Concept of Inventory

The concept of inventory, despite being defined variously by different scholars, possesses a universally recognized significance. A primary component of a large company’s assets, inventory whether in the form of products, work-in-progress, finished goods, or raw materials is indispensable. It stands at the core of a company’s operations, being either in use or poised for sale. The argument that inventory turnover is crucial cannot be overstated; it is one of the main avenues through which companies generate revenue and ensure consistent profits for their stakeholders. Furthermore, inventory represents a tangible asset that companies can leverage to drive sales, including those to retailers and end users. Ackah (2016) underscores that inventory, being an asset ready for client transactions, is vital for a company's financial health and operational success. Therefore, the strategic management of inventory is not merely an operational concern but a fundamental element of a company's profitability and stakeholder satisfaction.

Inventory plays a critical role in production operations, plant and machinery maintenance, and other operational needs, as argued by Ngugi (2014). However, the allocation of significant amounts of capital or money to inventory can be seen as a misallocation of resources, tying up funds that could be utilized more efficiently elsewhere. This perspective underscores a key

tension in inventory management: while necessary, large inventory stocks can induce significant anxiety for an organization's management.

2.2.2.Inventory Management Practice

2.2.2.1.Information Technology

Extensive research has consistently shown that information technology can significantly enhance performance (Chen & Wu, 2015). These studies compellingly argue that the transparency provided by IT systems enables firms to decentralize their operational tasks while centralizing strategic processes, particularly through advanced inventory management procedures. The integration of IT to improve inventory management is far from a novel concept. Historical implementations such as Electronic Data Interchange (EDI) have evolved into today's sophisticated web technologies, including business-to-business and collaborative commerce (Berg, 2009).

When the current inventory level is sufficient to meet downstream demand, the focus must shift to inventory strategy as a crucial consideration. Effective inventory management, which encompasses processes such as picking and packing, is essential for operational success. The advantages offered by information warehouses to inventory operations can be traced to two main sources.Firstly, the optimization of warehouse layout, typically addressed during the construction phase, can significantly enhance operational efficiency. Streamlined warehouse layouts not only reduce retrieval times but also minimize the risk of errors, leading to more efficient inventory management.Secondly, Chuang (2015) observes that the impact of full-time versus part-time personnel on inventory record accuracy varies. The argument here is that smart technologies can mitigate human-related issues such as slack and exhaustion by reducing the need for extensive manpower in warehousing operations. By leveraging advanced technologies, firms can ensure higher accuracy in inventory records and more efficient operations.Critics might contend that the initial investment in smart technologies and optimized warehouse layouts is prohibitively high. However, the long-term benefits, including reduced labor costs, increased accuracy, and enhanced efficiency, make a compelling case for their adoption. Therefore, integrating smart technologies and focusing on strategic inventory management are not just beneficial but essential for maintaining optimal inventory levels and meeting downstream demand effectively.

Digitization in inventory management offers a transformative benefit: the capacity to save and retrieve inventory data electronically, moving away from reliance on paper records. This shift facilitates faster and more efficient data analysis and reporting, enabling easier sharing and collaboration among various departments and stakeholders. The argument for digitization is further strengthened by its ability to integrate inventory management systems with other essential software, such as accounting and customer relationship management (CRM) systems. This integration enhances overall effectiveness and coordination within the organization.All things considered, organizations may enhance their inventory management and achieve more success by using technology to automate and digitize inventory activities.

2.2.2.2.Inventory Control Techniques

Lyson (2016) contends that effective inventory control strategies are essential for meeting performance targets. Despite the critical importance of inventory management techniques (IMTs) for sustainable financial management, significant research dedicated to comprehensively characterizing these techniques has been relatively sparse. This lack of extensive research underscores a gap in our understanding of optimal inventory management. However, one notable trend in inventory management research is the growing application of mathematical models and computer technology. This trend is crucial, as it highlights the economic benefits of robust inventory management practices. By leveraging advanced mathematical models, companies can achieve greater precision in forecasting demand, optimizing stock levels, and minimizing costs. Additionally, the integration of computer technology in inventory management systems enhances data accuracy, reduces human error, and facilitates real-time monitoring.

Markland (2014) argued convincingly that inventory management systems significantly outperform when operated under Material Resource Planning (MRP), showcasing their ability to reduce the expenses associated with maintaining traditional inventories. This assertion underscores the value of integrating sophisticated mathematical modeling in inventory management, which not only optimizes efficiency but also minimizes costs.Further supporting this perspective, Ming-Ling and Shaw (2015) demonstrated the effectiveness of Information and Communication Technology (ICT) through Enterprise Resource Planning (ERP) systems. By analyzing the warehouse and inventory management system at Shell Petroleum Development Company (SPDC) in Nigeria, they highlighted ERP as a true value-added instrument in

inventory management. Their findings emphasize that ICT integration is not just a technological upgrade but a strategic enhancement that drives substantial improvements in operational performance.

Moreover, Robert (2010) defended the application of a modified Just in Time (JIT) logistics-based strategy to perishable goods inventory management. This approach argues for the timely and efficient management of perishable inventories, reducing waste and ensuring freshness, thereby aligning inventory levels closely with actual demand.Critics might suggest that the implementation of MRP, ERP, and modified JIT strategies involves considerable complexity and upfront investment. However, the substantial long-term benefits—such as cost reduction, enhanced efficiency, and better alignment of inventory with demand—make a compelling case for these advanced methodologies. These examples illustrate that leveraging sophisticated inventory management techniques is not merely an option but a necessity for organizations aiming to optimize their operations and remain competitive.

Economic Order Quantity (EOQ)

Economic order quantity refers to the ideal order size for inventory replenishment. The amount of the order at which total inventory costs (ordering expenses plus carrying costs) are as low as possible is known as the economic order quantity (EOQ) or optimum order quantity.

Order quantity, often known as EOQ, is the number that, for a certain inventory item, will have the lowest total order and carrying costs. If a business places additional orders, it will incur redundant order expenses. If a business places too few orders, it will have large inventory holdings and carry significant costs. The business establishes an economic order quantity to decide how many units to buy to attain the lowest total cost of these two charges for inventory. If a business places needless orders, it will incur unnecessary order expenses (Jenkins, 2020). If a business places too few orders, it will have large inventory holdings and carry significant costs. Using an economic order quantity calculation that delivers the lowest total of these two costs, the corporation decides the ideal number of units to order.

Hansen and Heitger (2021) Assume that stock management is planned methodically so that the company can determine how much and when to buy. The economic order quantity is ascertained

to accomplish this. It is employed in the computation and administration of the ideal inventory level. According to Greefrath&Vorholter (2016), a mathematical model of reality must be created to compute the Economic Order Quantity. Every mathematical model simplifies reality by making certain assumptions about it. The model is only valid when the assumptions are true or largely accurate. Economic order quantity may have an effect on organizational performance, according to research on Just In Time, Activity Based Costing, Vendor Managed Inventory, and Organizational Performance (Riza&Purba, 2018).

Just-In-Time System (JIT)

In the 1930s, the Japanese pioneered just-in-time (JIT), one of the most innovative methods available at the time. However, it was rapidly adopted and implemented by businesses worldwide. JIT was created because it is a concept that is applied in the production process and aims to eliminate any resource waste, in addition to being an inventory control approach. The main benefits of achieving JIT are as follows: removing inventories gives the organization control over how to order and deliver goods to meet production orders and maintain flexibility; additionally, removing inventories lowers the organization's cost of carrying inventory. Businesses using the Just-In-Time (JIT) manufacturing strategy strive to minimize inventory levels and provide consumers with goods and services on schedule (Pandey, 2021).

Enhancing communication, cutting expenses and waste, and increasing quality, profitability, and effectiveness are all achieved by using the Just-In-Time approach. This strategy seeks to lower associated inventory costs to improve financial performance, according to Ufua&Agbola (2021). As it aids in the timely production of high-quality goods, the improvement of strategies, and the resolution of pressing problems, just-in-time (JIT) is a technique intended to decrease non-value-added operations (Mahendran&Jeyapaul, 2018). According to Panigrahi & Sahoo (2021) Production is raised, waste is reduced, and value is maximized when using this model, which ranks stocks according to demand.

Vendor Managed Inventory (VMI) Model

Vendor Managed Inventory (VMI), according to the American Production and Inventory Control Society, is a way to maximize supply chain performance in which the supplier is in charge of keeping the customer's needed inventory level and has access to the customer's inventory data. It is achieved by a procedure wherein the vendor resupplies through scheduled, on-site inventory

assessments. In the late 1980s, a partnership known as VMI—also known as a program of supplier-managed inventory or direct replenishment—was formed to coordinate supply chain replenishment choices while preserving the independence of chain participants. In this vendor-customer relationship, the vendor determines the frequency and amount of stock replenishment for the client.

The technique of vendor-managed inventory, according to Frahma (2003), places a strong emphasis on positive working relationships between suppliers and customers when making decisions about inventory replacement. The distributor and the manufacturer sign a cooperative or partnership agreement in which the distributor commits to maintaining a range of products and providing a level of service that is stated. As a condition of the deal, the customer agrees to stop keeping the items in stock and to only purchase the designated items from the distributor. Manufacturers can lower the danger of obsolete products and defective products.

Manufacturers can avoid stockouts, minimize or eliminate inventory, and remove the need for consumers to place new orders by implementing VMI procedures. The consumer is largely relieved of the cost of placing the order, having the materials shipped, tallying inventory, and stocking low-value items. By shifting these expenses that are typically under the client's control to the supplier, the customer can lower the total cost of the product and boost margins. Along with increased sales, there are also shorter lead times and fewer sales lost as a result of stockouts (Frahm, 2003).

A more straightforward solution to a stock strategy that satisfies consumer expectations is VMI. By using a vendor-controlled inventory strategy, the company can manage material replenishment at the most suitable client data source. Through the closure of unrestrained market activity and the provision of final customer satisfaction through the timely delivery of necessary material, the notion enhances customer responsiveness. To sustain members in the channel and replenish options in the logistics network, supplier-managed inventory, or VMI, was created in the 1980s. The company decides when and how much stock needs to be restocked for the customer in order to establish this vendor-customer connection.

Several businesses have effectively implemented vendor-managed inventory, including Bosch, Home Depot, Amazon, Wal-Mart, and Bosch. Kinyanjui (2016) states that one of the most

important requirements for using vendor-controlled inventory systems successfully is upstream information sharing with suppliers, such as the current material levels.

Manufacturing companies can determine their suppliers' stock requirements at the right moment by using a vendor-managed inventory system, which is a type of supplier-assisted inventory replenishment (Weraikat&Lehoux, 2019). This strategy helps organizations minimize needless inventory expenditures like storage and order fees by encouraging them to plan accurately and make timely needs. Furthermore, a study by Mulumba (2016) demonstrates that contracts that control an agrochemical company's inventory are what drive vendor-managed inventory systems to perform better.

2.2.2.3.Inventory Cycle Counting

Inventory cycle tracking, according to Mattson (2009), enables more timely identification of important concerns and more effective inventory management. To do cycle counting, inventory must be regularly counted using samples that are modest in comparison to the total amount of inventory that the business carries on hand. Accurate inventory counts and financial reporting can be greatly enhanced by a business through regular results collection and observation. According to the results of his study, cycle counting can reduce the need for complete physical counts and produce accurate results when done consistently and methodically.

ABC Analysis

An inventory analysis technique known as ABC analysis is used to determine the worth of inventories to give management attention to expensive products. Three new categories, A, B, and C, are formed. The approximation of the objects' classification, value, and quantity are shown in the following table. Jenkins (2020) states that the ABC inventory control technique is predicated on the idea that a relatively large number of items may come from a small portion of the money value of stores, whereas a small portion of items may typically represent the bulk of money value of the total inventory used in the production process. By multiplying each item's material quantity by its unit price, the money value is determined.

High value items are more strictly regulated than low value ones in this inventory control method. Depending on the amount spent on that specific item, each inventory item is assigned a denomination of A, B, or C. The most seasoned employees should be in charge of "A," or the

highest-value things, which should be tightly controlled, while "C," or the lowest-value objects, might just be physically controlled.

You should never take for granted that anything produced will be perfect. Giving yourself wiggle room while managing your production inventory is crucial. Put another way, determine how much product is needed such that, even if defects evade quality control measures, there will be an adequate supply of the product. The company sources various inventory products from several suppliers, (Ucharia & Kumar, 2017). XYZ, FSN, VEN, ABC, and other control system kinds are among the numerous possibilities. By using the so-called yearly dollar utilization method, inventory items are categorized into A, B, or C groups using ABC analysis. To get the yearly dollar usage, multiply the annual usage rate by the dollar value per unit.

It has been suggested that the degree to which manufacturing organizations use the ABC inventory approach affects how competitively priced they may stay (Albalaki&Kamardin, 2019). The anticipated cost of each product offered by an organization is determined by ABC and assigned to each one. Businesses may find it easier to determine proper pricing and employ acceptable profit margins if they apply the right costing technique to their items. The usage of ABC increases the accuracy of the company's profitability (Zheng&Abu, 2019).

