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**AN ASSESSMENT OF INVENTORY MANAGEMENT**  
**SYSTEM**  
**THE CASE OF HABESHA CEMENT SHARE**  
**COMPANY**

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**A Thesis submitted to School of Graduate Masters of Business Administration  
in Partial Fulfillment of the Requirements for the Degree of Master of  
Business Administration**

**Addis Ababa, Ethiopia**

**June, 2021G.C**

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**Declaration**

I, the undersigned, declare that the thesis entitled “An Assessment of Inventory Management System in the case of Habesha Cement Share Company.” submitted by me for the award of the Masters of Business Administration (MBA), at. St. Mary’s University, Original work and all sources of materials used for the study have been duly acknowledged.

I have carried out this project work independently with the guidance and support of my advisors. This study has not been presented for the award of any other Degree, Diploma, and Fellowship of any other university or institution.

Fetiya Mohammed Seman

\_\_\_\_\_

Name:

Signature

**St. Mary’s University, Addis Ababa June , 2021**

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## **LIST OF ABRIVATION AND ACRONYMS**

<b>ABC</b>	Always Better Control
<b>A.C</b>	Average Cost
<b>BOM</b>	Bill of materials
<b>CEO</b>	Chief Executive Officer
<b>EOQ</b>	Economic Order Quantity
<b>ERP</b>	Enterprise Resource Planning
<b>FIFO</b>	First In First Out
<b>GRN</b>	Goods received Note
<b>HCSC</b>	Habesha Cement Share Company
<b>IT</b>	Information Technology
<b>JIT</b>	Just-in-time
<b>LIFO</b>	Last In First Out
<b>MRO</b>	Maintenance, Repair and Operating
<b>MRP</b>	Material Resource Planning
<b>POs</b>	Purchase Order
<b>PSCD</b>	Procurement and supply chain Department
<b>ROA</b>	Return on Asset.
<b>S.C</b>	Standard Cost
<b>VMI</b>	Vendor Managed Inventory
<b>WIP</b>	Work in progress

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## **ABSTRACT**

*This research sought to examine the assessment of inventory management system of Habesha Cement Share Company. The study is applied descriptive reserach design and mixed research approach. The target population was the total number 48 employees of Habesha Cement Share Company. Primary data were gathered using structured questionnaires and interview. the questions were closed ended format. The study result revealed that the inventory management system of Habesha Cement Share Company is somehow effective in managing the inventory level. However; further improve is required in areas like inventory physical counting inspection, handling of overstocking and under stocking of inventories, data accuracy and real time report preparation. Moreover, the Company is mainly used perpetual inventory system to determine the materials demand of the customers. More importantly, lack of management support, insufficient qualified staffs and shortage of training are the major problems for assessment of inventory management practices. Based on the findings, the study recommends that the managements of the company should work hard to have its own standards and policies of inventory management the current inventory control practices and procedures need to be reviewed and redesigned. The management should stay up-to-date on inventory carrying cost. Only qualified and adequately trained personnel should be involved in stock control*

**Key Words:** *Inventory management system of Habesha Cement Share Company*

# Chapter One

## Introduction

### 1.1 Background of the Study

Inventory is the totality of all the stock, which includes: raw materials, work-in-progress and finished goods that enable an organizational to produce. It could also say to be the total amount of goods and or materials contained in a store or factory at any given time Hilton, 1994.

Many organizations in today's business environment are forced to increase their market share both locally and globally in order to survive and sustain business growth. The challenge is to design an effective strategy to minimize the continued operation costs and maximizing returns to those organizations (Arnold, 2008).

Define inventory as the materials and supplies that a business or institution carries either for sale or to provide inputs or supplies to the production process. Inventory is a substantial part of total assets which are any stored resources that are used to satisfy the current or future customer needs. Inventories in many organizations occupy a large part of costs which possibly affects the profitability and manufacturing operations of the organization. So that (Sharma, 2009)suggested that managing inventory efficiently has become an important operational weapon for companies to coup the competitive pressures and financial costs

Researchers and practitioners continue to face the age-old challenges associated with inventory level setting and replenishment. However, the realities of the environment in which these challenges must be met, is evolving. The popular formula, which the competitive battleground is shifting from organization vs. organization to supply chains vs. supply chain, is now perceived to be a reality (Srinivasan, 2005)Effective inventory management has become a prerequisite to gaining and retaining a competitive advantage and organizational performance (Moberg, 2012). As researchers and practitioners move from the traditional view of enterprises as separate, independent entities towards more collaborative models (Singh, 2005).the management of inventory increases in importance. This is especially true for service-based supply chains. Services have become increasingly important as the driving force in the decentralized system of local governance (Ellram, 2004)Inventory management is primarily about specifying the size and

placement of stocked goods. Inventory management is required at different locations within a facility or within multiple locations of a supply network to protect the regular and planned course of production against the random disturbance of running out of materials or goods. The aim of inventory management is to hold inventories at the lowest possible cost, given the objectives to ensure uninterrupted supplies for ongoing operations. When making decision on inventory, management has to find a compromise between the different cost components, such as the costs of supplying inventory, inventory-holding costs and costs resulting from insufficient (Hugo, S., Baden ,W.,& Van Rooyen, 2004).

(Bowersox, 2002)Discussed that as inventory represents large part of asset, more effective inventory management can result in increased sales revenue, customer satisfaction, significant cash flow and profitability improvements. To attain improved performance, inventory managers must make more accurate and timely decisions regarding when and how much to order. However, the basic challenge is to determine the inventory level that works the best within the organization. With increasing need for effective operations management, organizations now requires that costs and cost centers be well managed and controlled. Consequently stores as a cost centers must be well managed. In practice firms spend an inordinate amount of resources i.e. time and money managing and directing their suppliers to ensure that critical inventory/ stock levels are maintained and the vital flow of product needs for operations continue. Generally, inventory management system is at its primitive nature by any standard in Sub-Saharan African countries like Ethiopia (Shitaye&Wodaje, 2017).

The goal of inventory management is to balance supply and demand in order to keep customers satisfaction to drive profits. The activities of effective and efficient inventory management are critical to any successful business. Inventory management enables to give the right decisions about what to buy how much to buy and when to buy within the capital limits. These are “value decisions.” Excessive inventory investments can tie up capital that may be put to better use within other areas of the business. On the other hand, insufficient inventory investment can lead to inventory shortages and a failure to satisfy customer demand. A balance must be struck and maintained. Generally, it can conclude that inventory management plays a role of coordinating and managing the activities of all business segments (Namusonge,2015)

## 1.2 Statement of Problem

The study of (Shitaye&Wodaje, 2017).indicated that the common problems that have seen in Ethiopian basic Cement industries among other such as unbalanced demand and supply of basic Cement industries, poor IT system, inefficient and faulty practice, absence of material manager, poor delivery time, poor customer satisfaction, product unavailability, material cost, and material warehouse problems. This showed that many Ethiopian basic Cement industries are exposed to the problems of inventory management system.as discussed by (Awolabi,al.,et, 2014)Manufacturing Companies in recent times are faced with the problem of high cost of production mainly as a result of inability of the management to have an effective control over inventory. Unless operators understand the true costs of poor inventory management and productivity, and they will continue have higher cost and lower profitability.Inventory management is the key to any successful business distribution. Inventory management provides everything that everyone needs to know about the receipt and movement of goods, the sale, removal or other disposition of goods, and the precise valuation and status of goodsremaining in inventory at any time. And also, effective inventory management allows a distributor to meet or exceed his /her customer's expectations of materials availability with the amount of each item that will maximize the distributor's net profit (Altekar, 2005).In contrary to this fact, due to inefficient inventory management system in Habesha Cement Share Company, I would like to mention the following external audit report as an example .On the 2019/2020external audit report the audit firm mentioned on the management letter that a discrepancy of four types of raw materials in between the yearly inventory report and the stock ledger data which resulted in an over statement of more than 20 million birr. Therefore, this problem needs to be properly addressed by the concerned management of the company by establishing a sound internal control system and the study will help them to provide a mitigation mechanism together with the core reason of the discrepancy. Since the inception of the company using reliable documents, reports and other mechanisms to properly expose the situation.The inadequate Inventory Management in turn give rise to improper decision regarding resource matters, which has an adverse impact on quality and budget lose particularly to companies like Habesha Cement Share Company which is resided in the third world countries like Ethiopia.The Purpose of this study will to fulfill the following gaps in Habesha cement Share Company. Even if there are the necessary Documents to receive and issue inventory items the stores capacity to keep the necessary items safely and procedures followed by user departments to request and utilize these resources is too poor in comparison with other similar firms with in sector.

First, at a time Habesha Cement Share Company has no any inventory Management System, but manually handles the various available item using semi-skilled and professional personnel. So, the study will show the right inventory management system for the company.

Second, Even if there are the necessary documents to receive and issue inventory items on the company, the stores capacity of the necessary items are keep safely but procedures followed by user departments to request and utilize these resources is too poor in comparison with other similar firms with in sector. This study will full fill and accomplish all the necessary procedures how to handle the stores safely to compete with the international companies and standards.

