EFFECTIVENESS OF INVENTORY CONTROL IN THE PUBLIC ORGANIZATION:

CASE STUDY OF MEDICAL STORES DEPARTMENT

(MSD)
EFFECTIVENESS OF INVENTORY CONTROL IN THE PUBLIC ORGANIZATION:

CASE STUDY OF MEDICAL STORES DEPARTMENT (MSD)

BY

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MSC/PSCM/DCC/034/T.11

A Dissertation Submitted in Partial Fulfillment of the Requirement for the Degree of Masters in Procurement and Supply Chain Management of Mzumbe University
CERTIFICATION
We, the undersigned, certify that we have read and hereby recommend for acceptance by the Mzumbe University, a dissertation entitled Effectiveness of Inventory Control in the public Organization: Case Study of Medical Stores Department (MSD), in fulfillment of the requirements for award of the degree of Master in Procurement and Supply Chain Management.

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ACKNOWLEDGEMENT

My heart full gratitude goes to our Almighty God who is the provider of everything for granting me with knowledge, power and breath. Also for His encouragement and strength whenever I felt that I have lost hope.

Mzumbe University under the department of Business Studies practically my supervisor Nora Msuya who offered me with knowledge, and shared experience concerning all the parts of this research work but mostly important for supervising me.

Special thanks goes to all my respondents who were ready to sacrifice their time but mostly important to reveal the real inventory control practice situation within their organization. Without them this work would not move even a single stage.

Lastly it is hard to mention each by name who had a helping hand in fulfillment of this work but you just have to know that I appreciate and recognize your contribution.

MAY GOD BLESS YOU ALL
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<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tr>
<td>CC</td>
<td>Carrying Cost</td>
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<tr>
<td>e.g</td>
<td>For Example</td>
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<td>EOQ</td>
<td>Economic Order Quantity</td>
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<td>FEFO</td>
<td>First Expired First Out</td>
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<td>FG</td>
<td>Finished Goods</td>
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<td>GAAPS</td>
<td>General Accepted Accounting Principles</td>
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<td>i.e</td>
<td>That Is</td>
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<tr>
<td>JIT</td>
<td>Just In Time</td>
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<td>LPO</td>
<td>Local Purchase Order</td>
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<td>MOS</td>
<td>Margin of Safety</td>
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<td>MSD</td>
<td>Medical Stores Department</td>
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<td>NGO</td>
<td>Non-Governmental Organization</td>
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<td>OC</td>
<td>Ordering Cost</td>
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<tr>
<td>PPRA</td>
<td>Public Procurement Regulatory Authority</td>
</tr>
<tr>
<td>QU</td>
<td>Quality Unity</td>
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<tr>
<td>TB</td>
<td>Tuberculosis</td>
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<tr>
<td>TFDA</td>
<td>Tanzania Food and Drugs Authority</td>
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<tr>
<td>WIP</td>
<td>Work In Progress</td>
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ABSTRACT

The study aimed at determining the effectiveness of inventory control in a public organization where the Medical Stores Department (MSD) central zone was used as a case study. The objectives of the study were to analyze the principles established for controlling inventory, to determine the contribution of inventory control, to identify the problems that affect the inventory control and to suggest the appropriate method for inventory control for the organization.

The study combined the use of different data which were primary and secondary data methods. The primary data included the use of different techniques such as interview, questionnaires and observation to gather information. The secondary data included the review of various documented records of the organization concerning inventory, official reports of the inventory, inventory control working papers such as special order form, delivery note and a gate pass. The researcher presented and analyzed data by using both qualitative and quantitative methods and also tables and simple statistics like percentages were used to present data.

The findings revealed that MSD has set inventory control principles to undertake for proper inventory control and such principles were; principle of controlling inventory when receiving the items, principle of controlling inventory during inspection of items, principle of controlling inventory on quality issues, principle of controlling inventory during issuing of the items and the principle of controlling inventory for rejected items. Also the appropriate method for controlling inventory at MSD was First Expired First Out method.

The findings made the researcher able to conclude that there was effective inventory control at MSD. It is the recommendation of this study that computerized system should be adopted to reduce paper work as papers may get lost easily, management should improve security of the items in the warehouse to prevent theft. It is also recommended that there should be proper allocation and record keeping of the items, classification of items should be used in order to save time when retrieving the items from the warehouse. The management should employ people with relevant skills in the warehouse department, new systems of arrangement in the store should be adopted and coding methods should be used and closed monitored in order to help the whole process of storing and retrieving the items in the warehouse.
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CHAPTER ONE
AN OVERVIEW OF THE STUDY

1.0 Introduction
This chapter consists of background of the organization, background of the problem, statement of the problem, research objectives, research questions, scope of the study, significance of the study, limitation and delimitation of the study.

1.1 Background to the Study
For most organizations, the investment in inventory is a substantial one because maintaining inventory allows the organization to independently perform the key activities of purchasing, production, and selling. Without adequate inventory managing these three activities would not be completely controlled by the firms. Firms they need to be able to perform their operations or activities on time and hence scheduling these three important activities on time is their major concern.

Many distributors suffer stock-outs of popular product (when to order a product) because replenishment order of these items are not issued at the right time, thus failed to determine which characteristics of product must be considered in making this decision, including the difference between managing raw material and finished goods inventory. Stock out problem is the result of poor forecasting of the items required in the production or items needed by the organization. This stock out problem may result to a loss of a customer goodwill and also it destroys organization name. There are also still exists the problem of determining the replenishment quantity (how much of a product to order). And the methods appropriate to control this include the economic order quantity, determining the proper purchasing when faced with several discount options, and a check list to present new stock items from becoming dead stock. Knowing what to order and when to order will help an organization to know and perform its operations on time. Every organization should know what to order and when to order before running out of stocks.

A number of firms or companies do also put more efforts rather than managing inventory; this may be due to the fact that management considers inventories to be composed of items which can be easily subjected to theft/fraud. However the fact remains intact that inventory forms an important part of asset for any organization in a
country. In order for the organization to safeguard the organization’s inventory, the clear procedure and principles has to be developed and established so as to abstain from fraud or theft of inventory and also making proper handling and control of the inventory by using proper inventory control method. Without proper principles and guidelines to follow, the whole process of controlling inventory in an organization that deals with large number of inventories like MSD will eventually fail to grow.

1.2 Statement of the Problem
For many years, many firms in Tanzania are faced with the problem of incurring unnecessary costs due to the improper evaluation of inventory control. Most of these manufacturing firms have to some extent failed to answer the three basic questions in inventory control. These questions are what to order, how much to order and when to order. This problem arises as result of poor management inventory in connection with receiving, storage, movement of inventory within and outside the organization and proper inventory control method.

Consequently accounting for inventories requires proper records, control and inventory valuation as per accounting guidelines and policies of any organization. It is very useful if these guidelines and polices enable an accountant to arrive at inventories balances, which should match with what has been brought in. This will bring about true and fair view of the organization financial statement. Contrary to guidelines and policies, there have been malfunctions pilferage and incorrect valuation of inventory to the balance sheet, error in recording and poor valuation of inventory. This study therefore, was seeking to evaluate the effectiveness of inventory control in an organization, see the contribution of inventory control for the success of an organization be able to identify the problems hindering effective inventory control, and the researcher also tried to find out if inventory are being executed in accordance with organization policies, regulations and in accordance with generally accepted accounting principles (GAAPS).

1.3 Research Questions
The research study aimed at answering the following research questions as far as mentioned topic is concerned by using the case study of MSD in Dar es Salaam

1.3.1 The General Question
Is there effective inventory control at MSD?
1.3.2 Specific Questions
(i) What are the principles established to control inventory in an organization?
(ii) What contribution does inventory control have on the success of the organization?
(iii) Which problems hinder the effective inventory control in an organization?
(iv) What are the appropriate methods for controlling inventory in an organization?

1.4 Objectives of the Study
The study had both general objective and specific objectives.

1.4.1 The general Objective
To determine effectiveness of inventory control by using the case study of MSD in Dar es Salaam.

1.4.2 Specific Objectives
(i) To analyze the principles established for controlling inventory in an organization.
(ii) To determine the contribution of inventory control on the organization.
(iii) To identify the problems that affects the inventory control in an organization.
(iv) To suggest the appropriate methods for inventory control in an organization.

1.5 Scope of the Study
This study was conducted at MSD, which is located in Dar-es-Salaam City. The study based specifically on such areas as Procurement department, warehouse department and transportation department. The study examined effectiveness of inventory control in an organization. The researcher concentrated on the system of procurement in controlling the inventory, storing them, and transporting them to where be needed and prospective methods and principles applied. Due to the wide coverage of this topic other departments e.g. Accounts/Finance department and any other department were consulted for further information and evidence when needed. Some of the organization suppliers and few customers who have dealings with the organization were also consulted for obtaining information for the study. The researcher wanted to know if the suppliers were paid on time and if the customer’s deliveries reached them on time too. This is because the relationship between a customer and the organization can be used judge the success of the organization on how it satisfies its customers.
1.6 Significance of the Study
Generally the significance of any study work is either for acquisition or addition of new knowledge or problem solving; however this research also had the following significances:

i. The study enabled the researcher to gain practical experience on the procurement concerning inventory control by combining theoretical skills and practical skills. This has helped the researcher gain an understanding on how to answer the three basic questions of how to order, when to order and how much to order.

ii. The study served as a guideline for future reference for researchers intending to study on the similar problem. For academic purposes or further studies that may be conducted, this research will eventually help different other academicians with the same topic or study of controlling inventory.

iii. The finding of the study provided good challenge and provides a clear picture for the organization to overcome problems regarding inventory control and suggest possible solutions. Organization is able to know how to go about controlling their inventories. It helps them to receive and stock their items properly and be able to determine ordering points.

iv. The evaluation and recommendations of this study provided a clear picture on how a firm can improve its inventory control system. Without proper inventory control systems an organization with large number of inventories will obvious be unsuccessful.

