

**CHALLENGES OF INVENTORY MANAGEMENT AND THE WAYS  
FORWARD ( A STUDY OF SUNGLASS NIGERIA LIMITED KADUNA)**

**BY**

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**BEING A RESEARCH PROJECT SUBMITTED TO  
THE DEPARTMENT OF MANAGEMENT STUDIES, COLLEGE  
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**IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR  
THE  
AWARD OF HIGHER NATIONAL DIPLOMA IN PRODUCTION  
AND OPERATIONS MANAGEMENT**

**KADUNA POLYTECHNIC, KADUNA**

**AUGUST, 2022**

**DECLARATION**

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I hereby declare that this research project work was written by me, **Mohammed  
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Signature and Date

### **APPROVAL PAGE**

This is to certify that this research project '**Challenges of Inventory Management and the Ways Forward (A Study of Sunglass of Nigeria Limited Kaduna)**' undertaken by **Mohammed Nata'ala KPT/CBMS/18/40795**, has been prepared in accordance with the regulation governing the preparation and presentation of project in the Department of

Management Studies, Kaduna Polytechnic, Kaduna and therefore approved for its contribution to knowledge and literary presentation.

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### **DEDICATION**

This work is dedicated to Almighty Allah

## **ACKNOWLEDGEMENT**

I give my sincere gratitude to Almighty Allah for the knowledge, wisdom and understanding he gave me during the period of writing this project.

My appreciation also goes to my able supervisor in person of Dr. Ismaila Haruna Maikujeri who made the necessary corrections, and the entire staff of management studies, Kaduna Polytechnic.

Special gratitude also goes to my father, Alhaji Muhammad Nata'ala, my mother Hajiya Rahab Nata'ala, my siblings and Prof. M. S. Haruna.

## **ABSTRACT**

*The research project is on the Challenges of Inventory Management and the Ways Forward (A Study of Sunglass Nigeria Limited Kaduna). The objectives of the study are; to explore the challenges of inventory management at Sunglass Nigeria Limited, Kaduna, and to identify the system used by Sunglass Nigeria Limited, Kaduna in managing their inventory management, to provide recommendation to Sunglass Nigeria Limited, Kaduna in order to improve their inventory management. Various literature were synthesized to ascertain their relevance with the subject matter. Questionnaire were used to collected data from the staff of sunglass Nigeria limited Kaduna. The findings of the study reveal that receiving inspection is used by Sunglass Nigeria Limited Kaduna to enhance quality materials and also the organization incorporate audit department inspection for inspecting material purchase to enhance quality materials. The study also recommends amongst others that management of Sunglass Nigeria Limited Kaduna should engage professionals in conducting inspection activities in the firm. They should establish inspection unit that will comprise of professionals who will be responsible to implement sound inspection policy, top management should support and provide resources for effective inspection activities within the firm and broadly communicate the importance of quality to all the units in the organization as well as the importance of inspection to ensure good quality product.*

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## **CHAPTER ONE**

### **INTRODUCTION**

#### **1.1 Background to the Study**

Inventory management plays an important role in every company. As any ineffective inventory system will result in loss of customers effective inventory management is able to generate more sales for the company which directly affects the performance of the company. Therefore it requires a systematic: inventory management which is managed by a group of employees who are experts in this area (Ogbadu, 2019).

Inventory is an idle stock of physical goods that contain economic value, and are held in various forms by an organization in its custody awaiting packing, processing, transformation, use or sale in a future point of time. Any organization which is into production, trading, sale and service of a product will necessarily hold stock of various physical resources to aid in future consumption and sale. While inventory is a necessary evil of any such business, it may be noted that the organizations hold inventories for various reasons, which include speculative purposes, functional purposes, physical necessities etc (Waller, & Esper, 2014).

From the above definition the following points stand out with reference, to inventory: All organizations engaged in production or sale of products hold inventory in one form or other, inventory can be in complete state or

incomplete state, inventory is held to facilitate future consumption, sale or further processing/value addition and all inventoried resources have economic value and can be considered as assets of the organization.. Inventory of materials occurs at various stages and departments of an organization. A manufacturing organization holds inventory of raw materials and consumables required for production. It also holds inventory of semi



finished goods at various stages in the plant with various departments. Finished goods inventory is held at plant, Stores, distribution centers etc. Furthermore, both raw materials and finished goods that are in transit at various locations also form a part of inventory depending upon who owns the inventory at the particular juncture. Finished goods inventory is held by the organization at various stocking points or with dealers and stockiest until it reaches the market and end customers (Zhong, and Xu, 2016). Besides Raw materials and finished goods, organizations also hold inventories of spare parts to service the products. Defective products, defective parts and scrap also forms a part of inventory as long as these items are inventoried in the books of the company and have economic value. Every business organization that is engaged in manufacturing, trading or dealing with salable products holds inventories in one form another. Inventory is held in the form of raw materials or in the form of salable goods.

Since every unit of inventoried item has an economic value and is itemized in the books of account of the company, inventory can be considered to be an asset ' of the company (Wild, 2017).

Inventory Management is a critical function performed by planners to balance the inventory holding so as to ensure that optimum inventory levels are maintained. Any excess inventory will result in incremental costs of maintaining inventory and affects the financials of the company as it blocks working capital.

Under inventory on the other hand can seriously hamper the market share. Any customer order that is not fulfilled due to a stock out is not at all a good sign.

Therefore, the responsibility of striking a fine balance in holding lean inventory calls for smart planning, and continuous monitoring of the inventory levels coupled with quick decision-making. Due to the above factors all organizations generally tend to avoid holding inventories except at certain times.

It has been noticed that inventory buildup in process and manufacturing industries is often a sign of hidden problems, which lie underneath and are not visible at the surface level. In other words, one can say that to cover up inefficiencies in the internal systems, people build up inventories as safety stocks. Stock build up can occur as a solution to cover up supplier inefficiencies (Zhong, & Xu, 2016).