Third, the study will try how can avoid the common Ethiopian cement company problems of unbalance demand and supply cement productions with quality and quantity production, technological advances and pure inventory management system

### **1.3 Research Questions**

Based on the above discussion the researcher tried to address the following basic questions.

1. What kind of inventory handling tools does Habesha Cement SCo use during the operation process?
2. What were the factors that are affecting the inventory management practices?
3. What are the major limitations of the existing inventory management system?
4. Does the inventory management method of the company affect the financial performance of the organization?
5. What are the future plans in improving performance of the organization through inventory management system?

### **1.4 Objective of Study**

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

### **1.4.1 General Objective**

The Main objective of this study is to assess the inventory management system Habesha Cement Share Company.

### **1.4.2 Specific Objective**

In line with the above General Objective, The study was addressing the following specific objectives:

1. To asses type of Inventory Management system Habesha Cement Share Company.
2. To asses direct and indirect effect of the Inventory Management System of the Company.
3. To assess the major limitation of the existing Inventory Management of the Company
4. To investigate financial performance of the organization.
5. To check whether t he company has future plans to improve the performance of inventory management system and give suggestion.

### **1.5 Scope of Study**

Basically, the study is focused on the assessment of inventory management practices of Habesha cement Share Company. It is located in Oromia region Holeta town. And its head office is located at the center of Addis Abeba. the researcher was conducting the study on issues related with inventory management practices, coordination between production and purchasing departments ,how the managements used the store efficiently, how the inventory management practice were automated and how the management handle the stock e.t.c

### **1.6 Significance Of Study**

This study help the management of the organization in order to identify the various possible risk of failure or mistakes made by employ in relation to inventory management. Also enable the managers' aware of the importance of inventory management. It is helpful to the auditor in this organization to know their role in the organization. On the other hand, It allow the researcher to practice a larger similar study could be performed in organizational sector and to other stakeholders who need knowledge about inventory management system can use the Research as a reference.



## **1.7 Organization of Study**

The research paper was organized in five chapters. In the first chapter, it is comprised of the background of the study, background of the organization, statement of the problem, objective of the study, significance of the study, scope of the study and organization of the study. The second chapter deals with literature review of the study and the third chapter deals with methodology, the fourth chapter deal with data presentation, analysis and interpretation and the final chapter provides discussion of study finding, conclusion and recommendation of the study.

## **Chapter Two**

### **Literature Review**

#### **2.1 Theoretical Review**

##### 2.1.1. Essence of Inventory and Inventory Management

(Arnold, 2008) defines inventory as the materials and supplies that a business or institution carries either for sale or to provide inputs or supplies to the production process. Additionally, (Ngugi & Godana, 2014) Ascertained that inventory is essential to organization for production activities, maintenance of plant and machinery as well as other operational requirements. (Subramanian, 2008) defines Inventory as the set of raw materials, partially finished goods and finished goods, an organization holds to meet its operational needs. In other words, it is a physical stock of goods kept in store to meet the anticipated demand and they represent the second largest asset of manufacturing companies next to plant and equipment.

(Lau & Snell, 2006) noted that the inventory management scope is concerned with the replenishment and lead time, carrying costs of inventory, asset management inventory forecasting, inventory valuation, inventory visibility, available physical space for inventory, quality management, returns and defective goods and damage forecasting.

(Stevenson, 2009) inventory management is defined as a framework employed in firms in controlling its interest in inventory. It includes the recording and observing of stock level, estimating future request, and settling on when and how to arrange.

Inventory as an asset on the balance sheet of companies has taken on increased importance because many companies are applying the strategy of reducing their investment in fixed assets

which even highlights the significance of reducing inventory. Changes in inventory levels affect important financial parameters called Return on Asset. Reducing inventory usually improves ROA, and vice versa if inventory goes up without offsetting increases in revenue.

According to (Kotler, 2000) inventory management refers to all the activities involved in developing and managing the inventory levels of raw materials, semi-finished materials and finished goods so that adequate supplies are available and the costs of over or under stocks are low.

Inventory generally refers to the materials in stock. It is also called the idle resource of an enterprise. Inventories represent those items which are either stocked for sale or they are in the process of manufacturing or they are in the form of materials, which are yet to be utilized.

(Lysons, K., & Farrington, B, 2012) state that Inventories are stock supplies of raw materials, suppliers, components, work in process, and finished goods that appear at numerous points throughout a firm's production and logistics channel .Inventory refers to the value or quantity of raw materials, supplies, work in progress (WIP) and finished stock that are kept or stored for use as need arises.

(Kothari, 2004) Define raw materials are commodities such as steel and lumber that go into the final product. Supplies include items such as Maintenance, Repair and Operating (MRO) inventory that do not go into the final product. Work in progress is materials that have been partly fabricated but are not yet completed. Finished goods are completed items ready for shipment.

(Sharma, 2009) Define inventory as the quantity of goods, raw materials, or other resources that are idle at any given point of time. From the definition above, inventories consist of raw materials, component parts, supplies or finished assemblies etc. which are purchased from an outside source, and goods manufactured in the enterprise itself. In simple words, inventory refers to stocks held by affirm.

#### 2.1.2. Methods of Evaluating Inventory

There are four methods accounting uses to cost inventory namely first in first out (FIFO), last in first out (LIFO), average cost (A.C) and standard cost (S.C). First In First Out (FIFO): This method assumes that the oldest (first) item in stock is sold first. In rising prices, replacement is at a higher price than the assumed cost. This method does not reflect current prices and replacement will be understated. The reverse is true in a falling price market. Last In First Out (LIFO): This

method assumes the nearest (last) item in stock is the first sold. In rising prices, replacement is at the current price. In a falling price market existing inventory is overvalued. However, the company is left with an inventory that may be grossly under stated in value. Average Cost (A.C): This method assumes an average of all prices paid for the article. The problem with this method in changing prices (rising or falling) is that the cost used is not related to the actual cost. Standard Cost (S.C): This method uses cost determined before production begins. The cost includes direct material, direct labor and overhead. Any difference between the standard cost and actual cost is stated as a variance (Arnold, et al. 2008).

### 2.1.3 Inventory Management Techniques

Here under are the inventory management tools to be employed by different organizations to attain an affective inventory management, efficiency production and profit maximization. Economic order quantity: According to (Bowersox, 2002) the inventory management needs to be organized in a logical way so that the organization can be able to know when to order and how much to order. This must be attained through calculating the Economic Order Quantity (EOQ). Monetary request amount engages correlation to arrange their stock reestablishment on an ideal premise. For instance, the arrangement can be scheduled to happen from month to month, quarterly, half yearly, or yearly. By so doing, it enables firms to have insignificant limit costs or zero inside their circulation focuses. Along these lines, as associations attempt to enhance the stock administration, the EOQ and Re-Order Point (ROP) are necessary instruments that associations can utilize.

#### **1. Just in time technique**

The JIT technique is a Japanese philosophy which comprises having the right things in the right quality and amount in the correct place at the opportune time. Utilization of JIT technique brings about the increment in quality, profitability, and effectiveness, enhanced correspondence, and declines in expenses and wastes. (Hutchins, D., & Gower, 1999) characterized JIT as a process that is prepared for moment response to the request without the necessity for any overstocking, either in the desire of the application being approaching or as a concern of improvident characteristics all the while. (Hutchins, D., & Gower, 1999) additionally concentrated on that the prime objective of JIT technique is the accomplishment of zero stock, not simply inside the bounds of a single association at the end of the day all through the whole production network.

## **2. ABC analysis**

The ABC stock control technique relies on that the decision a little bundle of the things may usually address the weight of money estimation of the total stock. It is used as a part of the era method while a tremendous number of things may happen from a little part of the money estimation of stores. Accordingly, to manage stock control high regard things are more solidly controlled than low regard things. ABC examination is an essential action method that follows the Pareto principle concerning an organization's arrangement of stock. Most organization attempts and oversights are depleted on managing A thing. C things get the base thought, and B things are in the centers. The ABC approach ranks using the following criteria: A things represent 70–80% of the firm's annual consumption approximation and just 10–20% of aggregate stocked items. B things represent 15–25% of annual use esteem and 30% of aggregate the stock, and C things characterize 5% of the annual application of esteem and half of total stocked items.

## **3. Security Technology**

Technology can be used to protect inventory from internal and external threats security alarms on doors and windows can alert local policies authorities in the case of a break-in. Advanced locks on doors protecting storage areas can reduce incidents of internal theft as well as break in Security cameras can record theft in progress, helping to identify thieves for local authorities. Cameras can also discourage employees from even attempting to steal inventory in the first place. Advances in technology continue to provide new security options. Smart phones provide new opportunities to monitor security alarms and surveillance systems from anywhere in the world at any time (Hutchins, D., & Gower, 1999).

## **4. Inventory Audits**

Inventory audits systematically count inventory on hand and compare it with internal inventory records, receive records and Deliver records to spots incidents of theft, spoilage or other forms of shrinkage. Internal audits can act as a powerful psychological deterrent to internal theft, if employees know that there is random inventory counting they may be discouraged from even think about stealing

## **5. Vendor Managed Inventory**

(Frahm, 2003) discusses that Vendor-managed inventory is a practice in which inventory replacement decision emphasizes on good working relations between customers and suppliers. The manufacturer enters into a collaborative or partnership agreement with the distributor, under which the latter agrees to stock a specified range of items and meet specified service levels. In return, the customer undertakes to buy the specified items solely from the distributor and no longer keeps the items in stock. It enables manufacturing firms reduce chances to defective items and the risk of obsolescence.