1.7 Limitation of the Study
During the research period the researcher had the following limitations:

(i) Lack of funds; this required a researcher to limit the scope of his/her analysis, the size of his sample, as it can be a significant obstacle in conducting research. The researcher has to cater for all the costs incurred in the whole study.

(ii) Lack of prior research studies on the topic; citing prior research studies forms the basis of the literature review helps to lay a foundation for understanding the research problem a researcher is investigating. There are so many research works done but finding the ones that are relating to the study was difficult. The
researcher had to work relying the available studies and other research works available at the time of study.

(iii) Access; a study depends on having access to people, organizations, or documents and at times a researcher was denied or otherwise limited the access to them. Many employees were scared to cooperate with a researcher for the fear of being referred as the ones giving out organization information and also for the fear of them losing their jobs or get any punishment. Employees don’t want to look like they have betrayed their organization hence they see it is better to stay quite than to contribute anything.

(iv) Longitudinal effects; time to investigate a research problem and to measure change or stability within a sample was constrained by the due date of the assignment. One has to choose a topic that did not require an excessive amount of time to complete the literature review, apply the methodology, and gather and interpret the results.

(v) Cultural and other type of bias; we all have biases, whether we are conscience of them or not. Bias is when a person, place, or thing is viewed or shown in a consistently inaccurate way. Many researchers are faced with this problem. Employees of the organization always show biasness to the researchers. Some employees usually pays less attention to the researchers.

(vi) Confidentiality, some of the employees that the researcher managed to have on the spot interview; were reluctant to give what is the real practice in the organization for fear that the information collected can be presented to the management and investigation can be made to the concerned staff.
CHAPTER TWO
LITERATURE REVIEW

2.0 Introduction
This chapter introduced the conceptual definitions and terminologies used throughout the entire work, followed by the review of the available literature coupled with empirical and theoretical studies. The purpose of doing literature review was to make the researcher familiar with the problem; so as to enable her to come up with the solution to the problem through experience gained from the literature.

2.1 Theoretical Literature Review
In reality, inventory control function in any organization has been an area of great concern to management. Scholars and professionals alike have written much on how monies are misused in respect of procurement and supplies. In some cases, resources of inferior quality or excess of normal requirements are procured just in case. As a result inventory worth of millions of money are held with no use.

A lot has been said about savings though efficient purchasing and inventory management, but little has gained through it in both public and private sectors/organization (Compton 1981). Saving in inventory is an important matter as inventory itself include many costs alongside it like carrying cost, holding cost, transportation cost, stock out cost, ordering cost and many others. In developed countries for example, inventory values held by industries and Trade is usually a high (and unseen) proportion of gross national products.

In UK, for example, the annual sum is seldom less than ten of billions of pounds, varying from year to year according to the state of trade, value of currencies, prices and other factors (Compton 1981). Similarly inventories carried by a company are considerable proportion of its total output and its total belongings.

Despite of great importance of inventory control envisaged above, the supplies function has been envisaged as a second –class activity manned usually by incompetent staff. Management spends great efforts on sale promotion, production and administration of finances, but they tend to ignore the importance of stores management while it is also an important factor in controlling the inventory. They assume that every individual trained
or not can manage stores and materials; this is misconception of the importance of inventory control routine.

2.2 Types of Inventory
Inventories consist of raw material, work-in-process and finished goods which are held by a business in ordinary course of business, either for sale or for the purpose of using them in the process of producing goods and services. Lucey (2003) in the book titled Management Accounting classifies the types of inventories into:-

i. Raw Material
Raw material is a type of inventory which acts as the basic constituent of a product. For example cotton is raw material for cloth production and plastic is raw material for production of toys. Raw material is usually held by manufacturing companies because they have to manufacture goods from raw material. They are the source of every finished product in the manufacturing and production companies.

ii. Work-In-Process
Work in process is a type of inventory that is in the process of production. This means that work-in-process inventory is in the middle of production stage and it is partly complete. Work-in-process account is used by manufacturing companies. Manufacturing companies keeps WIP for two purposes, one is to keep the WIP for further use so it acts as a storage purpose and the other purpose is to turn WIP into finished products.

iii. Finished Goods
Finished goods are a type of inventory which comes into existence after the production process in complete. Finished goods are ready for sale or distribution. They are the final products obtained from raw materials and WIP. These goods can be sold of can be used by the organization itself to serve their needs.

2.3 The Need for Inventory Control
Inventory control is quantitative control technique with strong financial implications that any organization needs to consider. For many organizations inventory control is perhaps the single most important control technique which is crucial to the organization
and having direct relationship with production, marketing, purchasing and financial policies. In his book, Owlet L.W.J says “Stock control is the means by which material of correct quantity is made available and when required, with due regards to economy in storage and ordering costs, purchasing prices and working capital”.

Inventory control often constitutes a major element of total working capital and hence it has been correctly observed, “Good inventory control is good financial management”.

Drury Colin (2004) in his book Management and Costing Accounting emphasizes on the issue of inventory (stock) control. He says “Investment in inventories represent a major asset of most industrial and commercial organizations and it is essential that inventories be managed efficiently so that such investments do not become unnecessarily large” From the authors point of view it follows therefore that inventories should be sufficient to meet different requirements but at the same time the organization must avoid holding surplus, unnecessary inventories which may increase the risk of loss through obsolescence.

In practice every industry concern or public undertaking has storehouses and find it necessary to keep stores in inventory for one or more reasons. He also said that, people hold stock for three reasons. That is transaction motive where there is need to hold stock to meet production and sales requirements, Precaution motive when demand for the future is uncertain, and speculative motive where there is an expectation increase in price.

“Inventories in stores represent money and should not be misappropriated, wasted or improperly used” this is the contribution of Jossp and Morrison (1968, page 9) in the book titled storage and control of stocks. Before goods can be withdrawn from a storehouse there must be some authority for the transaction.

Tindwa George (1989, page 16) had the following contribution on the issue of inventory control, “Effective controls requires primary attention to those point which are critical to appraising performance, control requires organizational structure which shows the various position of the staff and their duties, plus their responsibilities”

Poor segregation of duties and responsibilities has been a major source of ineffectiveness in any organization if it is not done properly, according to Professor Sharma, NBAA professional seminar (1984). Segregation of duties, therefore, reduces
the risk of intentional manipulation of errors. This is because each individual in an organization can have few duties to concentrate and thus be able to perform well such duties.

He goes on saying that one of the essential qualities of a good control system is the separation of duties which include the following:

- a. Initiation and authorization of transactions
- b. The documentation and recording of transactions.
- c. The custody of the asset involved should preferably be performed by the separate persons.

2.4 Types of Costs Involved In Inventory Control

Mclaney.E (2003), point out that, all businesses normally seek to balance the costs and risks of holding stock with those of holding no or low level of stock. While the costs of holding stocks tend to be fairly certain, if difficult to identify those of failing to hold stocks may or may not occur; that is there is a risk. Thus such costs are in the nature of expected values, where costs are combined with their probability of occurrence.

2.4.1 The Costs and Risks Of Holding Stocks; These Include;

i. Insurance cost: Holding valuable stocks exposes businesses to risk from fire, theft and others of the like against which will usually insure, at cost. Hence holding inventories will cost an organization to pay more to cover for insurance of such items in the warehouse. Every items found in a warehouse needs to be insured and that is a cost which cannot be inevitable. This will only mean an increase in the whole totally cost of holding inventory which is unnecessary cost as an organization can only keep a minimum number of inventory and avoid such holding costs of many items that needs to be insured.

ii. Storage Costs: Holding a large volume of items on hand means you need a large amount of space to store your inventory. Storage space like warehouses and storage rooms cost money to build, rent and maintain and paying for the security for the items stored in it. Storage facilities require workers to categorize and
organize items and transport items from one place to another. In addition, high levels of inventory can lead to higher insurance costs.

iii. Deterioration and Obsolescence: Some businesses sell goods that tend to deteriorate or perish over time, such as food products. Keeping a large amount of perishable inventory on hand risks the possibility that you will be unable to sell some of the inventory in time before it goes bad, which can force you to throw away product. Similarly, certain types of products, such as computers and other electronic devices tend to become obsolete quickly. Keeping a large inventory of such products is risky because consumers might not be willing to buy old versions of products at a price that is profitable when new or updated versions become available.

iv. Shifts in Demand: Another disadvantage of keeping a large amount inventory on hand is that certain goods might not sell due to shifts in market demand. For example, a clothing store that stocks too during the summer may find itself unable to get rid of the stock before fall. During the fall, consumers might demand different types of stock leaving the company with a large quantity of goods on hand that simply take up space. Demand changes from time to time hence holding inventory may cause an organization faced with problem of keeping outdated items in the warehouse.

v. Lost of interest over the items: This could occur as a result of money that is tied up in the stocks. This cost is partly mitigated by a certain amount of free credit granted by suppliers of the stock, which would only be available if stock is brought. An organization may found itself holding large number of inventory which they cannot sell as customers have no interest over such items.