## **1.2 Statement of the problem**

Inventory management in Sunglass Nigeria Limited is mostly seen in, bottles packing, buying of stock and keeping of it to provide the customers good services, supply of customers, issuing of stock among others. This is because most of the business enterprises use different systems in inventory management including; integrated system (System Application and products) responsible for management information system which helps to make serious decisions on stock, material requirement points, and over stock brands for the fast moving, use of store keepers. Inventory is a significant asset in business enterprise; its effective management therefore is a key task within the auspices of operations, i Zipkin (2018). But inventory management is difficult. It involves a complex

of decision due to the many forms inventory takes and functions it provides.

In the light of the above the researcher intends to find out challenges of inventory management and the ways forward using Sunglass Nigeria Limited Kaduna plant as a case study.

## **1.3 Objectives of the Study**

The general objective of this research is to examine the inventory

management challenges and seek the best recommendation to be practiced by Sunglass Nigeria limited to improve their inventory management. Thus: this study specifically attempted to address the following objectives:

- i. To explore the challenges of inventory management at Sunglass Nigeria Limited, Kaduna.
- ii. To identify the system used by Sunglass Nigeria Limited, Kaduna in managing their inventory management.
- iii. To provide recommendation to Sunglass Nigeria Limited, Kaduna in order to improve their inventory management.

#### **1.4 Statement of Hypothesis**

The following hypothesis will guide the study;

**H<sub>0</sub>:** Inventory management challenges have no significant impact on organizational Productivity

**H<sub>1</sub>:** Inventory management challenges have significant impact on organizational Productivity.

#### **1.5 Significance of the Study**

Theoretically, this study will add to the inventory management literature. Practically, it will also provide useful information to Sunglass Nigeria Limited as well as the practitioner to practice the same recommendation in order to improve their inventory management.

#### **1.6 Scope of the Study**

The scope of the study was inventory management challenges and the

ways forward and the study is carried out at Sunglass Nigeria Limited Kaduna.

#### **1.7 Limitations of the Study**

The study involved the following constraints;

**Time:-**The time allowed to do this research was not enough to allow exhaustive study and obtain all the essential information for much more suitable conclusions. The problem was minimized by putting much effort on this research so as to meet the deadline,

**Financial Constraints:-**The Researches was limited by financial resources such as the transport costs and stationery to carry out his research effectively. In an effort

to mitigate this shortcoming, she sourced for funds from a few sponsors:

### **Slow or non- response**

Due to the sensitivity of the study, the respondents refused to give some data to the researcher citing the reason behind the study. The researcher however overcame this by showing an introductory letter acquired from the department fully explaining the purpose of the research. He also assured respondents that their ideas would be treated with utmost confidentiality.

Funds were not enough to complete the study. The researcher solved this by mobilizing enough money advance which avoided shortages during the

study.

## **1.8 Historical Background of Sunglass Nigeria Ltd.**

Sunglass Nigeria limited as one of the manufacturing organization in Kaduna was incorporated as a limited liability company in the year 1992 to under take the business of producing glass containers. After incorporation the company bought over the assets of the former Ballapur Glass limited which explains

why sunglass is occupying the premises vacated by the defunct Ballapur Glass. Sunglass employs over 500 persons directly and many more indirectly. Source its raw materials about 85% locally (Katsina, Kogi, Abuja, Borno, and Plateau) which constitute Sand, Marble powder, Dolomite, feldspar, Barytes. Sunglass Nigeria limited has started producing glass containers on the 15th of November, 1995, to its consumers within and outside the state. And it is doing averagely in the industry. Sunglass is equipped with high speed automotive machines that produce up to 260,000 glass bottles daily,

## **1.9 Definition of Terms**

**Management:** *Management* consists of the interlocking functions of creating corporate policy and organizing, planning, controlling, and directing an organization's resources in order to achieve the objectives of that policy.

**Inventory:** Inventory is the raw materials, work-in-process products and finished goods that are considered to be the portion of a business's assets that are ready or will be ready for sale.

**Inventory Management:** As an element of supply chain management, *inventory management* includes aspects such as controlling and overseeing ordering inventory, storage of inventory, and controlling the amount of product for sale.

**Techniques:** a particular method of doing an activity, usually a method that t \* involves practical skills.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Concept of Inventory**

In American English and in a business accounting context, the word inventory is commonly used to describe the goods and materials that a business holds for the ultimate purpose of resale.

In American English, the word stock is commonly used to describe the capital invested in a business, while in British English, the sentence stock shared is used in the same context. In the rest of the English speaking world stock is more commonly used, although the word inventory is recognized as a synonym. In British English, the word inventory is more commonly thought of as a list compiled for some formal purpose, such as the details of an estate going to probate, or the contents of a house let furnished. In both British and American English, stock is the collective noun for one hundred shares as shares were usually traded in stocks on Stock Exchanges. For this reason the word stock is used by both American and British English in the term Stock Exchange (Ozer, 2010).

Inventories are materials stored, waiting for processing, or experiencing processing. They are ubiquitous throughout all sectors of the economy. Observation of almost any company balance sheet, for example, reveals that significant portion of its assets comprises inventories of raw materials, components and subassemblies within the production process, and finished goods. Most managers don't like inventories because they are like money placed in a drawer, assets tied up in investments that are not producing any return and , in fact, incurring a borrowing cost. They also incur costs for the care of the stored material and are subject to spoilage and obsolescence. In the last two decades there have been a spate of programs developed by industry, all aimed at reducing inventory levels and increasing efficiency on the shop floor.