VMI practices enables manufactures to eliminate the need for customers to reorder, reduce or exclude inventory and obviate stock outs. It relieves the customer of much of the expense of ordering, shipping the materials, counting inventory and stocking low-value items. By passing these costs normally managed by the customer on the supplier, the customer is able to reduce the overall cost of product and increase on margins. There's also reduced lead times with enhanced sales and a reduction of lost sales due to stock outs (Frahm, 2003).

This technique has the following advantage;

- i. It ensures a closer and a more strict control over such items, which were having a sizable investment.
- ii. It helps management to in planning its inventory need
- iii. It releases working capital, which would otherwise have been locked up for a more profitable channel of investment.
- iv. It reduces inventory-carrying cost.
- v. It enables the relaxation of control for the 'C' items and thus makes it possible for a sufficient buffer stock to be created.
- vi. It enables the maintenance of high inventory turnover rate.

### **2.1.4 Usefulness of Effective Inventory Management**

for Manufacturing Companies stated that because inventory is usually one of the biggest numbers on their balance sheet, effective inventory control and management is a vital function to help insure the continued success of manufacturing companies. Uses of managing inventory effectively can be discussed in detail as follows:

#### 2.1.4.1 Profit Maximization

(Ogbu, 2008) stated that as profit maximization is the goal of every firm, the most important requirements to maintain that are preventing wastage of time and raw materials, not leaving the machine capacity idle and underutilization of labor force. In order to maximize profit, manufacturing concerns always try to reduce both holding costs and ordering costs by using optimum order quantities called EOQ. Costs attributed to not holding the appropriate level of inventories are drastically reduced when proper inventory management technique is applied.

#### 2.1.4.2 Customer's satisfaction

According to (Ogbu, 2008) firms should keep customers satisfied to survive manufacturing concerns because they cannot afford to miss an order because of absence of an item in stock. This is achieved by reduction in excessive inventory and encouraging optimum production. This section discusses the relationship of inventory control system of the company with demand management, which is a key to customer satisfaction, as follows;

- Order Receipt-. Identification codes prepared for inventory control are sent to customers as order forms to help them make their order precisely.
- Order processing-. Inventory control methods are often used for establishing criteria for classifying orders.
- Estimating delivery times to customers- Promises have to reflect the real stock and replenishment situation or else customer service will be poor.
- Production of dispatch information Here invoicing systems shouldn't interfere with inventory movement.
- Customer feedback to report on progress and to keep the customer feeling involved in the supply is very important from a customer relations standpoint.

#### 2.1.4.3 Uninterrupted production

(Ogbu, 2008) states that production is changing raw materials into finished goods. When these raw materials are not available, production is disrupted. Also, when production suffers, the customers are lost to the competitors and when excessive inventories are stocked, capital is tied up in the organization. And so, it is only through the process of effective inventory management can enable the EOQ to be obtained that allows efficient production to be achieved.

#### 2.1.4.4 Liquidity control

(Ogbu, 2008) discusses that sometimes, manufacturing companies over invest in stock in order to maintain production, avoid stock-outs and satisfy their customers. But when this investment is done without regards to efficient inventory management, a lot of capital resources of the concerns are large holding costs. At that point, liquidity which is the ability of an organization to meet its repayment demand as they fall due will be affected.

#### 2.1.5 The Role of Inventory Management System

(Mohamed, 2016) Inventory is importance for balance sheet that used as an increase the asset group on the company balance sheet, because many firms play a role to reduce their investment in fixed asset, plants, warehouses, office buildings, equipment and machinery by increasing their inventory .Inventory management system is essential to approve the quality of control in stock handling and the area of customers served by consumer goods. A good inventory system will lead the company easily to know the time to be order. Inventory management system is also an essential means of tracing large shipment with in short time.

(Ackah&Ghansha, 2016) An automated inventory system enables to minimize the risk of error and helps by providing up to date information of the stock items in the warehouse.

The role of inventory management is arranging and organizing over all operation of the organization maintaining the transactions of sales appropriately keeping the level of stock to satisfy customer's needs. The achievement of inventory management is satisfying customer and driving profit by keeping the required inventory items, balancing the right order as customer needs. Since all business has a limited working capital, inventory management responsible to make decisions what type of materials, the quantity bought, how much or within the capital limits. Hence, an effective inventory management is very necessary for any businesses successes. Bulky inventory keeping can tie up capital that may be used for other investment to generate income is locked up without nothing. On other way (Namusonge, 2015) less keeping inventory items can be a weaker to satisfy customer need and the organization can't achieve its setting goal.

Also (Chio, 2012) indicated that effective inventory management is essential in the operation of any business and keeping stock is used as an important strategy by companies to meet customers' needs without taking the risk of frequent shortages while maintaining high service level. Grossly, effective inventory management gives the chance to make continues competitive



advantage and improvement of the competitive position of the companies. Moreover, it enhances the profit margins of the companies since it will reduce the operational and inventory cost thereby increase in profitability.

On the contrary, poor inventory management affect the organization cash flow, reduce efficiency and adversely affect the procurement performance out of the capital. The inventory system that helps the operating policies and organizational work flow for replenishing and controlling materials in store will be suspended.

According to (Ackah&Ghansha, 2016) Surpluses cause financial hardships because they tie up capital and shortages lead to poor operational results, but satisfactory and scientific inventory control eliminates these shortcomings thus proving its importance. Accordingly, management of inventory system requires an appropriate system of making the decisions to keeping track of items in inventory and how much and when the order is applied.

Inventory management increases profitability- Forecasting, controlling & managing inventory increases productivity, while reducing costs, resulting in greater profitability Accuracy improvements & time savings, in addition to the reduction of fixing costly mistakes, can result in considerable cost savings across an organization.

(Zipkin, 2000) state that Inventory management improves decision-making rapid, accurate data collection enables access to real time business intelligence across all areas of your company Issue, event and project management tracking integrated with an inventory management system enables all associates to proactively identify & solve business issues. It increases customer satisfaction Responding to trends, seasonality, promotions & changing marketing conditions results in having the right products in stock for customers Properly identified products available to load enables customers to order & receive the correct Commodity Quickly Customer service tools integrated within an inventory management equips the entire company to deliver consistent, personalized care for your customers

Inventory management helps businesses be successful. That's as much of an understatement as saying the sun's surface is warm. Inventory management is a crucial part of any business" success.

Inventory Balance: Good inventory management helps you figure out exactly how much inventory you have. This makes it easier to prevent product shortages and keep just enough inventories on hand without having too much. Accurate Planning: Using smart inventory

management, you can stay ahead of the demand curve, keep the right amount of products on hand and plan ahead for seasonal changes. This goes back to keeping your customers happy all year long. Employee Efficiency: You can empower your employees to help you manage inventory. Training employees to use barcode scanners, inventory management software and other tools helps them make better use of their time, and it helps your business make better use of its resources, both human and technological. Inventory Tracking: If you have multiple locations, then inventory management becomes even more important because you need to coordinate your supplies at each location depending on differences in demand and other factors. Time Saving: Inventory management is a great time-saving tool. By keeping track of all the products you have on hand; you can save yourself the hassle of doing inventory recounts to make sure your records are accurate. This once again requires inventory management software (PanosKovelis, 2002).

#### 2.1.6 Problems of Inventory Control

(Brent, 2008) argued that, the angle of each department in the enterprise is generally different. Each department looks at inventories in a different manner. The production department wants to keep the inventories at a sufficient level at all times. The sales department, on the other hand, is interested in ensuring a maximum number of customer of for which it always wants a good stock of all the finished products. The transport department is interested in keeping its fleet intact and all the time in serviceable condition for which the department needs sufficient stock of spare parts, and consumable items as its disposal. The finance department may all the time feel that inventories are consuming capital and looking up the capital. The individual department thinking poses a problem to the inventory control which has to reconcile the conflicting claims of different departments within the framework of the policies and programmers of the enterprise. It is now being realized that inventory control problems have to be solved while keeping in view the problems of every phase of operation purchase, production, sales and to solve the problems of inventory control keeping the costs at their lowest. This can be achieved by the integrated approach.

(Ogbu, 2008) Discussed that manufacturing concern to manage its inventories are to establish an adequate inventory level at a minimum cost, to reduce the cost of managing inventory, to ensure the production is not interrupted due to lack of inventory and that inventories are not used through excess stock by fixing re-order and stock levels, to minimize overstocking and understocking. the factors that complicate this problem as:

- ✚ Conflicting objectives across various segments of each company: some parts of a business seek to increase inventory and other parts to decrease it. For example, sales function encourages keeping FGI high to keep customers satisfied due to on time delivery, purchasing department wants to achieve volume discounts on large batch and off-season purchases, and also Production wants all parts and raw materials to be available to keep line efficiency high and run large batch sizes. Conversely, product developers and finance department, senior management want to decrease inventory, because sitting on stock ties up cash flow.
- ✚ The tentative nature of both supply and demand: unpredictability of demand and supply includes unsteady supplier performance, supply chain disruptions, scarcity of materials, the perishability, obsolescence, and shrinkage on the supply side and economic environment, new products and innovations and others on demand side. For manufacturers, the problems are complicated further when hundreds of thousands of finished goods for sale or thousands of parts for assembly are warehoused across multiple locations. Because inventory is the lifeblood of the sales and production processes, it's important to stock enough of it to avoid paying the opportunity costs of lost sales and diminished.