2.4.2 The Cost and Risks of Holding No Stocks: These Include;

i. Production dislocation: this is a cost of no business. This happens when the machines used in production stays idle as the raw materials to be used are unavailable for production purposes. Running out of raw material when other production facilities (factories, machinery, labor etc) are available can be very costly. This is because the machines will stay idle without any work and that is unnecessary cost incurred in the production. If the business runs out of raw
materials to be used in the production, it is probably quite feasible for these to be added at the end of the production cycle rather than at the scheduled stage, without too much costly dislocation.

ii. Loss of flexibility: organization with just a minimum number of inventories cannot change its business depending on the demand as they bound to work depending on the available resources. Businesses that hold little or no stock inevitably lead a “hand to mouth” existence where purchasing and manufacture must be very closely agreed to sales. There will be no production depending on the demand and if the production will match the demand then there will be no sufficient raw materials to produce and cater the available demand of customers. Since there will be no stock on hold, production will be less than a demand available. This may preclude maximizing the efficiency of production runs or of buying materials in batches of economically optimum sizes. An organization with minimum number of items in storage needs to have an arm’s length relationship with its supplier and at times they are encouraged to have develop their own suppliers through supplier development in procurement.

iii. Reorder cost: every organization must know their ordering point or level in order for it to perform well. Any business exciting on little or no stock will be forced to place a relatively large number of small orders with short intervals of time between each one. Each order gives rise to costs including the physical placing of the order (buyer’s, telephone, postage) and the receipt of the goods (store men’s time, costs of processing the invoice and marketing payment). An organization can save this cost through bulky buying which involves consolidation of all the organization requisitions.

iv. Ordering costs: also known as purchasing cost or set-up cost, this is the sum of the fixed costs that are incurred each time an item is ordered. These costs are not associated with the quantity ordered but primary with physical activities required to process the order. For purchasing items these would include the cost to enter the purchasing order and/or requisition, any approved steps the cost to process the receipt, incoming inspection, invoices, processing and vendor payment. It is important that these are costs associated with the frequency of the orders and not the quantity ordered. For the most part, order cost is primarily the labor
associated with processing the order, however may included the other costs such as costs of phone calls, taxes, postage, envelopes, and the like.

v. Holding cost: this includes the totally cost of holding the items in the warehouse (the cost of paying security to guide the items in the warehouse, the insurance cost of the items found in the warehouse, the total cost of building the warehouse and the like). The costs that accrue due to the actual holding of inventory over a time period can vary considerably from one situation to the next. The demand of the items may also affect the period of holding the inventories in the warehouse as the items with large demand may not be kept long in the warehouse unlike the items which their demand is low, they will stay long in the warehouse. It comprises the opportunity cost, insurance cost, warehouse and storage cost, material handling cost, cost of obsolescence and deterioration. The key characteristics of a holding cost are that the cost are varies with the amount of inventory being held and with the length of time that the inventory is held as some items may be stored for long (items with long shelf life) while other items cannot be stored for long.

vi. Stock-out costs: These are the costs associated with running out of/inventory the avoidance of these costs is the basic reasons as why stocks are held in the first instance. The costs include;:- Lost contribution through the lost sale caused by stock-out, Lost of future sales because customers go elsewhere, Lost of customer goodwill, Labor frustration over stoppages, Cost of production stoppages caused by stock-out of work-progress or raw-materials and emergence of procurement cost.

vii. Loss of customer goodwill: Failure to be able to supply a customer owing to having insufficient stock may mean the loss not only of that particular order, but of further orders as well. The extent to which this is a significant risk depends to a large degree on the nature of the trade and on the relative market power of supplier and customer. An organization should make sure that there is strong relationship between the organization and its customers. Customers are very important people in the success of the organization and hence they need to be well treated at all costs.
2.5 Empirical Literature Review
In this section, the researcher tried to relate the study with the same or similar studies done by other researchers. According to research, which was done in the year titled Manage Inventory to Meet Profit Goals by Wolfe Bagby 2004, a case study of USA manufacturing firms had all this to say about this topic of inventory control in manufacturing company.

On his research Wolfe Bagby came up with the following points concerning this topic which are, Manufacturers have strived for improved inventory management systems. The closer they get to carry zero inventories –without sacrificing customer demand –the closer they get to reach that pinnacle of manufacturing efficiency. When the concept of just –in- time inventory management evolved, for example it brought afresh new look at the entire manufacturing cycle, and how it could operate without interruption or non –value-added time costs. Such thinking combined with today’s available technology has brought inventory management systems to a new level.

Manufactures can now meet their customers demand without incurring the costs and burdens that come from stocking excess inventory. Features such as effective forecasting, vendor management and data management control make it possible for manufactures to achieve a much higher rate of efficiency.

According to Sven Axsater (2006) in inventory control said that the control of raw materials to final customer is crucial problem. The total investment in inventories is enormous and the control of capital tied up in raw materials, work in progress and finished goods offers a very important potential for investment.

There are also important inventory control problems in all supply chain. And it is very common that the demand for an item depends on the demand of some other items. An increase or decrease of the demand of such items will eventually mean an increase or decrease of the other demand of items.

Much of this effort deals with building collaborative relationships with the suppliers to the point where by most inventory – related matters can be worked out easily. For instance, a return policy can be structured that gives manufacturers better control over knowing the amount of space that must be allocated for returns of the items and be able to allocate proper space for such items.
Meena Sanford (2001) in purchasing and inventory control argues that, the means of achieving an effective inventory management depend on different factors like, goals or objectives, size of the business, type of staff held such as highly skilled or semi skilled or common men and the experience the business have. However he concluded that, an effective control would be achieved through the following:

The physical count of stocks has to be done by a person other than those responsible for custody or stores of the particular items. The physical counting can be done periodically may be daily, every after three months or it can be done annually. And the employees maintaining stock records are not allowed to involve themselves in stocktaking as by doing so, they will be loopholes for fraud especially when there is shortage or difference as they can cover up the difference and no one will be able to know and tell if there are some items missing.

The movement of stock has to be held completely when the accounting exercise is in progress. An internal audit of stocks has to be conducted throughout the year by making physical count of stocks to be compared with stocks records. The available stock on hand should match the amount of stock on the stores records. This will help to prevent theft of items in the warehouse. And in order to minimize such problem, only authorized personnel should be allowed in the warehouse and their movements should also be monitored.

The periodic reports have to be served to the management showing the damaged or defective stocks, obsolete ones, slow moving ones, and the stocks in excess of normal requirements. This will help the management to know the amount of stock they have on hand, they can decide how to deal with the slow moving items either by selling them at low price or they can give out as donations to those in needs. They can also decide on how to deal with defective items if they can be repaired or if they can just get rid of them as they occupy unnecessary space in the warehouse. And for excess inventory, they have to know the extra inventory they have on hand in order to make sure that the extra stock will act as a security in times of an increase in demand. Also an extra stock will help the management to know how much they need to buy in future in order to avoid over and under stocking of the items in the warehouse. The management should make sure that the extra stock is kept at minimal in order to avoid tying up capital which can be used elsewhere to serve other purpose for the organization.
Where differences or shortages are identified, they are to be disclosed, investigated and corrected. Issues from stores should be made against documents which are properly authorized. Every difference occurred in the warehouse should be justifiable with a proper cause. In case of theft of items in the warehouse, responsible people for such an act should be accountable and be punished accordingly. Precautionary measures in the godowns and warehouse against fire by maintaining adequate fire extinguishers and strictly prohibit smoking in the godowns or warehouses. Proper signs to show that smoking is not allowed in the warehouse should be kept all over the places and that people can see them easily. Also taking in the hazardous items that can easily cause fire in the warehouse should be strongly prohibited in the warehouse.

According to **Tony Wilds (2002)** in best practice in inventory management explained that inventory control is the activity which organizes the availability of items to the customers. It coordinates the purchasing, manufacturing and distribution functions to meet the marketing needs. This role includes the supply of current sales items, new products, consumables, spare parts, obsolescent items and all other supply.

Inventory enables a company to support the customer service, logistic or manufacturing activities in situations where purchase or manufacture of the items is not able to satisfy the demand. Lack of satisfaction could arise either because of the speed of purchasing or manufacturing is too protracted, or because quantities cannot be provided without stocks.

Stock control exists at crossroads in the activities of a company. Many of the activities depend on the correct level of stock being held, but the definition of the term ‘correct level’ varies depend upon which activity is defining the stock. Stock control is definitely a balancing act between the conflicting requirements of the company, and the prime reason for the development of inventory management is to resolve this conflict in the best interest of the business. A conventional supply organization will have many departments including sales, purchasing, finance, quality assurance, contracts and general administration. In some cases there will also be manufacturing, distribution or support services or a variety of industry - specific activities.

According to **Max Muller(2004)** of inventory management control said that inventory itself is usually the primary value they add to customer. These organizations also
provide product information, customer support, pricing, and discounts and rebates as part of their total customer interface. For organizations that sell inventory directly, the inventory itself is usually the primary value they add to the customer. These organizations also provide product information, customer support, pricing, and discounts and rebates as part of their total customer interface.

Traditional – thinking organizations for such a long time have assume that they must carry inventory in stock at large in order to meet demand. Furthermore, accounting systems treats inventory as an asset that is very valuable, which adds value to the company thus increases the importance of holding stock in the company. However, companies that embrace the new production systems like lean, just – in – time (JIT), and/or supply chain concepts understand that they don’t necessarily have to carry inventory in stock. They are only required to have access to it when they need it. Carrying a minimum stock is encouraged mostly in order to avoid tying up capital in held inventories which can be used elsewhere in the company activities.

Companies understand that in many instances information can replace physical inventory and that information is much less expensive than actual inventory. Retailers don’t carry substantial inventories of items just in case they decide to have a special promotion; instead, they plan the promotion in advance and have the manufacturer deliver the inventories just in time for the sale. Manufacturers understand the seasonality of their goods; they make snow blowers in time for the fall/early winter selling season and sandals and swim suits in time for late spring/summer. In fact, some mail – order or internet – based retailers actually carry no stock themselves. They take orders from the customer, and then have their supplier’s drop – ship directly to the customer.

2.6 The Gape Analysis of the Literature Review
From the literatures reviewed, most emphasize by different authors reviewed by the researcher based on reducing costs in inventory and reducing the cost of storage facilities, they also concentrated on improving customer satisfaction by delivering quality products. At the end the reviewed researchers failed to consider the proper ways of managing and controlling inventory to make sure that there is proper flow of inventory from one place to another without any disruptions. Concentrating on reducing inventory costs and reducing the storage cost will not mean anything if there is
no proper way of managing inventory from the beginning and maintain proper flow of inventory. The inventory cost and storage cost will eventually rise when there is poor proper ways of managing flow of inventory from the beginning.

