

Inventory Management Practices and SMEs' Performance in Lagos State

OYETADE, Biyi John (Ph.D)¹, BELLO, Abass Oyeshola ^{*2}, AKINLALU, Olugbenga Samuel³

Lagos State University of Science and Technology, College of Applied Social Sciences,
Department of Accounting, Isolo Campus, Isolo, Lagos State.

*Corresponding Author

DOI: <https://dx.doi.org/10.47772/IJRISS.2024.805068>

Received: 18 April 2024; Revised: 08 May 2024; Accepted: 13 May 2024; Published: 01 June 2024

ABSTRACT

The pursuit of unraveling the intricacies surrounding inventory management practices and SME performance in Lagos State necessitates this study as the study used a descriptive survey research design. A sample of 154 SMEs was considered using Yaro Yamane's formula, the sample size was drawn using a simple random sampling technique. Data for the study were obtained through the administration of a structured questionnaire to owners of SMEs and senior personnel of the sampled firms. The questionnaire was structured to elicit data about the three inventory management practices and SMEs' performance in the sampled local governments. The tools used to describe the properties of the data sets were range, mean, and standard deviation on a simple table while Chi-square and analysis of variance statistics with the aid of SPSS version 20.0 were used to draw inferences from the three hypotheses. The findings of the study revealed the three dimensions of inventory management practices (inventory control techniques, inventory storage system, and inventory tracking system) all have a significant effect on SMEs' performance in Lagos state. The study concluded that inventory management practices (inventory control techniques, inventory storage system, and inventory tracking system) all have a significant effect on SMEs performance in Lagos state and therefore recommended that SME owners and managers should improve the applicability level of inventory management tools among the SMEs in Lagos state which automatically leads to improved performance. All the inventory control systems should be made formal at the operational level among SMEs.

Keywords: Inventory management, performance, SME, inventory control techniques, inventory storage system, inventory tracking system.

JEL Classification: G3, G4

INTRODUCTION

Worldwide, inventory management is believed to have originated with the usage of tally sticks for counting about 50,000 years ago. However, throughout time, inventory management evolved into rather more precise accounting and record-keeping systems, particularly in the cultures of the ancient Greeks and Egyptians. Subsequently, sophisticated inventory management systems became more and more common in the mid to late 1990s. The key elements of contemporary inventory management include radio-frequency identification, microchips that transmit product information, including everything that matters to a business owner and their staff, and mobile inventory software that can handle inventory (Ugwu & Nwakoby, 2020). To maintain track of its raw materials, stock, work-in-progress, and finished items, every business must

have efficient inventory management (Rasool, Hussain, Ullah & Shehzadi, 2024).

Inventory management, according to Illiemen, Aniefor, and Odukoya (2022), helps businesses to provide the right amount of inventory on hand at all times by coordinating material availability, control, utilization, and acquisition. Moreover, Mamuda and Adamu (2023) contended that inventory management is essential to enhancing the effectiveness and efficiency with which businesses handle their stock. To satisfy consumer needs, Tadayonrad and Ndiaye (2023) emphasize the critical role that correct inventory information plays. They also stress the clear link between improved customer satisfaction and efficient inventory management.

Accurate inventory control is essential for companies as it affects not just financial statements but also customer contentment and overall productivity. Inventory management errors may have crippling financial effects and damage a company's reputation by causing stockouts and overstocking, among other problems (Groenewald & Kilag, 2024). Alam, Thakur, and Islam (2024) state that the biggest obstacle to managing inventory at an optimal level is the difficulty in forecasting demand and aiming customers' expectations of product availability in the market. One challenge in inventory management is keeping the supply and demand for inventory in balance. In an ideal world, a company wouldn't lose sales due to stockouts and would have adequate inventory to match client demand. However, because carrying inventory is expensive, the company does not want to keep an excessive amount of goods on hand.

The methods for controlling, storing, and keeping track of inventory products are the three primary components of inventory management, according to Zoho Corporation (2024). Managing storage space effectively is a daunting challenge. Utilizing inventory management platforms to plan and construct storage areas gives you more control over when new goods are delivered, which is a crucial factor in determining available space. While ordering to delivery is just one part of the extensive cycle that is inventory management, storage is one of the most important. Regrettably, many of the biggest inefficiencies are also located here (Vyas, 2023). According to Jenkins (2022), new challenges for warehouse design and storage arise when considering biodegradable packaging or doing away with packaging entirely to decrease waste. It can also include purchasing new machinery or a reduced shelf life for some things. One issue with the supply chain may be the loss of inventory as a result of theft, damage, or spoiling. Problem areas must be identified, monitored, and measured.

According to Anshur, Ahmed, and Dhodi (2018), improper inventory tracking increases the likelihood of inventory issues, which also have an impact on wastefulness and additional costs overall. It is laborious, redundant, and prone to mistakes to use manual inventory tracking techniques across several applications and spreadsheets (Vyas, 2023). Accurate monitoring is crucial in the cutthroat industry of today. The use of manual processes continues to be a barrier; many companies still enter data by hand using spreadsheets or antiquated software, which can result in errors (Jenkins, 2022).

Periodic and Perpetual systems are two types of inventory control systems. Various methods are used in inventory control to keep an eye on the movement of stocks in a warehouse. Existing stock at a warehouse is managed via inventory control (Estrellas, 2024). Inventory and warehouse managers utilize a variety of inventory management control approaches, including inventory forecasting, inventory reorder points, information technology, and inventory turnover, to monitor and enhance organizational performance (Anshur et al., 2018). There are several approaches to inventory management, and each has advantages and disadvantages of its own. Managers should be sure to take into account the kind of product they offer, the size of the company, the total budget, and the degree of precision required to operate a successful supply chain when selecting the best strategies (Tarver & Aditham, 2023). It is a function that is very vital and significant to the performance of any kind of organization (Hayes, 2024; Porzuczek, 2022).

However, the performance of SMEs is critical to the growth and development of nations. This is because it helps create an environment that is favorable to competitive advantage and job creation, the SME sector has been seen as a catalyst for increasing economic activity as well as a way to reduce unemployment and

poverty (Yanya & Mahamat, 2020). It has been found that the success of SMEs is closely correlated with a nation's wealth, economic growth, and development. They are the catalysts for economic expansion and development, generating wealth, fostering innovation, and opening doors for the creation of jobs. Any developing nation hoping to achieve long-term growth and development must pay close attention to the performance of its SMEs. In essence, the (SME) business plays a major role in the financial stability of any country, developed or developing (Adekunle, Yusuf & Shuibu, 2022). SMEs do not only contribute to financial but also non-financial performance (Abdullahi, Ardo, Hassan, & Ibrahim, 2021).

Statement of Problem

Businesses need to manage their inventories well to succeed. By carefully planning and controlling their inventory, organizations may optimize overall operational efficiency and accomplish particular goals by maintaining ideal inventory levels. By focusing on streamlining and standardizing inventory management procedures, it increases the efficiency of the company's inventory (Hänninen, 2024). According to Mamuda and Adamu (2023), SMEs must use efficient inventory management techniques to improve performance and boost their competitiveness. An organization's performance may be attributed to the reduction of operational issues through efficient inventory management. Despite the accepted value of inventory management in organizations, many SMEs still find it difficult to set up a thorough and efficient inventory management system (Hänninen, 2024).

Several studies have been carried out by scholars in academic on inventory management, prominent among them are Olaide and Omodero (2023), Mamuda & Adamu (2023), Iliemena, Odukoya, and Aniefor (2022), Chizoba, Clara, and Juliet (2022), Eze & Uchenu (2021), Sonko & Akinlabi (2020), Olowolaju and Mogaji (2020), Folajimi et al. (2020) Ugwu and Nwakoby (2020) Ogidiolu, Akinosun, and Ajakore (2019), etc, all these studies and to the best of the researchers' knowledge, did not investigate the inventory management practices with the dimensions of inventory control techniques, inventory storage system, and inventory tracking system specifically in Lagos state, hence the gap this study fulfills. SMEs who fail to practice inventory control techniques may tend to buy and hold unnecessary goods which might affect their performance. Also, SMEs who do not put adequate storage systems in place may lose customers which would influence sales, profits, customer satisfaction, market share, etc. Finally SMEs who do not track their inventory might lead to stock pilferage, buffer stock position, expiry of products, loss of customers, loss in profit etc.