2.2.2.4.Warehouse Management System

The argument put up by Arrowsmith et al. (2013) is that a business needs strong warehousing skills to achieve a competitive edge in inventory management and performance. In the highly competitive global business environment of today, organizations are emphasizing return on assets; consequently, minimizing warehousing costs has become a critical business issue. A study conducted in 2009 by Berg found that warehousing can account for as much as 2% to 5% of a corporation's cost of sales.

To boost throughput rates or inventory turns necessary for their warehousing operations to be financially viable, several businesses are automating their fundamental warehousing services (Brealey et al., 2009). Efficient and effective allocation of warehouse resources is vital in order to augment production and mitigate warehouse operation expenses. Finding the right places to store thousands of products in a warehouse is a crucial factor in determining its efficiency.

Every warehouse needs to implement a warehousing management system (WMS). Compared to manual handling systems, automated warehousing systems yield more dependable, efficient, and low-effort outputs. WMS is intended to assist in cost reduction using efficient warehouse procedures (Technical White Paper, 2013). The WMS granule offers the ability to manage sophisticated warehouse operations, such as automated data capture systems, directed picks and put-aways, and so forth. The warehouse must be divided into zones and bins to do directed pick and put away. A zone can have one or more bins in it, and it can be used for stocking or receiving (Technical White Paper, 2013).

2.2.3. Performance of Commercial Bank

"Many inventory management activities suffer from neglect, lack of direction, poor coordination, lack of open competition and transparency, varying degrees of corruption, and most importantly, not having a cadre of qualified and trained procurement specialists who are competent to conduct and manage such procurements in a professional, timely, and cost-effective manner," claims Gunasekaran (2013), even though there are numerous studies that focus on performance. There are numerous theories regarding what influences a bank's performance. The structure-conduct-performance (SCP) and market power theories have been widely used in performance studies.

2.2.4.The Usage of Inventory

Maintaining physical inventory in the system is crucial for safeguarding against unforeseen circumstances since the unavailability of materials could cause delays in projects, services, or production. The opportunity cost of "carrying" or "storing" inventory for the company comes with inventory management as well. Thus, the paradox is that, despite our desire for inventory, obtaining it is difficult. Because of these factors, inventory management is a challenging area of materials management. It results in a high inventory turnover ratio as well, which is a sign of exceptional performance (Vrat, 2014).

2.2.5.The Role of Inventory Management

The task of inventory management is to ascertain the quantity of inventory required to manufacture a given item. The product and customer needs serve as the foundation for the planning and control system for inventory items, while the inventory that is on hand serves as the basis for operating activities. Additionally, because inventory is used to expand the asset group on the balance sheet of the company, it is significant for the balance sheet. By increasing

inventory, many businesses lower their investment in fixed assets like plants, warehouses, office buildings, machinery, and equipment (Mohamed, 2016). The number of consumers that consumer goods service and the level of control over stock handling both depend on an effective inventory management system.

Ordering will be made easier for the business with the use of an efficient inventory system. Another crucial tool for tracking down big shipments quickly is an inventory management system. You can reduce the possibility of error and receive current information about the stock items in the warehouse with the use of an automated inventory system (Ackah, 2016).

Ineffective inventory management has grown to be a major concern as organizations' development is thought to be centered on performance. A supply chain network's planning, execution, and control are crucial to the success of any firm, and a really effective inventory management system reduces these challenges. A company's bottom line can be considerably enhanced by the opportunities that come with better inventory management.

According to Ackah (2016). Thus, inventory control is essential for all kinds of businesses. It is essential to the success of businesses that make money and provide services. Purchasing, shipping, receiving, tracking, warehousing and storage, turnover, and reordering are all included in an inventory control system. According to that criteria, the respondents had to react to the remarks in the context of what they suggested about the company (Keitany, Wanyoike, & Richu, 2014).

2.2.6.Obsolete Inventory

A sum-control management mechanism is required Grondys & Strzeleczyk (2014) for warehouse management operations to control excess and obsolete inventory by indicating the inventory material condition and level. In order to effectively handle excess and obsolete inventory, it is necessary to first identify the sort of stock that is not moving, gauge the amount of slow-moving inventory in the warehouse that could be classified as obsolete or excess inventory, and finally conduct an analysis to demonstrate why the inventory is being used. When multiplied by the number of days since the delivery, the indicator can display the difference between the inventory from the previous and current periods as well as the amount of resources from the most recent deliveries, up until a zero value is reached. To obtain the real slow-moving stock, the best solution is to use the FIFO method. This indicator's computation is as follows:

ZM =Ɛ d. I Where:

d – Number of days of slow-moving resources by FIFO

I – Value or amount of slow-moving resources in a warehouse

2.2.7.Handling of Inventory

Sum controlling management system is required, according to Prempen (2015), for warehouse management operations to control the excess and obsolete inventory, to identify the material condition and level of inventory. To effectively manage excess and obsolete inventory, it is necessary to first identify which inventory is non-moving and how much of it is in the warehouse that moves slowly. This inventory can be classified as either excess or obsolete. Furthermore, analysis of the data is made possible to demonstrate why the inventory is being used. When the indicator reaches zero value, it can display the difference between the inventory from the last delivery and the current inventory, as well as the amount of resources. This value can then be multiplied by the number of days that have gone since the delivery.

2.2.8.Store knowledge and skill

According to Jenkins (2020), training is a deliberate process to alter attitudes, knowledge, and skills via learning experiences to perform well in a variety of tasks or in one particular activity. In the workplace, its goals are to help each person reach their full potential and meet the organization's present and future demands for human resources. The author goes on to state that staff members can receive internal training while working on a project or external training at a college that offers supply chain management courses. that hiring, training, and developing staff with the ability and drive to conduct better work is essential for the supply function to attain a superior supply performance. By performing a variety of tasks quickly and effectively, qualified employees with competence and expertise will aid the business in reaching its goals and objectives. Staff qualifications are a prerequisite for an organization's success and should align with the demands of the position.

2.2.9.Store Management

The creation of storage systems is crucial since it appears that they are essential for maintaining assets until other warehouses or storage facilities ask for them. This method seeks to use contemporary technology in the design and implementation of storage systems and

administration (Kadhum, 2012). One of the primary areas of logistics is warehousing. The storage of completed items or materials (raw and components) for industrial, commercial, or agricultural uses is its very broad definition.

Truly, warehousing encompasses a wide range of tasks, including "proper storage," inspection, and product acceptance (loading and unloading). It is the entire system (warehouse management system), comprising tracking systems, communication "between product stations," and warehouse infrastructure. The "Just in Time technique" is one of the storage solutions trends that is most environmentally friendly. It denotes the delivery of goods straight, without warehousing, from supplier to manufacturer. However, as the distances between middlemen are increasing due to the globalization of the global economy, this system's applicability is quite limited. Though several sustainable changes may be made to the warehouse infrastructure, modern logistics cannot function without warehousing services (Oluwaseyl, 2017).

2.2.10.Inventory Control

The practice of keeping the investment in materials and parts kept in stock within predefined bounds established in compliance with management's inventory policy is known as inventory control. Thus, setting investment patterns and regulating them in accordance with individual and group needs, determining the maximum amounts of inventory to be held, creating policies for inventory control, monitoring the effectiveness of inventory policies, and making adjustments as needed are all included in inventory control activities. Selling and stocking nowadays come with a lot of challenges. Inventory management is therefore essential. The effectiveness of the operations of medical logistics companies has been negatively affect ed for many years by a variety of issues, particularly about stock control. According to Sporta (2018), the issues include understocking, employee theft and a lack of inventory taking, overstocking that leads to out-of-date or expired products, and delays in the order and delivery of medical supplies.

2.2.11.Model of Inventory Control Management

The following features are taken into consideration in inventory management models: One item as opposed to several. This dimension takes into account if several interdependent goods need to be taken into account or if a single item can be utilized alone for calculations due to coordinated control, space or budget limits, or item substitutability. length of time. The selling season for some products may be brief, and excess stock at the end of the season may not be able to meet

demand the following year in certain inventory management scenarios. Under such circumstances, a one-period model is necessary. A rolling horizon implementation approach is a popular strategy when several time periods need to be taken into account. Decisions are taken at the beginning of each era, taking into account a comparatively small number of future periods. At the beginning of the next term, the issue is resolved and the decisions are put into action. Total number of points for stocking. An individual stocking point should occasionally be handled separately. ZIUkov (2015) states that many locations are frequently used to store inventories of identical items in the actual world.

2.3. Empirical Review

The predominance of stock management techniques in maintaining and regulating inventory as well as its effect on business performance were investigated by Panigrahi (2021). The study specifically used inventory automation, competitive strength, operational efficiency, and distribution turnover to assess the performance of steel manufacturing companies. In India, a descriptive and causal research design was used to perform the study. The study encompasses managers operating in the domains of operations, production, procurement, and warehousing.

The study's findings show that operational effectiveness and distribution turnover are statistically significantly correlated with an efficient inventory management model, accurate inventory records, stock-out management, and information technology use. For steel manufacturing organizations, there are numerous benefits to implementing effective inventory management systems. These benefits are linked to operational efficiency and include on-time performance, optimal output, meeting assembly targets, and customer satisfaction.

Through an analysis of employee viewpoints and a company's annual report, a Ghanaian study by Eskel (2021) looked into the effect of materials management on a firm's success. The research objectives, which were centered on a publicly traded manufacturing business in Ghana, were met by using a cross-sectional research approach. The study demonstrated a strong positive correlation between firm profitability and all eight materials management strategies. Subsequent investigation revealed that the three most significant indicators of the company's performance were just-in-time, vendor-managed inventory, and material need planning.

The effect of various stock management techniques on the operational performance of manufacturing businesses was the subject of another study conducted in Ghana (Opoku &

Opoku-Agyemang, 2020). In the Accra, Tema, and Kumasi metropolises, the study employed a descriptive survey design with a data collection of 152 procurement and operations managers from 246 registered manufacturing firms. Production companies like activity-based costing and strategic supplier relationships, according to the research. Just-in-time stock management was, nevertheless, the least popular approach. Activity-based costing, vendor-managed inventory, economic order quantity, material resource planning, and strategic supplier partnerships were found to be strongly and favorably correlated with operational performance using ordinary least square regression analysis.

2.3.1.Information Technology and Organizational Performance

The effect of stock management techniques at a particular hospital was examined by Osei-Mensah (2016). There were 30 patients and 60 staff members involved in the study. The main method for gathering data was the use of questionnaires. The research's conclusions include that the hospital uses a material requirements planning system to apply contracts with suppliers for short-distance distribution and to ensure accurate supplier response rate forecasts. The hospital strictly employs modern automation in materials management procedures and assures strategic supplier partnerships as a stock management approach, according to this research.

To assess how stock management techniques affected the warehouse businesses in Mombasa County, Gitau (2016) conducted an investigation. A descriptive survey of 48 warehouse companies was the research design used. Through the dissemination of questionnaires, the correlational study assisted in providing answers to the research objectives. The results obtained were highly acceptable, as most of the parameters had outstanding internal consistency. The results are presented in tables that make it evident that stock management techniques and operational effectiveness are related. Material-assisted technologies and strategic supplier partnerships are examples of explanatory variables. The researchers advise more studies on businesses located outside of Mombasa County and in other industries as a result.

H1: Information Technology has a significant and positive effect on the performance of the Commercial Bank of Ethiopia.

2.3.2.Inventory Control Techniques and Organizational Performance

The relationship between stock management practices and manufacturing firms' performance in Kenya was investigated by Mulumba (2016) in a case study that focused on agrochemical

companies. The study identified four research goals to achieve this goal: to comprehend the effect of the JIT on productivity; to investigate the effects of Vendor Managed Inventory (VMI) on productivity; and to comprehend the effects of the net transactions approach to stock management on the productivity of Kenyan production companies. We conducted the analysis using 65 responses from agrochemical institutes. The procurement, operation, production, and warehousing departments sent representatives.

The analysis reveals that the net transaction method's main goal is to ensure that the company has all the resources necessary to carry out its activities and, as a result, improve performance. The study also shows that a company's manufacturing system expenses can be decreased by implementing JIT. According to the report, contracts that control the agrochemical company's inventory to enhance performance are also what drive VMI. In addition, the study discovers that inventories have enhanced agrochemical businesses' return on equity.

According to the study, in order to increase performance, top management at every manufacturing company in Kenya should develop their re-planning abilities. Senior management of Kenyan manufacturing firms ought to apply the pull strategy, which produces goods at each stage of production exactly as needed. Manufacturers can improve performance by reducing or doing away with inventory by utilizing vendor-controlled inventory solutions. Predicting future demand and ensuring high performance should be the goals of forecasting.