More emphasize was put on handling properly the public funds and catering the public needs without considering the contribution of inventory in creating efficiency in public organization at large. Reviewed authors concentrated on abiding the public procurement regulatory authority (PPRA). The PPRA encourages public organizations to make the best possible use of the public funds and conducting all procurement transactions with honesty, fairness and transparency. Authors did not also consider the proper ways and methods of controlling inventories as they only talked about its role in improving financial position of an organization. Without knowing the proper ways of controlling inventory in an organization, it is difficult to make the proper use of public funds for procurement purposes. Every organization needs to know its suitable method of controlling inventory so as to make sure that procurement is done accordingly.

Most emphasize was on keeping much inventory which means higher handling costs and they did not consider the negative impact of keeping much inventory as much inventory equals to much capital tied up. They also fail to mention the need to improve security systems which enhances safeguarding the organization inventories. This will help to reduce the access made by unauthorized people in an organization and inventory movement within and outside the organization can be closed monitored.

2.7 Conceptual framework
Public Procurement of goods, works and services (Public Procurement Regulatory Authority 2007), has instead that the public procurement policies are based on the need to make the best possible use of public funds, whilst conducting all procurement transactions with honesty, fairness and transparency. For every public money spent should be justifiable on how it was spent to cater for the public needs.

By referring to previous literatures, we can observe that it was highly encouraged at all times to control inventory by following its principles when receiving, inspecting, issuing and rejecting in order to help the organization avoid any problems that may occur and to find the ways to deal with the rejected items. However, it also happens in many cases that companies or organizations fails to abide to those principles or methods
of controlling inventory provided due to different reasons. The best interests of a public should be considered as the public funds are used so they have to be justifiable. Most organizations are only seeking on making profits for their own benefits and forget to improve their performance which will in turn help them increase their success.

The factors that hinder effectiveness of inventory control in many organizations like stock out, difficulties in using computer system for controlling inventory and losing a customer can still be seen despite of all the measures that are taken to eliminate them. In addition, the organizations responsible for the use of public money should ensure that they make proper use of such funds and make sure that inventory is taken accordingly. Catering for the public needs should be their major concern in every public organization in a country. Inventory control for public goods is an important issue in the economic development of the country and it is a key to the achievement of value for money.

On the basis of the previous mentioned points, we can theorize that there would be positive correlations between effective inventory control and each of the following variables: Adequate funds, skilled personnel, Sound record keeping, proper inventory control method and proper inventory control principles.

The variables were chosen considering their effect on the independent variable. The adequate funds will affect the inventory control if the funds are not sufficient enough to cater for the whole process of controlling inventory. Controlling inventory means also mean paying for all the costs necessary that are incurred during the whole process of controlling inventory. Such costs incurred during the process of controlling inventory are holding cost which needs to paid as the items will be held in a warehouse, ordering cost I time of placing an order or also can be referred to as acquisition cost, carrying costs, transportation cost paid for the movement of items within and outside the warehouse, stock out cost which is supposed to be minimized at all cost or eliminated at once and others. Skilled personnel are needed in every organization to make sure that all the activities of the organization are done accordingly because failure to do so may cause improper inventory control at the organization and this will eventually bring losses to the organization. And from our study, skilled personnel are needed the most in order to deal with proper inventory control by making sure that the FEFO method of inventory control is done accordingly.
And also the sound record keeping is required to make sure that there is proper inventory control movement within and outside the organization. Without proper record keeping of the flow of the items, the items can easily get misplaced or stolen. And the inventory control principles are needed to act as a guideline when controlling inventory of the organization. The principles will be there to ensure that inventory is undertaken accordingly. Adequate supervision is important in inventory control and only authorized personnel should have direct access to the inventories. Authorized personnel are going to be held responsible for any misconduct that will occur upon inventory control.

Diagrammatically the conceptual framework can be presented as follows:

**Independent Variables**

- Skilled personnel
- Sound record keeping
- Inventory control principles
- Inventory control methods
- Adequate supervision
- Adequate funds

**Effective inventory control**

*Source: Researcher, 2013*
CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction
This chapter described the methods and approaches that the study applied in conducting the research. This chapter contained the research design, data collection methods which were primary data and secondary data, data collection techniques used which were interview (by also using interviewing checklist), observation, research questionnaires and documentation review (for gathering secondary data), sampling procedures, sample size, sampling method and data analysis method (which involves both qualitative and quantitative methods and usage of percentages were necessary).

This chapter introduced research methodology, where case study was at MSD (central zone) in Dar-es-salaam found at Mabibo, and the main area concentrated upon was the inventory control. The case study provided the opportunity and flexibility in the use of data collection methods, it was possible to come up with a focused study where a single unit was intensively studied, and the information was easily verified on spot through data collection techniques used which were observation, interview, questionnaires and documentation, and hence the researcher was in a better position to secure accurate information about the topic that was studied and be able to make conclusion and recommendations for the organization success as whole.

3.1 Research Design
The reason for choosing a case study design was due to its flexibility to use data collection techniques which were interviews, observations, questionnaires and documentations. Also a case study was less expensive than other methods in terms of consumption and needed resources and also considering the time available to undertake the research a case study was the best option to take.

3.2 Population
Is the totality or the aggregate of all individuals with specified characteristics (Richard 2006). The targeted population comprised of 30 different persons who will comprise of; procurement staffs, warehousing department staffs, transportation department staffs, Accounting/ Finance staffs and short listed suppliers and customers of the organization. From the target population only 20 peoples were given the questionnaires.
3.3 Sample and Sampling Procedures
Sampling helps to select the respondent according to the purpose of the study. From our case, sometimes staff members were chosen from different levels for interviews and the researcher used the interview checklist as a guideline to the interview questions.

3.3.1 Sample Size
The sample size of 20 persons was drawn from a targeted population of 30 people from each of the respective departments and sections/units using judgmental sampling: 6 people from procurement department, 4 people from warehousing department, 4 people from transportation department, 3 people from Supplier who are shortlisted, 3 people from accounting/finance department. The 20 people were given the research questionnaires to fill and only 15 were successful ones as they were returned.

3.3.2 Sampling Techniques
In this study the research employed different procedures and technique to obtain appropriate respondents. Such sampling techniques used were purposive sampling technique and simple random sampling technique.

3.3.2.1 Purposive Sampling Technique
Sample elements respondents were chosen that can fill certain criteria, the study selected respondents for interview that are believed to yield the most comprehensive understanding of the study which included: procurement manager, procurement officers from procurement department, warehouse manager and warehouse officers from warehouse department, transportation manager, accounting and finance officers, suppliers and customers of the organization and thus they were selected for the purposive sampling technique.

3.3.2.2 Simple Random Sampling
The technique involved using of simple random sampling to select the sample respondents at random from the sampling frame without replacement. Each member element of the population had equal chance of being selected for sample. This technique was used to obtain respondents who were given questionnaire at procurement department, warehouse department, and accounting and finance department and transportation department. All respondents were chosen randomly and without being biased for the better results for the study.
3.4 Data Collection Methods and Technique
Different methods of data collection were employed depending on the data sources. The relevant data will be collected effectively using the four main techniques i.e. interview (by the use of interview checklist as guideline to the interview questions), research questionnaire, observation (which was done by the researcher) and documentation review (for secondary data collection).

3.4.1 Primary Data
These are the original observations collected by the researcher for the first time for any investigation and used by them in statistical analysis. This is also referred as first hand data as it is collected for the very first time. It is a method of data collection in which the researcher was involved physically in the exercise of data collection. Primary data was collected through interview, observation and questionnaire.

3.4.1.1 Interview
The study used different questions from one respondent to another depending on the importance and nature of information required from the respondent. The respondents were interviewed privately and one at a time. Using interview checklist as a guideline to the interview questions has helped the researcher to ask similar questions to all the respondents for the better results. Asking same questions to same people has helped the researcher to gain better knowledge of the matter concerned by gathering different views of the respondents over same matter. See the attached interview questions found in annexes on page 64.

3.4.1.2 Questionnaire Administration
The questionnaires were organized and prepared to suit the procurement and warehouse department as well as transportation department. The questions were very simple, direct and self-administered ones for easy response. This method was used because it was considered to be reliable, simple, needs minimum cost and the required data was collected with a minimum number of errors. A total number of 20 questionnaires were distributed and only 15 were returned as successfully questioners which make it a total of 75% out of the 100% distributed. Most of the respondents from the questionnaires were from the procurement department and ware housing department which made the total of 8 respondents out of 15.
3.4.1.3 Observation
The method was helpful to a researcher to collect data or information concerning attitudes, perception, skills and knowledge of the respondent in the problem area which can be easily observed. The researcher recorded facts as he/she saw, listened or experienced in the field. Observation was simultaneously carried out during administration of interviews and questionnaires in the selected area. And large part of information in the research report based on the information obtained from the observation. This is the most reliable data collection technique as the researcher observed all the necessary activities of the organization and come up with the reliable information to make the conclusion and recommendations.

3.4.2 Secondary Data
The major advantage of using this type of data it is that, it is for more economical as the cost of collecting original data is saved and also at times is used as basis comparisons with the primary data the research has previously collected (Rajendra 2008). This is a data that has been already been collected by other people that matches the study. The researcher uses this data to gain better knowledge and understanding of the study on hand.

3.4.2.1 Documentary Review
This includes the reading of various documentary records, published data, official reports, delivery notes, gate passes, special orders form, award notification files and advertisement files. The researcher used the available documents of the organization in order to obtain secondary data; this technique helped the researcher to collect data so as to answer the research questions. All materials available that relates to the study should be exhausted effectively in order to get the most reliable information concerning the study that will help the researcher on the study.