There is still a paradox in the complex economic environment, where SMEs are the foundation of economic life. Even while these businesses play a major role in creating jobs, fostering innovation, and advancing the economy, they face many difficult obstacles, particularly when it comes to efficient inventory management. The complexity of this problem affects SME operations in a broad range, which has an impact on their sustainability and overall performance. In light of this, this research looks at how inventory management affects the performance of SMEs in Lagos State.

Research Objectives

In the pursuit of unraveling the intricacies surrounding inventory management practices and SME performance in Lagos State, this study is driven by three secondary objectives which were to:

- assess if inventory control techniques significantly influence SME performance in Lagos state.
- evaluate whether adequate inventory storage systems significantly affect SMEs' performance in Lagos state.
- investigate if inventory tracking systems significantly affect SME performance in Lagos state.

Research Questions

The research questions raised for this study were:

1. Do inventory control techniques have a significant influence on the performance of SMEs in Lagos state?
2. Do the inventory storage systems have a significant effect on the performance of SMEs in Lagos state?
3. Do the inventory tracking systems have a significant effect on the performance of SMEs in Lagos state?

Research Hypotheses

The research hypotheses stated in a null form which were tested at 0.05 level of significance were:

H01: Inventory control techniques do not have a significant influence on the performance of SMEs in Lagos state.

H02: Inventory storage systems do not have a significant effect on the performance of SMEs in Lagos state.

H03: Inventory tracking systems do not have a significant effect on the performance of SMEs in Lagos state.

LITERATURE REVIEW

Conceptual Review

Inventory

Inventory is a crucial asset for many organizations, according to Olaide and Omodero (2023), who referenced Gokhale & Kaloji (2018). This is because inventory is often a substantial asset reported in fiscal statements and provides a source of returns through item sales in the near future. Inventory is also defined as “the stock of any item or resource used in an organization” by Okolocha, Anuri, and Anugwu (2022) citing Davis et al. (2003). Inventories are stockpiles of semi-finished, finished, and raw materials that businesses hold to ensure a smooth production process (Otuya and Eginwin, 2017). Kilonzo et al. (2016) define inventory as idle physical products or stock with a high economic value that organizations hold to package, process, or prepare for sale. Stock is referred to

Components of Inventory

Olaide and Omodero (2023) opined that Raw materials/components, WIP, finished goods, and Maintenance, Repair, and Operations (MRO) are the four primary forms of inventory. Whereas, Ogidiolu et al (2019) quoted Omolehinwa (2000) that inventory is classified into three which are raw materials, Semi-finished materials, or finished goods. A few individuals, on the other hand, only recognize three types of inventories, ignoring MRO.

1. **Raw Materials/Components:** This is where a company’s production method originated. It could consist of “raw” components that need to be substantially restructured to produce a product. (Definition of inventory, 2021) The raw materials used by a business to create and finish its products are known as Olaide and Omodero (2023) list completed goods, work-in-progress (WIP), raw materials/components, and maintenance, repair, and operations (MRO) as the four primary categories of inventory. However, Omolehinwa (2000), referenced by Ogidiolu et al. (2019), said that inventory is separated into three groups: semi-finished materials, finished goods, and raw materials. On the

other hand, some individuals only recognize the three types of inventories and disregard MRO.

2. **Work in Progress (WIP):** This is the term used to describe raw materials that are transformed into finished commodities throughout a manufacturing process. This can cost a modest amount if the manufacturing process is completed quickly, or a significant amount if the product takes several months to produce. (Definition of inventory, 2021)
3. **Finished Goods:** Finished goods are products that are prepared for retail sales. They are prepared to be sold to customers after being manufactured using raw materials or purchased from a supplier. Manufacturers view completed goods that are bought and prepared for sale as merchandise (Tunney, 2019).
4. **Maintenance, Repair, and Operations:** Products that help a manufacturing business run efficiently make up MRO inventory. MRO inventory includes everything needed to maintain or repair manufacturing equipment, including protective gear, staff uniforms, machine tools, cleaning supplies, and other items (Tunney, 2019).

Inventory management

According to Olaide and Omodero (2023), inventory control is essential to a business's smooth operations. Effective inventory management is essential to profitability. If it is founded on an inventory management system, a reliable demand estimate, a thorough comprehension of lead times, and suitable assessments of holding, ordering, and scarcity costs, it might be deemed effective. (Kolawole, Olusipe, & Akomolafe, 2019). Inventory management, according to Atnafu and Balda (2018), is "a framework used in firms to control their interest in inventory." It entails keeping track of stock levels, projecting future needs, and deciding when and how to make arrangements.

Inventory management is the act of organizing and managing the storage, transportation, and conversion of raw materials through value-adding operations to provide completed goods to the client, according to Reph and Milner (2015). Olowolaju and Mogaji (2020) stated: "Inventory management refers to all the activities involved in developing and managing the inventory levels of raw materials, working in progress and finished goods so that adequate supplies are available and the costs of over or under stocks are low". According to Cunningham (2000), referenced by Ogidiolu, Akinosun, and Ajakore (2019), inventory management is the science-based art of making sure that a company has exactly the right amount of inventory on hand to satisfy customer demand. The above definition shows that in managing inventory, a scientifically based approach is used to ensure balance in inventory hold and cost of holding it. Inventory management is becoming an increasingly significant aspect of a company's operational activities. The rationale for this is that effective inventory management can boost a company's profitability attested by (Olaide and Omodero, 2023).

Elements of Inventory Management

Inventory Control Techniques

Organisations can use a variety of inventory control strategies to reduce costs and, consequently, increase profit. Along with other inventory control methods, several carefully chosen inventory controls have been categorized into related categories by the study and will be analyzed. The three main categories of inventory control are inventory security control (regular stock taking and use of technology), inventory usage control (just-in-time and safety stock level), and procurement control (strategic supplier partnership and material requirement planning).

Inventory Storage System

According to Nicole (), inventory storage systems are the tools and methods used by companies to keep track of, arrange, and store their inventory. Solutions for inventory storage frequently take into account the amount of space that firms have available, their finances, potential spoiling problems, and stock unloading

alternatives. Most inventory models, concepts, and approaches are based on established inventory management and storage systems (Muchaendepi, Mbohwa, Hamandishe, & Kanyepe, 2019). According to Nicole(), the best way to store your inventory will depend on how much room you have available, how much it will cost, how well it will work, and other factors. A lot of companies employ a variety of techniques for inventory storage, including last-in, first-out (LIFO) and first-in, first-out (FIFO).

Inventory Tracking System

The inventory tracking system also known as the inventory monitoring system, according to Zoho Corp (2024), assists you in keeping an eye on the whereabouts and movements of your company's inventory. The majority of inventory tracking systems are a component of inventory management software, such as Zoho Inventory, while there are standalone systems designed for this purpose. On the other hand, according to Nicole(), inventory tracking is the act of keeping track of all the goods and SKUs that you own, are transporting to and from your warehouses, and the amounts that are available everywhere. Maintaining inventory levels is essential for warehouse and order fulfillment processes. Inventory is tracked using two primary methods: digital systems and manual systems. There are two main systems of tracking inventory which are a manual-based system and a digital-based system. The manual bases system involves the use of pen and paper to physically count, trace, and check inventories from time to time be it periodic, perpetual, or otherwise, whereas, the digital-based system deals with the use of software or advanced inventory management systems to count, trace and check inventories from time to time. Adam (2024) stated that organizations typically maintain sophisticated inventory management systems capable of tracking real-time inventory levels popular POS systems like Square, Vend or Lightspeed offer inventory systems that let you do a whole lot more.

Material Requirements Planning (MRP)

Material requirements planning is a standard system for calculating the quantities of components, sub-assemblies, and materials required to carry out a production program for complex products. The MRP process starts with a production program that schedules the products to be completed week by week during the planning period. It is based on customer orders, sales forecasts, and manufacturing policy (Farrington & Lysons, 2006). Continuous Replenishment (CRP) System Continuous Replenishment is an inventory control system that can be adopted by a small-scale manufacturing company. Continuous replenishment aims to develop free-flowing order fulfillment and delivery systems so that pipeline inventories can be substantially reduced (Baily, Farmer, Barry, Jessop, & David, 2008).