In order to better understand how inventory tactics affect the financial performance of a certain Nigerian company named Larfage Wapco Plc, Onikoyi (2017) conducted study. A survey design method was applied for this project, examining both field data and financial documents. While the second hypothesis demonstrates a pertinent outcome, the study's first hypothesis revealed a relationship between the stock held and the product cost of sales between 2005 and 2013. The results demonstrated a positive relationship between sales growth and Larfage Wapco Plc's stock control management.

Establishing internal policies that facilitate the quicker adoption of ideal stock management strategies like EOQ, JIT, and MRP is advised for cement manufacturing enterprises. Furthermore, when the level of partnership increases, the company should also strengthen its clientele. The company should adjust its material system to match specific manufacturing

requirements since this will facilitate the implementation of programs such as vendor controlled inventory.

According to Ali Ahmed (2017), the Nyamache tea factory's operations are effect ed by stock management techniques. Investigating how material valuation affects manufacturing processes was one of the study's main objectives. The researcher employed an observational study design. A total of 122 employees from the Nyamache tea facility met the requirements for this demographic. In order to collect the required data from the chosen participants, a deliberate technique was used with a sample size of 36 responses. The results of the study indicate that, through technical processes, pricing assessment has the biggest influence on material size.

Musau (2018) conducted research to look at how stock management affects supply chain results in Kenyan textile manufacturing enterprises in terms of cost savings, operational flexibility, profitability, and efficiency. The investigation employed an emerging mixed methods design. A total of 196 individuals from the purchasing departments of fifteen different Nairobi-based fabric manufacturing industries participated in the study. 139 persons responded to the survey. The procurement department personnel from the textile companies were selected using basic random sampling methods. Utilizing questionnaires and interview schedules, information from primary sources was acquired.

Using inferential statistics such as hierarchical multiple regression and correlation analysis, the relationship between the variable and the hypothesis was assessed. Stock management is a strategic tool used by the Kenyan enterprises that were chosen for the study to influence productivity. The investigation found that the company's overall performance metrics are effect ed by stock management tactics.

A different study Atnafu & Balda (2018) looked at how Ethiopian businesses' sales and competitiveness were affected by stock management strategies. The country's manufacturing sector comprised 1888 micro and small enterprises (MSEs), from which data were gathered. Finding out which stock management techniques MSEs preferred and how much of an effect it had on their sales and competitive advantage were the specific objectives. In this study, the theoretical framework was the theory of limitations. Further stock management strategies could improve firm sales and give the company a stronger competitive advantage, according to the findings. Also, the research discovered a direct and favorable correlation between productivity

and competitive advantage. Accordingly, this research suggests enough training and strong resources to guarantee increased productivity, which in turn promotes economic expansion.

H2: Inventory Control Techniques have a significant and positive effect on the performance of the commercial bank of Ethiopia.

2.3.4.Inventory Cycle Counting and Organizational Performance

A recent study by Orobia & Akisimire (2020) used a correlational research method to look at the relationship between financial performance, managerial ability, and stock management. With the use of AMOS software, the survey was tested among 304 SMEs in Uganda. The analysis reveals a strong correlation between stock management tactics and financial productivity. Furthermore, the relationship between financial results and managerial competency is mediated by stock management. This suggests that a favorable outcome is significantly influenced by stock management. According to the study, stock management is essential to the growth and success of companies. Once more, the amount of sales has an effect on corporate profit. Product quality is directly related to it. The study makes the following recommendation in light of this: businesses should modify their stock operations to satisfy desired standards. To maintain a steady flow of output, executives need also to closely monitor and manage their resources.

The nature of Covenant Bakery's stock management procedures and their effect on financial results were assessed by research study Kehide & Ibidunni (2020). The purchasing division of the business unit provided quantitative data. Inventory strategies that were heavily utilized in the organization, according to the research, were Activity Based Costing and Economic Order Quantity. A further finding of the study was the relevance of EOQ and ABC to profit maximization and cost minimization. Thus, the report suggests that the company keep proper control over basic commodities including sugar, flour, and margarine.

Goal (1992) conducted research to verify the causal relationship between stock management strategies and Polish food processing companies' profitability. Using panel regression techniques, this was carried out at the level of the Polish food business. Additionally, the years 2005–2017 are included in the analysis. The work-in-progress, finished product, raw and other material stocks, and other goods are all included in the study's focus on stock composition. It was shown by the data that daily inventory sales for total stocks tend to decline when the inventory ratio for materials and final products declines. Better financial success, as measured by the return

on working capital, is correlated with more efficient inventory management, according to the panel regression model.

H3: Inventory Cycle counting has a significant and positive effect on the performance of the commercial bank of Ethiopia.

2.3.3.Warehouse Management System and Organizational Performance

Material management's effect on private companies' productivity in Uganda was examined by Mugabe (2018), with a particular emphasis on the formal sector in Kisoro Municipality. The three primary objectives of the study were to identify inventory management strategies, look at the relationship between stock management and productivity, and identify challenges related to their implementation. Data collection was conducted using a clustered random sample technique and a questionnaire. A mixed technique was used to examine the data, with a sample size of sixty respondents. The study concludes that organizations can achieve high productivity by using the right material handling techniques. This is because it guarantees time management, quality control of the available materials, and proper functioning of the manufacturing department.

As stated by Bawa and Kissi (2018) conducted studies to look at how stock management affected the performance of listed industrial companies in Ghana. To ascertain whether stock management and company performance in Ghanaian-listed manufacturing companies are related, the research employed secondary data. The sample used in this study included 140 firm-year observations from 14 manufacturing companies that were listed between 2007 and 2016 on the Ghana Stock Exchange (GSE). As metrics for measuring business performance, profitability and operational cash flows were assessed. Operational cash flow and return on assets were used to evaluate business performance statistics. To ascertain the link, regression statistics were also used. The main construct, stock management, was found to have little effect on firm performance and to have a negligible correlation with the productivity of Ghanaian manufacturing enterprises.

Muchaendepi & Kanyepe (2019) investigated the effect of effective material management on organizational performance in Zimbabwe. Data from the Gleview Complex, Siya So Mbare, Kuwadzana, Gazaland, and Magaba industrial sites were used in this study. The research design was a descriptive technique. There were 244 responders in the study's sample size. The majority of SMEs, according to the report, follow a just-in-time methodology and have little knowledge of vendor controlled inventory systems and related computerized systems. Because of this, their

manufacturing had supply chain issues since they had to keep in constant contact with their suppliers and shorten the time it took to receive goods. causing a scarcity of one or both of their brands, which would be detrimental to their profitability and ensuing efficacy.

H4: Warehouse management has a significant and positive effect on the performance of the Commercial Bank of Ethiopia.

2.4. Gap Analysis

Ethiopia has made great progress in recent years toward enhancing inventory practices among businesses. Even with this advancement, service delivery is still being adversely affected by problems with regulatory frameworks. Although research has been done on the advantages of inventory management techniques, it is crucial to remember that different industries may use different inventory management strategies. Therefore, more study is required to determine how inventory functions affect the performance of organizations. Even though earlier research has looked into several variables that might effect inventory performance, there are still a lot of unanswered questions about how inventory methods are adopted and used. Ethiopia is not an exception when it comes to the importance of inventory management practices on the efficiency of local government service delivery. Research frequently ignores inventory management practice, despite its importance.This research was conducted to close any gaps in the Commercial Bank of Ethiopia's inventory management practice. And to determine how the inventory management practice affected the organization's performance at the time, the researcher tried to do so.

2.5. Conceptual Framework

As to Miller (2010), inventory management encompasses all the procedures implemented to guarantee that customers have access to the necessary goods or services. To fulfill organizational requirements for product availability to clients as well as marketing needs, it coordinates purchasing, production, and distribution activities. The main task of inventory management is to determine the quantity and arrangement of stocked items. To safeguard the regular and planned flow of production against the unforeseen disruption of running out of materials, inventory management is necessary at several places inside a plant or at many sites of a supply network. In addition, inventory management encompasses the following areas: asset management, physical inventory, demand forecasting, inventory valuation, inventory visibility, future inventory price forecasting, quality control, lead time management for replenishments, product replenishment,

returns, and defective goods, and carrying costs of inventory. Reaching an ideal inventory level requires striking a balance between these needs; this is a continuous process that calls for adjustments as the company needs to adapt to changing market conditions (Ogbo, 2014).

The conceptual framework of the study is shown below. The study examines inventory management strategies as drivers of organizational success, including just-in-time, activity-based costing, economic order quantity, and vendor-managed stock systems. In this study, the metrics of organizational success that were used were profitability, customer service delivery, and operational cost reduction. In this model, organizational performance is the dependent variable, and stock management strategies are the independent variable.

Conceptual Framework

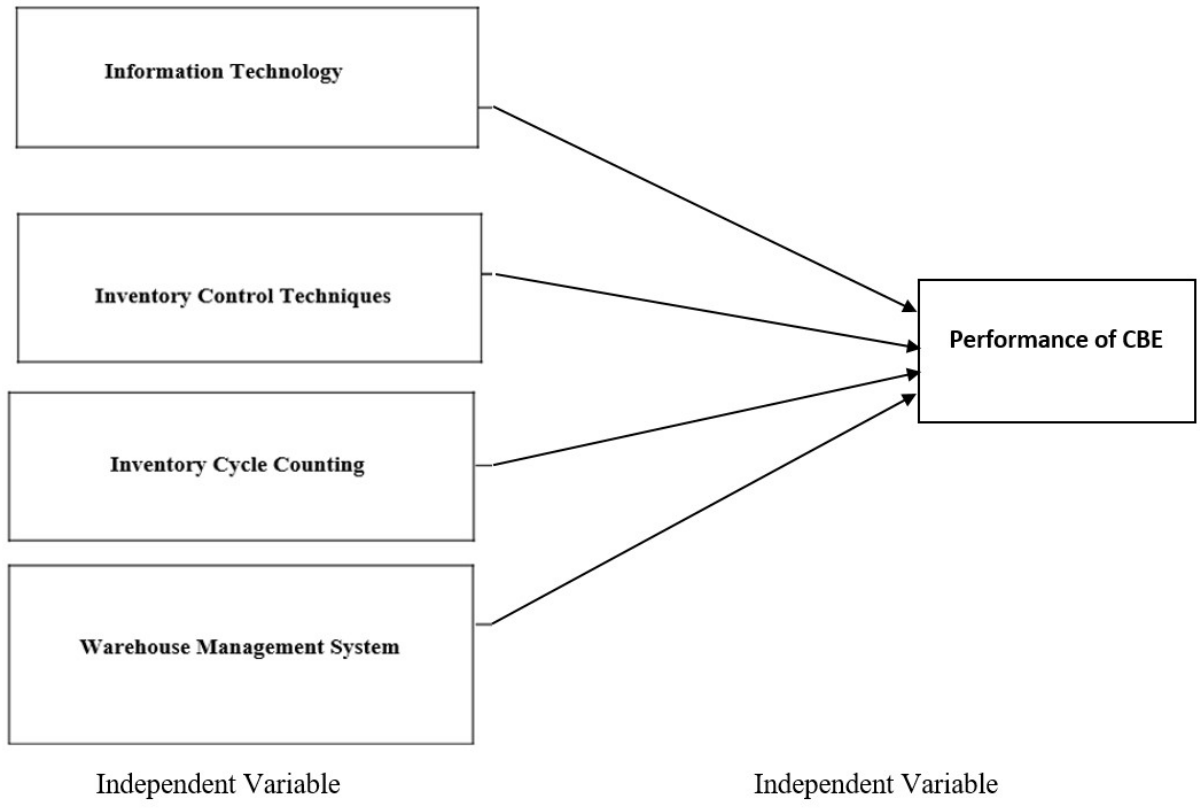

Figure2.1. Conceptual Model of the Study ***Source; Achuora John Odoyo***

2.6. Research Hypothesis

The following were the research hypotheses;

H1: Information Technology have a significant and positive effect on the performance of the commercial bank of Ethiopia.

H2: Inventory Control Techniques have a significant and positive effect on the performance of the commercial bank of Ethiopia.

H3: Inventory Cycle counting has a significant and positive effect on the performance of the commercial bank of Ethiopia.

H4: Warehouse management has a significant and positive effect on the performance of the Commercial Bank of Ethiopia.

CHAPTER THREE

3. RESEARCH METHODOLOGY

3.1. Introduction

A key component of research is the research technique, which aids in determining how to accomplish the goal, what information to gather, and how to gather and evaluate that information to address the issue at hand. As a result, selecting the right techniques that will yield the required results requires careful thought.

Evaluating how inventory management techniques affect the Commercial Bank of Ethiopia's performance was the main goal of this research. This chapter's goal is to go over the research methods used in this investigation. The topics covered in the following discussions include the population and data source, sampling strategies, validity and reliability, data gathering methods and tools, data processing and presentation methods, and ethical considerations.