## **2.2 Empirical Review**

Different studies have been conducted by various researchers, concerning techniques of inventory management, assessment of their application in different organization, and effectiveness of inventory management.

(Ackah&Ghansha, 2016)By their study, on the title of Assessment of Inventory Management, assessed the Performance of the Production Sector to find out how the management of inventory within work would be effective and bring a lot of cost savings for the organization to increase organizational profitability. A study by (Koumanakos, 2008)titled The Management of Inventory Levels in the Local Manufacturing Industry found out that out of different methods of inventory management, the most commonly used methods in manufacturers are continuous review model and MRP method. Different authors have been doing various endeavors to clarify the relationship between inventory management practices and the efficiency of a firm. Factors of his study were Inventory Management rehearses as an independent variable, and cost diminishment as a reliant variable. The discoveries of the survey showed a positive relationship between the factors. (Koumanakos, 2008) contemplated the impact of Inventory Management on the solid execution of assembling firms working in Greece. The theory that is inclined to the stock management stimulates variations in the business's budgetary implementation. The discoveries recommend that the higher the level of inventories protected by a firm, the lower the rate of return. (Eckert, 2007) analyzed Inventory Management and the part it plays in enhancing client benefit levels. He found a positive relationship between stock administration practices and consumer loyalty because of decreased number of stock-outs. Effective inventory management processes help increase operational efficiency of firms; improves customer service; reduces inventory and distribution costs; and enables businesses track items and their expiration dates consequently balance between availability and demand (Pandey, 2004).

**All organizations keep a supply of inventory for the following reasons:-**

1. To maintain independence of operations. A supply of materials at a lost work center allows that flexibility in operation inventory allows management to reduce the number of setups. The time that it takes to do identical operations will naturally vary from work unit to work unit. The sum total performance of an organization is the collective performance of workstation located at different localities or units. Therefore, to meet business goal, effective and efficient inventory management at all work station is crucial.
2. To meet variation in product demand. If the demand for the product or service is known precisely, it may be possible to provide services exactly to meet the demand. But demand is not completely known because we can't have full information about customers, and a safety or buffer stock must be maintained to absorb variation.
3. To allow flexibility in service provision scheduling. A stock of inventory relieves the pressure on the service provision to get the goods out. This leads to longer lead times, which permit service planning for smoother flow and lower cost operation through larger lot size production.
4. To provide a safeguard for variation in inventory delivery time. When material is ordered from a vendor, delays can occur for a variety of reasons: a normal variation in shipping time, a shortage of material at the vendor's plant causing backlogs, an unexpected strike at the vendor's plant or at one of the shipping companies, a lost order, or a shipment of incorrect or defective material.
5. To take advantage of economic purchase order size. There were costs to purchase materials. The larger each order is the lower ordering cost of the materials because of the bulk purchase. Organization has to decide the quantity and time to procure materials economically. Materials have to purchase by comparing the ordering and storing costs. The most economical point where materials to be procured is at the lowest cost of storage and order cost.

### **2.3 Objective of Inventory Management**

The main objective of a good inventory management is to place an order at the right time from the right source with the right quantity and quality. While developing an appropriate inventory management system of inventory the following objectives should be kept in mind:

- Organizations should try to minimize the possibility inventory obsolescence by giving due attention during procurement of materials. Besides materials storage, distribution and usage should be appropriate to avoid shrinkage or obsolescence of the materials.
- A firm should maintain inventory to such a level that smooth and unhampered service provision is ensured without any obstruction.
- Investment in inventory should be kept at minimum so that undue amount is not locked up in it as investment in inventories involves costs.
- A firm should maintain sufficient amount of inventory to meet the demand of customers regularly because if not done customers may shift to the competitors, which will result in permanent loss to the firm. So it is essential to have necessary inventories which were sufficient to the operation of the organization. Excessive inventory is an idle resource on which resource is tied up rather than investing on other better alternative. The investment in inventories should be just sufficient in the optimum level. The major dangers of excessive inventories were:
  - High customer dissatisfaction and failure of operation
  - The unnecessary tie up of the firm's funds and loss of profit.
  - Excessive carrying cost, and The risk of liquidity.

The excessive level of inventories consumes the scares funds of business, which cannot be used for any other purpose and thus involves an opportunity cost. The carrying cost of inventory, such as the cost of shortage, handling insurance, recording and inspection, were also increased in proportion to the volume of inventories. The low level of inventories may result in frequent interruptions in the production or service provision schedule resulting in under-utilization of capacity and poor operation that leads to customer dissatisfaction. The aim of inventory management thus should be to avoid excessive inventory and inadequate inventory and to maintain adequate inventory for smooth running of the business operations. Efforts should be

made to place orders at the right time with the right source to purchase the right quantity at the right price and quality for the operations of the organization.

#### **2.4 Research Gap**

The Purpose of this study was to fulfill the gaps in inventory management practice of Habesha Cement Share Company. At that time the researcher identified the inefficiency the inventory Management practice in the company. Hence the research conducted to identified the main reason of inefficiency in Habesha cement share company.

## **Chapter Three**

### **3. Research Methodology**

#### **3.1 Description of the Study**

Habesha Cement Share Company, as a manufacturing firm involving in producing cement. It has many types of inventories which are important to fulfill its purpose. From the many inventory items: - raw materials, spare parts, semi processed cements(Clinker), coal, cement, packing bags are the major inventory items which need a skilled labor force and better management system to properly utilize and become profitable.

From the inception of the company Habesha Cement Share Company has faced many problems especially due to the existing political situations of the country, lack of enough capital to properly function in a regular manner. Hence, managing the available resource towards the successful accomplishment of its goal becomes a challenge for a period of more than two (2) years.

Currently, (HCSC) Habesha Cement Share Company handles various available items using semi-skilled and professional personnel. Even if there are the necessary documents to receive and issue inventory items the stores capacity to keep the necessary items safely and procedures followed by user departments to request and utilize these resources is too poor in comparison with other similar firms with in the sector.

#### **3.2 Research Approach And Design**

According to (Kothari, 2004) a research design is the conceptual structure within which research is conducted, it contribute the blue print for the process of collections, measurement and analysis of data. Thus, this study applied a descriptive research design because it enables the researcher to collect data from large population and to look a bigger overview about the subject matter, inventory management system of Habesha Cement Share Company.

Also, the study used mixed approach. Thus, the quantitative approach became suitable in gathering information on the subject matter from a wider section of the population via questionnaire. Parallely, so as to have more detailed information on the subject issue and to discuss the open ended and interview questions the study applied qualitative approach.



Therefore, so as to meet this objective properly, both qualitative and quantitative approaches were used. During the qualitative study (a case study approach), deep information about applications of inventory management were gathered from key informants. On top of that, quantitative data were gathered from employees to supplement the quantitative data through Focus Group Discussion of service center employees.

### **3.3 Population and Sampling Technique**

#### **3.3.1 Target Population**

According to (Mugenda, 2003) a population is a well-defined or set of people, services, elements, and events or group of things that are being investigated. Accordingly, the population for this study consisted of management and staff of Habesha Cement Share Company with a population of 100 permanent skilled staffs from four departments. This research targeted the departments which have a direct relation to the inventory management system specifically: Procurement and Supply Department (PSCD), Finance Department, Production Department and store and quality control department. Therefore, Out of these distinctive subjects the research identified all portion of samples by using census method because the total number of population is manageable and it helps to get accurate information. That means based on census sampling the researcher identified the target population is 48 skilled permanent employees who have a direct relation to the study subject matter. Each of the target departments treated as a separate stratum from where the respondents selected according to the proportion of the employees. The sample size for this research is 48 these population consists of 12 from Production department, 15 from Procurement and supply department, 15 from Finance department and 6 from store and quality control department

#### **3.4 Type and Source of Data**

The study used both primary and secondary data. Primary data collected through the use of structured questionnaires and interviews. secondary data reviewed from external sources such as the internet, Journals, the company's document and reports, other documentations and external audit reports depending on the nature and scope of the information needed.

### **3.5 Data Collection Technique**

Primary data was collected by distributing questionnaires to employees and managers. Interview was conducted to get in-depth understanding of the organizations working principles, procedures and methods. And to check the data found by the questionnaire are in line with the employee responses. Furthermore, data were gathered documents and reports through reviewing them.

### **3.6 Procedure of Data Collection**

Questionnaire is chosen as the main data collection instrument. According to (Kothari, 2004) questionnaire has a specific concrete and predetermined questions to ensure that all respondents reply to the same set of questions. Therefore, the study data was gathered with the aid of questionnaires to assess the respondent's views on the inventory management system of Habesha Cement Share Company. The questionnaire was organized in line with the study objectives and it composed of two sections. The first section of the survey questionnaire portrayed the general demographic information of the sampled respondents.