Distribution Resource Planning (DRP) System

A method for estimating or forecasting the needs for completed goods at the point of demand is called distribution resource planning (Farrington & Lysons, 2006). According to Baily, Farmer, Barry, Jessop, and David (2008), DRP systems are made to take predicted demand and reflect it via the distribution system on a time-phased requirement basis.

Small and Medium Scale Enterprises (SMEs): constitute a sizable portion of the economy and are responsible for the socioeconomic advancement of any nation. They produce the majority of output and employment in the private sector and make up a larger portion of all firms in almost all economies. Improved living standards, significant local capital formation, and high levels of production and competence for both people and countries are all facilitated by SMEs. Eze and Uchenu (2020) cited Mandah, (2012); Tenungwa, (2012); Kehinde, Abiodun, Odegbuniyi & Oladeleji, (2016) that SMSEs are crucial to the processes of industrialization, employment generation, personalised service delivery, and sustainable economic growth.

As stated in the 2017 National Survey of Micro, Small, and Medium-Sized Enterprises (MSMEs) report, which was produced by the National Bureau of Statistics (NBS) and the Small and Medium Enterprises

Development Agency (SMEDAN), 2017. According to Garuba (2021), “the national MSMEs strategy specifically addressed the current subject of what exactly qualifies as a micro, small, and medium-sized business. Class limitations, employment, and assets (excluding land and buildings) are the dual criteria that the classification uses, as shown in the table below. When it comes to settling any disputes over classification, the employment criterion takes precedence over assets.”

S/N	Size Category	No of Employment	Assets in Nmills (Exclgd Land & building)
1.	Micro enterprises	Less than 10	Less than 10
2.	Small enterprises	10 – 49	10 to Less than 100
3	Medium enterprises	50 – 199	100 to Less than 1000

Source: SMEDAN National Policy on MSMEs, 2017

SMEs Performance

“Performance is the degree to which a company’s goods and services live up to the expectations of its clients. It shows the supply chain’s capacity to offer goods and services to customers. Performance is crucial to both organizational psychology and the workplace. Over the past ten to fifteen years, researchers have made progress in elucidating and developing the performance idea (Vitorino & Moori, 2020)”. Additionally, strides have been made in identifying key variables and mechanisms linked to both individual and organizational performance. The continuous changes that SMEs are going through in today’s organizations are causing the performance concepts and SME performance needs to alter (Asamoah, Agyei-Owusu, Andoh-Baidoo & Ayaburi 2021). SME performance is classified as financial and non-financial performance. Financial performance includes but is not limited to revenue growth, increased gross profit, improved net profit, increased assets, returns on assets, returns on capital employed, etc. while non-financial performance includes but is not limited to customer satisfaction, product acceptance, employee satisfaction, owners satisfaction, etc.

Conceptual Framework

The Authors conceptualized this study by connecting the independent variables of inventory management practices with the dependent variable of SME performance.

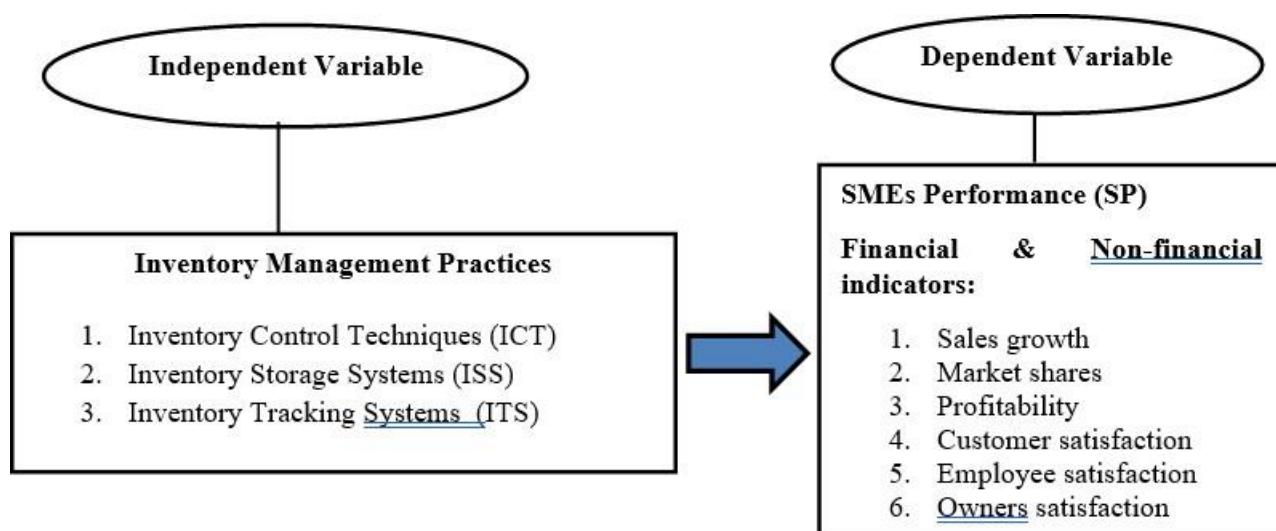


Figure 1: Conceptual Framework of Inventory Management Practices and SMEs Performance

Source: Researcher’s Conceptualization (2024)

Theoretical Framework

Deterministic Inventory Theory

Munyaka and Yadavalli (2022) stated that deterministic inventory theory bases inventory operations on a known (certain) demand. A deterministic model yields the same result due to certainty about the factors, conditions, and parameters involved, which are stated explicitly at the beginning. One of the parameters is demand. Antic, Djordjevic, and Lesec (2022) state that deterministic demand is expressed as a monthly sales forecast for each product. The deterministic demand model seeks to minimize the total costs associated with production time, setup time, and overtime, as well as inventory-related costs like ordering costs, carrying costs, and stock-out costs (overstocks and shortages). According to David (2019), deterministic theory is the inventory theory that most suppliers or retailers use. In essence, this is maintaining inventory levels and placing further orders as needed. When shipment times and client orders can be predicted, this hypothesis performs well. You need to have enough inventory, for instance, if it takes a week for things to ship to a store. If not, you will have to decline orders from consumers when the item runs out of stock.

Stochastic Inventory Theory

According to Porteus (2002), the goal of stochastic inventory theory is to efficiently fulfil demand for commodities by managing their stock levels. According to this hypothesis, sellers fulfill the desires of purchasers for commodities, even in cases when there is no monetary transaction. On hand stock is the inventory of an item that is physically accessible. When a certain amount of an item is physically moved from the units in stock to the buyer, the demand for that quantity is deemed satisfied. When needs are not satisfied right away, there are shortages. If customers are willing to wait, shortages result in backorders; if not, they result in lost revenues. Backorders are sometimes referred to as backlogs and backlogged demand. The inventory manager may occasionally decide to restock the available stock by placing an order for more of the items. Decisions about inventory are made in a stochastic (probabilistic or Bayesian) model taking uncertainty (demand and/or lead time) into account. Stochastic demand, according to Antic, Djordjevic, and Lesec (2022), is produced as a random fluctuation in sales estimate within a range of around 20%. According to Nemtajela and Mbohwa (2017), variables like modifications to purchase orders and unforeseen circumstances are the cause of the demand's unpredictability. Moreover, Tanthatemee and Phruksaphanrat (2012) believe that orders changing at the last minute, suppliers' erratic capacity, or unanticipated circumstances are the causes of uncertain inventory demand.

Empirical Review

Olaide and Omodero (2023) used two (2) industrial goods companies listed on the Nigerian Stock Exchange to do a study on inventory control systems and the profitability of businesses. Opening, closing, and average inventories were used to measure the independent variable (Inventory Management). Profit After Tax, which was collected for the study over five years (2015-2019), was used to measure the dependent variable (Firm Profitability). Descriptive statistics, correlation analysis, and the ordinary least square method were used for analysis. The study's findings demonstrated that inventory control significantly impacted profit after taxes.