Raw material inventories provide a stable source of input required for production. A large inventory requires fewer replenishments and may reduce ordering costs because of economies of scale. In- process inventories reduce the impacts of the variability of the production rates in a plant and protect against failures in the processes. Final goods inventories provide for better customer service. The variety and easy availability of the product is an important marketing consideration. Because of their practical and economic importance, the subject of inventory control is a major consideration in many situations. Questions must be constantly answered as to when and how much raw material should be ordered, when a production order should be released to the plant, what level of safety stock should be maintained at a retail outlet, or how in-process inventory is to be maintained in a production process. These questions are amenable to quantitative analysis with the help of inventory theory (Ozer, 2010).

## **2.2 Inventory Control**

In any business or organization all functions are interlinked and connected to each other and are often overlapping. Some key aspects like supply chain management, logistics and inventory form the backbone of the business delivery function. Therefore these functions are extremely important to marketing managers as well as finance controllers.

The word “inventory” has been defined in many ways, as indicated in the

literature. Three definitions have been chosen seem to be more appropriate to



the topic developed in this dissertation. “Inventories are stockpiles of raw materials, suppliers, components, work in process, and finished goods that appear at numerous points throughout a firm’s production and logistics channel”(Ballou, 2014).

According to Chase, Jacobs and Aquilano (2014), inventory is the stock of any item or resource used in an organization. An inventory system is the set of policies and controls that monitor levels of inventory and determine what levels should be maintained, when stock should be replenished, and how large orders should be. Finally, Pycraft (2000), defined inventory or stock as “the stored accumulation of material resources in transformation system. So a manufacturing company will hold stocks of materials, a tax office will hold stocks of information and a theme park will hold stocks of customer ( when it is customers which are being processed we normally refers to the stocks of them as a queues”). Inventory management involves providing the required inventory levels that will sustain the organization’s daily operations at minimum costs. This covers issues like determining the level of stock to order, when to order, establishing receipt and inspection procedures and providing proper storage facilities. Without proper stock control procedures

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in place, firms are likely to face two undesirable inventory levels. That is to

say excessive/ high levels of inventory or inadequate/ low levels of inventory (Dickerson 2015).

### **2.3 Inventory Management**

Inventory management is the process of monitoring and controlling inventory level and ensuring adequate replenishment in order to meet customer demand. Determining the appropriate inventory level is crucial since inventory ties up money and affects performance. Having too much inventory reduces the working capital and impacts the company's liquidity. On the contrary, having too little inventory leads to stock outs and missed sales which leads to less profit. It becomes clear that management attention should be focused on keeping inventory level somewhere in between, striving for increased customer satisfaction and minimum stock outs while keeping inventory costs as low as possible

Inventory management is a very important function that determines the health of the supply chain as well as the impacts the financial health of the balance sheet. Every organization constantly strives to maintain optimum inventory to be able to meet its requirements and avoid over or under inventory that can impact the financial figures. Inventory is always dynamic. Inventory management requires constant and careful evaluation of external and internal

factors and control through planning and review. Most of the organizations have a separate department or job function called inventory planners who continuously monitor, control and review inventory and interface with production, procurement and finance departments.

Douglas, (2012) stated that the success of any organization is a function of how it utilize the time at its disposal to achieve its set goals and objectives through effective inventory management. Inventory is very important in the day-to-day running of an organization. Effective inventory scheme ensures that production machinery operates closely to installed capacities. This eventually results in the organization meeting its projected production goals over a stipulated period of time.

## **2.4 Challenges of Inventory Management**

Inventory management is a critical component of the modern supply chain. It involves several moving parts, including the ordering, storage, and selling of raw orders and finished goods alike. An effective inventory management system can ensure desirable inventory levels, which, in turn, boosts product availability, order accuracy, and customer satisfaction.

As the basis of a properly functioning enterprise, inventory management has always been accompanied by significant challenges. Recently, however,

these have accelerated as a result of supply chain issues and pandemic-related instability.

Meanwhile, previous shortcomings related to inventory management processes have yet to disappear. For example, manual tracking continues to prompt errors and inefficiencies in warehouse operations. What's more, outdated devices and software present huge security risks.

Singh, and Verma, (2018) posited the following as the Common Inventory Management Problems & Obstacles

A variety of concerns loom large in the world of inventory management. Different industries may face different struggles, although a basic level of uncertainty remains one of the most widespread issues at the moment.

### **Manual Processes**

Human error represents one of the most expensive issues in the warehouse space, but also one of the weaknesses that can be most easily resolved. Despite this, many businesses continue to stubbornly cling to manual processes.

Often, this reluctance to adopt new, more effective technologies comes down to intimidation or fear of the unknown<sup>20</sup>. With guidance, however, automation

can easily be implemented in place of physical counts and other inefficient procedures. Upon seeing the advantages of these automated inventory systems, many previously reluctant entrepreneurs become enthusiastic about newfound optimization strategies.

### **Inventory Tracking**

Reliable tracking is absolutely essential in today's competitive market. As mentioned previously, manual systems often stand in the way; many businesses still rely on manual entry via spreadsheets or outdated software.

Centralized tracking solutions can remove some of the burden, providing automatic updates that are instantly accessible via the cloud. RFID tags and readers can also be implemented to optimize tracking. Well-defined read zones boost this effort, making it instantly clear when inventory is missing or otherwise compromised.

### **Inventory Visibility**

Inventory loss is completely unacceptable, given the high level of oversight that today's digital systems can provide. Often, limited visibility is at the heart of this issue. Digital processes can improve visibility, but only if they're customized and strategically implemented.

There should never be any question as to how many SKUs are available or where they're located. Integrated tracking solutions and inventory management software promote end-to-end visibility, indicating exactly what is in stock and where issues such as shrinkage, stockouts, or overstocking might arise.

### **Multiple Systems in Use**

From inventory management to asset tracking, today's enterprises rely on a vast array of systems to keep operations working efficiently and effectively. With so many moving parts, however, it can be difficult to keep everything straight. If these various solutions are not carefully integrated, it can be difficult for them to achieve their stated objectives. Poor integration may prompt unacceptable delays or even errors.