3.2. Research Design

Descriptive research aims to depict the current state of affairs and characterize features of a population or phenomena to produce an accurate profile (Kothari, 2004). Descriptive research is used for “What” research questions. One objective of this study is to determine the state of the company's Inventory management practice and organizational performance level in terms of characteristics. Explanatory research, also known as causal research, extends descriptive research by investigating and explaining why or how phenomena occur. It attempts to demonstrate causes,

effects, or intents (Olsen & Pedersen, 2018). The researcher employed explanatory research to test the effect of inventory management practices on organizational performance.

3.3. Research Approach

There are three types of research approaches: mixed, qualitative, and quantitative. The researcher's strategy will determine whether to use a quantitative or qualitative technique.

Creswell (2005) defines qualitative research as investigations that do not make an effort to quantify their findings by statistical analysis or summarization. It aims to characterize many facets of conduct as well as additional elements investigated in the humanities and social sciences. It is distinguished by adherence to a wide range of orientations and tactics to maximize the validity and reliability of research methods and findings. As such, it's a kind of empirical research where data collection involves deliberate sampling. In-depth interviews, focus groups, artifact analyses, projective methods, and unmeasured observations are frequently used.

Conversely, quantitative research is a way of doing research where the investigator chooses what to investigate, formulates focused questions, gathers numerical data from subjects, applies statistical analysis to these data, and carries out the investigation impartially and objectively (Creswell, 2005). Analyzing qualified and descriptive data and information is part of it.

Accordingly, the investigator employed a mixed technique. This subject is complicated since many distinct factors might affect an inventory management system, not to mention the various parties that are involved. Therefore, to comprehend the complexity and validate or improve the framework that was developed from the body of existing literature, the researcher used a mixed technique by converting the qualitative data to quantitative data so that they can be interpreted and analyzed by employing a questionnaire to meet the study's specific and overall objectives. By employing the mixed approach, the researcher was able to characterize the gap in research questions by comprehending stakeholder perceptions of the situation and examining the effect of the Inventory Management practice.

3.4 Target respondents and population, Sampling Method, and Sample Size

3.4.1. Target respondents and population

A population comprises all possible participants to whom the study's findings are intended to be broadly applicable (Abiy et al., 2009). It is the compilation of all the units of analysis. Purposive

sampling was utilized to choose companies from several sector organizations that had adopted inventory management systems because the CBE has a more structured inventory department and more number of people that is effective for the research to take place . Accordingly among the several Addis Ababa organizations, the Commercial Bank of Ethiopia was specifically chosen to serve as the research's study area. The study's target group consisted of inventory department managers and the staff members that report to them, each of whom has distinct tasks and duties within the inventory management process. For this study, 70 employees makes up the target group's total population.

3.4.2. Sampling Method

The sampling approach is the method used to choose study participants (Creswell, 2009). Sampling's goal is to draw accurate conclusions about the total and is only warranted if the portion of the sample that is chosen is a true representative of the larger population. Probability sampling and non-probability sampling are the two basic categories of sampling techniques. With probability sampling, the elements are chosen at random, meaning that the choice of one element does not affect the choice of any other element.

The likelihood that an elementary unit in the population will be included in the sample is unknown in non-probability sampling, in contrast to probability sampling. Purposive sampling selects respondents depending on their availability and convenience, according to Creswell (2009).

The inventory management department at CBE is the study's designated population. 65 people have responded. Since other departments won't have pertinent data, knowledge, and experience related to the field of study, the respondents for this study were chosen using the previously mentioned purposive sampling approach. According to Saunders & Thornhill, (2022), purposive or judgmental sampling will be employed while working with a small sample size, hence this sampling methodology is appropriate for this case study. It permits using choice to select circumstances that support addressing the research question and achieving the study's goal.

3.5. Data Collection Source, Types, Instrument

3.5.1.Data source

In this study, primary data was used to obtain relevant information. To achieve this goal, a well-designed questionnaire survey was employed as the best instrument to gather primary data from the selected population.

3.5.2.Data Collection Instrument and Type

The researcher utilized questionnaires as the primary data collection instrument. Owens (2002) recommends the use of questionnaires due to their potential to reach a large number of respondents within a short time, the ability to give respondents adequate time to respond, and offering a sense of privacy and confidentiality. The researchers therefore selected this instrument as a quick and cost-effective way to collect data.

The primary research instrument for this study was a questionnaire. The questionnaire for the independent variable of inventory management practice is adapted from the research paper by Achuora John Odoyo titled "Influence Of Inventory Management On Performance Of The Private Commercial Banks In Kenya," published in 2017. The questionnaire for the dependent variable of organizational performance is adapted from the research paper by Ibrahim Abdela "The impact of knowledge management on organizational performance: The case of Ethiopian Insurance Corporation" published in 2016.

The questionnaire used for the study is divided broadly into two sections. The first section is the demographic section, which includes variables such as age, gender, highest educational level, position in the organization, and years of experience. The second section pertains to Inventory management practice and Performance of the organization outlined in the conceptual framework. This section contains questions to be answered using a five-point Likert scale, where respondents indicate their agreement/disagreement with various statements related to inventory management practice and Organization performance. The scale ranges from "strongly disagree" (5) to "strongly agree" (1).

3.5.3. Data Analysis- Software, Model, Technique

Data analysis, as per Mugenda and Mugenda (2021), involves bringing order, structure, and meaning to a large volume of data. The collected data was analyzed using quantitative data analysis methods. For the questionnaire, data analysis was conducted using SPSS (Statistical Package for Social Science) version 23, after assigning numerical codes to each response paper.

SPSS was chosen because it is a readily available and user-friendly analysis tool with which the researcher is familiar.

Descriptive analysis entails summarizing and describing the primary features of a dataset. This analysis concentrates on comprehending the fundamental characteristics of the data, including central tendency, dispersion, distribution shape, and relationships between variables. Descriptive statistics are employed to organize, summarize, and present data meaningfully. Common descriptive statistics comprise measures such as mean, median, mode, standard deviation, and range. Among this mean and standard deviation is used for the first two "what" research quations.

The study also utilized regression analysis, a statistical method used to analyze the relationship between one dependent variable (usually denoted as Y) and one or more independent variables (usually denoted as X). The objective of regression analysis is to model the relationship between the variables and make predictions based on that model.

There are various types of regression analysis, including multiple linear regression, logistic regression, polynomial regression, and others. Multiple Linear regression is used for the analysis of this research, assuming a multiple linear relationship between the dependent variable and independent variable(s). Data was categorized based on meaningful groups of responses, and graphs and tables were employed to summarize relevant details of the responses to facilitate easy analysi

3.6. Methods of Data Analysis

The process of giving a lot of data organization, order, and significance is known as data analysis (Mugenda & Mugenda, 2021). Quantitative data analysis techniques were applied to the acquired data. After assigning a number code to each response paper, the data analysis for the questionnaire was carried out using SPSS (Statistical Package for Social Science) version 16. Because SPSS is a widely accessible and intuitive analysis program that the researcher is familiar with, it was chosen.

Summing up and outlining a dataset's key characteristics is the goal of descriptive analysis. Knowing the fundamental properties of the data, such as the central tendency, dispersion, distribution form, and correlations between variables, is the main goal of descriptive analysis.

When arranging, condensing, and presenting data in a relevant manner, descriptive statistics are employed.

Regression analysis comes in various forms: logistic regression, polynomial regression, linear regression, etc. One of the most popular kinds of regression is Multiple linear regression, which assumes that there is a linear relationship between the dependent and various independent variables. Relevant categories of replies were used to categorize the data. The relevant facts of the responses were condensed into graphs, charts, and tables to make analysis easier.

Multiple Linear regression was further utilized in the investigation. The relationship between one dependent variable (often represented as Y) and one or more independent variables (often represented as X) is examined using Multiple Linear regression analysis, a statistical procedure. In regression analysis, modeling is the aim. the variables' relationship and forecast using that model as a basis.

The contribution of each variable to the model is displayed in the standardized beta coefficient column. The average increase in the dependent variable (all other independent variables held constant) when the independent variable increases by one standard deviation is known as the beta weight. We may compare these since they are standardized. The following model is defined using the regression equation's standardized coefficients (Beta) for the independent variables.

The links between employee Performance and inventory management system aspects were investigated in the current study using multiple linear regression models. Thus, $Y= \beta0+ \beta1X1+ X2\beta2 + \beta3X3+ \beta4X4 + e$ were the equations employed in the investigation. β1 refers to information technology, β2 to control techniques, β3 to cycle counting, and β4 to warehouse. If β0 is constant, then the coefficients of terms X1, X2, X3, and X4 are IT, Control Techniques, Cycle Counting, Warehouse, and Performance are the parameters to be estimated, while β0 is the constant. Performance is the dependent variable. The independent variable coefficients are denoted by X1, X2, X3, and X4, while the error term is represented by e.

The research used a multiple-regression model

$Y= \beta0+ \beta1X1+\beta2X2+\beta3X3 +\beta4X4 +Ɛ$

Where Y= Performance of CBE

β0= Constant

X1= Information Technology

X2= Inventory Control Techniques

X3= Inventory Cycle Counting
X4= Warehouse Management System
Ɛ= Error Term at 95% confidence level.

3.7. Validity and reliability

3.7.1 Validity

The term validity, which comes from the Latin word validates, meaning "strong," is used in qualitative as well as quantitative studies. As stated by Kothari (2004), validity implies that a result can never be legitimately shown; it can only be contested. As a result, the validity of a research instrument includes components such as construct validity, which deals with the consistency of the questions with the desired responses of the researcher. The questionnaire's validity is ensured by designing it according to the appropriate objectives. Other consideration is the validity of the content, which is ensured by using questions that are closed-ended to exclude insignificant responses to ensure internal validity; researchers also transmit the draft survey to the adviser. This was included in the final questionnaire for evaluation and feedback. Construct validity is achieved by rearranging the questions by the responses of the respondents to preserve the flow of questions. The survey questionnaires are valid in this regard because they have been used by many studies and are supported by literature. As a result, the researcher is confident that the constructs can analyze the effect of inventory management practices on CBE performance.

3.7.2. Reliability

The degree to which methods for gathering data or conducting analyses can produce consistent results is known as reliability (Saunders & Thornhill, 2022). Cronbach's Alpha is used to quantify the data reliability test. As per the findings of William and Barry (2010), scales that display a coefficient alpha between 0.80 and 0.96 are deemed to have very good reliability, those that exhibit an alpha between 0.70 and 0.80 are considered to have good reliability, those that display an alpha value between 0.60 and 0.70 indicate fair reliability, and those with a coefficient alpha below 0.60 are deemed to have poor reliability. The Cronbach’s Alpha is 0.95 which shows a very good reliability test result.

Table 3.1. Reliability Test for the independent variables

Reliability Statistics

Cronbach's Alpha	N of Items
.959	54

A Cronbach's Alpha value of 0.959 indicates a very high level of internal consistency for the 54 items in your questionnaire. Cronbach's Alpha (α) measure of reliability, or internal consistency, of a set of scale or test items which ranges from 0 to 1, with higher values indicating greater reliability. An alpha value of 0.959 suggests that the items in your questionnaire are highly consistent with each other, meaning they likely measure the same underlying construct or concept. This is considered an excellent level of reliability, indicating that the scale is very dependable. The number of items is (54), which refers to the total number of questions or items included in the reliability analysis. Having a high number of items can contribute to a higher Cronbach's Alpha, but it also implies that the questionnaire is comprehensive in covering the topic.In summary, a Cronbach's Alpha of 0.959 for 54 items suggests that your questionnaire is highly reliable and the items are very consistent in measuring the same construct.

Table 3.5.Reliability Test for the Organizational Performance

Reliability Statistics

Cronbach's Alpha	N of Items
.852	12

The Organizational Performance scale has 12 items, and a reliability test using Cronbach's Alpha produced a result of 0.852. The scale's items have very strong internal consistency, as seen by the high Cronbach's Alpha, which suggests that the items consistently assess the same underlying construct. A Cronbach's Alpha value above 0.7 is typically regarded as acceptable, above 0.8 as outstanding, and 0.9 as superb. Consequently, a score of 0.852 indicates that the scale's items are highly dependable and consistent with one another for assessing organizational performance in your research.

3.8. Ethical consideration

The researcher is fully aware of the need to exercise ethical caution. The scenario, the kind of questionnaires, and the subject matter of the research must all be disclosed to the respondents. ensuring that participants understand that the information gathered will only be utilized for this study. According to Saunders & Thornhill (2022), "Ethics refers to the appropriateness of your behavior about the rights of those who become the subject of your work, or are affected by it."The presentation of research findings and conclusions must be accurate, and devoid of misinterpretations or variable manipulation.

CHAPTER FOUR

4-PRESENTATION, INTERPRETATION AND ANALYSIS OF FINDINGS

4.1 Introduction

The results of a questionnaire survey given to employees of the Commercial Bank of Ethiopia are provided and examined in this chapter. There are essentially two primary components in this section. The findings of the descriptive analyses are presented in the first section, and the second section displays the findings of the regression analysis. After the results are presented, there is a discussion of the data collected from the respondents, with supporting evidence from the literature. Generally speaking, this part is set up as follows: The respondent profile was first shown and examined. Second, an analysis was done on the data gathered via surveys.