Mamuda & Adamu (2023) used an ex-post facto and causal research design to investigate the impact of inventory management on the financial performance of listed consumer goods companies in Nigeria. The study's findings will be used to inform recommendations. The study's findings indicated that inventory management significantly affects consumer goods companies' financial performance.

Iliemena, Odukoya, and Aniefor (2022) carried out an exploratory study of a few health institutions in Anambra state, Nigeria, to learn more about inventory management and control systems in the context of the COVID-19 pandemic. The research design used in the study was a survey. The reorder level system,

periodic review system, and economic order quantity model were used to measure inventory management, and the ideal stock level was used to measure inventory control. The Taro Yamane (1967) algorithm and stratified sampling approach were used to calculate the sample size of 66 respondents out of a population of 74 collected from 7 health facilities. The Spearman Ranked Order Correlation Coefficient and the Chi-Square test were used to assess the hypotheses. The analysis's conclusion showed that the three systems currently in use—the Re-order Level System, the Periodic Review System, and the Economic Order Quantity Model—have a statistically significant impact on health institutions' ideal stock levels and present substantial usage challenges during the COVID-19 pandemic.

In Enugu State, Nigeria, Chizoba, Clara, and Juliet (2022) looked into how inventory resources management affected SME's ability to grow sustainably. The study design chosen was a survey. Distribution of the questionnaire to the intended responders produced the data. A purposive sample technique was used to pick 760 SMEs in the state of Enugu. Regression analysis was used to examine and test the data using SPSS version 20.0. The hypothesis, which was supported by the empirical data, maintained that, at the 5% level of significance, inventory resource management significantly improved the sustainable development of SMEs in Enugu State, Nigeria. Based on the study's findings, the researchers advised that businesses install an inventory control management system to enhance their storage system and effective control management.

The inventory management practices of small and medium-sized businesses in Anambra State were the subject of an investigation by Eze & Uchenu (2021). "The study sought to ascertain the extent to which Managers and Accountants of SMEs in Anambra State utilize inventory management techniques." The study was led by two research questions, and two null hypotheses were examined at the significance level of 0.05. For the study, a descriptive survey research approach was chosen. As of January 2020, the Anambra State Ministry of Commerce and Trade had enrolled 483 managers of small-scale businesses and 244 accountants of medium-sized businesses as part of the study's population. Since the population size was manageable, no sample was taken. Data were gathered using a standardized, structured questionnaire consisting of twenty items. Three experts, one from Nnamdi Azikiwe University in Awka, one in measurement and evaluation, and two in business education, verified the questionnaire. A pilot test that was examined using Cronbach Alpha to ensure the instrument's reliability produced a reliability coefficient of 0.87. The t-test was employed to assess the null hypotheses, while mean and standard deviation were utilized to analyze data relevant to the study topics. According to the study's findings, the purchasing control inventory technique is used moderately by managers and accountants of SMEs in Anambra State, but the economic order quantity approach is used less frequently. The survey also found that there is a substantial difference in the mean assessments of managers and accountants of SMEs in Anambra regarding the extent to which inventory management strategies are used. The study found that the underutilization of inventory management strategies by SMSE managers and accountants led to the slow and stunted growth of the SMSEs.

In Lagos State, Nigeria, food and beverage manufacturing enterprises encountered several difficulties in their day-to-day operations, according to a study done by Sonko & Akinlabi (2020) on inventory management and profitability. Their performance has been negatively impacted by these issues, which have persisted in the form of poor product quality, dwindling sales, high inventory, and slow product turnover. The companies' main issue is inadequate inventory implementation and management. The core of many industrial businesses worldwide is inventory management, which, when done well, greatly enhances business performance. Nigerian enterprises that produce food and beverages, however, struggle with inadequate material control and management, which lowers their sector's performance. Therefore, this study looks at how inventory management affects the profitability of businesses in Lagos State, Nigeria, that manufacture food and beverages. A cross-sectional survey study design was chosen. The target group consisted of the top, medium, and lower level managers in 2027 of the selected food and beverage businesses in Lagos State, Nigeria. A stratified random sample strategy was used in the investigation. A validated survey tool was utilized. The Cronbach's alpha coefficients for the constructions ranged from 0.702 to 0.955. To analyze the data, both inferential and descriptive statistics were applied. The findings

demonstrated that a group of food and beverage manufacturing companies located in Lagos State, Nigeria had substantially higher profitability as a result of inventory management. The study concluded that inventory management has an impact on the profitability of particular Lagos State, Nigerian food and beverage manufacturing enterprises.

In 2020, Olowolaju and Mogaji carried out a study on how inventory management practices affect small and medium-sized businesses' (SMEs) performance in Akure, the capital of Ondo State, Nigeria. The study analyses the impact of inventory management practices on the organizational performance of SMEs in Akure Metropolis. The study's specific goals are to: identify the inventory management strategies employed by the chosen SMEs; evaluate the factors influencing the type of inventory management practices that the chosen business has adopted; and determine the impact of those practices on the chosen business's profitability. The purpose of the study was to integrate secondary data from SMEs in the Akure Metropolis with primary survey-based data. There were 966 registered SMEs in Akure Metropolis, Ondo State, Nigeria, which made up the population of the study region. In this investigation, a multi-stage sampling procedure yielded 400 sample sizes. Using a well-structured questionnaire, primary and secondary data were collected statistically. Profit information from the chosen SMEs in the research area was also collected. Descriptive and inferential statistical tools were used to analyze the acquired data, respectively. The results of the investigation indicated that the respondents had a positive impression of procurement and planning. The inventory management strategies and the profitability level of the chosen SMEs have a positive and significant association, according to the hypothesis testing result of ($r = 0.225$ and $P \leq 0.05$) obtained by Pearson Product Moment Correlation.

According to research done by Folajimi et al. (2020) on inventory control and the financial performance of Nigerian listed conglomerate companies, "inventory constitutes a substantial portion of a firm's cost of production." Conglomerate companies have to contend with a declining rate of return because of the high cost of production, of which inventory makes up the majority. Research has indicated that proficient inventory management, encompassing forecasting, procurement, transportation, inspection, material handling, storing, warehousing, supplier management, and inventory security, is essential for minimizing production costs and optimizing returns. This study looked at how listed conglomerate companies in Nigeria performed financially concerning inventory control, namely inventory procurement, inventory security, and inventory usage control. Both an empirical survey and a field research strategy were used in the study. The six (6) identified conglomerates as of December 31, 2018, make up the study's population. The target group consists of 108 employees from the finance and store departments, of whom 72 were chosen by quota sampling methods to administer the structural questionnaire. The secondary data was collected using the total enumeration method. By employing content validity to examine the questionnaire's question components, the study instrument was validated. The dependability of the study instrument was assessed using the Cronbach Alpha reliability test, which yielded an overall score of 0.988, over the threshold of 0.70-0.80. Out of the 72 structured questionnaires that were distributed, 68 were retrieved, or 94.4%, and were used in the study. Used were secondary data for a twenty-two (22) year period taken from the audited annual reports and accounts, which produced 110 unbalanced firm-year observations. To test the hypotheses, descriptive and inferential statistics were used. The results showed that: inventory control affects listed conglomerate firms in Nigeria's financial performance significantly; inventory procurement control significantly improves financial performance; inventory security control significantly improves financial performance; and inventory utilization control has a significant and beneficial impact on financial performance. Furthermore, there was a negligible beneficial impact of the inventory turnover period on financial performance. The study came to the conclusion that listed conglomerate companies in Nigeria had a substantial financial performance impact from inventory control.

In 2020, Ugwu and Nwakoby conducted a study utilizing grass-root opinion to examine the effect of inventory management on company performance in Nigeria. They stated that their primary goal was to ascertain the impact of inventory management on firm performance in Nigeria through the use of grass-root opinion. Determining the effects of the ABC model, the low, medium, and high models, and the economic

order quantity (EOQ) models on firm performance are some further particular goals. With an emphasis on a deliberately selected sample of 10 enterprises with a combined workforce of 710 employees, our methodology employed a grass-roots opinion (primary questionnaire) survey design. Taro Yamane equations were utilized to determine the 400 employees that comprised our respondents. OLS regression and Pearson correlation were the descriptive statistics used in the analysis process. The outcome indicates that the independent factors (ABC, LMH, and EOQ) on firm stock management jointly explained the Adjusted R-squared value of 0.879, which is 88% of the systematic fluctuations in the dependent variable in the pooled firms. The overall statistical significance of the OLS pooled model at the 5% level is demonstrated by the F-statistic value of 429.250 and P-value of 0.0000. The ABC, LMH, and EOQ inventory models have a good and significant impact on company performance in Nigeria, according to additional findings of the explanatory variables. The study concludes that the evaluated inventory management model strategies significantly improve company performance. Because it offers management principles for stock management models that reduce stock waste and improve corporate performance, this study is crucial to Nigerian manufacturing companies.