These struggles are best resolved with a central solution, which should keep all systems working properly. A centralized approach limits confusion and will make every aspect more efficient, accurate, and secure.

### **Supply Chain Disruptions**

Increasing supply chain volatility has made it incredibly difficult for enterprises to plan ahead. The unfortunate reality is that a lot more flexibility

will be needed until current supply chain issues are resolved. Small

businesses, in particular, will suffer if they lack agility in the midst of shortages and general uncertainty.

Moving forward, the ability to pivot at a moment's notice will be crucial. Still, enterprises will need to handle these concerns without expensive overstocking, as this can lead to the costly problem of dead stock.

Demand forecasting can help businesses find a viable middle ground, while mobile insights will provide the real-time data needed to make quick adjustments when necessary.

### **Warehouse Operational Efficiency**

While inventory management encompasses a vast cycle that includes everything from ordering to delivery, the warehouse is one of the most crucial components. Unfortunately, this is also where many of the greatest inefficiencies lie.

Everyday processes must be examined and updated constantly to ensure peak productivity. This begins with assessing warehouse design. Where can small adjustments be made to prevent congestion? How can limited space be utilized more efficiently to cut operational costs?

Again, inventory tracking and visibility play into this effort, as it's impossible to make necessary changes unless the inefficiencies are spotted and addressed early on.

### **Accurate Reporting**

Inventory cycles can be incredibly difficult to discern and understand in today's complicated environment. Reporting systems provide much-needed clarity by examining everything from SKU profitability to turnover ratios and even stock levels. Equipped with this data, enterprises can determine the extent to which inventory will be required for fulfilling future customer orders and ensuring timely shipments.

### **Outdated Devices and Technology**

Outdated devices aren't merely less efficient — they can cause a whole host of security risks. As such, these devices need to be identified and attended to as quickly as possible. In many cases, replacements will be necessary, although some devices can get by with software updates. Either way, keeping up with the fast pace of change can be difficult — but the failure to do so can lead to security breaches and significant downtime.



Mobile insights are essential for addressing this problem; through careful tracking, it's possible to determine when devices need repairs or replacements.

## **2.5 Way Forward to Challenges of Inventory Management**

According to Singh, and Verma, (2018) inventory Management in Supply Inventory management is immensely complex. Here are some solutions to the common inventory management challenges listed above.

### **Centralized Tracking:**

Consider upgrading to tracking software that provides automated features for re-ordering and procurement. Inventory management platforms provide centralized, cloud-based databases for accurate, automatic inventory updates and real-time data backup.

### **Transparent Performance:**

Measure and report warehouse performance metrics like inventory turnover, customer satisfaction and order processing speed to overcome warehouse inefficiencies. Share this data with employees and suppliers.

### **Stock Auditing:**

Frequent stock auditing processes, like daily cycle counting, reduce human error and provide more accurate, up-to-date inventory data for managing cash

flow. Organize audits by category and cycle count smaller inventory samples on a predictable schedule for more accurate financial data.

### **Demand Forecasting:**

Some inventory management platforms include demand forecasting tools. This feature integrates with accounting and sales data to help you predict demand and schedule orders based on shifting customer preferences, material availability or seasonal trends.

### **Add Imagery:**

Add images with product descriptions in your inventory database to improve purchasing and receiving processes, enhance accuracy and prevent misplaced inventory.

### **Go Paperless:**

Give employees the right inventory tools for the job. They need software to replace manual inventory documentation, and paperless transactions for invoices and purchase orders.

### **Preventive Control:**

Implement stock control systems to manage problem inventory, such as perishable stock, fragile equipment or obsolete materials. Perform regular preventive maintenance on machinery and equipment stock in storage if

required by the manufacturer. Catalog data on problem stock location, cost and quantity to monitor shelf life and prevent waste.

**Measure Service Levels:**

Monitor and track supplier data, such as shipment errors, damaged or defective products and missed delivery appointments. Measure your supplier's performance to find and fix supply chain disruptions, reduce complexity and streamline logistics.

**Optimize Space:**

Use inventory management systems with warehouse management features to optimize storage space and inventory flow. Categorize inventory storage down to shelf, bin and compartment, and automate order picking, packing and shipping workflows.

**Automate Reorders:**

Backordered inventory delays production and creates poor customer experiences. Use inventory management software to set automatic reorder points based on preset stock levels and current availability to avoid overselling.

**Safety Stock:**

Maintain safety stock to offset supply chain disruptions and help manage increased lead times due to shifting international competition for raw materials. Proper inventory planning helps operations adapt to dynamic global supply chains.

**Classify Inventory:**

Create inventory classifications to manage changing trends, such as packaging initiatives to reduce plastic waste. Categorize stock by packaging type, dimensions and product. Use this information to control shipping costs and storage location better.

**Multi-Location Warehousing:**

Use multi-location warehouse management features to track and control expanding inventories. Take advantage of receiving and put-away schedules with automated inventory tracking alerts and scheduling features that keep tabs on warehouse location and in-transit inventory.

**Leverage Lead Times:**

Take lead times into account when placing orders for high-demand stock.

Track and manage your high-demand inventory using cycle counting data to set automatic reorder points and average lead time to preventing stockouts.

**Reduce Human Error:**

Use inventory control processes like blind receiving with barcodes and mobile scanners to prevent human error, inventory manipulation and shrinkage due to theft or negligence,

**Plan Demand:**

Use an inventory management system with advanced demand forecasting and reporting features to prioritize your top inventory. Take into account the availability of the top 20% of inventory that generates 80% of your customer demand. To learn more about inventory planning and demand forecasting, read our essential guide to inventory planning.

**Subcontract Expertise:**

Consider outsourcing to an expert in inventory management. Contract in-person training and provide online support to help employees follow best practices for working with technical inventory management software features.

**Dashboard Collaboration:**

Introduce dashboards with simple interfaces that show real-time inventory data. Having everything on one screen helps remove communication barriers across accounting, sales and warehouse operations.