4.2 Response Rate

Questionnaires that permitted the researcher to leave them with the respondents and pick them up later after they completed the forms were used to interview a sample of seventy respondents. A total of seventy workers were polled. 65 respondents, or 92.85% of the sample, were selected from the total population surveyed. As Mugenda & Mugenda (2021), this exceeded the 50% threshold that is deemed adequate in descriptive statistics.

Table 4.1.Response Rate of Respondents

Response	Frequency	Percentage
Actual Response	65	92.85%
Non-Response	5	7.14%
Total	70	100%

4.3 Demographic Characteristics of Respondent

First, the questionnaire presents the demographic information of the subjects. Limited questions concerning the personal and professional demographics of the respondents were asked in this section of the survey. The table below shows the respondents' age, education, department of employment, work experience, and computer ability. Data collected from the respondents was analyzed as follows.

Table 4.2. Background of Respondents (CBE)

Variable	Variable Categories	Frequency	Percentage
Age	20-30 Years	26	40.0%
	31-40 Years	35	53.8%
	40 and above Years	4	6.1%
	Total	65	100.00%
Educational Level	Diploma	2	3.1%
	Degree	42	64.6%
	Master and above	21	32.3%
	Total	65	100.00%
Work Experience	0-5 Years	10	15.4%
	6-10 Years	43	66.2%
	11 and above Years	12	18.5%
	Total	65	100.00%
Computer Proficiency	Basic	9	13.8%
	Intermediate	22	33.8%
	Proficient	34	52.3%

	Total	65	100.00%
Department	Inventory	12	18.5%
	Procurement	1	1.5%
	Warehouse	52	80.0%
	Total	65	100.00%

Source: Field Survey (2024)

Based on the age distribution of the participants, 53.8% of CBE staff members are in the 31–40 age range, while the remaining 40.0% fall between the 20–30 age range. The lowest percentage of workers, however, are those over 40 (6.1%). Stated otherwise, the bulk of workers belong to the productive age group which is stated as, 15-24 years (early working age), 25-54 years (prime working age), 55-64 years (mature working age), where the summation percentage is more than 85%. There is a bit of maturity among those over 40, though.

Education is one of the most important components in determining an employee's ability to understand a specific situation and apply a new method. The aforementioned table shows that 64.6% of CBE workers hold a first degree, 32.3% hold a master's degree or above, and 3.1% hold a diploma. The results show that the individuals were well-educated enough to perform their assigned responsibilities effectively.

Regarding years of service, the majority of CBE workers (66.2%) have been employed by the company for a sizable amount of time, whereas 15.4% of respondents have only been employed by the company for a short time. Interestingly, 18.5% of the remaining respondents had been employed by the company for eleven years or longer. Most of the participants had worked with the company for more than six years, which is a significant duration for an employee to become acquainted with the organizational culture and working practices.

Proficiency with computers was one of the most essential requirements since inventory management is becoming more and more integrated with IT. 13.8% of respondents, or the majority, only know how to use a computer in a basic way. Intermediate users (33.8%) and proficient users (52.3%) follow. The result shows that companies have enhanced their employees' computer skills.

According to the research design of this study, just three departments—defined as strata that are directly connected to supply chain management and inventory management—will be the subject of this investigation. Because of this, of the 65 employees that participated in the research,

80.0% were employed in the warehouse division, 1.5% in the procurement division, and 18.5% in the inventory division.

4.4 Descriptive Statistics

These sections contain summaries of every variable under the categories of the factors that were analyzed. To enhance understanding and provide a summary of the data, the researcher use descriptive statistics, particularly the mean, standard deviation, and frequency. Utilizing a Likert rating scale, the researcher employed questionnaires to verify that respondents agreed with the items concerning the inventory management practices of the company being studied. The scales are as follows: 1 = Strongly Agree, 2 = Agree, 3 = Neutral, 4 = Disagree and 5= Strongly Disagree.

Table 4.3. Issues Related to Information Technology

Statements	SD	D	N	A	SA	Mean	SDv
Electronic data interchange systems play a significant role in profitability improvement.	0%	1.5%	6.2%	33.8%	58.5%	1.52	0.752
Electronic point-of-sale systems play a significant role in profitability improvement.	0%	1.5%	6.2%	35.4%	56.9%	1.54	0.752
Barcoding plays a significant role in profitability improvement.	0%	1.5%	15.4 %	33.8%	49.2%	1.71	0.843
Electronic data interchange systems play a significant role in expanding market share.	0%	1.5%	9.2%	30.8%	58.5%	1.55	0.791
Electronic point-of-sale systems play a significant role in expanding the market share.	3.1%	1.5%	13.8 %	40.0%	41.5%	1.85	0.939
Barcoding plays a significant role in expanding market share.	3.1%	1.5%	12.3 %	44.6%	38.5%	1.86	0.916
Electronic data interchange systems play a significant role in attaining higher customer satisfaction.	3.1%	1.5%	10.8 %	29.2%	55.4%	1.68	0.954
Electronic point-of-sale systems play a	1.5%	1.5%	4.6%	49.2%	43.1%	1.69	0..76

significant role in attaining higher customer satisfaction.							9
Barcoding plays a significant role in attaining higher customer satisfaction.	4.6%	1.5%	10.8 %	43.1%	40.0%	1.88	0.992
Mean of Information Technology						1.70	

Source: Field Survey (2024)

Additionally, the respondents were asked to provide feedback on claims made about how information technology affected CBE performance. Likert scale ratings were used for the responses, with the results shown in the above table. On a 5-point Likert scale, where 5 represents strongly disagree and 1 represents strongly agree, the response was given.

According to the results, 92.3% of the respondents agreed with the statement that electronic data interchange technologies significantly increase profitability. Additional findings showed that 92.3% of respondents agreed that better profitability is largely attributable to electronic point-of-sale systems. Barcoding significantly contributes to increased profitability, according to 83.1% of respondents. This shows that information technology plays a significant role in profitability improvement.

Market share expansion is significantly aided by electronic data interchange technologies, according to 89.2% of respondents. According to the results, 81.5% of the respondents agreed with the assertion that increasing market share is largely facilitated by electronic point-of-sale systems. The majority of respondents, or 83.1%, agreed with the statement that barcoding significantly contributes to growing market share. This implies that information technology plays a significant role in expanding the market share.

The findings also showed that 84.6% of respondents, or the majority, agreed with the assertion that electronic data interchange technologies are crucial to achieving greater customer satisfaction. According to the results, 92.3% of the respondents agreed with the assertion that achieving improved customer satisfaction is mostly dependent on electronic point-of-sale systems. The majority of respondents, or 83%, agreed, according to the results, that barcoding is crucial to achieving greater customer satisfaction.This shows that information technology plays a significant role in attaning higher customer satisfaction.

The statement that information technology affected the performance of the commercial bank was supported by most respondents, as indicated by the average mean of all the statements, which was 1.69 which is considerd high because it is found below < 3.40. Furthermore, as indicated by a standard deviation of 0.85, there were small changes in the responses. The results support Gachon and Fisher's (2010) assertion that, while employing information technology to manage inventories can be wise, doing so can also be costly and time-consuming if done incorrectly.

Table 4.4. Issues Related to Inventory Control Techniques

Statements	SD	S	N	A	SA	Mean	SDv
Just-in-time sourcing plays a significant role in profitability improvement.	0%	1.5%	9.2%	29.2%	60.0%	1.54%	0.792%
Vendor-managed inventory system plays a significant role in profitability improvement.	0%	1.5%	4.6%	32.3%	61.5%	1.48%	0.731%
Economic order quantity system plays a significant role in profitability improvement.	0%	1.5%	10.8%	44.6%	43.1%	1.72%	0.781%
Just in time, sourcing plays a significant role in expanding market share.	0%	1.5%	13.8%	52.3%	33.8%	1.80%	0.666%
Vendor-managed inventory system plays a significant role in expanding market share.	0%	1.5%	20.0%	40.0%	38.5%	1.86%	0.846%
Economic order quantity system plays a significant role in expanding the market share.	0%	1.5%	16.9%	36.9%	44.6%	1.77%	0.844%
Just-in-time sourcing plays a significant role in attaining higher customer satisfaction.	0%	1.5%	10.8%	32.9%	55.4%	1.60%	0.806%
Vendor vendor-managed inventory system plays a significant role in attaining higher customer satisfaction.	0%	1.5%	13.8%	36/9%	47.7%	1.71%	0.824%
Economic order quantity system plays a significant role in attaining higher customer satisfaction.	0%	1.5%	9.2%	33.8%	55.4%	1.58	0.788%
Mean of Inventory Control Technique						1.67	

Source: Field Survey (2024)

Additionally, questions regarding the effect of inventory control procedures on the performance of CBE were posed to the respondents for feedback. The findings showed that 89.2% of respondents, or the majority, felt that just-in-time sourcing significantly increased profitability.

Additional findings showed that 93.8% of respondents agreed that the implementation of vendor controlled inventory systems contributes significantly to increased profitability. According to 87.7% of respondents, increasing profitability is significantly aided by the economic order quantity system. This implies that inventory control techniques play a significant role in increased profitability.

Just-in-time sourcing is a major factor in growing market share, according to 86.1% of respondents. According to the findings, 78.5% of the participants affirmed that a vendor-managed inventory system has a considerable effect on increasing market share. Findings showed that 81.5% of respondents agreed with the assertion that increasing market share is mostly dependent on the economic order quantity system. This shows that inventory control techniques play a role in increasing the market share.

The findings demonstrated that 87.7% of the participants concurred with the assertion that just-in-time sourcing is crucial to achieving greater levels of customer satisfaction. As per the findings, 84.6% of the participants agreed with the assertion that a vendor-managed inventory system is crucial for achieving increased customer satisfaction. As per the findings, 89.2% of the participants concurred with the assertion that achieving greater customer satisfaction is mostly dependent on the economic order quantity system. This shows that inventory control techniques play a significant role in achieving increased customer satisfaction.

The majority of respondents believed that inventory control procedures affected the performance of the commercial Bank of Ethiopia, as indicated by the average mean of all the responses, which was 1.67 is considered high as it is found below < 3.40 . Furthermore, a standard deviation of 0.786 indicates that there was a small fluctuation in the responses. These results suggest that by implementing inventory control strategies, management might increase the effectiveness of inventory management while also achieving more cost savings, quicker delivery times, higher quality, and improved performance. They concur with Gunasekaran (2013) that companies

should focus on enhancing their inventory control methods. Given the considerable effect on margins and the bottom line, there are significant prospects for cost savings and improvements to inventory control systems.

Table 4.5. Issues Related to Inventory Cycle Counting

Statements	SD	D	N	A	SA	Mean	SDv
The Control group counting system play a significant role in profitability improvement.	0%	1.5%	10.8%	33.8%	53.8%	1.60	0.746
The Random sample counting system play a significant role in profitability improvement.	0%	6.2%	24.6%	33.8%	35.4%	2.02	0.927
The ABC analysis system play a significant role in profitability improvement.	0%	1.5%	16.9%	30.8%	50.8%	1.69	0.809
The Control group counting system play a significant role in expanding market share.	0%	1.5%	13.8%	38.5%	46.2%	1.79	0.820
The Random sample counting system play a significant role in expanding market share.	0%	1.5%	16.9%	43.1%	38.5%	1.83	0.821
The ABC analysis system play a significant role in expanding market share?	0%	1.5%	12.3%	46.2%	40.0%	1.77	0.786
The control group counting system plays a significant role in attaining higher customer satisfaction.	1.5%	1.5%	15.4%	32.2%	49.2%	1.74	0.889
The random sample counting system plays a significant role in attaining higher customer satisfaction.	0%	1.5%	16.9%	27.7%	53.8%	1.68	0.868
The ABC analysis system plays a significant role in attaining higher customer satisfaction.	0%	3.1%	18.5%	32.3%	46.2%	1.82	0.950
Mean of Inventory Cycle Counting						1.76	

Source: Field Survey (2024)

The control group counting system significantly contributes to increased profitability, according to the results, which showed that 87.6% of respondents agreed. It was agreed upon by the majority of respondents (69.2%) that a random sample counting system is important for increasing profitability. Additional findings showed that 81.6% of respondents agreed that the

ABC analysis system increases profitability. This shows that inventory cycle counting play a significant role in increased profitability .

Expanding market share is facilitated by the Control group counting system, according to 84.7% of respondents. Regarding the claim that a random sample counting system is important for increasing market share, 81.6% of respondents agreed. The majority of respondents, or 86.2%, agreed, according to the results, that the ABC analysis system significantly contributes to increasing market share. This implies that inventory cycle counting plays a significant role in expanding the market share.