In Lagos State, Nigeria, Ogidolu, Akinosun, and Ajakore (2019) studied the impact of strategic inventory management on the performance of small-scale manufacturing companies. They stated that the study's goal was to ascertain how strategic inventory management affected these companies' ability to operate. The study employed primary data to get the information it needed from the companies. There are thirty-one small-scale manufacturing companies in Ikeja, Lagos State, Nigeria, which make up the population. 220 respondents were chosen at random using a straightforward technique from the departments of production, marketing, and administration. Using the questionnaire, respondents provided information on variables such as inventory management tools, strategic decision policy, and performance variables. Descriptive and inferential statistics were then used to analyze the data. The study demonstrated that, when implemented properly, strategic inventory management improves the performance of small-scale manufacturing companies. The foundation of their inventory management procedures should consist of instruments such as the ABC system, Two-way bins, EOQ, Production Lot Size, and Quantity discount model. The study concluded that small-scale manufacturing companies should offer inventory management services to support their technical performance, which will result in increased performance.

RESEARCH METHODOLOGY

A descriptive survey research design was used in the study because the study described the relationships, patterns, and trends that exist within the data. Every SME in Lagos State makes up the population. The 11,663 registered SMEs in Lagos State, Nigeria, as reported by the National Bureau of Statistics Collaborative Survey (2019) and the Small and Medium Enterprises Development Agency of Nigeria (SMEDAN), comprise the population under consideration. Lagos State was chosen for the selection of SMEs since it is considered to be one of Nigeria's main business hubs. A group of 154 SMEs were taken into account. This result was obtained by applying the Yaro Yamane formula;

$$n = \frac{N}{1 + N(e)^2}$$

n = sample size,

N = Population size

E = level of precision or sampling error

$$n = \frac{11663}{1 + 11663(0.05)^2} = 386.7$$

$387/20 = 19.3 * 8 = 154.4 = 154$ SMEs

The sample was drawn using a simple random sampling technique, while the local governments selection sample was drawn using a purposive sampling technique justified by the volume of commercial activities and the population size of these local governments. The sample consists of SMEs selected from all 8 out of the initial 20 Local governments in Lagos State before the creation of the Local Council Development Areas (LCDAs). The local governments used for this study are Agege, Alimosho, Amuwo-Odofin, Ikeja, Mushin, Ojo, Oshodi-Isolo, and Surulere local Governments. (LCDAs were not utilized). These local governments were very close to Isolo where the researchers were based. Data for the study were obtained through the administration of a self-designed questionnaire to owners of SMEs and senior personnel of the sampled firms.

The purpose of the questionnaire was to gather information regarding the performance of the three inventory management and SMEs in the local governments that were sampled. On a straightforward table, the parameters utilized to characterize the data sets' properties were range, mean, and standard deviation. Using SPSS version 20.0, the study used the Chi-square and analysis of variance statistics as data analysis techniques. The performance of SMEs served as the dependent variable in this study, and the independent factors included different inventory management strategies (such as inventory control techniques, inventory storage systems, and inventory tracking systems).

Model Specification

The main model specification for this study is depicted below:

$$SMEsP = f(IMP) \dots\dots\dots (3.2)$$

Whereas the specific models for each hypothesis

$$SMEsP = f(ICT, ISS, ITS)$$

$$SMEsP = F(ICT_{it}, ISS_{it}, ITS_{it},) \dots\dots\dots (3.2)$$

Estimation Technique

To estimate the functional relationship between inventory management practices and SME performance in Lagos state using an econometric technique, equation (3.2) is expressed in mathematical form as:

$$SMEsP = \beta_0 + \beta_1 ICT + \beta_2 ISS + +\beta_3 ITS + \mu \dots\dots\dots (3.3)$$

Where: SMEsP is Small and Medium Enterprises Performance, IMPI is Inventory Management Practices proxied with Inventory Control Technique (ICT), Inventory Storage System (ISS) and Inventory Tracking System (ITS) β_0 , is the constant term, $\beta_1, \beta_2, \beta_3$, are the parameter estimates, while ϵ_t is the stochastic error term.

Reliability and Validity of Research Instrument

Based on Nunally's (1978) conventional reliability test of 70% in management science research, Table 3.1's results attested to the test instruments' reliability. The test instrument underwent a content validity test as well. Research specialists in the domains of inventory management practice and SME performance were asked to complete the questionnaire and provide their honest feedback. This allowed the test instrument's

validity to be verified.

Table 3.1: Reliability Test

S/N	Construct Description	No of Instruments	Cronbach's Alpha Statistics
Independent Variable			
1	Inventory control techniques	6	0.724
Independent Variable			
2	Inventory storage system	5	0.795
Independent Variable			
3	Inventory tracking system	5	0.742
Dependent Variable			
4	SMEs Performance	6	0.729

Source: Researchers' Computation, 2024

DATA PRESENTATION AND ANALYSIS

Data Presentation

Table 4.1: Questionnaire Distributed and Used

The table shows the total number of questionnaires distributed and the total number of questionnaires used.

	Number	Percentage
Number of Questionnaires Distributed	154	100%
Number of Questionnaires Returned	153	99.35%
Number of Questionnaires Correctly Filled in	151	98.05%
Number of Questionnaires Used	151	98.05%

Table 4,1 above shows the total number of questionnaires distributed was 154, representing 100%, 153 were returned representing 99.35% and 151 questionnaires were correctly filled in representing 98.05% which were found usable.

Data Presentation (Descriptive)

Table 4.2: Descriptive Statistics of Bio Data

	N	Range	Min	Max	Sum	Mean	Std. Dev	Variance
Gender	151	1.00	1.00	2.00	240.00	1.5894	.49358	.244
Age Bracket	151	3.00	1.00	4.00	297.00	1.9669	.67742	.459
Academic Qualifications	151	2.00	1.00	3.00	322.00	2.1325	.71810	.516
Average Annual Turnover	151	3.00	1.00	4.00	315.00	2.0861	.88649	.786
Average Number of Employees	151	2.00	1.00	3.00	194.00	1.2848	.53388	.285
SMEs Nature of Business	151	3.00	1.00	4.00	368.00	2.4371	.72642	.528
SMEs Form	151	2.00	1.00	3.00	205.00	1.3576	.69613	.485

Years of operating SMEs	151	2.00	1.00	3.00	246.00	1.6291	.71755	.515
Valid N (listwise)	151							

Source: Researcher’s Computation, 2024

The results in Table 4.2 describe the various properties of the biodata of the respondents ranging from gender to years of operating SMEs with regards to range, minimum, maximum, sum, mean, standard deviation, and variance.

Table 4.3: Descriptive Statistics of Inventory Control Technique

	N	Range	Min	Maxi	Sum	Mean		Std. Dev	Variance
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Statistic
ICT_1	151	4.00	1.00	5.00	540.00	3.5762	.09276	1.13981	1.299
ICT_2	151	4.00	1.00	5.00	568.00	3.7616	.07261	.89225	.796
ICT_3	151	4.00	1.00	5.00	604.00	4.0000	.07458	.91652	.840
ICT_4	151	4.00	1.00	5.00	564.00	3.7351	.07321	.89964	.809
ICT_5	151	4.00	1.00	5.00	557.00	3.6887	.08519	1.04681	1.096
ICT_6	151	4.00	1.00	5.00	619.00	4.0993	.05378	.66086	.437
Valid N (listwise)	151								

Source: Researcher’s Computation, 2024

The results in Table 4.4 using the mean ranking approach revealed that the most ranked variable is “*The standard and quality of products are considered in our business.*” followed by “*Our organization does regular stock-taking to control inventory.*” and the least ranked is “*The business considers the lead time for the supply of inventory.*“. The closeness of the standard deviation of each of these variables to their mean scores suggests that the data is not skewed hence generating a normal distribution.