3.5 Data Presentation and Analysis Method
Due to the nature of the study, the researcher presented and analyzed the data by using both qualitative and quantitative data analysis methods. Discussions and explanations oriented, tables, simple statistics like percentage were used when necessary. Data collected through interview, questionnaires were analyzed qualitatively by the application of tables and figures. The study employed a multiple approaches in data analysis. The data from the interviews with the key informants for example were analyzed using thematic data analysis approach. The interviews were done through
interview checklist in order to help the researcher have systematic form of questions to all the interviewed staffs of the organization.

It is worth noting that data analysis in case study research design was an on-going process from the proposal writing to the production of final report/document, therefore throughout research process there was a reflection on the data collected at every stage, and these reflections were used to re-adjust the research whenever appropriate for best results of the study. The analyses of findings obtained were used to draw conclusions and to take recommendations to the public organization so that it can be able to work towards their problem and deal with them accordingly.
CHAPTER FOUR
FACTS FINDINGS AND ANALYSIS

4.0 Introduction
This chapter revealed the relationship between the research questions and what actually exist in the organization under the study. The findings obtained are based on the data collected from both primary and secondary data collected. And then the collected data were classified into meaningful information to indicate what they mean in the context of this research report and to recommend measures that would promote effective inventory control. This section also analyses data collected from different data collection techniques used which were mainly interview, observation, questionnaires and documentation. And at the end the data was analyzed and presented in quantitative and qualitative forms and usage of percentage wherever necessary and the tables and other figures were used when needed to represent the collected data.

4.1 Respondents Characteristics
This is the summary which explains in details the information of the respondents from the questionnaires distributed. It tells about the information of the people from which the data was collected from. The obtained information was from the questionnaires distributed in the warehouse department, transportation department, procurement department and accounting and finance department. The detailed information of the respondents constitutes the respondents statistics which explains the total number of the respondents of the questionnaires from each of the department in which they were distributed, gender of the respondents to show that the researcher was not biased as the researcher tried not to be biased and respondents level of education of in order to see how they are able to control the inventory properly especially when using the FEFO inventory control method.

4.1.1 Responded Statistics
In this study, 15 out of 20 respondents from the questionnaires which made 75% of the total respondents and in general they were satisfied with the whole inventory control that it is undertaken accordingly. Most of the respondents from questionnaires were from the warehousing department and procurement and transportation department. The 4 respondents from the procurement department who made up of 20%, the other
members were from the transportation departments which are 3 respondents who made up 15%, and the 4 respondents from warehousing department who made 20%, the 2 respondents were from accounting and finance department which made 10% and the last were 2 people from shortlisted buyers and suppliers which are involved with the organization which made up 10% of the total respondents.

### Table 1 Questionnaire Analysis

The following table shows the percentage of respondents from the questionnaires that were distributed. Only 15 questionnaires were returned from the 20 questionnaires that were distributed by which we refer them as successful questionnaires. The questionnaires were distributed to different departments of the organization in order to get reliable information of the activities of MSD. The departments involved in this were; procurement department, warehouse department, transportation department and accounting and finance department.

<table>
<thead>
<tr>
<th></th>
<th>TOTAL</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Questionnaires Distributed</td>
<td>20</td>
<td>100</td>
</tr>
<tr>
<td>Successful Response from Questionnaires</td>
<td>15</td>
<td>75</td>
</tr>
</tbody>
</table>

#### 4.1.2 Gender

Generally the study was not gender sensitive (the issue of gender of respondents was not highly put into consideration). Hence during questionnaire administration the researcher considered the key informants where by employees from both gender had an equal chance to participate in all aspects of data collection and their ideas, views, and all sort of contribution were also considered equally in this study to avoid any kind of biasness. The researcher had to discuss the point of gender in order to make sure that the point of biasness will not affect the researcher’s work and findings.
The pie chart below reveals the case of gender whereby females participated were 55% and 45% of males and this does not imply that bias was on females as the researcher tried to balance both.

![Gender Information](image)

4.1.3 **Level of Education**

Almost more than a half of the employees which were interviewed (58%) had degree or equivalent level of education, followed by 33% who had diploma level of education. It’s only 9% of the respondents who had certificates from procurement suppliers and technicians board and also have reached postgraduate and masters level of education.

The researcher needed to know the level of education from the corresponding employees of the organization so as to be able to know the if the employees have professional knowledge and skills, also to see if employees understands the importance of the inventory in the organization. The level of education of the staff of the organization can help the researcher determine if inventory control is done accordingly as it requires skilled people with inventory knowledge. Since, MSD has invested only on medicine it is important for them to know the level of skills of its employees. Also the level of education has helped the researcher be able to know if the employees will be able to cope with FEFO method of controlling inventory as it requires employees who are computer literate to undertake the work especially in the warehouse which they use the FEFO method most for its daily activities.

The FEFO method helps MSD to identify all the expired items that are in the warehouse. The FEFO method identifies the expired date of every item as registered in
the system. Each item entered in the system is registered against their expiration date. This helps in time of retrieving the items for issuing purposes. Items with the earliest expiration date are going to be moved out first. And in case the items have the same date of expiration, serial number of such items are going to be considered then. And if the items have same serial number, then the items with the smallest serial number will be moved out first as it will be the one which was manufactured first. This helps MSD to move out items that have short shelf life.

Employees with computer skills are the one suitable to control inventory by using FEFO method although they need to be trained to use it but their prior knowledge on how to use computer will help them to understand easily. Proper training and prior knowledge of computer ill helps staff to keep easy track of inventories in the system as at time it becomes trick on when deciding which items should be moved first when the date are the same and the serial number are close and alongside taking into consideration the shelf life of the items in the warehouse.

4.2 Inventory Control at MSD

Through interview with key informants and documentation(including official documents, organization journals and MSD website) as well as observation made at the study area, the subject of inventory control involves the process of reducing inventory costs while remaining responsive to customer demands. The management will want to lower its cost of operating inventory. These costs are acquisition cost, carrying cost, ordering cost and stock out costs.

Due to nature of items MSD deals with (Medicines, Machines and other hospital and medical items/equipments) inventory control at MSD is done mainly through the use of First Expired Fist Out (FEFO). The First-Expired-First-Out (FEFO) method is a sorting method used by MSD that ensures that the items, those with the earliest expiration dates, are picked out first.

Inventory control activities at MSD are under Procurement Department which works independently. All purchasing, issuing and other inventory activities are done by Procurement Manager in collaboration with warehouse manager and transportation officers. Accounting and finance are the one dealing with payments of all the organization expenditures incurred. Accounting and finance department make sure that
all payments are made on time to the suppliers, also they need to make sure that items are not paid twice, and payments are made for the actual items that have been received and brought in the warehouse. The procurement department is the center of all the procurement activities of the organization. It is the main office that performs all duties concerned with purchasing of the required medicines (inventories) and machines, storing them and also sells them as demanded. For good performance there is need of effective communication between the Directors, all workers and the procurement officers within the organization. And for any authority, the Director is always aware of the financial position and procurement practices and hence purchase of stock can be effectively controlled. Any transaction to be made by the procurement section should be passed to director for approval as will be seen in the stores procedures to be dealt later.

**Researcher’s own Interpretation on inventory control at MSD**

The inventory control at MSD is done properly by observing that the inventories are kept at a required condition without damaging their quality. Through observing the whole practice, procurement department deals directly with the procurement in order to avoid any department conflicts as each department to order and purchase individually.

And also the use of authorized personnel to be in charge of the procurement activities, as it uses procurement manager has help to minimize theft and frauds in the whole inventory control activities at the organization since procurement manager will be the only one responsible to authorize the procurement activities undergone by the organization. Authorized people are held accountable in case of any misconduct happens in the organization. Hence it was necessary for MSD to point out few people who authorized people to be in charge to make sure that there is a proper movement of people and items inside and outside the warehouse.

Also the researcher under inventory control at MSD was able to point out how MSD was trying to build a better relationship with its customers and suppliers. There is a good bond between the customers and MSD. The relationship is nurtured between them by both parties as they always find a way to work together without any problems. The organization has also simplified the process of ordering made by customers as now they can order online through MSD website and they can use special order form that is available on the website. Customers can access special order form from the
organization website and fill it online for quick and better results. The special order form contains the customer’s information in which a customer is supposed to fill his or her name, the name of the hospital or dispensary (as the customer is always the hospital or dispensary whether government or private and there is no direct sale to single customer for self consumption). Also the customer physical address is required, the district and region in which the hospital or dispensary is found. And last part of the form is customer’s contact address where the customer is required to write the email address which is a valid one as false email address will invalid the request, customer’s telephone number is also required and fax if available it will also going to be needed. The specimen for the special order form is found in the annexes on page 65.

4.3 Reasons for Keeping Inventory at MSD
The researcher wanted to know the main reasons for keeping inventory at MSD, hence during the interview with respondents mainly officers from the warehousing and procurement departments enlightened the researcher in details the following reasons;

Time; the time lags present in the supply chain, from supplier to user at every stage, requires MSD to maintain certain amounts of inventory to use in this lead time. Lead time is the time spent before placing an order to the time in which the order is received. So, MSD keeps inventory incase when there is long time between placing an order to its delivery, he items or inventory kept can be used during that awaiting time of an order placed. However, in practice, inventory is to be maintained for consumption during changes in lead time. Since lead time differs from one supplier to another it is important for MSD to keep inventory for such matter. Longer lead time may happen that will affect MSD and if they did not keep any inventory on hand this may affect the customers and the organization at large as the organization will be faced by stock out problems, loss of customer goodwill etc.