The second part contained the main questions which are linked directly with the research specific objectives. The questions are closed ended format where; if the respondent agree = Yes/ Agree if not the respondent mark on = No/Disagree and so on. The use of closed ended questions is to make easier for respondents to answer question in a simple way and the questionnaire was prepared in English language.

After validation of the research instrument, requisite consents are obtained from the concerned management of Habesha Cement Share Company. After having permissions, the questionnaires distributed to the sample respondent's. To supplement the gap that are captured by the data that from questionnaire, key informant interview with Finance manager, Supplies and logistics manager was conducted. Finally, the researcher performed the data coding, entering, editing and cleaning activity in order to check the consistency of the data which was collected from the respondents.

### **3.7 Methods of Data Analysis**

This part represents the output of data analysis. After collecting all the necessary data, these data was coded and edited, analyzed and rephrased to eliminate errors and ensure consistency. It involve categorizing, discussing, classifying and summarizing of the responses to each question in coding frames, basing on the various responses. This is intended to ease the tabulation work. It also helps to remove unwanted responses which may be considered insignificant.

The data are presented in the form of tables. The data analysis of this study is done from both a qualitative and quantitative standpoint to achieve the objective of the study. The presentation was done according to the objectives of the study. The data analysis was based on returned questionnaires distributed to respondents.

The background information of respondents was deemed necessary because the ability of the respondents to give satisfactory information on the study variables greatly depends on their background. The background information of respondents solicited data on the samples and were presented by categorizing into; gender, education levels, work unit, age and length of service years in the organization.

### **3.8 Validity And Reliability Test**

#### **3.8.1 Validity**

Validity refers to the degree to which a study accurately reflects or assesses the specific concept that the researcher is attempting to measure.

The researcher ensured that these are wholly integrated in the research. To enhance validity and reliability of research findings, the researcher has eliminated or at least reduced bias and ambiguity by using questionnaires and data collector bias are minimized by the researcher's being the only one to administer the questionnaires, and standardizing conditions such as exhibiting similar personal attributes to all respondents and the research has applied both pre and post coding techniques to check omission, legibility, and clarity responses before dictation.

### **3.8.2 Reliability**

The researcher is also engaged in careful fine-tuning of questions integrated on the questionnaires to make them clear and easy to comprehend. More so, before the questionnaires are administered to participants the researcher conducted a pilot-test by using 2 colleagues in the researcher's office. This is meant to assess whether the questionnaires are easily understandable and well suited to probe answers to the research problem under study. The 2 colleagues chosen for the pilot-test are the foreign purchase division head and local purchase division head at the head office and thus are presumed to understand the purpose underlying the research and the repercussions thereof. There critics were mainly on the content of the question. My previous questions were focused more on general management questions and as per their comment I have changed the content of the question towards inventory management practice. The constructive criticisms and responses forwarded by the colleagues are incorporated by making necessary amendments and revision to the questionnaires.

### **3.9 Ethical Consideration**

Above all, the researcher did not ask the study participants to engage into risks as a result of participating in this study. Besides, informed verbal consent was obtained from the key respondents during data collection. The respondents were given the right to refuse or take part in the study. All the primary and secondary data collection in the organization was under the permission of the managers and without any offence in ethical rules during the whole research process.

## CHAPTER FOUR

### 4. DATA ANALYSIS AND PRESENTATION

#### 4.1 Introduction

This chapter deals with presentation, analysis and interpretation of data obtained from respondents through questionnaire and interview to explore the inventory management practices of Habesha Cement Share Company. 48 questionnaires were distributed to the selected sample respondents, out of the distributed questionnaires 37 of them were properly filled and returned. The interview was conducted with the focused group in the company. Accordingly, all the data gathered are presented, analysed and interpreted in the forthcoming subsequent pages.

#### 4.2 Response rate

Total of 48 questionnaires were distributed to employees of the company out of which 12 from Production department, 15 from Procurement and supply chain department (PSCD), 15 from Finance department and 6 from store and quality control department. Out of the distributed questionnaires 37 of them were filled in and returned which makes the response rate 77%. According to Mugenda and Mugenda (2003), a response rate of 50% is adequate for analysis and reporting; a rate of 60% is good and a response rate of 70% and above is excellent. Based on the assertion, the response rate was excellent. As to interviews the response rate is 100%.

	Response Rate	Percentage
Total Sample Size	48	100%
Successfully collected	37	77%
Uncompleted and Unreturned	11	23%

So, the analysis was made based on 37 successfully responded questionnaires and done in line with the research questions and objectives.

### Justification for the uncompleted and unreturned questionnaires

From the targeted 48 sample respondent, 11 respondents were not fill and give back the research questionnaires to the researcher due to the current pandemic of COVID-19 and lack of willingness to fill out the questionnaire and returned too.

### 4.3 Demographic characteristics of the respondents

The demographic profile of the sample respondents is presented and analysed below. The purpose of assessing respondents' gender is that, to determine whether the researcher considered heterogeneity of sample units. On the other hand, assessing the work experience and education level of the respondents'' is that, when the respondents are more experienced and educated they have better opportunity to understand the case and give better response than else.

**Table 1- 1 Demographic characteristics of Employees**

S.N	Demography	Characteristics	Frequency	
			In number	In percentage
1	Gender	Female	10	27%
		Male	27	73%
		<b>Total</b>	<b>37</b>	<b>100%</b>
2	Educational Background	Diploma	2	5%
		1 <sup>st</sup> Degree	25	68%
		Master's Degree	10	27%
		<b>Total</b>	<b>37</b>	<b>100%</b>
3	Work Experience	1-5	17	46%
		6-10	15	40%
		11-15	5	14%
		16-20	0	0%
		21-25	0	0%
		Above26	0	0%
		<b>Total</b>	<b>37</b>	<b>100%</b>

Source: own survey result (2021)

As shown in the table below majority employees in the selected functions of the company are males comprising 73% (27 out of 37) of the population while females contain the remaining 27% (10 out of 37). Background data shows that 5% (2 out of 37) of the respondents are diploma holders, 68% (25 out of 37) have 1st degree and 27% (10 out of 37) are Masters Holders. This data shows that 1st degree holders are dominant in the selected functions which are satisfactory for their positions.

**Table 2- 1 Inventory management practice and Techniques-Production Department response**

Questions		Frequency of responses	
		In Number	In percentage
Does your industry have policies and procedures to keep inventory level that avoid excess inventory?	Yes	12	100%
	No	0	0%
	<b>Total</b>	<b>12</b>	<b>100%</b>
Is there optimal level of inventory management in the industry?	Yes	10	83%
	No	2	17%
	<b>Total</b>	<b>12</b>	<b>100%</b>
Which inventory system does the industry use?	Perpetual procedure	12	100%
	Periodic procedure	0	0%
	<b>Total</b>	<b>12</b>	<b>100%</b>
Which types of industry management techniques does the industry follow?	EOQ	1	8%
	JIT	0	0%
	ABC	0	0%
	Stock Level	3	25%
	Others	8	67%
	<b>Total</b>	<b>12</b>	<b>100%</b>
Do you think the company is using appropriate inventory management technique?	Yes	12	100%
	No	0	0%
	<b>Total</b>	<b>12</b>	<b>100%</b>

Source: own survey result (2021)

As to inventory system used, 100% store and quality control employees confirmed that perpetual inventory system is used. Perpetual system of inventory updates inventory balance continuously and counting is done at the end of year for the purpose of reconciliation. All of them respondents also stated that the company counts inventory once a year. They all agree that the current situation is well organized and effectively performed to manage control inventory effectively.

**Table 3- 1 Inventory management practice and techniques store and quality control response**

Question	Frequency of responses		
		In number	In percentage
How often does the industry count/check its inventory?	Monthly	0	0%
	Semiannually	0	0%
	Annually	6	100%
	Others	0	0%
	<b>Total</b>	<b>6</b>	<b>100%</b>
Do you agree that in the current situation, inventory control management practice is well organized and effectively performed to manage, control inventory items to keep safely and handling?	Strongly Agree	0	0%
	Agree	6	100%
	Disagree	0	0%
	Strongly Disagree	0	0%
	<b>Total</b>	<b>6</b>	<b>100%</b>
Is there Lack of manpower?	Yes	4	67%
	No	2	33%
	<b>Total</b>	<b>6</b>	<b>100%</b>
Do you have enough knowledge about the company inventory management policies and procedures?	Yes	2	33%
	No	4	67%
	<b>Total</b>	<b>6</b>	<b>100%</b>

Source: own survey result (2021)



As shown in Table 3, 100% of the employees agreed that industry count/check its inventory annually. And all store and quality control department respondents agreed that the current inventory control management practice is well organized and effectively performed to manage and control inventory items. However, the findings discussed in the above paragraphs make the researcher to question on existence of problem of the current inventory management practice of the company. 67% of the respondent assured there is a problem regarding with knowing the company inventory management policies and procedures. But 33% of store and quality control respondents confirmed the they have enough knowledge about the company inventory management policies and procedures. And 67% of respondents assured there is lack of manpower to manage the company inventory management system but the rest 33% respondents confirmed there is no problem regarding with manpower.