Where: ICT_1 is “*The business considers the lead time for the supply of inventory.*”, ICT_2 is “*Our organization has a strategic partnership with suppliers of our inventory.*”, ICT_3 is “*Our organization does regular stock-taking to control inventory.*”, ICT_4 is “*We buy inventory base on customers demand.*”. ICT_5 is “*Our organization keeps certain units of inventory to sustain customers.*” and ICT_6 is “*The standard and quality of products are considered in our business.*”.

Table 4.4: Descriptive Statistics of Inventory Storage System

	N	Range	Min	Max	Sum	Mean		Std. Dev	Variance
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Statistic
ISS_1	151	4.00	1.00	5.00	625.00	4.1391	.06647	.81682	.667
ISS_2	151	2.00	3.00	5.00	608.00	4.0265	.04598	.56506	.319
ISS_3	151	2.00	3.00	5.00	612.00	4.0530	.04486	.55122	.304
ISS_4	151	2.00	3.00	5.00	570.00	3.7748	.06454	.79307	.629
ISS_5	151	2.00	3.00	5.00	623.00	4.1258	.05662	.69575	.484
Valid N (listwise)	151								

Source: Researcher’s Computation, 2024

The above descriptive analysis as revealed by the Mean Ranking Approach (MRA) that the most ranked variable is “*Our organization considers available space when dealing with inventory.*” followed by “*The efficiency of our staff determines how inventory is stored in our organization.*” and the least ranked is “*Stock unloading determines the storage system in our organization.*” The closeness of the standard deviation (SD) of these variables to their mean scores suggests that the data is not skewed thus nearing normalcy.

Where ISS_1 is “*Our organization considers available space when dealing with inventory.*” ISS_2 is “*The budgets or funds available are determinants of inventory stored in our business.*” ISS_3 is “*The potential spoilage issues are factors responsible for inventory kept in our business.*” ISS_4 is “*Stock unloading determines the storage system in our organization.*” and ISS_5 is “*The efficiency of our staff determines how inventory is stored in our organization.*”

Table 4.5: Descriptive Statistics of Inventory Tracking System

	N	Range	Min	Max	Sum	Mean		Std. Dev	Variance
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Statistic
ITS_1	151	3.00	2.00	5.00	599.00	3.9669	.05671	.69682	.486
ITS_2	151	3.00	2.00	5.00	587.00	3.8874	.08892	1.09266	1.194
ITS_3	151	2.00	3.00	5.00	643.00	4.2583	.05101	.62678	.393
ITS_4	151	3.00	2.00	5.00	639.00	4.2318	.06540	.80369	.646
ITS_5	151	3.00	2.00	5.00	569.00	3.7682	.08162	1.00295	1.006
Valid N (listwise)	151								

Source: Researcher’s Computation, 2024

The above descriptive analysis as revealed by the Mean Ranking Approach (MRA) that the most ranked variable is “*Surprised spot checks are conducted to keep track of inventory in our organization.*” followed by “*Our firm does physical counting of inventory periodically.*” and the least ranked is “*We use bar codes, POS, Vend or Lightspeed to track inventory in our organization.*” The closeness of the standard deviation (SD) of these variables to their mean scores suggests that the data is not skewed thus nearing normalcy.

Where ITS_1 is “*Software is installed to track inventory usage and movement in our organizations.*”, ITS_2 is “*Inventory identifiers such as labels are used to track inventories in our business.*”, ITS_3 is “*Surprised spot checks are conducted to keep tracks on inventory in our organization.*”, ITS_4 is “*Our firm does physical counting of inventory periodically.*” and ITS_5 is “*We use bar codes, POS, Vend or Lightspeed to track inventory in our organization.*”

Data Presentation (Inferential)

Test of Hypotheses

Hypothesis 1: Inventory control techniques do not have a significant influence on the performance of SMEs in Lagos state.

Table 4.6: Chi-Square Test (χ^2) of Inventory Control Techniques

	ICT_1	ICT_2	ICT_3	ICT_4	ICT_5	ICT_6
Chi-Square	138.815a	156.523a	57.865b	51.754c	46.574a	46.523a

Df	5	5	4	4	3	3
Asymp. Sig.	.000	.000	.000	.000	.000	.000

Source: Researcher’s Computation, 2024

Table 4.7: ANOVA of Inventory Control Techniques

		Sum of Squares	Df	Mean Square	F	Sig
Between People		157.426	150	1.032		
Within People	Between Items	6.142	3	2.112	3.238	.009
	Residual	426.146	450	.883		
	Total	573.572	453	.897		
Total		730.998	603	.938		
Grand Mean = 3.9586						

Source: Researcher’s Computation, 2024

The chi-square (χ^2) and the F-statistics were adopted for the study and in considering the relationship between the inventory control technique and the performance of the SMEs, six variables were considered and tested using the χ^2 . The asymptotic (P) value of the $\chi^2(0.00, 0.00, .000, 0.00, .000, \text{ and } 0.00)$ and f-statistics (0.009) at 0.05 significant level revealed that all the variables are significant and thus inventory control techniques have a significant influence on the performance of SMEs in Lagos state.

Hypothesis 2: Inventory storage systems do not have a significant effect on the performance of SMEs in Lagos state.

Table 4.8: Chi-Square Test (χ^2) of Inventory Storage System

	ISS_1	ISS_2	ISS_3	ISS_4	ISS_5
Chi-Square	73.352a	64.573a	78.123a	93.152a	86.972 a
Df	4	4	4	4	4
Asymp. Sig.	.000	.000	.000	.000	.000

Source: Researcher’s Computation, 2024

Table 4.9: ANOVA of Inventory Storage System

		Sum of Squares	Df	Mean Square	F	Sig
Between People		141.262	150	.962		
Within People	Between Items	12.752	3	4.513	5.219	.006
	Residual	469.818	450	1.003		
	Total	483.570	453	1.019		
Total		624.832	603	1.003		
Grand Mean = 3.8806						

Source: Researcher’s Computation, 2024

The chi-square (χ^2) and f-statistics statistics were adopted for the study and in considering the relationship between the inventory storage system and the financial performance of the SMEs, five variables were considered and tested using the χ^2 statistics and the f-statistics. The asymptomatic (P) value of the χ^2 statistics (0.00, 0.00, 0.00, 0.00, and 0.00) and f-statistics (0.006) at 0.05 significant level for both the f-factor and the χ^2 factor shows that the variables are significant. This revealed that all five variables are significant and thus Inventory storage systems have a significant effect on the performance of SMEs in Lagos state.

Hypothesis 3: Inventory tracking systems do not have a significant effect on the performance of SMEs in Lagos state.

Table 4.10: Chi-Square Test (χ^2) of Inventory Tracking System

	ITS_1	ITS_2	ITS_3	ITS_4	ITS_5
Chi-Square	64.240a	55.462b	69.012a	86.111b	76.961 a
Df	4	4	4	4	4
Asymp. Sig.	.000	.000	.000	.000	.000

Source: Researcher’s Computation, 2024

Table 4.11: ANOVA of Inventory Tracking System

	Sum of Squares	Df	Mean Square	F	Sig	
Between People	147.712	150	.962			
Within People	Between Items	16.752	3	4.732	5.416	.009
	Residual	477.675	450	1.005		
	Total	494.437	453	1.078		
Total	613.149	603	1.002			
Grand Mean = 3.7816						

Source: Researcher’s Computation, 2024

The chi-square (χ^2) and f-statistics statistics were adopted for the study and in considering the relationship between the inventory tracking system and the performance of the SMEs, five variables were considered and tested using the χ^2 statistics and the f-statistics. The asymptomatic (P) value of the χ^2 statistics (0.00, 0.00, 0.00, 0.00, and 0.00) and f-statistics (0.009) at 0.05 significant level for both the f-factor and the χ^2 factor shows that the variables are significant. This revealed that all five variables are significant and thus inventory tracking systems have a significant effect on the performance of SMEs in Lagos state.