**Productivity Tools:**

All the information you need about your inventory can be in your pocket.

With mobile solutions and cloud-based software, you can control inventory and improve your warehouse productivity from anywhere in the world.

**Update Platforms:**

Upgrading to a cloud-based inventory management platform doesn't just give all the latest features. You get to take advantage of the vendor's expertise and training while it's being implemented.

The right inventory management platform can automate processes, improve inventory practices and enhance customer experiences. NetSuite offers a collection of native inventory management and control features to help overcome some of the biggest inventory management challenges. Track inventory across multiple locations, automatically manage reorder points, forecast demand and plan production and distribution.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY ' I**

#### **3.1 Research Design**

- i The aim of this assessment is to determine the impact of branding strategies on sales turnover of consumers' product.

The descriptive research design has been adopted for the study. This was considered appropriate because, it seek to ascertain certain magnitudes and explain how it is rather than an occurrence.

#### **3.2 Research Population**

The population of this research comprises of the staff of Sunglass Nigeria Limited Plc, Kaduna. The total population size is five hundred (500), which comprises of staff of Sunglass Nigeria Limited, distributors, and customers of ! Sunglass Nigeria Limited.

#### **3.3 Sample Size and Sampling Technique**

According to Krejcie and Morgan (1970) The sample size is (217) i.e. sample is selected from the total population of five hundred (500) workers which comprises of the staff strength in the organization. Random sampling technique is employed to give equal opportunity to all the staff

#### **3.4 Instrument Used for Gathering Data**

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The methods used in gathering data for the research are:

- i. Primary sources  
t \*  
»
- ii. Secondary sources  
Primary sources, this include questionnaires  
  
Secondary sources, these include information sourced from journals, i  
newspapers, Internet and textbooks.

### 3.5 Justification for the Instrument Used

The researcher finds it more convenient to rely on questionnaire as sources of data collection for the study. However questionnaire which is an example of primary source of data collection serve as the best instrument to reach subject or respondents who are inaccessibly difficult to be pin down. It should be noted that the questionnaire is important because it is most suitable for data collection ! respondents are literate.

Textbooks, internet and journals which are examples of secondary sources allow the researcher to have firsthand information.

### 3.6 Methods of Data Analysis

The method adopted in analyzing data is that, responses are tabulated and the respondent's response to each question will be calculated using the simple percentage to present and analyze data. While, chi-square is used to test the hypothesis. <sup>32</sup> Below are the formulae.



Percentage method

$$Q/N \times 100$$

Where Q = Total number that represent a particular question option

N = total number of respondents

$$X^2 = \frac{\sum (O-E)^2}{E}$$

Where: O = Observed frequency

E = Expected frequency

$X^2$  = Chi-Square

### **Decision Rule**

If the computed chi square is greater than table value you reject the Null hypothesis and if computed  $x^2$  is less than the table value accepted the Null hypothesis.

1 .e.  $x^2 > x^2_{005}$  Reject  $H_0$

Degree of freedom =  $(c-1)(r-1)$

Where c ^number of column = 3

R = number of row = 3

'  $(3-1) (4-1) = 2 \times 3 = 6df$

### **3.7 Justification of the Method Used**

The researcher considered chi-square method appropriate because it is more reliable and suitable to analyze the data collected and draw the necessary finding of the research work.

## **CHAPTER FOUR**

### **DATA PRESENTATION AND ANALYSIS**

#### **4.1 Data Presentation**

This chapter is centered on the presentation, discussions and interpretation of data elicited for this study. The researcher used tables to analyze the data retrieved during the research work.

The researcher administered 217 questionnaires, out of which 200 were responded to and returned to the researcher which forms the basis for analysis of the presentation of result.

##### **4.1.1: Working Experience of the Respondents**

<b>Working Experience</b>	<b>Frequency</b>	<b>Percentage (%)</b>
0 – 5yrs	64	32
8 - 11 Yrs	100	50
16 – 20 yrs	20	10
21 and Above	16	8
<b>Total</b>	<b>200</b>	<b>100</b>

Source: Field Survey, 2022.

Table 4.1.4 shows that 32% (64) of the respondents have spent 0- 5yrs at the company, while 50%(100) of the respondents have spent 8-11yrs at the company while 10%(20) have been in the organization for 16-20 years and 16 (8%) are been in company 21 years and above/.

#### 4.1.2: Distribution of Respondents by Academic Qualification

Academic Qualification	Frequency	Percentage (%)
Primary School Level	26	13
SSCE/WAEC	58	29
OND/NCE	76	38
HND/Degree	34	17
Post Graduate	6	3
<b>Total</b>	<b>200</b>	<b>100</b>

Source: Field Survey, 2022.

Table 4.1.5 shows that 13% of the respondents have Primary School Level certificate, while 29% of the respondents have SSCE/WAEC. In addition, 38% of the respondents have OND/NCE, while 17% of the respondents has HND/Degree certificate and 3% of the respondents have post graduate certificate. This means that majority of the respondents are educated.

#### 4.1.3: Distribution of Respondents by Working Experience

Years of Working Experience	Frequency	Percentage (%)
Below 5 years	104	52
6-10 years	64	32
11-15 years	28	14
16 years and above	4	2
<b>Total</b>	<b>200</b>	<b>100</b>

Source: Field Survey, 2022

Table 4.1.5 shows that 52% of the respondents have been working the organization for five years and below, while 32% of the respondents are between 6-10 years. In addition, 14% of the respondents are between 11-15 years, while 2% of the respondents has experience ranging from 16 years and above.

The four rating scale approach is used with a mean score of 2.5, as a cut off mark for analyzing the data and presentation of result. This form the

decision mark for result as any mean score above 2.5 is regarded as accepted while any mean score fall below 2.5 will be considered rejected.