The majority of respondents, or 81.5%, agreed, according to the results, with the statement that a control group counting system is important for achieving improved customer satisfaction. The majority of respondents, or 81.5%, agreed with the assertion that a random sample counting system is crucial to achieving greater customer satisfaction, according to the results. According to the results, 78.5% of the respondents agreed with the assertion that achieving improved customer satisfaction is mostly due to the ABC analysis system. This shows that inventory cycle counting plays a significant role in achieving improved customer satisfaction.

The average mean of all the statements was 1.77, suggesting that most respondents concurred that inventory cycle counting affects how well CBE performs. Furthermore, as indicated by a standard deviation of 0.756, there were Small changes in the responses. Based on these results, it appears that businesses can enhance their competitive standing, augment essential inventory control competencies, and distribute the danger or expense of significant thefts that might transpire in the absence of periodic inventory counts (Kimutai, 2010).

Table 4.6. Issues Related to the Warehouse Management System

Statements	**SD**	**D**	**N**	**A**	**SA**	**Mean**	**SDv**
Warehouse dynamic and static configuration plays a significant role in profitability improvement.	0%	1.5%	7.7%	35.4%	55.4%	1.55	0.708
Warehouse space utilization systems play a significant role in profitability improvement.	0%	1.5%	4.6%	53.8%	40.0%	1.68	0.640
Warehouse inbound and outbound logistics coordination plays a significant role in profitability	0%	1.5%	12.3%	38.5%	47.7%	1.68	0.752

improvement.							
Warehouse dynamic and static configuration plays a significant role in expanding market share.	0%	1.5%	13.8%	30.8%	53.8%	1.63	0.782
The Warehouse space utilization system plays a significant role in expanding market share.	0%	1.5%	15.4%	27.7%	55.4%	1.65	0.856
Warehouse inbound and outbound logistics coordination play a significant role in expanding market share.	0%	1.5%	18.5%	30.8%	49.2%	1.74	0.871
Warehouse dynamic and static configuration plays a significant role in attaining higher customer satisfaction.	0%	1.5%	7.7%	43.1%	47.7%	1.65	0.759
Warehouse space utilization system plays a significant role in attaining higher customer satisfaction.	0%	1.5%	9.2%	38.5%	50.8%	1.63	0.782
Warehouse inbound and outbound logistics coordination play a significant role in attaining higher customer satisfaction.	0%	1.5%	9.2%	32.3%	56.9%	1.57	0.790
Mean of warehouse management						1.64	

Source: Field Survey (2024)

According to the results, 90.8% of the respondents agreed with the statement that a warehouse's dynamic and static configuration significantly improves profitability. Further findings showed that 93.8% of respondents agreed that warehouse space utilization methods contribute significantly to increased profitability. Logistics coordination between warehouses inbound and outbound has a major role in improving profitability, according to 84.6% of respondents. This shows that warehouse management plays a significant role in increased profitability.

The claim that warehouse configuration, both static and dynamic, is important for growing market share was accepted by 84.6% of respondents. According to the results, 83.1% of the respondents agreed with the assertion that a warehouse space utilization system is important for increasing market share. The majority of respondents, or 80%, agreed, according to the results, that coordinating warehouse inbound and outgoing logistics is crucial for growing market share. This implies that warehouse management plays a significant role in growing marker share .

When it comes to achieving improved customer satisfaction, 90.8% of the respondents believed that warehouse configuration—both static and dynamic—is important. According to the findings, 89.3% of the participants concurred that a warehouse space utilization system is crucial in achieving increased levels of customer satisfaction. According to the findings, 89.2% of the participants concurred that achieving greater customer satisfaction is mostly dependent on the synchronization of warehouse inbound and outbound logistics.This shows that warehouse management plays a significant role in achieving increased levels of customer satisfaction .

According to the average mean of all the statements, which was 1.64, most respondents agreed that the warehouse management system affected the Commercial Bank of Ethiopia's performance. In addition, a standard deviation of 0.77 indicates that there were small differences in the responses. As per Koumanakos (2008), the findings suggest that implementing a warehouse management system can have a significant positive effect on an organization's inventory costs. It can also help introduce optimal space utilization systems that are tailored to the organization's requirements and help streamline the warehouse management system.

Table 4.7. Issues Related to the Performance of the Organization

A. Measuring customer perspective of organization performance	**SD**	**D**	**N**	**A**	**SA**	**Mean**	**SDv**
The quality of service that we provided improved as per the customer's needs.	0%	0%	7.7%	36.9%	55.4%	1.52	0.640
Customers of CBE leaving due to poor service.	7.7%	6.2%	20%	46.2%	20.0%	2.35	1.110
The organization has the quality of service that improved.	0%	4.6%	13.8%	41.5%	40.0%	1.83	0.840
The number of people who are using the service has increased.	1.5%	1.5%	12.3%	27.7%	56.9%	1.63	0.876
Mean of customer perspective of organization performance						1.83	
B. Statement for a measure of learning and growth perspective aspects of organization performance	**SD**	**D**	**N**	**A**	**SA**	**Mean**	**SDv**
The organization gives enough training on the job.	0%	3.1%	18.5%	33.8%	44.6%	1.80	0.851

I Am satisfied with my job.	0%	1.5%	12.3%	40.0%	46.2%	1.71	0.805
The organization checks employees' performance continuously and updates the job title	1.5%	1.5%	18.5%	49.2%	29.2%	1.97	0.829
CBE uses the best way that help to protect the firm from loss of knowledge due to employee turnover	1.5%	3.1%	20.0%	38.5%	36.9%	1.94	0.916
Mean of learning and growth perspective aspects of organization performance						1.86	
C. Stamens for measures of internal process perspective aspect of organization performance	**SD**	**D**	**N**	**A**	**SA**	**Mean**	**SDv**
The organization has a better quality of service.	0%	1.5%	15.4%	43.1%	40.0%	1.78	0.760
CBE gives priority to the employees' health and safety	0%	1.5%	30.8%	41.5%	26.2%	2.08	0.790
The organization provides necessary equipment and tools for employees.	0%	4.6%	24.6%	23.1%	47.7%	1.86	0.950
The organization has a time-saving decision-making process.	0%	4.6%	24.6%	52.3%	18.5%	2.15	0.775
Mean of internal process perspective aspect of organization performance						1.97	

Source: Field Survey (2024)

The findings showed that 92.3% of respondents agreed with the statement that the level of service improved to the needs of the client. Additional findings showed that 66.2% of the participants agreed that CBE's clients are departing as a result of subpar service. 81.5% of respondents said that the organization's level of service quality had increased.

There has been a rise in the number of users of the service, according to 84.6% of the respondents. According to the results, 78.4% of the respondents agreed with the assertion that the company provides enough on-the-job training. Based on the results, it was found that 86.2% of the respondents agreed that they were happy with their jobs.

The claim that the company updates job titles and regularly evaluates employees' performance was accepted by 78.4% of respondents. The findings showed that 75.4% of respondents agreed with the assertion that CBE is the greatest strategy for preventing knowledge loss at the company from employee turnover. According to the results, 83.1% of the respondents agreed with the assertion that the organization offers higher-quality services.

The claim that the CBE places a high premium on employee health and safety was accepted by 67.7% of respondents. Based on the results, it was found that 70.8% of the respondents agreed with the statement that the firm should offer its employees with the required tools. The organization's decision-making process is time-saving, according to the majority of respondents (70.8%), according to the results.

Since the average mean of all the statements was 1.88, most respondents seemed to agree with it. The performance of the Commercial Bank of Ethiopia was affected by measuring the perspectives of customers, learning and growth, and internal processes. Furthermore, as indicated by a standard deviation of 0.845, there were small changes in the responses. To lower inventory costs, meet organizational needs, and collaborate with the organization to simplify the organization management system, the results suggest that an organization gains a great deal from measuring customer perspective, learning and growth perspective, and internal process perspective of organization performance.

4.5. Results of Descriptive Statistics

According to Akmaliah (2009), mean score measurement can be used while interpreting the data. As he further specified, if the mean score is greater than 3.79, it will be considered low; if it is between 3.40 and 3.79, it will be considered moderate; and if the mean score is below 3.40, it will be considered as high.

Table 4.8. Mean and Standard Deviation of Independent Variables

Statistics

		Information Technology	Control_Techniques	Cycle_Counting	Warehouse
N	Valid	65	65	65	65
	Missing	3	3	3	3
Mean		1.70	1.67	1.76	1.64
Std. Deviation		.640	.575	.607	.559

According to the scale employed, participants' perceptions of IT were, on average, 1.70. It appears from this that participants' perceptions of IT are generally high since it is below 3.40. The majority of evaluations fall within 0.64 points of the mean, while there is some variety in the replies, as indicated by the standard deviation of 0.640. This implies that there is some difference in the respondent's response .

Perceptions of Inventory control Techniques were evaluated at 1.67 on average by participants. It can be inferred from this that participants' perceptions of control strategies are generally high as it is below 3.40. The majority of evaluations fall within 0.575 points of the mean, according to the standard deviation of 0.575, which shows that replies are often near the mean. This indicates that participants' perceptions of control tactics are not very variable.

Cycle counting was rated 1.76 on average by participants. This suggests that, with a slight increase, participants' judgments of cycle counting are generally high as it is below 3.40. The standard deviation of 0.607 indicates a level of response variability, with the majority of scores falling between 0.607 and the mean. It appears from this that opinions on cycle counting differ slightly amongstindividuals.

The participants gave warehouse management an average rating of 1.64. This shows that participants' perceptions of warehouse management are generally high as it is below 3.40. The standard deviation is 0.559. With most evaluations falling within 0.559 points of the mean, the responses are comparatively near the mean, according to the standard deviation of 0.559. This shows that participants' perceptions of warehouse management are not very variable.

Table 4.9. Mean and Std. Deviation of dependent variable

Statistics

Performance

N	Valid	65
	Missing	3
Mean		1.89
Std. Deviation		.526

There are 65 valid observations for the variable "Performance".Three observations are missing under "Performance," suggesting that there may be some missing data in the data set. 1.89 is the mean (average) score for performance. This shows the central tendency, which shows that 1.89 is

the high-performance score for the valid observations as it falls below 3.40. The performance's standard deviation is equal to 0.526. The standard deviation illustrates the variability of the performance scores around the mean. Based on the 0.526 standard deviation, the Performance scores show an average variance of 0.526 units from the mean. Understanding the overall performance level and the consistency of performance ratings within the sample may be done with the use of this information

4.6. Pearson's Correlations

The degree of significance and link between the variables, as well as the amount of variation in the dependent variable brought about by the explanatory variables, were all determined using correlation analysis. It is used for "How" research quations that explains the degree of association between two variables.. Table 4.11 provides a summary of the correlation analysis's findings.

Table 4.10. Summary of Pearson's Correlations

Correlations

		Information Technology	Control_Techniques	Cycle_Counting	Warehouse	Performance
IT	Pearson Correlation	1				
	Sig. (2-tailed)					
	N	65				
Control_Techniques	Pearson Correlation	.704**	1			
	Sig. (2-tailed)	.000				
	N	65	65			
Cycle_Counting	Pearson Correlation	.611**	.869**	1		
	Sig. (2-tailed)	.000	.000			
	N	65	65	65		
Warehouse	Pearson Correlation	.647**	.794**	.882**	1	

	Sig. (2-tailed)	.000	.000	.000		
	N	65	65	65	65	
Performance	Pearson Correlation	.379**	.545**	.589**	.680**	1
	Sig. (2-tailed)	.002	.000	.000	.000	
	N	65	65	65	65	65

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

The connections between each independent variable and the dependent variable were all significant at the 95% confidence level, according to the correlation summary displayed in Table 5. To ascertain the association between information technology and CBE'S performance, a Pearson correlation coefficient test was conducted at a significance level of 5%. The findings show a positive correlation (r=0.379) between information technology and CBE's performance. Furthermore, the association was discovered by the researcher to be statistically significant at a 5% level (p=0.000, <0.05).

The Pearson correlation coefficient was calculated and tested at a significance level of 5% to conduct a correlation analysis and ascertain the relationship between inventory control systems and the performance of Ethiopia's commercial banks. The findings show that the performance of CBE and inventory control methods have a favorable association (r=0.545). Furthermore, at the 5% level, the association was found to be statistically significant by the researcher (p=0.000, <0.05).

The Pearson correlation coefficient was calculated and assessed at a 5% significance level to conduct a correlation analysis and ascertain the association between inventory cycle counts and the performance of Ethiopia's commercial banks. The findings show a positive correlation (r=0.589) between inventory cycle counts and Ethiopia's commercial bank's performance. Furthermore, at the 5% level, the association was found to be statistically significant by the researcher (p=0.000, <0.05).

The Pearson correlation coefficient was estimated and tested at a significance level of 5% to study the link between the warehouse management system and the performance of Ethiopia's commercial banks. The findings show that the warehouse management system and Ethiopia's commercial bank's performance have a favorable link (r=0.680). Furthermore, the association was found to be statistically significant at the 5% level (p=0.000, <0.05) by the investigator.