Discussion of Findings

The findings of the study about hypothesis one, revealed that the inventory control systems of SMEs will enjoy better performance. The findings of hypothesis two also showed that the inventory storage systems of the SMEs has a significant effect on the performance of the SMEs. The findings of hypothesis 3 on the Inventory tracking system, also deduced that there is a significant relationship between the use of inventory tracking system and the performance of SMEs in Lagos state. Additionally, this outcome is consistent with the study’s findings. Olaide and Omodero’s (2023) study findings demonstrated that inventory control significantly impacted profit after taxes. Inventory management significantly affects the financial success of consumer products companies, according to Mamuda & Adamu (2023). The Re-order Level System,

Periodic Review System, and Economic Order Quantity Model—the three systems now in use—have a statistically significant impact on the ideal stock level of healthcare facilities, according to Iliemena, Odukoya, and Aniefor (2022). The results of Chizoba, Clara, and Juliet (2022) showed that, at the 5% level of significance, inventory resource management significantly improved the sustainable development of SMEs in Enugu State, Nigeria. Sonko & Akinlabi (2020) findings revealed that “inventory management had significant effect on profitability of selected food and beverage manufacturing companies in Lagos State, Nigeria. Olowolaju & Mogaji (2020) revealed that “there is a positive and significant relationship between the inventory management techniques and the profitability level of the selected SMEs in the study area.” Folajimi et. al (2020) result showed that “inventory control significantly affects financial performance of listed conglomerate firms in Nigeria; inventory procurement control has significant positive effect on financial performance; inventory security control exerts significant positive effect on financial performance; and inventory usage control significantly and positively influence financial performance”. Ugwu & Nwakoby (2020) fidig showed that “inventory management model techniques tested have positive significant impact on firm performance.” Obioma, Yusuf & Cosmas (2019) result revealed that “inventory management has positive and strong correlation with capacity development in small scale enterprises.”

CONCLUSION AND RECOMMENDATIONS

Conclusion

The study adopted a questionnaire-based method of evaluation, testing the efficacy of each hypothesis using the chi-square method and comparing the result with empirical statistical evidence to form a basis of opinion. The study therefore concludes that inventory control systems have significant effects on the performance of SMEs in Lagos state. Also, the study concludes that the inventory storage system of the SMEs has a significant effect on the performance of Lagos SMEs and finally Inventory tracking system, has a significant relationship with the performance of SMEs in Lagos state. This conclusion of this study supports stochastic inventory theory.

Recommendations

Given the findings and conclusion drawn above, the researchers therefore make the following recommendations, that there should be improved applicability level of inventory management tools among the SMEs in Lagos state which automatically would lead to improved performance. All the inventory control systems should be made formal at the operational level among SMEs. Inventory control systems like perpetual inventory control systems, Periodic inventory systems, and barcode inventory control systems should form the bedrock of their inventory control. Since inventory management and control affect the operational performance of SMEs, sufficient inventory management facilities should be provided by such organizations to support the operational performance technically which will bring about improved performance.

Effective inventory control techniques are crucial for the efficient and effective running of SME organizations. The process of ensuring the right quantity and quality of relevant stock is available at the right time at the right place is called inventory control. Many enterprises have failed because of inaccurate inventory levels. It is for this reason that the study investigated the effect of inventory management practices on the performance of SMEs in Lagos. According to the study, SME management should take lead time for the supply of inventory seriously, have strategic partnerships with suppliers of their inventories, and do regular stock-taking to control inventory. Purchase inventory based on customer demand keeps certain units of inventory to sustain customers and that standard and quality of products be purchased at all times as they all have a significant effect on SMEs performance in Lagos state.

Also, the management and owners of SMEs should consider available space when trading with inventory and make adequate budgets or funds available considering spoilage and expiry factors, inventory unloading,

and the efficiencies of their staff as they are all determinants of SMEs' performance in Lagos state. Finally, inventory software, inventory identifiers, surprised spot checks, physical counting of inventory bar codes, POS, Vend or Lightspeed should be adopted to track inventory of SMEs.”

REFERENCE

1. Abdullahi, U., Ardo, Y. Hassan, A., & Ibrahim, G. (2021). Assessment of financial and non-financial performance indicators used by small and medium construction firms in Nigeria. *FUTY Journal of the Environment*, 15(2), 48-58.
2. Adam, H. (2024). *Inventory Management Defined, Plus Methods and Techniques*. <https://www.investopedia.com/terms/i/inventory-management.asp>
3. Adekunle, O., Yusuf, A. A., and Shuaibu, H. (2022). Effects of supply chain management on the performance of some selected SMEs in Lagos state. *Lapai International Journal of Administration*. 4 (2), 244 – 257. ISSN:2616-1346(Print) ISSN:2756-5246(Online)
4. Alam, M. K., Thakur, O. A., & Islam, F. T. (2024). Inventory management systems of small and medium enterprises in Bangladesh. *Rajagiri Management Journal*, 18(1), 8-19.
5. Anshur, A. S., Ahmed, M. M., & Dhodi, M. H. (2018). The role of inventory management on financial performance in some selected manufacturing companies in Mogadishu. *International Journal of Accounting Research*, 6(2), 1-6.
6. Antic, S., Djordjevic M.L. & Lisec, A. (2022). Dynamic discrete inventory control model with deterministic and stochastic demand in pharmaceutical distribution. *Applied Science*, 12 (3), 1536. <https://doi.org/10.3390/app12031536>
7. Asamoah, D., Agyei-Owusu, B., Andoh-Baidoo, F. K., & Ayaburi, E. (2021). Inter-organizational systems use and supply chain performance: Mediating role of supply chain management capabilities. *International journal of information management*, 58, 102195.
8. Baily, P., Farmer, D., Barry, C., Jessop, D., & David, J. (2008). *Procurement principles and management*. Harlow: Pearson Education.
9. Barry, F. C., and Company (2019). *Inventory management*. <https://www.fcbco.com/blog/top-6-features-to-look-for-in-an-inventory-management-system>
10. Chizoba, O. ,Clara, C. A. & Juliet O. (2022). Effects of inventory resources management on sustainable development of SME in Enugu state, Nigeria. *Advanced Journal of Business & Entrepreneurship Development*,6(6). <https://aspjournals.org/ajbed/index.php/ajbed>
11. David W. (2019). Theories on inventory systems. <https://smallbusiness.chron.com/theories-inventory-systems-81727.html>
12. Estrellas, L. (2024, January 4). *A guide to inventory control*. Retrieved on 14/3/ 2024 from <https://safetyculture.com/topics/inventory-management-system/inventory-control/>
13. Eroglu, C., & Hofer, C. (2011). Lean, leaner, too lean? The inventory-performance link was revisited. *Journal of Operations Management*, (29), 356–369
14. Eze, A. N Uchenu, C. A. (2021). Inventory management techniques of small and medium scale enterprises in Anambra state. *Unizik Journal of Educational Research and Policy Studies*. 3; 295- 307. URL: <http://sjifactor.com/passport.php?id=21363>
15. Farrington, B., & Lysons, K. (2006). *Purchasing and Supply Chain Management*. London: Pearson Education.
16. Folajimi, F. A., Grace, O. O. Appolos, N. & Olusoji, D. O. (2020). Inventory control and financial performance of listed conglomerate firms in Nigeria. *Journal of Management and Strategy*,11 (2),40-55.<http://jms.sciedupress.com>.
17. Garuba. A. A (2021). The effect of financial management practices on performance of Small and Medium Scale Enterprises (SMEs) in Lagos state.
18. Groenewald, E., & Kilag, O. K. (2024). E-commerce inventory auditing: Best practices, challenges, and the role of technology. *International Multidisciplinary Journal of Research for Innovation, Sustainability, and Excellence (IMJRISE)*, 1(2), 36-42.