The acronyms used in the table are as follows;

SA = Strongly Agreed = 4 points

A = Agreed = 3 points

SD = Strongly Disagreed = 2 points

D = Disagree = 1 points

X = mean which is total responses under each acronyms multiply by the acronyms points and total divided by the number of questionnaire analyzed.

#### 4.2 Data Analysis

S/N	Variables	SA	A	D	SD	Total	X	Remarks
1	Effective inventory management improves the profit margin of a firm	88	60	40	12	200	3.12	Accept
2	Good materials inventory management system improves stock turn over and possibility of reducing capital tied up	72	60	40	28	200	2.9	Accept
3	Does your organization encounter any challenges in course of managing inventory	86	60	41	12	200	3.1	Accept
4	Material quality control promotes and improves organization production efficiency	72	60	40	28	200	2.9	Accept

5	Good Inventory Management reduce errors rate in the production processes	88	60	40	12	200	3.12	Accept
N = 200		Cut-off point = 2.5						

Analysis from the above table 4.1.1 shows the challenges and way forward to inventory management in Sunglass Nigeria Limited

The response from respondents on variable 1 indicates that Effective inventory management improves the profit margin of a firm is base on the mean score of 3.12 above the cut- off point of 2.5. Variable 2 postulated that, Good materials inventory management system improves stock turn over and possibility of reducing capital tied up. This conclusion is arrived at as the responses of the respondents are calculated to a mean score of 2.9 which is above the cut off mark of 2.5. From the analysis in variable 3, it is obvious that the response of the respondents is strongly with the statement that, the organization does encounter any challenges in course of managing inventory as the mean score of the respondent amounted to 3.1 which is below the cut of point of 2.5.

From the analysis in variable 4, the respondents is strongly agree with the statement that, material quality control promotes and improves organization production efficiency as the mean score of the respondent amounted to 2.9 which is below the cut of point of 2.5.

Further, analysis in variable 5, shows that the respondents are in agreement with the statement that, Good Inventory Management reduce errors rate in the production processes as the mean score of the respondent amounted to 3.12 which is below the cut of point of 2.5.



## **CHAPTER FIVE**

### **SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS**

#### **5.1 Summary of Findings**

The following are findings of the study;

1. Receiving inspection is used Sunglass Nigeria Limited Kaduna to enhance quality materials and also the organization incorporate audit department inspection for inspecting material purchase to enhance quality materials
2. Inspection is conducted by anybody irrespective of their unit Sunglass Nigeria Limited Kaduna, also the decision to inspect is the responsibility of the top management in the organization.
3. The delivery of quality materials by suppliers is enhanced by inspection Sunglass Nigeria Limited Kaduna.
4. It was discovered that quality control function is not only responsible for inspection and that the responsibilities to inspect materials input is not confirmed solely by purchasing unit. This indicates that there is a formal procedure for inspection activities Sunglass Nigeria Limited Kaduna. The delivery of quality material by suppliers, ability to detect poor quality materials, input of quality materials to the production, cost associated with poor quality and the acquisition of quality product by the purchaser

urge the researcher to administer research question three and the response of the respondent that inspection activities have contributed immensely to the success of the organization in achieving quality materials is observed clearly.

## **5.2 Conclusion**

Manufacturing firm and profit making organization greatly depends on the accuracy, reliability, efficiency and effectiveness of inventory management in achieving its organizational goals. Therefore the attainment of goals will greatly depended on techniques used to manage its inventory such as JIT technique, ABC analysis and Economic Order Quantity (EOQ).

Proper control cannot be carried out without effective use of inventory management systems and techniques. Improper control of inventory leads to the high inventory costs such as cost of stock out, deterioration, or obsolescence of goods due to the delays in storage, production disruption due to lack of inadequate raw materials and failure to meet customer demand.

Inventory management is very important in the improvement of customer relation, reduction in manufacturing costs; reduction in inventory carrying cost, reduction in inventory total cost will lead to strengthening of firm

profitability. Hence as a result the overall financial performance will be improved as the primary objective of inventory management is to minimize the total costs of investment and to avoid idle stock which does not generate cash.

In the light of the above findings, the following conclusions were made:

- i) First, there are methods of inspecting materials purchased by the organization. Inspection is carried out by team in the organization and that decision to inspect is made by the top management.
- ii) That not just anybody in the organization can participate in the conduct of inspection activities in the organization that cost associated with poor quality product has been eliminated as a result of inspection Sunglass Nigeria Limited Kaduna.
- iii) Furthermore, that inspection activity has contributed a lot to the success of the organization in achieving quality materials.

### **5.3 Recommendations**

In view of the above findings conclusion and implementation of findings, it is recommended that:

1. The management of Sunglass Nigeria Limited Kaduna should engage professionals in conducting inspection activities in the firm. They

should establish inspection unit that will comprise of professionals who will be responsible to implement sound inspection policy.

2. The top management should support and provide resources for effective inspection activities within the firm. Broadly communicate the importance of quality to all the units in the organization and that the importance of inspection is to ensure quality.
3. The organization should strive as much as possible to get their specifications right from the initial stage before sending to suppliers. The purpose of inspection is to assure the buying organization that the supplier has delivered an item that corresponds to the description when buying organization placed an order for material mostly with new supplier; their products or service must be watched with particular care, until they have proved themselves dependable.
4. The company should ensure that only quality control officials of the organization should be solely responsible for inspection and monitoring.