#### **4.3.1 Timing and Quantity of order**

Raw materials and supplies of the company are purchased from both local and foreign suppliers. 100% respondents of purchasing department also agreed that they get raw materials from local market. Information from the purchasing manager of the company shows that local orders are initiated when requisition, containing quantities to be ordered, is sent by department based on job orders received. This shows JIT technique of inventory management. This reduces carrying cost of the company and as (Toomey, 1996) discussed it requires minimum lead time and maximum machine utilization. The main risk of JIT is interruption of production due to late delivery This is confirmed to

Occur sometime by 100% respondents of purchasing department employees. After requisitions are accepted, POs are issued by the corporate service director. Pre numbered POs are used and they must all be approved by the CEO.

The manager described that to determine the quantity to be ordered from foreign suppliers, the company forecasts annual production and sales, and based on that Manufacturing Resource Plan is prepared by comparing available stock with demand. POs are then issued by the managing director and approved by CEO. The quantity also highly depends on foreign currency allowed for importing. Segregation of approval and issuance of purchase order shows one strength of the inventory control system as it reduces fraud and theft.

**Table 4- 1 Timing and quantity of order-Purchasing Department responses (PSCD)**

Questions		Frequency of responses	
		In number	In percentage
Can your company easily get the raw material and supplies from local market to stock?	Yes	0	0%
	Sometimes	15	100%
	No	0	0%
	<b>Total</b>	<b>15</b>	<b>100%</b>
Do suppliers respondents per your request on time?	They always do	0	0%
	They sometimes do	15	100%
	They don't	0	0%
	<b>Total</b>	<b>15</b>	<b>100%</b>

Source: own survey result (2021)

### 4.3.2 Stores Function

Proper receipt and storing of inventory is also important for inventory management process. In the studied company, the employees responsible to receive inventory are also responsible for warehousing. Two stores each having one storekeeper in the head office and two storekeepers in the plant site are found in Habesha Cement Share Company.

As to release of materials to production, the manager discussed that it is initiated by production order made by the production department. Based on production order, material requisition is prepared and as it is approved by the production manager, Order sheet is prepared to release materials from store. Releasing is done by reconciling material requisition with order sheet. The materials transported to production are kept in satellite stores found in production area until they are placed to production. The main stores function doesn't check whether the materials have been put into production or not but satellite stores do.

The manager also stated that average level of inventory, minimum and maximum stock levels, holding cost of inventory are not familiar in their practice. The amount of inventory in the store depends on the number of orders available.

**Table 5- 1 store function response**

Questions		Frequency of responses	
		In number	In percentage
How often do you find defective inventory material can be seen in receiving process of your warehouse?	Many Times	0	0%
	Sometimes	3	100%
	Always	0	0%
	Never	0	0%
	<b>Total</b>	<b>3</b>	<b>100%</b>
How often do you face problem of receiving dissimilarity of purchased items with sample received items?	Sometimes	2	67%
	Always	1	33%
	Never	0	0%
	Other	0	0%
	<b>Total</b>	<b>3</b>	<b>100%</b>

Source: own survey result (2021)

All store employees confirmed that sometimes there is a defective inventory material during material receiving process. And they also assured problems of receiving dissimilarity of purchasing item sharpened sometimes.

### 4.3.3 The role of accounting and finance function

As discussed in (Toomey, 1996) accounting data is directly or indirectly involved in almost all inventory management decisions by determining cost of carrying safety stock, EOQ, cost of distribution & other costs, and also by preparing various reports. To assess this function, the researcher conducted interview with finance manager of the company and the result is discussed below.

According to finance manager of the company, accounting and finance function of the company is done in- house. The role of accountant in the firm with relation to inventory management includes recording purchases to update inventory accounts, registration and reconciliation with POs, preparation of inventory related reports and others The type frequency and purpose of reports is summarized below.

**Table 6- 1 Inventory control Reports**

<b>Name of reports</b>	<b>How often is it prepared</b>	<b>Brief Description</b>
Consumption Report	Monthly, Quarterly, Yearly	It is a document used in production process to summarize the RM used during a specific accounting period.
Inventory stock status Report	Monthly, Quarterly, Yearly	It reports on-stock inventory items in warehouse and item number sequence, showing current status, value, and most recent activity dates.
Stock reconciliation report	Monthly, Quarterly, Yearly	It reconciles the balance of inventory accounting record with actual amount of Inventory in stock
Inventory valuation report	Monthly, Quarterly, Yearly	It is used to review a summary of warehouse Activity for a range of dates.
Material Variance Report	Monthly, Quarterly, Yearly	It shows the difference between the standard cost of material and actual costs Incurred.

Source: own survey result (2021)

**Table 7- 1 coordination between departments–stores department responses**

Questions		Frequency of responses	
		In number	In percentage
Is there a problem in warehouse in ordering the purchase request to Maintain (replenish the inventory items?)	Yes	0	0%
	No	6	100%
	<b>Total</b>	<b>6</b>	<b>100%</b>
How strong do you think is coordination among production departments ,store department and Purchase department of the industry?	Very Strong	0	0%
	Moderately Strong	6	100%
	Weak	0	0%
	<b>Total</b>	<b>6</b>	<b>100%</b>
Store and quality control departments compare quantities received against receiving reports?	Yes	2	67%
	No	4	33%
	<b>Total</b>	<b>6</b>	<b>100%</b>

Source: own survey result (2021)

**Table 8- 1 coordination between departments–production department responses**

Questions		Frequency of responses	
		In Number	In percentage
There is Lack of management support and leadership	Yes	10	67%
	No	5	33%
	<b>Total</b>	<b>15</b>	<b>100%</b>
How strong do you think is coordination among production departments, store department and purchase department of The industry?	Very Strong	0	0%
	Moderately Strong	15	100%
	Weak	0	0%
	<b>Total</b>	<b>15</b>	<b>100%</b>

Source: own survey result (2021)

As seen in Table 7 & 8, all employees of storing and production department think there is a moderately strong coordination between the three functions, and all purchasing department employees think that the coordination is highly strong. However, the findings discussed in the above paragraphs make the researcher to question on existence of problem of coordination between departments.

**Table 9- 1 coordination between purchasing departments**

Questions	Frequency of responses		
		In Number	In percentage
How often purchased inventory items have got a problem of defect?	Most of the time	0	0%
	Rarely	0	0%
	Very Rarely	15	100%
	Never	0	0%
	<b>Total</b>	<b>15</b>	<b>100%</b>
Do you think purchasing of inventory items is timely done to maintain the level of inventory items?	Yes	14	93%
	No	1	7%
	<b>Total</b>	<b>15</b>	<b>100%</b>
How often does your department face problem of delay to authorize the purchase order request by top management?	Always	3	20%
	Most of the time	9	60%
	Never	3	20%
	<b>Total</b>	<b>15</b>	<b>100%</b>
How does a delay on finance department in processes of preparing the payment of suppliers affect your work?	Highly	13	87%
	Moderately	2	13%
	Minimally	0	0
	It doesn't affect	0	0
	<b>Total</b>	<b>15</b>	<b>100%</b>
How strong do you think is coordination among production department store department and purchase department of the industry?	Very strong	15	100%
	Moderately strong	0	0
	Weak	0	0
	<b>Total</b>	<b>15</b>	<b>100%</b>
How does the delay on processes of central store receiving inventory delivery affect your work?	Highly	15	100%
	Moderately	0	0
	Minimally	0	0
	<b>Total</b>	<b>15</b>	<b>100%</b>

Source: own survey result (2021)

## **4.4 Problems associated with inventory management of the company**

### **4.4.1 Lack of coordination**

As discussed in (Toomey, 1996) desired organizational structure is a means to get jobs done for better end. In some cases, material managers at corporate level might have direct or indirect control on purchasing, production planning and production control functions while in other cases the manager has control over only on receiving and storing, shipping, and production control function. The latter case is called Decentralized system. The problems of using this system are conflict of interest, communication problems and others. Lack of coordination between top management & departments and between departments are also problems of Decentralized management.

The researcher has observed existence of the problems in Habesha Cement Share Company. According to material manager of the company, production department of the company doesn't bring order sheet to stores on time (by considering the time it takes to process the order, to transport and make raw materials ready for the process), this cause late delivery of raw materials to production. As a result, manufacturing process is interrupted because machines are kept idle and productivity is adversely affected. Uninterrupted production is also achieved if materials are purchased on time. Although it doesn't seem dominant, 20% of purchasing department employees (as shown in table 9) responded that purchasing is not done on time. Similarly, problem of replenishing order is a problem seen storing function because replenishing is mostly initiated by order that optimum level.

Lack of coordination also exists between top management purchasing departments. 60% of purchasing department employees confirmed that there is a delay in authorization of POs by top management most of the time, 20% answered it always happens and there mining aid it never happens. As confirmed by store employees (Table 5) and the interview conducted with material manager of the company, defects in items received occur but all respondents of purchasing department were asked the same question and they answered it happens rarely. This shows that the purchasing department doesn't make sure that materials they ordered have been received or not. The effect of lack of coordination on getting jobs done is also confirmed by employees' of purchasing department. 87% of the respondents think delay of finance department in payment highly affects their work and 13% of the respondents think it affects moderately. All of the respondents agreed that a delay in receiving function highly affects their work highly.