19. Gokhale, P. P. & Kaloji, & M. (2018). A study on inventory management and its impact on profitability in the foundry industry at Belagavi, Karnataka. *International Journal of Latest Technology in Engineering, Management & Applied Science*, 29-31.
20. Green, K.W. & Inman, R.A. (2005). Using a just-in-time selling strategy to strengthen supply chain linkages. *International Journal of Production Research*, 43 (16), 3437-53.
21. Hiller, F. S. & Lieberman, G. J. (2001). *An introduction to operational research*. McGraw Hill: New York.
22. Hayes, A. (2024, February 27). *Inventory management is defined, plus methods and techniques*. Retrieved on 14/3/ 2024 from <https://www.investopedia.com/terms/i/inventory-management.asp>
23. Hänninen, P. (2024). *Improving inventory management efficiency: the impact of optimization* (Master's Thesis, Lappeenranta–Lahti University of Technology, LUT)
24. Iliemena, R. O., Aniefor, S. J. & Odukoya, O. O. (2022). Inventory Management and Control Systems in Covid-19 Pandemic Era: An Exploratory Study of Selected Health Institutions in Anambra State, Nigeria. *Global Journal of Management and Business Research: A Administration and Management*. 22 (8). 43-55
25. Jenkins, A. (2022, February A). *20 Inventory management challenges and solutions for 2022 and beyond*. Retrieved on 14/3/ 2024 from <https://www.netsuite.com/portal/resource/articles/inventory-management/inventory-management-challenges.shtml>
26. Kilonzo, J. M., Memba, F. S., & Njeru, A. (2016). Effect of inventory control on the financial performance of firms funded by government venture capital in Kenya. *European Journal of Business Management*, 8(5), 181-197.
27. Kolawole, A. D., Olusipe, B. J. & Akomolafe, A. B. (2019). Inventory Management: An Impetus for Increased Profitability in Manufacturing Firms. *International Journal of Accounting, Finance and Risk Management*, 4 (4). 1-6. ISSN Print: 2578-9368, Online: 2578-9376.
28. Mamuda, A. U and Adamu, H. F. (2023). Examine the effect of inventory management on the financial performance of listed consumer goods companies in Nigeria. *International Journal of Social Sciences and Humanities*, 11(6), 129 -140. <http://arcnjournals.org> .
29. Muchaendepi, W., Mbohwa C., Hamandishe, T., & Kanyepe, J (2018). Inventory Management and Performance of SMEs in the Manufacturing Sector of Harare. ScienceDirect Procedia Manufacturing. 33 454–461. www.sciencedirect.com
30. Nicole, G. (). Inventory Storage Meaning & 3 Options for Inventory Storage <https://www.bluecart.com/blog/inventory-storage>
31. Nemtajela, N. and Mbohwa, C. (2017). Relationship between inventory management and uncertain demand for fast moving consumer goods organizations. 14th Global Conference on Sustainable Manufacturing, GCSM, 3-5 October 2016, Stellenbosch, South Africa. *Procedia Manufacturing*, 8(1), 699–706.
32. Nunally, C.J, (1978). *Psychometric Theory*. New York: McGraw-Hill.
33. Obioma, O. H; Yusuf, F. M. & Cosmas, L. (2019). Capacity development and inventory management in small scale enterprises (SSEs): A study of selected metal fabrication enterprises in Onitsha, Anambra state, Nigeria. *Sumerianz Journal of Business Management and Marketing*. 2(10). 118 – 129. Online ISSN: 2617-0175 Print ISSN: 2617-1724
34. Ogidiolu, A.S.,Akinosun, O. M, Ajakore, M. (2019). Effect of strategic inventory management on the performance of small-scale manufacturing Firms in Lagos State, Nigeria. *The international journal for business and management*, 7(5), 212 – 221. www.theijbm.com.
35. Okolocha, C.B., Anuri O. N. and Anugwu C.C. (2022). Effect of inventory resource management on sustainable development of SMEs in Enugu state, Nigeria. *Advanced Journal of Business & Entrepreneurship Development*. 6(6), ISSN: 4405-3914 (Print Version) ISSN: 2507-4309. <https://aspjournals.org/ajbed/index.php/ajbed>
36. Olaide, A. O.& Omodero O. C. (2023). Inventory Control System and Profitability of Companies. *Journal of Accounting and Management*, 13(1), 29-57.

37. Olowolaju, P.S & Mogaji, B.J. (2020). Effects of inventory management practices on the performance of small and medium scale enterprises SMEs in Akure Metropolis. *IOSR Journal of Business and Management*, 22 (1) 1- 7. DOI: 10.9790/487X-2201050107 www.iosrjournals.org
38. Otuya, S. & Eginwin, E. J. (2017). Inventory management and SMEs profitability. A study of furniture manufacturing, wholesale, and eatery industry in Delta state, Nigeria. *Journal of Finance and Accounting* 5(3), 75-79.
39. Porteus E.L (2002). *Stochastic inventory theory*. Stanford University Press, Stanford, CA
40. Porzuczek, P. (2022, December 1). The role of inventory management on organizational performance. Retrieved on 14/3/ 2024 from <https://medium.com/@por314159/the-role-of-inventory-management-on-organisational-performance-4a9cd2706e13>
41. Ramadan, A., Alkhodary, D., Alnawaiseh, M., Jebreen, K., Morshed, A., & Ahmad, A. B. (2024). Managerial competence and inventory management in SME financial performance: A Hungarian perspective. *Journal of Statistics Applications & Probability*, 13(3), 859-870.
42. Rasool, F., Hussain, M. M., Ullah, M. F., & Shehzadi, I. (2024). Evidence from Pakistan's non-financial sectors: A behavior testing of inventory conversion period and firm performance. *International Journals on Contemporary Issues in Social Science*, 4(1), 1115-1121.
43. Reph, G. & Milner, C., (2015). *Inventory management: advanced methods for managing inventory within the business system*. London. Kogan page limited.
44. SMEDAN & NBS, (2017) Report of National Survey of Micro, Small and Medium Enterprises (MSMEs) by Small and Medium Enterprises Development Agency (SMEDAN) and National Bureau of Statistics (NBS), 2017.
45. Sonko, M. L. & Akinlabi, H. B. (2020). Inventory Management and Profitability of Food and Beverage Manufacturing Companies in Lagos State, Nigeria.
46. Tadayonrad, Y., & Ndiaye, A. B. (2023). A new key performance indicator model for demand forecasting in inventory management considering supply chain reliability and seasonality. *Supply Chain Analytics*, 3, 100026.
47. Tanthatamee, T. and Phruksaphanrat, B. (2012). Fuzzy inventory control system for uncertain demand and supply. *Proceedings of the international Multi conference of Engineers and Computer Scientists 11* (1), IMECS 2012, March 14-16, Hong Kong.
48. Tarver, E., & Aditham, K. (2023, September 13). *17 Essential inventory management techniques*. Retrieved on 14/3/ 2024 from <https://www.forbes.com/advisor/business/inventory-management-techniques/>
49. Tunney, M. (2019, February 1). *Growing & Complex Businesses : 5 Inventory Types: From Raw Materials to Finished Goods*. Retrieved from Quickbooks: <https://quickbooks.intuit.com/r/growing-complex-businesses/5-inventory-types-fromraw-materials-to-finished-goods/>
50. Ubabudu, M. C., Ozoemena, P. C., & Anam, B. E. (2024). Effectiveness of inventory management on the profitability of manufacturing sectors in Nigeria Bottling Company, Kaduna. *European Journal of Business and Innovation Research*, 12(1), 1-14.
51. Ugwu I. V. & Nwakoby, N. P. (2020). Impact of inventory management on firm performance in Nigeria: Using grassroots opinion. *International Journal of Engineering and Information Systems*.4 (11), 34-46. ISSN: 2643-640X, www.ijeais.org/ijeais
52. Vitorino, V. A., & Moorri, R. G. (2020). *RBV in the context of supply chain management*. *Gestão & Produção*, 27.
53. Vyas, D. (2023) How you can solve inventory management challenges? <https://medium.com/@divaker.vyas/how-you-can-solve-inventory-management-challenges-529df75699de>
54. Yanya, M., & Mahamat, N. (2020). The impact of supply chain management practices on competitive advantages: moderation role of total quality management. *Polish Journal of Management Studies*, 21

55. Zoho Corporation (2024). Inventory tracking software crafted for growing businesses.
<https://www.zoho.com/in/inventory/inventory-tracking-software/>