## References

- Chase, R. B. F., Jacobs, R. F., Aquilano, N. J., (2014) Operations Management for Competitive Advantage, 10/e, McGraw-Hill Higher Education, 2004  
[http://highered.mcgraw-hill.com/sites/0072506369/student\\_view0/chapter14/](http://highered.mcgraw-hill.com/sites/0072506369/student_view0/chapter14/)
- Ogbadu, A. I., (2019). The impact of effective inventory control management on organisational performance: A study of 7up bottling company nile mile enugu, nigeria. *Mediterranean Journal of Social Sciences*, 5(10), 109.
- Ozer, O. (2010). Inventory Management: Information, Coordination and Rationality. Management Science and Engineering Stanford University Stanford, CA 94305
- Pycraft, T. (2000). *Operations management*. Southern Africa edition. Pearson education. South Africa.
- Singh, D., & Verma, A. (2018). *Inventory Management in Supply Chain*. Materials Today: Proceedings, 5(2), 3867–3872.  
<https://doi.org/10.1016/j.matpr.2017.11.641>.
- Waller, M. A., & Esper, T. L. (2014). *The definitive guide to inventory management: principles and strategies for the efficient flow of inventory across the supply chain*. Pearson Education.
- Wild, T. (2017). Best practice in inventory management. Routledge.
- Zhong, R., & Xu, X. (2016). *Food supply chain management: systems, implementations, and future research*. Retrieved from <https://www.emerald.com/insight/content/doi/10.1108/IMDS-09-2016-0391/full/pdf?title=food-supply-chain-management-systems-implementations-andfuture-research>.
- Zipkin, P. H. (2018) Foundations of inventory management. *Journal of inventory management* 32(105-106).

- Agu, A. O., Obi-Anike, H. O., & Nnate, E. C. (2016). Effect of inventory management on the organizational performance of the selected manufacturing firms. *Singaporean Journal of Business economics, and management Studies*, 5(4).
- Bag, S. (2012). World class procurement practices and its impact on firm performance: a selected case study of an Indian manufacturing firm. *Journal of Supply Chain Management Systems*, 1(3), 27.
- Banjoko, S. A. (2000). *Production and operations management*. Lagos: Saban Publishers.
- Barbieri, P., & Zanoni, A. (2005). The e-procurement experience in Italian universities. *Journal of Public Procurement*, 5(3), 323. *Singaporean Journal of Business Economics, and Management Studies* 38
- Bragg, S. M. (2005). *Inventory accounting: a comprehensive guide*: John Wiley & Sons.

- Burt, D. N., Dobler, D. W., & Starling, S. L. (2003). World class supply management: The key to supply chain management: Irwin/McGraw-Hill.
- Chang, H. H., & Wong, K. H. (2010). Adoption of e-procurement and participation of e-marketplace on firm performance: Trust as a moderator. *Information & Management*, 47(5), 262-270.
- Christopher, S. B., & Kamalavalli, A. (2009). Sensitivity of profitability to working capital management in Indian corporate hospitals. *International Journal of Managerial and Financial Accounting*, 2(3), 213-227.
- Coleman, B. J. (2000). Determining the correct service level target. *Production and Inventory Management Journal*, 41(1), 19.
- Croom, S., & Johnston, R. (2003). E-service: enhancing internal customer service through e-procurement. *International Journal of Service Industry Management*, 14(5), 539-555.
- Drury, C. M. (2013). *Management and cost accounting*: Springer.
- Dubey, R. (2011). Role of Manufacturing Competencies on Performance of Indian Manufacturing Firms-An Empirical Study. *IIMS Journal of Management Science*, 2(2), 230-246.
- Eckert, S. G. (2007). Inventory management and its effects on customer satisfaction. *Journal of Business and Public Policy* (ISSN: 1936-9794), 1(3), 1.
- Gaur, V., Fisher, M. L., & Raman, A. (2005). An econometric analysis of inventory turnover performance in retail services. *Management science*, 51(2), 181-194.
- Ghosh, A., & Kumar, P. (1991). *Production management*: Anmol Publications.
- Godana, B., & Ngugi, K. (2014). determinants of effective inventory management at Kenol Kobil limited. *European Journal of Business Management*, 1(11), 341-361.

- Gu, J., Zhang, G., & Li, K. W. (2015). Efficient aircraft spare parts inventory management under demand uncertainty. *Journal of air transport management*, 42, 101-109.
- Hartmann, E., Trautmann, G., & Jahns, C. (2008). Organisational design implications of global sourcing: A multiple case study analysis on the application of control mechanisms. *Journal of Purchasing and Supply Management*, 14(1), 28-42.
- Heese, H. S. (2015). Single versus multiple sourcing and the evolution of bargaining positions. *Omega*, 54, 125-133.
- Kaplan, R. S., & Norton, D. P. (2005). *The balanced scorecard: measures that drive performance*: Harvard Business School Publishing.
- Kilonzo Jennifer, M., S., M. F., & A., N. (2016). Effect of Inventory Management on Financial Performance of Firms Funded by Government Venture Capital in Kenya. *European Journal of Business and Management*, 8(5).
- Kotler, P. (2012). *Marketing Management, millenium edition: Custom Edition for University of Phoenix*: Pearson Custom.
- Koumanakos, D. P. (2008). The effect of inventory management on firm performance. *International journal of productivity and performance management*, 57(5), 355-369.
- Lancioni, R. A., Smith, M. F., & Oliva, T. A. (2000). The Role of the Internet in Supply Chain Management. *Industrial Marketing Management*, 29(1), 45-56. doi: [https://doi.org/10.1016/S0019-8501\(99\)00111-X](https://doi.org/10.1016/S0019-8501(99)00111-X)
- Lazaridis, I., & Tryfonidis, D. (2006). Relationship between working capital management and profitability of listed companies in the Athens stock exchange.
- Lundu, B. L., & Shale, N. (2015). Effect of intergrated financial management information system (IFMIS) implementation on supply chain management performance in the devolved government systems in Kenya: A case of Nairobi city county government. *International Academic Journal of Procurement and Supply Chain Management*, 1(5), 1-26.