Uncertainty; Inventories are maintained as buffers to meet uncertainties in demand, supply and movements of goods. Production plans changes in response to the sales, estimates, orders and stocking patterns. Holding inventories at a nearby warehouse helps issue the required quantity and item just in time. There might be increase in demand and supply of items without prior warning to the supplier. Increase in demand from our case may be caused due to eruption of certain diseases like cholera, tuberculosis (TB) and malaria which will make people increase their demand by
purchasing medicines for such diseases to cure and protect themselves. Hence MSD keeps such medicines at excess since they knew that the demand for such medicines may occur abruptly and so they need to prepare themselves when it happens and that is why they keep inventory on hand.

Long Lead and High demand items need to be held in Inventory; there could be an increase in demand while the raw materials for production are not available and thus it makes an organization like MSD keeps extra inventory in storage to cater the public needs when such case arise. Often raw material supplies from vendors have long lead times running into several months or worse depending on the availability of such raw materials for production. Coupled with this, if the particular item is in high demand and there is a short supply, one can expect disruption of supplies. In such cases it is safer to hold inventories and have control in times of increase in demand, problems at the supplier’s site (fire, lack of raw materials), problems in shipment of the items to delivery of such items and others of the same like. A safe or buffer stock should be kept in order to cater for any increase in demand at any time as emergencies occurs at all times and also to avoid stock out problems as this leads to loss of a customer goodwill towards the organization and loss of sale too.

Reduce Transit Cost and Transit Times; MSD saves a lot in terms of transportation cost through buying in bulk and transporting as a container load or a full truck load. Saving is also in terms of transit time too; transit time for full container shipment or a full truck load is the same, direct and faster unlike part shipment load where the freight forwarder waits for other loads to fill the container which can take several weeks for several parts to be consolidated in one container. The requirements are consolidated and when they are many it is easy for MSD to send an order and transport the items in bulky despite of transporting the items in just small parts. Bulky buying always save a certain amount of money and that is why MSD keeps inventory that they can use when they consolidate the requirements of other items in order to buy them in bulky.

Inventory Balance; Good inventory management has helped MSD to figure out exactly how much inventory they need for their daily operations. The warehouse officers have described it as the easiest way to prevent product shortages and keep just enough inventories on hand without having too much. Only a reasonable amount of stock is kept in order to help MSD run its operations and they make sure that they avoid over
stocking as it only ties up capital and uses up space unnecessarily and also avoid under
stocking as it may lead to stock out. Every organization should make sure that there
should be neither over stocking nor under stocking of the items in the warehouse.
Proper balance of the items in the warehouse should be maintained in order to avoid
incurring unnecessary costs during inventory control.

Guarding against shortages; In times for shortages that may have not been forecasted
MSD can use its adequate inventory as a blessing. MSD efficiently hold stock to have a
competitive advantage. The warehouse officers commented that they keep stock
because the production runs/ services of those businesses i.e. of the supplier that can be
affected by adverse supply conditions or any other natural causes events that may have
to delay production and cause longer lead time. Therefore, holding inventory ensures
continuity in the short-to-medium term as production is not reliable all the time so it is
better for MSD to keep a stock that can serve them in time of need as future demand is
hard to be speculated.

Taking advantage of price discounts; When MSD purchase goods from the
manufacturers and suppliers, they usually get price discounts if they buy in bigger
bulks. This is because manufacturers and suppliers give these discounts to attract and
maintain regular buyers. Taking advantage of price discounts is helpful at times but
MSD must always remember not to overstock the inventory because inefficient buying
may cause failure of the business. Also overstocking may lead to tying up capital which
can be used elsewhere to serve other purpose, overstocking will also increase holding
cost and the space that will be used to hold the items will not be used properly. When
MSD have inventory in store, they can get quality discounts because they know which
goods and services to buy from the suppliers and manufacturers. It helps to learn where
to get better deals than no deal at all.

Time lag in deliveries; Time lag in deliveries also necessitates keeping of inventories at
MSD. This is because if the replenishment lead times are positive then stocks are
needed for system operation. MSD deals with different suppliers which have different
times for producing and delivering the items to them hence it needs to keep inventories
as it will be a sensible thing to do since delivery times differ from each supplier and the
uncertainty in delivering times should be closely monitored as it may affect the
operations at the organization. Materials may be transported thousands of miles before
they are incorporated into an end product so it is obviously that delivery time will differ from time to time and hence MSD is needed to keep stock in order to suffice its daily operations and making sure that there is continuous flow of inventories to cater for the public needs.

**Researcher own Interpretation on keeping inventory at MSD**

Since MSD uses public funds to run its organization, it is necessary for them to make sure that there is smooth and continuous flow of activities in their organization. They have to do that because it is a public organization and also it is because they are required by the PPRA. As they need to make sure that there is a continuous supply of items and goods it is important for them to keep inventory as buffer stock or as a safety stock in the organization at a minimum and avoiding over stocking of the items in stores.

The buffer stock or safety stock kept by MSD will help the organization to avoid stock out problems, meet customers demand on time, increase organization profitability by reducing unnecessary waste and costs etc. This at the end will help MSD be able to improve its success as the whole organization. Inventory should always be kept as a security also to any other organization in case of variations in lead time and any emergencies that they may occur.

**4.4 Principles of Controlling Inventory**

In order to know the effectiveness of inventory control at MSD, the researcher had to assess the adherence to principles of controlling inventory. The organization has established different principles in order to enable controlling the stock in all process activities taken by the organizations. The principles were set to control the movement of inventory within and outside the MSD.

Information from the respondents provided a full picture over this matter whereby officials who are responsible are located in the warehouse in collaboration with transportation officers. Generally they are the one responsible to fill all the entries for receiving and issuing ledgers and also do the physical counting for the items in the warehouse. When counting the quantity of the items which are medicine and hospital machine/equipments and all the received items they must match i.e. between the physical counting and the amount of items as shown in the bin card. Only authorized
officers and Board of Survey personnel are allowed to enter in the warehouse. Furthermore these responsible officers explained in details each principle applied during inventory control as discussed here under;

4.4.1 Principles of controlling inventory when receiving
Before receiving goods, the documents involved should be varied prior to accepting them into a store. This is done in order to see if there is any disagreement or not between the items received and the actual number of items expected to be received. This helped MSD to know all the items that they have paid for are delivered to them. And also this helps them to know all the items that they been received and kept in the warehouse as each items received is shown to be delivered and also avoiding paying same items twice.

Receiving records are written evidence or can be used as device to record store information. Store records are used to keep and show the movement of goods in documents. They are used to show all the items moving within the warehouse as they were received. Normally a document provides evidence of whether a certain activity has been accomplished or not. And also the documents can be used as evidence whenever necessary as it contains all the necessary information of a buyer and supplier and of the carrier.

Under this, the delivery note is used upon receiving in order to show the items that are being received. Each item received should be mentioned on the delivery note as it has been received. The delivery note contains details which show the actual date that the goods have been received, receipt number, name of the receiver who will be MSD in this case; it also shows the quantity number and the description of the items which also explains their conditions. The goods have to be received in good order and conditions. It also shows the name and signature of the person who received the goods and also the vehicle number which carried such goods. See the attached specimen of delivery note which is found as annexes on page 66.

4.4.2 Principles of controlling inventory during inspection
Upon receiving of goods at MSD, the receiving officer has to compare the documents involved in receiving with the copy of purchase order before physically verifying the goods that are actually being delivered as it is required by MSD. After verifying the documents and conducting inspection on the consignment, the documents should be
raised. Such documents will be kept as evidence so that the organization does not pay for the goods which have been received already.

When inspection is done goods are sorted out depending on their type and nature. After all these procedures then goods are then sent to the warehouse to be stored whereby those required to be restored in refrigerators are packed into special transportation trucks with fridges and sent at a warehouse located at Keko and the remaining are stored at the Dar es salaam central medical store which is the supplier of all other zones.

Upon inspection, the goods which did not meet the required standards are returned promptly to the supplier who is on site when the goods are inspected and the supplier is ought to re send the goods that are of the acceptable standard to MSD again. Inspection helps to make sure that the physical conditions of the items is at acceptable standard and quality and there is no damage to the items that have been received. The inspection is done to all the items that have been received promptly before sending them to the warehouse for storage.

4.4.3 Principles of Controlling Inventory on Quality
At MSD, the quality assurance control is the heart of all the activities of the organization. Quality of the items should be closed monitored at MSD because of the nature of the items that they are dealing with. Since MSD deals with medicines and other hospitals equipments, the quality of such items they have is their major concern as they need to make sure that tall their items are good for human consumptions and not poisonous or dangerous in case of the machines. It consists of the technical staffs that have the objective of maintain the quality assurance policy of MSD with a good goal of making sure that each and every drug or medical supply reaching a patient is safe, effective and of acceptable standard and quality.

The researcher observed that, under quality control, the activities are divided into routine and non routine activities. The routine activities done by the quality unit at MSD are:- inspection of incoming goods(when receiving the goods to be checked for any damages or faults on sight), collecting and monitoring of samples sent for analysis in order to evaluate the quality of the goods( the few items received will be taken as a sample that they can be tested to see the quality of such items and see if they can be able to be used for human consumption), after analyzing the goods a certificate is raised to
confirm the quality of such items that are of acceptable quality and standard and that they can be used for human consumption, inspection is also done in the warehouse for which the goods will be stored, QU also interacts with the customers and deals with the complaints from the customer as may arise, QU also monitors suppliers performance on quality issues on daily basis to make sure that supplier does not temper with the acceptable quality that they have agreed upon.

For non routine activities, QU only deals with maintenance of items by updating the range and technical specification of pharmaceutical products, medical supplies and equipments, diagnostic supplies, they also interact with the professional bodies on regulatory and legal requirements example TFDA, they also interact with suppliers on quality issues and mobilize expired drugs and obsolete items. The regulatory body like TFDA is used to make sure that the items are on the right and acceptable standards for human consumption and the expired drugs, drugs which are of low standards to be used for human consumption will be destroyed by burning them so that no one can use them as they are poisonous.