**Table 10- 1 Insufficient Storage Space: Store Department Responses**

Questions		Frequency of responses	
		In Number	In percentage
Do you have sufficient spaces to handle the inventory items properly in your warehouse?	Yes	0	0
	No	3	100%
	<b>Total</b>	<b>3</b>	<b>100%</b>
What types of inventory items mostly occupy space more in your warehouse?	Fast moving	0	0
	Slow moving	3	100%
	<b>Total</b>	<b>3</b>	<b>100%</b>
Is there a problem of not keeping slow and fast moving items separately?	Yes	2	67%
	No	1	33%
	<b>Total</b>	<b>3</b>	<b>100%</b>
There are inventories which are kept outside stock and vulnerable to theft	Agreed	3	100%
	Strongly agree	0	0%
	Disagree	0	0%
	Strongly disagree	0	0
	<b>Total</b>	<b>3</b>	<b>100%</b>
Are there inventories in your stock which are kept idle?	Yes	3	100%
	No	0	0%
	<b>Total</b>	<b>3</b>	<b>100%</b>

Source: own survey result (2021)

#### 4.4.2 Insufficient storage space

As shown in Table 10, 100% of the employees agreed that there is a problem of insufficient space to handle inventory. All of the respondents confirmed existence of slow moving and idle stocks in store. Slow moving items should be kept separately from fast moving items for more accurate determination of their carrying cost and better managerial decision. Yet, 67% of the respondents answered that there is a problem of not keeping them separately. The interview with Material manager of the company also assured that approximately 5 to 10% of inventories in stock are obsolete. The existence of slow moving, idle and obsolete inventories are the main causes of insufficient storage space in the company. Because of this there are inventories which are kept outside stores and vulnerable to theft.

From the above analysis the researcher can observe lack of storage space due to poor inventory management

.Managerial decisions are the main answer to such issues.

#### **Interview with the IT department staffs**

The extent to which the respondent's agreement on the statements concerning information technology related to inventory management is presented in the table below using percentage and frequency.

**Table 11- 1 Assessment of Information Technology Practices: IT department response**

Questions		Frequency of responses	
		In Number	In percentage
Is there Availability of proper inventory Management software?	Yes	0	0%
	No	3	100%
	<b>Total</b>	<b>3</b>	<b>100%</b>
Does IT department help other departments in Generating of real time inventory reports?	Yes	0	0%
	No	3	100%
	<b>Total</b>	<b>0</b>	<b>0%</b>
Does the IT department tries to Improve coordination between departments?	<b>Yes</b>	2	67%
	<b>No</b>	1	33%
	<b>Total</b>	<b>3</b>	<b>100%</b>

Source: own survey result (2021)

As shown in Table 11, all respondents (100%) agreed that Habesha Cement Share Company have no proper inventory management software to manage its inventory. And also 100% of respondents agreed the company inventory controls not supported by information technology. The interviewee with the IT manager also assured that the Company have no computerized system to control its inventory management activities. This implies that respondent's response and the interview results confirmed Habesha Cement Share Company did not use information technology to manage its inventory stock. As the interviewee said, 67% of the respondent agreed with the statement "IT department tries to Improve coordination between departments "and the remaining 33% disagreed.

#### 4.4.3 Absence of computerized system

These days computerized system of inventory management is becoming more common because of its time saving advantage. Manual systems are highly labor intensive and hard to communicate. They are also more vulnerable to misstatement because they rely highly on the action of people. However, from the above table obtained by the researcher and interview with IT manager of the company, manual system is used and most practiced one in Habesha Share Company. Stock card which contains about value, location and other details is used.

#### 4.4.4 Lack of knowledge and skill

Successful inventory control requires both knowledge and motivation. The importance of education cannot be overemphasized. This concerns not only an initial implementation phase. An inventory control system should be seen as a tool that can be applied more or less professionally. How the tool is used is often more important than the design of the tool. To gain the advantages of a more advanced tool, the user needs a better education and training. (Axsäter Seven, 2015)

As observed in the research process, the employees in stores function don't have enough knowledge about inventory management techniques and policies. A question was asked to material manager of the company whether inventory management policy exists in the company and the answer given it that there might be (not sure). The manager said that the practice is done based on experience from the past and that he has never participated in any training in relation to inventory management. Only three store keepers exist in the company which shows that there is man power shortage in the function. This imply that most staff involved in this operation tied in the routine work to cover manpower shortage at operation instead of undertaking professional undertaking to manage inventory effectively.

### **What is being done to improve inventory management of the company?**

According to the interview with IT department manager of the company, Habesha Cement Share Company is in the process of adopting a system called ERP. According to (Toomey, 1996) ERP is the system that attempts to plan from supply and demand information taken across the entire network. It will attempt to rebalance supply and demand at each transaction point in the chain. The system will compare both actual through put of the supply chain and capacity utilization against customer demand over an extended period of time. It involves company-to-company interfacing with in the network. By adopting ERP system the company can overcome most of its problems in inventory management. As discussed by (CompuData , 2016)ERP will help JIT inventory system by

- Automated management of bill of materials- with proper BOM management the company can determine when it needs to order more materials and when to halt or slow down orders.
- Implementing lean strategies- helps for continuous business process improvement to eliminate excess cost.
- More accurate forecasting- employing ERP system with easy data analysis and reporting features for demand forecasting, the company can quickly plan production capacity ahead of time.

## **Discussions of results**

As per the researcher observed the major inventory management problem in Habesha Cement Share Company is Lack of knowledge & skill of the employees of stores and by the overall staff about inventory management to handle the inventory management system of the company. As a result, another researcher,(Girma, 2016)conducted on the major problems of inventory management found out that the major problems of inventory management are- lack of attention of store management, lack of assigned qualified employees to the right position on the right time, no planning mechanism to solve problems to improve inventory management and controlling system and lack of work performance evaluation of employees of the warehouse. As far as the researcher result agreed with the aforementioned researcher results.

The researcher observed lack of management support, Absence of computerized system in stores and lack of technology support by the IT team, of the company is another challenge for Habesha Cement Share Company. As a result, a study by (Azeb ,S., 2017)on challenges and practices of inventory management also concludes that inventory management skills level of personnel involved was poor and most of them did not know methods to be used in controlling inventory and those for quantifying commodities needed. Other challenges faced, weak management system, lack of proper training of inventory management, insufficient funds for procurement, lack of technology in inventory management is also another challenge. Among the result that wasproved by (Azeb ,S., 2017) and this study results agreed on lack of management support and lack of technology in general are the major problem of inventory management system of Habesha Cement S.C.

The researcher also observed that the purchasing department employees confirmed there is delays in authorization of POs by top management and it affect the purchasing process of the company. This finding also supported to (Demisse, 2015) that was conducted factors affecting the effectiveness of inventory control, on problem area of long purchasing processes system and factors affecting inventory control problem on lack of knowledge and training of employees.

(Morgan, 2009) conducted a research study in United States of America on inventory management performance in case of Alien Technology Corporation. The findings revealed that efficiency inventory management of the Alien Technology Corporation is achieved by applying just in time purchase by assuring smooth and well maintained relationship with suppliers of materials to ensure constant supply when the corporation is in need of raw materials to facilitate production. As per the above research finding, this research contrary conducted, as a result there is not maintained smooth relationship with forward relationship and backward relationship.

Moreover, this study proved insufficient storage space due to significant number of idle, slow moving & obsolete inventory and not keeping these items separately and in addition, is the vital problem of inventory management system. As a result, items are kept outside & vulnerable for theft.

## CHAPTER FIVE

### 5. SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATION

In this chapter the researcher tried to make conclusion about the effectiveness of Inventory Management in Habesha Cement Share Company based on the findings discussed and interpreted in chapter four. Recommendations were given to the concerned bodies in the studied Habesha Cement Share Company.

#### 5.1 Summary of Findings

The purpose of this study is to assess effectiveness of inventory management in manufacturing companies particularly in Habesha Cement Share Company by giving emphasis to practice and techniques of inventory management, problems associated with inventory management & their consequences and improvements in the inventory management system. Summary of findings of the study is discussed as follows.

The finding on inventory management practices show that the company inventory valuation system is perpetual inventory system.

Raw materials and supplies are acquired from local & foreign suppliers. Local purchases are made based on requisitions & by using properly authorized and approved POs when they are needed, and foreign purchases are made based on MRP when foreign currency is available.

Stores function of the company receives goods, checks their quality, returns defective goods from local suppliers immediately and informs suppliers for foreign defective goods. The store then releases the goods when they are needed by departments by reconciling approved material requisitions and order sheet presented but no checking thereafter.

Accounting and finance function of the company plays significant role in inventory management by recording movement of inventory, registering GRN & comparing with POs and preparing inventory related reports such as consumption, inventory stock status, stock reconciliation, Inventory valuation & material variance report.

The problems associated with inventory management of the company include:

- ✚ Lack of coordination between stores and production, purchasing and production, & top management and purchasing.
- ✚ Insufficient storage space due to significant number of idle, slow moving & obsolete inventory and not keeping these items separately. As a result, items are kept outside & vulnerable for theft.
- ✚ Lack of knowledge & skill of the employees of stores and by the overall staff about inventory management.
- ✚ Absence of computerized system in stores.