4.7. Regression Analysis

To ascertain the significance of the link between the dependent variable and all of the independent factors combined, multivariate regression analysis was employed in this study. To determine the percentage of the dependent variable (the commercial bank of Ethiopia's performance) that could be predicted from the independent variables (information technology, inventory control strategies, inventory cycle counting, and warehouse management system), regression analysis was used.

4.7.1.Reliability of the Instruments

Reliability is the general consistency of a measure, as the chapter above illustrates. If these metrics yield consistent, comparable findings under regular circumstances, they are considered reliable. With an acceptable Cronbach's alpha value, all the measurements are therefore dependable.

4.7.2.Multicollinearity Test

When there is a strong linear relationship between two or more explanatory variables in a multiple regression model, this is referred to as multicollinearity. Variance inflation factor (VIF) and tolerance static (1/VIF), among other methods, can be used to scan for multicollinearity. The variance inflation factors (VIF) and tolerance levels that make up the collinearity statistics are displayed in the following table.

Table 4.11. Multicollinearity Test

Model	Collinearity Statistics	
	Tolerance	VIF
(Constant)		
Information technology	0.468	2.137
Inventory control techniques	0.197	5.086
Inventory cycle counting	0.140	7.123
Warehouse management	0.203	4.915

a. Dependent Variable: Performance

b. Predictors: (Constant), information technology, inventory control techniques, inventory cycle counting, and warehouse management system

If the tolerance level is less than 0.2 or the biggest VIF is larger than 10, Field (2005) states that there is a risk of a multicollinearity problem. The collinearity statistics in the current model indicate that the VIF values are all below 10. Yet, The tolerance statistics for inventory control techniques and inventory cycle counts are below 0.2. Thus, it is possible to conclude that the existing data exhibit some degree of collinearity. This may be the cause for the insignificant result in the two independent variables. And it could be solved by merging these two highly collinear independent variables as one independent.

4.7.3.Normality Test

To find out if the error term is regularly distributed, a normality test is performed. Here, normal probability plots and histograms are used to aid with visual assessment. According to the figure, the residual has a normal distribution.

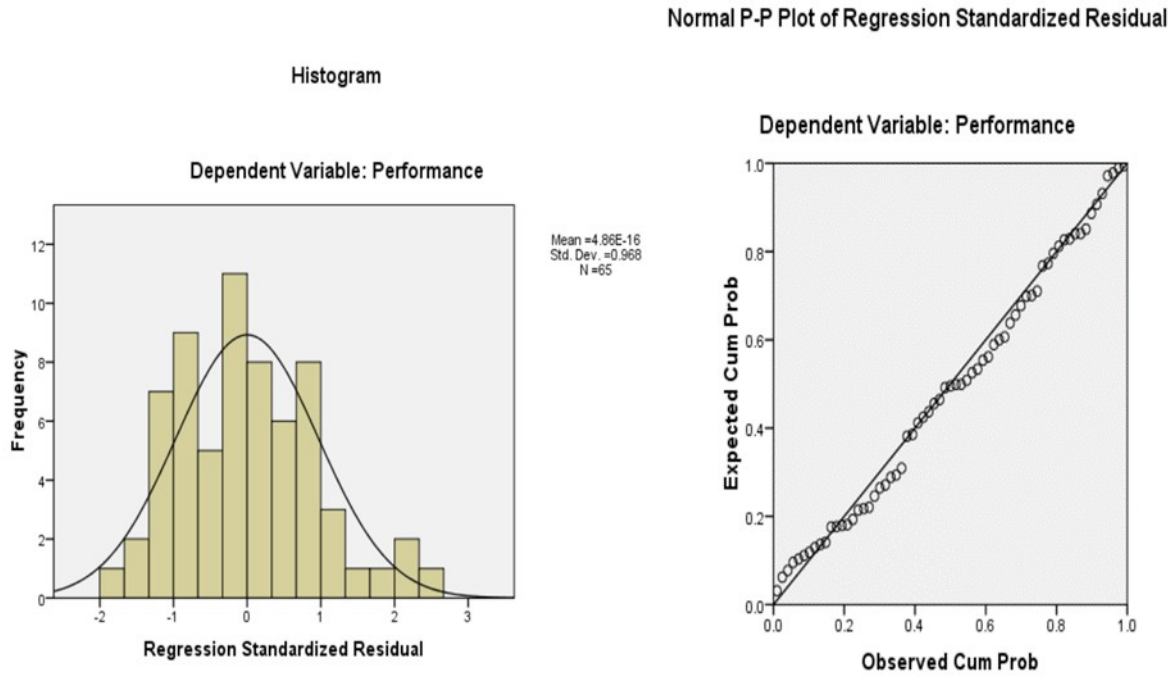

Figure 4.1. Histogram and P-P plot

4.7.3.1.Histogram Details

The bars form a roughly symmetric, bell-shaped curve centered around zero. This indicates that the residuals are approximately normally distributed, which is a good sign for the regression model. The mean (centered around zero) is extremely close to zero, which is what we expect for standardized residuals, the same goes for the standard deviation (spread), where it is close to 1, as expected for standardized residuals. In general, the model is likely well-fitted to the data and meets the assumptions of linear regression, such as the normality of residuals. This is a positive indication of the validity of the regression analysis on the dependent variable "Organizational Performance."

4.7.3.2.Plot Details

The points on the plot closely follow the diagonal line, which suggests that the residuals are approximately normally distributed. There are minor deviations from the line, but they are not substantial enough to indicate a serious departure from normality. In general the p-plot suggests that the regression standardized residuals for success are approximately normally distributed, which supports the appropriateness of the regression model and the validity.

4.7.4. Model Fit

In the current study, R2, adjusted R2 (for cross-validation), and ANOVA are used to assess the model's fit, or its capacity to predict the outcome variable. R2 measures how much of the variance in success is attributable to the independent variable, whereas adjusted R2 examines the cross-validation of the model. The outcomes are covered in more detail in the ANOVA tables and model summary below. Evaluating the goodness of fit of the model is essential since it shows how well the observed data fits the model. R2 is a crucial indicator of fit quality that shows how much of the variation in the result can be explained by the model. In other words, it expresses a percentage the amount of variation in the result that the model can explain.

4.7.5. Model Summary

Table 4.12. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.688[a]	.473	.438	.395	.473	13.456	4	60	.000

a. Predictors: (Constant), Warehouse, IT, Control_Techniques, Cycle_Counting

b. Dependent Variable: Performance

According to the model, performance explains roughly 47.3% ($R2$) of the variance in independent variables , showing a modest level of explanatory power. Hence, the other variables not examined in this study account for the remaining 52.7% of the variance. Given the significant correlation (R=0.688), it appears that the correlation between the dependent and independent is good.

4.7.6.Cross-validation of the Model (The Adjusted R2)

Making sure the model created from our sample truly represents the whole population can be difficult. Nonetheless, there exist techniques to assess the model's predictive accuracy across several samples. Cross-validation is one such technique that is evaluated using the regression's adjusted R2 value. examination. The adjusted R2 shows how much variance in the performance variable would be explained if the model were drawn from the population as opposed to simply the sample. It also represents the shrinkage or loss of predictive power. A value that is near or

equal to the R2 indicates that the model has good generalization. But in our case, the population and the sample are equal so it is not necessary to do the shrinkage.

Table 4.13. ANOVA

ANOVA[b]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	8.377	4	2.094	13.456	.000[a]
	Residual	9.339	60	.156		
	Total	17.716	64			

a. Predictors: (Constant), Warehouse, IT, Control_Techniques, Cycle_Counting

b. Dependent Variable: Performance

The influence is significant at a 95% significance level, according to the F value 13.456 of the ANOVA part of the preceding table, which was likewise significant (0.000). This suggests that across all traditional significance levels, the model fits the data the best.

The performance of the Commercial Bank of Ethiopia will be an index of 0.869 when all variables (information technology, inventory control strategies, inventory cycle counting, and warehouse management system) are held constant at zero, according to the regression equation above. results also demonstrate that a unit increase in information technology will result in a -0.145 drop in the Commercial Bank of Ethiopia's performance, holding all other independent factors constant. The association was not significant because the P-value was 0.294, which is more than 0.01. According to the study, the performance of CBE will rise by 0.152 points for every unit improvement in inventory control techniques. Since the link was not significant, the P-value was 0.475.

Furthermore, the analysis discovered that an increase in inventory cycle counting units would result in a -0.134 decline in CBE. The association was not significant, as indicated by the P-value of 0.593.

Lastly, the study found that a unit increase in the warehouse management system will lead to a 0.772 increase in the performance of the CBE. The P-value was 0.000 and hence the relationship was significant since the p-value was lower than 0.01. The findings of

the study show that the warehouse management system contributed most to the performance of the Commercial Bank of Ethiopia. The study's conclusions demonstrate that the warehouse management system had the biggest effect on CBE performance.

4.7.7.Coefficients of the Multiple Regression Analysis

Table 4.14. Coefficients of Determination

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.869	.164		5.309	.000		
	IT	-.119	.113	-.145	-1.059	.294	.468	2.137
	Control_Techniques	.139	.194	.152	.719	.475	.197	5.086
	Cycle_Counting	-.117	.217	-.134	-.538	.593	.140	7.123
	Warehouse	.727	.196	.772	3.713	.000	.203	4.915

a) Predictors: (constant), Information Technology, Inventory Control Techniques, Inventory Cycle Counting and Warehouse Management System
b) Dependent Variable: Performance of CBE

The standardized beta coefficient column indicates the contribution of each individual variable to the model. The beta weight represents the average increase in the dependent variable when the independent variable increases by one standard deviation, while holding all other independent variables constant. These coefficients are standardized (Beta) for the independent variables in the specified regression equation model.

The research used a multiple-reregression model

$Y= \beta 0+\beta 4X4 +\varepsilon$

The regression equation will be;

$Y= 0.869 +.772X4$

The table demonstrates that the among the independent variables only the warehouse management is significant but the rest of the independent variables which are Information

Technology , Inventory control technique and Inventory cycle counting are found to be insignificant because they have a p-value greater than >0.005. The reason behind the result of the three independent variables becoming insignificant may be caused by the existence of some level of colliniarity among the independent variables as shown by tolerance value which should be above >0.2 but in this case the two independent variables which are Inventory control technique and Inventory cycle counting are found to be below <o.2, which may be one reason for the existence of sinignificant value. The second reason for the existiance of insignificance value may be due to the small number of respondants used to carryout the research .

Performance and Warehouse management

The effect of a warehouse on Performance is sig (p=0.00) and positive (coefficient=.0.772). This result implies that the better the Warehouse Management of the organization the better the Organizational Performance would be. Therefore increasing the warehouse management of the organization helps the organization's Performance. This result is consistent with past studies about the relationship between the two variables. For example, as research made by The argument put up by Arrowsmith (2013) is that a business needs strong warehousing skills to achieve a competitive edge in inventory management and performance. Again it is supported by research made by Brealey (2009) that to boost throughput rates or inventory turns necessary for their warehousing operations to be financially viable, several businesses are automating their fundamental warehousing services.Performance and Warehouse have a substantial link that is 95% significant with a sig value of 0.00. As a result, there is strong evidence to support the hypothesis that the two variables have a positive and statistically significant association. The warehouse has a beneficial effect on performance, according to the standardized coefficient (Beta = 0.772).

4.8. Hypotheses Test

H1: A statically significant and positive effect is expected between Performance and Information Technology

The effect between performance and information technology, as shown in Table 16 , is not significant at 95% with a sig value of 0.294. Information technology hurts performance, according to the standardized coefficient (Beta = -0.145). As a result, the alternative hypothesis, which proposed a significant and positive effect between the two variables, is unsupported.

H2: A statically significant and positive effect is expected between Performance and Inventory Control Techniques

The effect between Performance and Inventory Control Techniques under Tables 16 is not significant at 95% with a sig value of 0.475. Inventory Control Techniques have a positive correlation with Performance, as indicated by the standardized coefficient (Beta = 0.152), which indicates little significance. Consequently, there is no evidence to support the alternative hypothesis, which proposed that the two variables have a statistically significant effect.

H3: A statically significant and positive effect is expected between Performance and Inventory Cycle_Counting

The effect between Performance and Inventory Cycle Counting with significance at 95% with a sig value of 0.593. Inventory Cycle Counting improved Performance, according to the standardized coefficient (Beta = -0.134). A positive effect between the two variables is therefore strongly supported, however, the hypothesis that claimed statistical significance is not supported .

H4: A statistically significant and positive effect is expected between Performance and Warehouse management systems.

Performance and warehouse management systems have a significant effect (95%, sig value = 0.00), as seen in Tables 4.7 and 4.3. Positive effects of warehouse management systems on performance were indicated by the standardized coefficient (Beta = 0.772). Hence, there is strong evidence to support the premise that the two variables have a statistically significant and positive effect.