- Lysons, K., & Farrington, B. (2006). *Purchasing and supply chain management*: Pearson Education.
- Mamiro, R. G. (2010). *Value for Money: The Limping Pillar in Public Procurement-Experience from Tanzania*. Paper presented at the 4th International Public Procurement Conference.
- Monczka, R., & Morgan, J. P. (1996). Supplier integration a new level of supply chain management. *Purchasing*, 120(1), 110-113.
- Mukopi, C. M., & Iravo, A. M. (2015). An Analysis of the Effects of Inventory Management on the Performance of the Procurement Function of Sugar Manufacturing Companies in the Western Kenya Sugar Belt. *International Journal of Scientific and Research Publications*, 5(4), 5-15. *Singaporean Journal of Business Economics, and Management Studies* 39
- Ogbo, A. I., & Ukpere, W. I. (2014). The impact of effective inventory control management on organisational performance: A study of 7up bottling company nile mile enugu, nigeria. *Mediterranean Journal of Social Sciences*, 5(10), 109.
- Panigrahi, A. K. (2013). *Cash Conversion Cycle and Firms' Profitability—A Study of Cement Manufacturing Companies of India*. Browser Download This Paper.
- Patil, H., & Divekar, B. R. (2014). Inventory Management Challenges for B2C E-commerce Retailers. *Procedia Economics and Finance*, 11, 561-571. doi: [https://doi.org/10.1016/S2212-5671\(14\)00221-4](https://doi.org/10.1016/S2212-5671(14)00221-4)
- Prempeh, K. B. (2016). The impact of efficient inventory management on profitability: evidence from selected manufacturing firms in Ghana. *International Journal of Finance and Accounting*, 5(1), 22-26.
- Ruth, K. (2012). *Information Technology and procurement process in Kenya*. Master Thesis, School Of Business, University Of Nairobi.
- Sack, K. (2000). *Retailing: General Industry Survey*. New York: Standard and Poor.

- Salleem, P. (2004). *Practical Management Science: practical guide to logistic*. New Delhi - India.
- Shah, A. (2013). *Global Financial Crisis*. Retrieved November 17, 2017
- Song, J., Haas, C. T., & Caldas, C. H. (2006). Tracking the location of materials on construction job sites. *Journal of Construction Engineering and Management*, 132(9), 911-918.
- Thogori, M., & Gathenya, J. (2014). Role of Inventory Management on Customer Satisfaction among the Manufacturing Firms in Kenya: A Case Study of Delmonte Kenya. *International Journal of Academic Research in Business and Social Sciences*, 4(1), 108.
- Thorsen, A., & Yao, T. (2017). Robust inventory control under demand and lead time uncertainty. *Annals of Operations Research*, 257(1-2), 207-236.
- Vipulesh, S. (2015). Impact of Inventory Management on the Financial Performance of the firm. *IOSR Journal of Business and Management*, 17(4), 01-12.
- Watts, C. A., & Hahn, C. K. (1993). Supplier development programs: an empirical analysis. *Journal of Supply Chain Management*, 29(1), 10-17.
- Zhang, Y., Hua, G., Wang, S., Zhang, J., & Fernandez, V. (2018). Managing demand uncertainty: Probabilistic selling versus inventory substitution. *International Journal of Production Economics*, 196, 56-67. doi: <https://doi.org/10.1016/j.ijpe.2017.10.001>

## **APPENDIX I : LETTER OF INTRODUCTION**

Department of Management Studies,  
College of Business and Management  
Studies (CBMS),  
Kaduna Polytechnic,  
Kaduna.

20<sup>TH</sup> April, 2022

Dear Sir/Ma,

I am a final year management student. As a part of the requirement for the award of Higher National Diploma in Production Operations Management, I am undertaking a research on Challenges of Inventory Management and Ways Forward (A study of Sunglass Nigeria Limited), Kaduna.

I am seeking for official permission to use your organization as my case study.

I shall be very grateful if this request is granted I am pledge treat all information made available to me for this study confidential.

Thank you.

Yours faithfully.

**Mohammed Nata'ala**  
**KPT/CBMS/18/40795**  
**Researcher**

## APPENDIX II: QUESTIONNAIRE

### SECTION A

Kindly tick (✓) in the appropriate box for your chosen answer or option

#### 1. Working Experience:

- a. 0-5 yrs [      ]
- b. 6 - 10 yrs [      ]
- c. 11 - 20 yrs [      ]
- d. 21 and above [      ]

#### 2. Percentage Distribution of Respondents by Education Attainment.

- a) Primary School Level (      )
- b) SSCE/WAEC (      )
- c) OND/NCE (      )
- d) HND/Degree (      )
- e) Post Graduate (      )

#### 3. Effective Inventory Management improves the profit margin of a firm?

- a) Strongly Agreed (      )
- b) Agreed (      )
- c) Disagreed (      )
- d) Strongly Disagreed (      )

4. **Good materials inventory management system improves stock turn over and possibility of reducing capital tied up**
- a) Strongly Agreed ( )
  - b) Agreed ( )
  - c) Disagreed ( )
  - d) Strongly Disagreed ( )
5. **Does your organization Encounter any challenges in course of managing inventory**
- a) Strongly Agreed ( )
  - b) Agreed ( )
  - c) Disagreed ( )
  - d) Strongly Disagreed ( )
6. **What are the challenges of inventory management in your organization**
- a) Manual Processes ( )
  - b) Supply Disruptions ( )
  - c) Multiple system in Use ( )
  - d) Outdated devices and technology ( )
7. **What are the way forward to challenges in inventory management stated above.**
- a) Centralized tracking ( )
  - b) Transparent Performance ( )
  - c) Stock Auditing ( )
  - d) Preventive Control ( )
8. **Material Quality control promotes and improves organization production efficiency.**
- e) Strongly Agreed ( )

- f) Agreed (     )
- g) Disagreed (     )
- h) Strongly Disagreed (     )

**9. Good Inventory Management reduce errors rate in the production processes**

- e) Strongly Agreed (     )
- f) Agreed (     )
- g) Disagreed (     )
- h) Strongly Disagreed (     )