## 5.2 Conclusion

From the finding about inventory management practices and techniques of the company presented in section 4 of this study, the researcher can conclude that the practice & techniques are strong enough.

Reasons for this conclusion are; Use of perpetual system which helps the company to compare with the physical inventory level and to figure out causes if inventory level discrepancies occur by updating inventory level regularly.

(Samuel, 2014) points out that there is failure in the company inventory management system since most of them are not have capable computerized inventory system and such firms tend to have huge inventories due to poor planning. It is also difficult to compete the competent to stay in the business sector

Proper authorization process of POs which helped the company to ensure that the proper and necessary quantities are purchased since excess purchase of inventory leads to higher carrying cost.

Keeping up-to-date inventory records & reporting periodically the current condition of inventory for managerial decisions by the accounting and finance.

However, improvement is needed because clear standards and policies of inventory management are not present. This leads decisions to be made based on customary practices, opinion of managers and internationally set standards and makes decisions to be more time taking and inefficient.

From the findings on the problems associated with inventory management of the company with their associated effects presented the researcher can conclude that the inventory management system is ineffective. Reasons for this conclusion are:

- i. Lack of coordination between purchasing, production, stores and top management of the company which is causing communication problems, purchasing and production delays, and loss of orders.
- ii. Lack of knowledge and skill of the employees in stores function, Along with managerial decision problems, lack of knowledge has led the company's store to be insufficient for the inventory items. Significant amount of obsolete, slow moving and idle inventories are occupying the space in store, and they are not kept separately from other items. As a result, some inventories are kept outside store and vulnerable to theft.
- iii. The researcher can also conclude that the problems seen have negative impact in the company's performance. This is because the findings show that the company frequently loses sales opportunity due to lack of proper inventory control in store and as a result customers are dissatisfied.
- iv. Use of manual system of inventory management which has led the employees to be tied up in routine manual works than striving for improvement of the system and an computerized systems.



From the overall data analysed in the study, the researcher can conclude that the Inventory Management system of Habesha Cement Share Company needs improvement.

### **5.3 Recommendations**

make the inventory management of Habesha Cement Share Company more effective. And the researchers categorises all the recommendations as:

Inside the organization, the company is recommended to:

1. To have its own standards and policies of inventory management and they should be communicated properly to the concerned bodies.
2. Should keep certain amount of reserve inventory in store to handle urgent orders by departments between purchasing, production, stores & other departments.
3. Conduct inventory count more frequently (like semi-annually, quarterly) for better control of inventory. And also conduct surprise counts.
4. Should keep slow moving, obsolete and idle items separately from others so that their amount can be determined easily and decisions on them can be made on time. Writing expiry dates on items would also help to avoid obsolescence.
5. The managers should create awareness to the stores and other related departments' employees so that they will have better knowledge about inventory management technique of the company so that they can apply it.
6. The company is also advised to provide training opportunity for the store employees.
7. Adopting computerized system with the latest inventory management software is a mandatory.
8. The managers should also be updated about latest accounting and inventory management techniques so that they can consider adopting them.

Inside the government, as a developing country the government is recommended to:

- a) Should give support on investor's government policies by making things easy to join the market and to create a competition among the companies.
- b) Taking the overall control on those companies which create market inflation.
- c) Support the companies on free taxation when they accommodate machines.

Inside the stockholders, as stockholders it is recommended to:

1. Create a joint venture to expand their power to produce and balance the demand and supply of cement.
2. Form a friendly relationship with other stock holders by helping each other for better performance.

#### **5.4 Areas of Further Research**

Despite the successes scored during the study, some factors have not been properly accounted for due to its scope. It is therefore suggested that further research should be done on some topics related to this one. In this regard, the researcher recommends further research in the following areas:

- i) How to reduce the Poor Inventory Practice of Habesha Cement Share Company.
  - iii) To determine stock record practice improvement at Habesha Cement Share Company.
  - iii) To identify the relevance of improved staff skill in inventory control at Habesha Cement Share Company.
- These areas must be evaluated further because they seem to be the major promoters of problems of inventory control at the Inventory Management system of Habesha Cement Share Company.

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Appendix

Appendix

**ST.MARY UNIVERSITY –SCHOOL OF BUSINESS ADMINISTRATION**  
**INVENTORY QUESTIONARIE**

**Appendix1:Questionnaires**

This questionnaire is designed primarily for collecting data which will be used in writing up master's thesis entitled“ Assessment of inventory management system in case of Habesha Cement Share Company.”So,you are kindly requested to give the right answer you think, since it contributes a lot for the success available of this study. And the final result may be available to you up on your request so that it may be valuable information regarding the issue of being researched since it offers a fresh and independent observation. I would also like to forward my thanks in advance for your corporation.

**Instruction**

- As for the guarantee of confidentiality you are not required to give your name.
- You may decline or leave any questions blank that you do not wish to answer.
- Please use cross mark(√)in the relevant boxes to indicate your response.

**I. Respondent profile**

Gender  Male  Female

**II Educational background**

1. Diploma  2. 1<sup>st</sup> Degree

3. Masters  4 PhD

**III Work position and year of experience**

1-5	<input type="checkbox"/>	10-15	<input type="checkbox"/>	20-25	<input type="checkbox"/>
6-10	<input type="checkbox"/>	16-20	<input type="checkbox"/>	25-30	<input type="checkbox"/>

## Questions for Production Department

1. Does your industry have policies and procedures to keep inventory level that avoid excess inventory?

A) Yes  B) No

2. Is there optimal level of inventory management in the industry?

A) Yes  B) No

3. Which types of industry management techniques does the industry follow?

- A) EOQ  C) JIT   
B) ABC  D) StockLevel   
E) Others

4. Do you think the company is using appropriate inventory management technique?

A) Yes  B) No

5. Is there Lack of management support And leadership?

A) Yes  B) No

6. How strong do you think is coordination among production departments, store department and purchase department of the industry?

- A) Very Strong  B) Moderately Strong   
C) Weak



## Questions for Store and quality control Department

1. How often does the industry count/check its inventory?

A) Monthly

B) Semi annually

C) Annually

D) Others

2. Do you agree that in the current situation, inventory control management practice is well organized and effectively performed to manage, control inventory items to keep safely and handling?

A) Strongly Agree

B) Agree

C) Disagree

D) Strongly Disagree

3. Is there Lack of man power to manage the inventory?

A) Yes

B) No

4. Do you have enough knowledge about the company inventory management policies and procedures?

A) Yes

B) No

### Questions for Purchasing Department (PSCD)

1. Can your company easily get the raw material and supplies from local market to stock?

A) Yes  B) No  C) Sometimes

2. Do suppliers respond as per your request ontime?

A) Always do  B) sometimes do  C) they don't

### Questions for Purchasing department & other departments

1. How often purchased inventory items have got a problem of defect?

A) Most of the time  B) Rarely

C) Very Rarely  D) Never

2. Do you think purchasing of inventory items is timely done to maintain the level of inventory items?

A) Yes  B) No

3. How often does your department face problem of delay to authorize the purchase order request by top management?

A) Always  B) Most of the time  C) Never

4. How does a delay on finance department in processes of preparing the payment of suppliers affect your work?

A) Highly  B) Moderately

C) Minimally  D) It doesn't affect

5. How strong do you think is coordination among production department store department and purchase department of the industry?

A) Very strong  B) moderately strong  C) Weak

### Questions for Store Department

1. Do you have sufficient spaces to handle the inventory items properly in your warehouse?  
A) Yes  B) No
2. What type of inventory items mostly occupy space more in your warehouse?  
A) Fast moving  B) slow moving
3. Is there a problem of not keeping slow and fast moving items separately?  
A) Yes  B) No
4. Is there inventories which are kept outside stock and vulnerable to theft?  
A) Agreed  B) Strongly agree   
C) Disagree  D) Strongly disagree
5. Are there inventories in your stock which are kept idle?  
A) Yes  B) No
6. How often do you find defective inventory material can be seen in receiving process of your warehouse?  
A) Many Times  B) Sometimes   
C) Always  D) Never
7. How often do you face problem of receiving dissimilarity of purchased items with sample received items?  
A) Sometimes  B) Always   
C) Never  D) Other
8. Is there a problem in warehouse in ordering the purchase request to maintain (replenish the inventory items)?  
A) Yes  B) No
9. How strong do you think is coordination among production departments, store department and purchase department of the industry?  
A) Very Strong  B) Moderately Strong  C) Weak
10. Store and quality control departments compare quantities received against receiving reports?  
A) Yes  B) No

**INVENTORY QUESTIONARIE**

**Appendix 2: Interview Question**



**Questionnaires for the focused group and IT department respondent**

1. How do you describe the internal inventory management system Habesha Cement Share Company?
2. Does the company use the information system to manage its inventory?
3. Are there any problems on the inventory management system of the company?
4. Did you observe the contribution of IT to control inventory management systems?
5. What type of inventory management techniques does Habesha Cement Share Company used in handling inventory?
6. What is the reason to choose this techniques does Habesha Cement Share Company used in handling inventory?