Table 4.15. Hypotheses Test

No	**Effect of Independent Variables on the Dependent Variables**	**Supported / Rejected**
H1	Significant and Positive Effects Between Information Technology and Performance	Not Supported
H2	Significant and Positive Effects Between Inventory	Not Supported

	Control Technique and Performance Not Supported	
H3	Significant and Positive Effects Between Inventory Cycle Counting and Performance Not Supported	Not Supported
H4	Significant and Positive Effects Between Warehouse Management and Performance Supported	Supported

CHAPTER FIVE

5. SUMMERY CONCLUSIONS AND RECOMMENDATION

5.1 Summary of Findings

5.1.1 Information Technology

When we try to see the mean scores of variable Information Technology has (1.70), a response rate of respondents that is high because it falls in a range below 3.40. As we proceed to the Standard Deviation for Information Technology it has a value of (0.640), in which the variables show small variability in response. When we try to see the significance value of Information Technology which is (0.294) and the Beta value of (-0.145) it shows insignificance and has a negative effect according to the regression analysis.

5.1.2 Inventory Control Techniques

When we try to see the mean scores of variable Inventory Control Techniques it has (1.67), a response rate of respondents that is high because it falls in a range below 3.40. As we proceed to the Standard Deviation it has a value of (0.575), in which the variables show small variability in response. When we try to see the significance value of Inventory Control Techniques which is (0.475) and the Beta value of (0.152) it shows insignificance and has a positive effect according to the regression analysis.

5.1.3 Inventory Cycle Counting

When we try to see the mean scores of variable Inventory Cycle Counting it has (1.76), a response rate of respondents that is high because it falls in a range below 3.40. As we proceed to the Standard Deviation it has a value of (0.607), in which the variables show small variability in response. When we try to see the significance value of Inventory Cycle Counting which is (0.593) and the Beta value of (0.134) it shows insignificance and has a positive effect according to the regression analysis.

5.1.4 Warehouse Management System

As its final goal, the study attempted to evaluate the effect of the warehouse management system on the performance of the Commercial Bank of Ethiopia. When we try to see the mean scores of variable Warehouse management it has (1.64), a response rate of respondents that is high because it falls in a range below 3.40. As we proceed to the Standard Deviation it has a value of (0.559), in which the variables show small variability in response. When we try to see the significance value of Inventory Cycle Counting which is (0.00) and the Beta value of (0.772)

it shows the significance and has a positive effect according to the regression analysis. The majority of respondents strongly agreed that Commercial Bank of Ethiopia's inventory management performance had benefited from the adoption of warehouse management systems. Commercial Bank Ethiopia frequently used both static and dynamic designs in addition to an optimal space utilization system. Findings from the study indicating the warehouse management system had a significant effect on the performance of the Commercial Bank of Ethiopia suggested that this was the most significant variable, as indicated by correlation and regression analysis.

5.1.5 Performance of Commercial Bank of Ethiopia

When we try to see the dependent variable which is the performance of the organization has a mean value of (1.89), the response rate of respondents is high because it falls in a range below 3.40. This suggests that respondents perceive performance to be high, which indicates better perception in this category. When we tried to look at the standard deviation with the value of (0.526) it showed a small variability in the response. This indicates that while there is some variation in how respondents rate performance, it doesn't show that much diversity

5.2. Conclusion

The researcher's goal is to measure and explore to what extent and whether positively or negatively

the independent variables which are (Information Technology, Inventory Control techniques, Inventory Cycle Counting, and Wearhouse) affect the Performance of the Organization. This part of the study tries to conclude the objectives that are mentioned above.

- It is concluded that the dimensions that measure the independent variables has a mean score of below 3.40 , which signifies "high level" of inventory management practice .
- When we try to see the dependent variable which is the performance of the organization, in which the mean value shows a high score as it falls in a range below 3.40. This suggests that respondents perceive performance to be high, which signifies "high level" of organizational performance.
- The regression analysis tries to reveal the significance and the effect each independent variable has on the dependent variable. When we try to see Information Technology it shows insignificant value and has a negative effect. When we see the second variable which is the Inventory Control technique it has an insignificant value which shows a

positive effect.When we come to the third variable which is Inventory Cycle Counting which has an insignificant value that shows a negative effect. When we come to the last one we have a warehouse that has a significant value which shows a positive effect. From this, we can conclude that only the last variable which is the warehouse supports the hypothesis stated above. As we increase warehouse management it will have a positive and significant effect on the performance of the organization so, the company should give special attention to warehouse management.

5.3. Recommendations of the study

Based on the research findings and conclusions above, the following recommendations are suggested:

- Based on the study's results, the warehouse is the only variable that shows a positive and significant effect on the performance of the organization. So Managers should pay attention to this aspect, which states as increasing warehouse management we can enhance organizational performance.
- Based on the conclusion made on the warehouse it is recommended that ;

- Considering the overwhelming agreement regarding the significance of both static and dynamic warehouse configurations, give flexible and effective warehouse layouts top priority when making investments.
- There is broad consensus regarding the importance of space use, and it is suggested that intelligent technologies like automated storage and retrieval systems (ASRS) and improved layout planning help maximize warehouse capacity. Profitability and market share will increase as a result.
- The strong conviction regarding the significance of outgoing and incoming logistics coordination necessitates improved logistics management. To guarantee efficient and timely delivery of goods, implement integrated logistics solutions. This will increase market share and boost customer satisfaction.
- Provide warehouse employees with frequent training programs to make sure they are proficient in using cutting-edge tools and methods. Better dynamic configuration execution, space utilization, and logistics coordination can all benefit from this.

- Get input from interested parties regularly and keep an eye on key performance indicators (KPIs) to adjust tactics as necessary. Maintaining profitability, expanding the market, and raising consumer happiness will all be made possible by constant development.

➢ These suggestions can greatly improve warehouse management, which will increase customer happiness, increase market share, and improve profitability. Sustaining improvement will require regular evaluations and adjustments based on input and performance information.

➢ There is room for improvement in all the dimensions of the organizational performance but more emphasis should be given to the internal process perspective.

- Establish a culture of continuous improvement where feedback from all stakeholders (customers, employees, and management) is regularly sought and used to make informed changes.
- Enhance communication channels within the organization to ensure transparency and alignment with organizational goals.
- Foster a work environment that promotes high levels of employee engagement by recognizing and rewarding employee contributions and providing opportunities for professional growth.

➢ By focusing on these areas, CBE can enhance its organizational performance, leading to higher customer satisfaction, improved employee morale, and more efficient internal processes.

5.4. Areas for further studies

▲ Further research should include other banks so that generalizability could be made.

▲ Again further research should broaden its scope to include a diverse range of organization types, not only banks, thereby expanding the applicability of findings. On the other hand, focusing on a single organization could improve the accuracy of conclusions about the relationship between inventory management practice and organizational performance by eliminating the impact of varying organizational factors.

- Additionally, future research should explore into detailed analyses of specific projects as well as other variables that represents inventory management practice and organizaropnal performance .

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6. APPENDICES

ADDIS ABABA UNIVERSITY

COLLEGE OF BUSINESS AND ECONOMICS

MA IN LOGISTICS AND SUPPLY CHAIN MANAGEMENT

Questionnaire to be filled by employees of Commercial Bank of Ethiopia

Dear respondents,

This questionnaire is designed to solicit relevant information under the theme "the effect of inventory management practices on the performance of Commercial Bank of Ethiopia".

The findings of the study will be used only for **academic purposes**. Hence, **your responses will be kept confidential**. The soundness and the validity of the findings highly depend on your genuine responses. Therefore, I kindly request you to fill out the questionnaire carefully and back to me.

Instructions: -

The quality of this study is contingent on the quality and genuineness of the information that you provide. Hence, your genuine response is highly decisive to the success of this study. Therefore, not need to write your name. Put the (√) mark in the box for your answer. With great excuse, possibly return on time.

For any problem or suggestion contact the researcher through the following addresses:

Email: tufasirgut@gmail.com

Phone: +251923498059

Participation in this research was entirely voluntary. Even if you decide to participate now, you may change your mind and stop at any time. There is no foreseeable risk of harm or discomfort in answering this questionnaire. This is an anonymous questionnaire; as such, it is not able to trace responses back to any individual participant. All information collected is treated as strictly confidential and will be used for this study only.

I have been informed about the purpose of the study and I give my consent to participate in this survey.

YES ( ) NO ( )

PART 1: Personal information

1. Gender
   A-Male ( ) B-Female ( )

2. Age

   A. 20 – 30 ( ) B. 31 to 40 years ( ) C. 41 and above ( )

3. Your professional qualification

   A. Diploma ( ) B. Degree ( ) C. Masters and Above ( ) D. Other ( )

4. How long have you been working in the company (In years)?

   A. 0-5 ( ) B. 6– 10 ( ) C. 11 and above ( )

5. Level of your Computer Proficiency

   A. Basic ( ) B. Intermediate ( ) C. Proficient ( )

6. What is your department?

   A.Procurement ( ) B. Inventory ( ) C. Warehouse( )

Part 2: Issues Related to Information Technology

Statements	SD	D	N	A	SA	Mean	SDv
Electronic data interchange systems play a significant role in profitability improvement.							
Electronic point-of-sale systems play a significant role in profitability improvement.							
Barcoding plays a significant role in profitability improvement.							
Electronic data interchange systems play a significant role in expanding market share.							
Electronic point-of-sale systems play a significant role in expanding the market share.							
Barcoding plays a significant role in expanding market share.							
Electronic data interchange systems play a significant role in attaining higher customer satisfaction.							

Electronic point-of-sale systems play a significant role in attaining higher customer satisfaction.							
Barcoding plays a significant role in attaining higher customer satisfaction.							

Part 3: Issues Related to Inventory Control Techniques

Statements	SD	S	N	A	SA	Mean	SDv
Just-in-time sourcing plays a significant role in profitability improvement.							
Vendor-managed inventory system plays a significant role in profitability improvement.							
Economic order quantity system plays a significant role in profitability improvement.							
Just in time, sourcing plays a significant role in expanding market share.							
Vendor-managed inventory system plays a significant role in expanding market share.							
Economic order quantity system plays a significant role in expanding the market share.							
Just-in-time sourcing plays a significant role in attaining higher customer satisfaction.							
Vendor vendor-managed inventory system plays a significant role in attaining higher customer satisfaction.							
Economic order quantity system plays a significant role in attaining higher customer satisfaction.							

Part 4: Issues Related to Inventory Cycle Counting

Statements	SD	D	N	A	SA	Mean	SDv
The Control group counting system play a significant role in profitability improvement.							
The Random sample counting system play a significant role in profitability improvement.							
The ABC analysis system play a significant role in profitability improvement.							
The Control group counting system play a significant role in expanding market share.							
The Random sample counting system play a significant role in expanding market share.							
The ABC analysis system play a significant role in expanding market share.							
The control group counting system play a significant role in attaining higher customer satisfaction.							
The Random sample counting system plays a significant role in attaining higher customer satisfaction.							
The ABC analysis system plays a significant role in attaining higher customer satisfaction.							

Part 5: Issues Related to the Warehouse Management System

Statements	SD	D	N	A	SA	Mean	SDv
Warehouse dynamic and static configuration plays a significant role in profitability improvement.							
Warehouse space utilization systems play a significant role in profitability improvement.							
Warehouse inbound and outbound logistics coordination plays a significant role in profitability improvement.							
Warehouse dynamic and static configuration plays a significant role in expanding market share.							
The Warehouse space utilization system plays a significant role in expanding market share.							
Warehouse inbound and outbound logistics coordination play a significant role in expanding market share.							
Warehouse dynamic and static configuration plays a significant role in attaining higher customer satisfaction.							
Warehouse space utilization system plays a significant role in attaining higher customer satisfaction.							
Warehouse inbound and outbound logistics coordination play a significant role in attaining higher customer satisfaction.							

Part 6: Issues Related to the Performance of the Organization

Measuring customer perspective of organization performance	**SD**	**D**	**N**	**A**	**SA**	**Mean**	**SDv**
The quality of service that we provided improved as per the customer's needs.							
Customers of CBE leaving due to poor service.							
The organization has the quality of service that improved.							
The number of people who are using the service has increased.							
Statement for a measure of learning and growth perspective aspects of organization performance	**SD**	**D**	**N**	**A**	**SA**	**Mean**	**SDv**
The organization gives enough training on the job.							
I Am satisfied with my job.							
The organization checks employees' performance continuously and updates the job title							
CBE uses the best way that help to protect the firm from loss of knowledge due to employee turnover							
Stamens for measures of internal process perspective aspect of organization performance	**SD**	**D**	**N**	**A**	**SA**	**Mean**	**SDv**
The organization has a better quality of service.							
CBE gives priority to the employees' health and safety.							
The organization provides necessary equipment and tools for employees.							
The organization has a time-saving decision-making process.							