4.4.4 Principles of Controlling Inventory During Issuing
At MSD, before issuing the items from the warehouse, the customer is required to purchase items needed by filling an order which is available at MSD or they can also order from the MSD website online. The filled form must be signed and authorized from the healthy facility. However, during payment, government hospitals like Muhimbili and Ocean Road hospital utilizes funds allocated to MSD by the government while for NGO Hospitals and others, goods are only sold to them directly through cash or bankers cheque. When filling the order form, customers are highly encouraged to adhere to the 14 days prior ordering system so that MSD gets ample time to consolidate items needed for such order.

This is because MSD receives many orders at different times, and in order to make sure that each order is delivered as it is required MSD needed those 14 days to make sure that the items are collected right for each order and thence buyers van come and collect their orders according. This is also just one way of improving a good relationship with their customers as customers will only receives what they have requested and not otherwise. However the order can be sent online through special order form to make sure that it reaches MSD in a short time and shortening the lead time.
When issuing the items from the warehouse, the gatekeeper is required to check all goods coming in and out of the stores by examining the requisition for stocks and issue voucher. A gate pass register should always be maintained properly at all times. For inventory control purposes a site stores ledger is also used at each site where such stores are transferred or issued outside the organization. The items issued are recorded in this site ledger which helps in inventory control and will also help physical counting of the items during stock taking as they will be able to know the items that have been sent out and the items that are left in the warehouse.

Upon issuing, the researcher found that MSD decided to have different zonal medical stores in ten different areas in order to provide its services closer and timely to people. Since issuing and distribution works together, in order for MSD to show its commitment to all people in the entire country ranging from cities, town to remote areas, it has to find ways to ease its distribution activities and that is why it has developed the idea of distributing the goods according to the zones so that goods can reach people easily. The idea of having different zones all over the country is a good one as customers will not waste time waiting for the order to be fulfilled in only one place at Mabibo. Also this is because MSD is accountable to the public as it spends public funds for their operations and finds the way to cater for the public needs.

MSD zonal medical stores are divided into; Tabora zonal store (which serve Kigoma and Tabora regions), Mwanza zonal sore (which serve Kagera, Mwanza, Shinyanga and Mara regions), Mbeya zonal store (which serve Mbeya and Rukwa regions), Iringa zonal store (which serve Iringa region and Ruvuma region), Mtwarra zonal store (which serve Mtwarra and Lindi regions), Tanga zonal store (which serve Tanga region only), Moshi zonal store (which serve Kilimanjaro, Arusha and Manyara regions), Dodoma zonal store (which serve Dodoma and Singida regions), Dar es Salaam zonal store (which serve Dar es Salaam, Morogoro and Coast regions), and the last is the Dar es Salaam central medical store which is the supplier of all other zones. The Dar es Salaam medical store found at Mabibo, is the supplier of all the zones scattered all over Tanzania. By allocating different zones at different areas this has helped MSD to reach out many customers on time without making people suffer for missing important medicines that they need for their healthy purposes and this makes the proper use of the public funds in the public organization.
During issuing of the items, a gate pass is required to be filled which requires the name of the customer, his/her address, serial number of the items, code number of the items issued, description of the items and their quantity and a date of issuing a gate pass. A person prepared such gate pass is supposed to write his/her name and sign against it, authorized personnel should also write his/her name and sign against it, the driver who will carry the items should also write his name and sign the gate pass with the number of the vehicle that will carry the item and last after checking and confirming all the details written, a security in charge will write his name and sign against it on write the date of issuing and will let the vehicle leave the premises. The gate pass can also be used as evidence when necessary as it shows all the important information of a person who authorized the issuing of such items, the driver with his vehicle number, the security guard in charge allowing the items to get out of the MSD site. See the attached specimen for gate pass on the annexes found on page 67.

4.4.5 Principles of controlling inventory incase of rejecting items
A damage note should be prepared in four copies that are to the carrier, supplier, account section and one copy should be retained by the store keeper in the warehouse, rejection may be due to: poor standards, hidden effects especially to the machines, less obvious defects, expired items as the ones received through aids from developed countries which are harmful for human consumption and others of the same like.

According to the employees interviewed by the researcher, in most cases the goods which are rejected are received through Aids. MSD receive items through Aids from different developed countries in order to help them in their operations. But such goods have a tendency of short shelf life cycle which means that they cannot be stored for long time as they can expire within a short period of time. Hence, under such cases MSD always destroys such good by burning them as they are not safe to be used by customers and also they burn them as they don’t want to be as a dumping area of such goods because such goods are useless for them and they cannot keep them as they will bring no profit to the organization.

The items with low standards are not going to be accepted and they will be rejected promptly and the supplier is ought to take them back and re send the items of the acceptable quality and standard that they can be used for human consumption, and the
damaged items are also treated the same. Suppliers should bring the items according to the acceptable quality and standard as agreed between the supplier and the organization.

4.4.6 Other principles established by organization
Each new stock is checked and verified always before entering in the store, this is undertaken in order to make sure materials or items stored are in good conditions and quantity. Verification helps in knowing that the items received are exactly as shown in the delivery note and this helps to reduce theft and fraud in the warehouse. Verification is made through a delivery note which warehouse officer is verifying by matching the items showed in the delivery note and the items that have been actual delivered in the warehouse.

The organization use combined requisition and issuing in the process of ordering and issuing of stock. By combining the requisitions this will help the organization in bulky buying and help the organization save some money through it. Procurement officer must approve all the stocks before received by the store managers to avoid shortages and also warehouse officers must sign all issued and received by the warehouse department. The subject of inventory control involves the process of reducing inventory costs while remaining responsive to customer demands. The management will want to lower its cost of purchasing inventory. These costs are acquisition cost, carrying cost, ordering cost and stock out costs and hence they will need to combine all the requisitions together with the issuing of items during ordering. This makes the procurement and warehouse officers accountable for their actions and this motivates them to work in a proper manner abiding to their work ethics.

Researcher’s Interpretation on principles
From the researcher’s opinion, all these principles are established by the organization and they help to maintain all activities done by organization to go on smoothly. The principles help the way through of controlling inventory flow within and outside the organizations. Due to these principles the inventory problems are being avoided as issuing and receiving are monitored closely in order to avoid stock out and theft, new stock are checked to avoid damages or wrong stock and materials are maintained in good order and quantity and verification is done to help stock taking of all the items in the warehouse. The laid down principles of inventory control by MSD helped MSD to overcome the problems encountered during inventory, finding the best ways to monitor
the use of inventory controlling methods, making the proper use of the inventory to improve organization’s success and lastly be able to make proper use of principles established for inventory control.

Stores or purchasing people should also notify accounting people so that they can be aware of all the movements since they are the ones dealing with payments they ought to know where the payment is made to. Accounting people should know where the funds are paid to and if such suppliers do exist in the real world. This will help the organization control the public funds properly as they monitor the funds closely. This helps to avoid such case of paying money to non-existing suppliers or fake suppliers which will cost the organization at the end. This also helps accounting people to perform stores accounts reconciliation, keep values of receipts, issues and stock balances, decide on stock pricing method (market price), create better stock information and the like.

The researcher saw that, by reviewing stock this will help to determine stock verification policies which will help to detect deteriorated stocks, redundant and obsolete stocks, waste items and others. This will also help to determine policies which will help detect slow moving items and also by reviewing stock it will help to check usage rate pattern of each stock regularly and also this helps in stock taking which is done daily, after a certain period of months or it is done annually. However the best period for stock taking is encouraged mostly to be daily and after a few set of months (every 3 months) as there is a short time to discourage any misconduct.

From the research it was observed that, by maintaining all these principles of receiving, quality, inspection, issuing and rejecting, MSD is on a very good position to perform its key activities properly by abiding to such principles. The principles will map a way upon which the organization activities are supposed to take place. Following such principles will help MSD know where they went wrong, be able to identify their mistakes as they happen and take corrective measures where necessary.

4.5 Contribution of Inventory Control at MSD
Considering the collected data obtained from the questionnaires, the procurement and warehouse department answered this question very well according to their experience with inventory control in their organization on daily basis. They pointed out the
contributions of inventory control in their organization being which were easily seen as; contract compliance, customer services, inventory costs, and theft prevention, reduce errors, cost control and avoiding stock out problems.

Table 2  Questionnaire analysis on contribution of inventory control
The following table shows the percentage of each contribution from the questionnaires that were distributed from the warehousing and procurement department answering the contribution of inventory control at MSD. The total number of respondents from procurement and warehousing department were 8 peoples. The contributions which have highest percentages were the ones which were mentioned more by the respondents from the questionnaire regardless that they use different word to mention them out but the key words and the meaning were the same and the researcher joined the points altogether in order to make one single point which can be easily understood and make sense to the readers. Stock out being the most mentioned one and contract compliance was the least mentioned one from the questionnaire analysis mad by the researcher.

Below is the table which shows the contributions of inventory control at MSD with their percentage in response for each contribution. The respondents from warehousing and procurement department answered these questions correctly as they have more knowledge of inventory compared to other departments like finance and transportation. The table below shows in percentages that the contract compliance contributes 5%, customer service having 20% with cost control which also have 10%, reducing errors also have 10% and avoiding stock out problems have 25%.

<table>
<thead>
<tr>
<th>Contributions</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contract compliance</td>
<td>5</td>
</tr>
<tr>
<td>Customer service</td>
<td>20</td>
</tr>
<tr>
<td>Inventory costs</td>
<td>10</td>
</tr>
<tr>
<td>Theft prevention</td>
<td>10</td>
</tr>
<tr>
<td>Reduce errors</td>
<td>10</td>
</tr>
<tr>
<td>Cost control</td>
<td>20</td>
</tr>
<tr>
<td>Stock out problems</td>
<td>25</td>
</tr>
</tbody>
</table>
Apart from mentioning the contributions, some of the respondents were able to go further and explain in details each contributions mentioned in order to help the researcher gain more knowledge upon such contributions of inventory control that are found at MSD. And through such details is where the researcher was able to give weights in percentage for every point mentioned by the respondents. The contributions are explained in details as following;

4.5.1 Contract Compliance
When MSD experiences a stock-out due to ineffective inventory management, it can force a purchase outside of the contractual terms. This results in the organization buying at increased prices instead of contracted prices. It also creates a purchase price variance and makes the organization non-compliant with the terms of the contract. Hence, it is important for MSD to make sure that they avoid such emergency contracts as they cost more than what they can get from the normal contracts.

Proper forecasting will help them overcome such a problem because MSD will know when they are required to purchase and also they will know how much to keep as a safety stock in case of emergencies. And this is why such organization is required to have proper inventory control and required to hold minimum inventory as security.

Keeping safety or buffer stock will help MSD overcome such contracts and thus it shows the importance of keeping inventory in the organization. Emergency contracts always cost more as the organization will be in such a great need and the suppliers will take advantage of that. And this in turn can lead to increase of the price of items which at the end will only affect the end user. So MSD needs to be careful and remembers to keep a safety stock so that the customers will not be affected at the end with high prices for items.

4.5.2 Customer Service
An increase in customer service levels results from having a highly defined and working inventory control policy. Proper inventory control means having shorter lead time (the time spent from placing an order to delivery of that order). Proper inventory control also helps in maintaining a higher fill rate (the number of orders filled divided by the total number of orders received). And also having special order form that can be filled online through organization website has helped to increase good customer service between the organization and its customers.
MSD receives different order from their customers, orders which can also be filled online using special orders, and also on the other hand is required to make sure that it distribute the items to all the none zones scattered all over Tanzania.

By doing so, it is important for them to keep inventory that can cater all the demand and make sure that the items are delivered on time as required by the customer. This will obviously increase the customer satisfaction and make the public in which their money is spent be happy that the money is not going to waste. Having a good relationship with a customer is an important fact to any business success.

4.5.3 Inventory Costs
MSD realized the need to fully understand the costs of carrying inventory and not only just how much the inventory costs to purchase. Inventory carrying costs consist of all the expenses an organization incurs for owning inventory. This includes the cost of building the warehouse to keep inventory, insurance cost paid for such items stored in the warehouse, security that is paid to secure the items kept in the warehouse and other of the like. Effective inventory control reduces these costs because it reduces the total amount of inventory required to manage the business. Inventory control monitors the level of inventory that should be kept in a warehouse at minimum and proactively manages obsolescence and deterioration by ordering in the appropriate quantities at the right time in order to avoid over stocking of the items in the warehouse.

Effective inventory control also reduces storage costs, because it orders enough inventories to fill consumer demand and not much more. Without knowing the cost of keeping inventory an organization should then not keep any inventory as the cost of holding may be large compared to the cost of not holding. Proper forecasting of the demand and inventory that should be kept on hold should be careful determined in order to avoid incurring any unnecessary costs. Also the stock that is kept should be minimum as overstocking will only means tying up capital that can be used somewhere else for other purposes.

MSD was able to know the cost of holding inventory, the benefits of holding such inventory and thus it was able to realize that it is only a minimal amount of stock that is required to be kept as safety or buffer stock which can be used in time that other items are on shipment and waiting to be delivered at MSD. And that is the proper way of controlling inventory and avoiding unnecessary costs in procurement.
4.5.4 Theft Prevention

Theft prevention is an important feature of inventory control in health care organizations like MSD. Not only are many inventorying items expensive, but they are also dangerous if an employee attempts to steal drugs or medicines. Since MSD keeps inventory at their sites, it is important for them to improve their security and make sure the items that are kept in storage are not missing as they will be needed to smoothen the organizations daily operations. MSD typically store inventory in locked rooms with limited access. This helps reduce theft or abuse by employees and other individuals. Managers may also be the only individuals allowed to order inventory, which reduces abuse in the procurement process.

It is important to keep buffer stock in case of theft or items being misplaced as items in the buffer stock can easily be used on such times to cover up such stolen and misplaced items. It is important for MSD and its employees to improve the security and making sure that the items that are kept for safety are not used otherwise like covering up for items that have been stolen and instead they should be used as they were intended to which is they are kept for safety purpose when the demands exceeds the supply of the items. It is very crucial for MSD to keep safe inventory as they don’t know where and when it will be needed, whether the items are stolen in the warehouse such safety stocks can be used to cover up although what is important is to prevent theft from occurring.

4.5.5 Reduce Errors

MSD was extremely careful with inventory items because they can cause undue damage or harm to people. MSD was also able to adequately dispose expired inventory items. Proper disposal by MSD ensured that individuals were not risk exposure to deadly communicable diseases commonly found in health care organizations.

Keeping inventory at MSD has helped them to reduce errors that may be caused by such items which can in turn make the items found in the inventory be dangerous for human being consumption.

Keeping inventory helps MSD to be able to make thoroughly analysis of the items that they have in stock, to be able to see if the items are suitable for human consumption, make any necessary enquiries to the supplier in order to satisfy themselves on the items that they have bought.
By doing so this makes them understand the items that they have bought and supply them for consumption instead of just buying the items and directly selling them for consumption. This will in turn helps them to reduce any errors that are expected to occur and be able to save the lives of the people.

4.5.6 Cost Control
Inventory controls helped MSD to reduce their operating costs. MSD often work from a budget, which helps their organization maintain low, unnecessary inventory expenditures. Constantly replacing a lost or stolen item can quickly increase costs and become an additional expense for paying customers.

MSD also saw the need and hoping to implement an automated software application or barcode system which can track inventory that are in the ware house electronically. These systems can improve inventory control and provide long-term cost reduction benefits.

Having good inventory control in the organization has helped MSD to reduce unnecessary costs that can be incurred through stock out problems, emergency contracts and many other costs that are only unnecessary to the organization. MSD needs to be careful on how they spend the public funds hence it is important for them to avoid any unnecessary costs. By keeping inventory in their organization MS is able to execute its operations smoothly and avoid any defaults that can cause them incur unnecessary costs.

4.5.7 Stock Out problems
Stock out is the situation in which the demand for an inventory item exceeds the supply of such an item and hence the need for that item cannot be fulfilled. According to the employees at MSD this may sometimes be caused by inaccurate records keeping in which in turn making forecasting for items is wrong. Keeping records manual to such a big organization like MSD is not reliable as the room for errors is very big and also from our case MSD purchase and store items centrally( at Mabibo in Dar es Salaam), therefore the other zones will have to go there and collect the inventory basing on their requirements. The time spent if will be long it is obviously that stock out problems will occur as the demand will exceed the supply automatically. A good inventory control systems reduces the risk of stock-outs and keeps the organization in compliance with the procurement practices.
Due to the fact that at times demand exceeds supply, MSD has no other option than keeping inventory for safety purpose and to avoid such stock out problems and also the other zones are encourage to keep inventory at their sites in order to avoid such problems also. The consequences of stock-outs for patients can be; They have to travel to other health facilities or private sector which may be far away and often many times they are more expensive, patients may go without the medicines they need or get an alternative, appropriate or no medicine at all and they can also lose confidence in the health facility to meet their needs considering that it is their money that is spent and need to bring them medicine and it is not helping them at the end.

**Researcher’s Interpretation upon contribution of inventory at MSD**

The researcher’s opinion was, since working inventory is managed efficiently, the investment made by MSD can contribute to overall objective of the organization. The circular flow of stocks does not occur automatically, it is essential responsibility of both managers and workers to guide it in a proper way.

As we have seen the importance of inventory control at MSD, care should be taken in order to avoid any wastage due to theft, fire or other abnormal losses. Stocktaking should be done periodically and annually by responsible personnel for stock tacking. Although the researcher highly encourage that they should also do stock tacking everyday as they keep large stock which needs close monitoring. Sensitive items like medicines and other sophisticated hospital equipments should be counted often and be compared with the ledger balances.

Avoiding stock out problem is the most contribution made by inventory control, the researcher believed that it is because by the fact that stock out affects directly the customers and allowing stock out problems to occur customers will lose faith to their supplier who is MSD. And if that happens, MSD will be questionable to the government and the public at large so it is important for them to keep inventory in order to avoid stock out problems.

By doing stock tacking often, this will help to make employees at MSD understand and take serious the importance of keeping inventory at their organization. Apart from the fact that the organization spends public funds so that they are liable to make close
follow ups, MSD should know that they spend a lot upon this and hence they need to know the importance of what they are buying and keeping in their warehouses.

4.6 Problems That Affects Inventory Control

According to the collected data from questionnaires and interview checklist and thoroughly analysis of such data, the following were pointed out as the problems that were affecting inventory control at MSD. Also, the researcher was able to observe a few problems that match the ones also found in the questionnaires. Such problems encountered during inventory control at MSD were;

4.6.1 Unqualified employees in charge of inventory

At times MSD found itself putting in charge too many people for their inventory distribution who either don’t have enough experience or don’t have adequate training. MSD need to pay closer attention in overseeing their inventory management and making sure employees receive proper training.

Such employees also can fail to execute FEFO method of inventory control which requires employees with computer knowledge and also that they have been trained to use such software application to keep records for every item entered at MSD. Employees should be properly trained to make sure that there will be no room for errors in the whole inventory control activities.

4.6.2 Not identifying shortages ahead of time

This happens all the time in many organizations dealing with large number of inventories daily. MSD found itself that they do not have enough in stock and must reorder. Waiting for the shipment to come in can slow down the supply chain process. Not having enough products in stock to meet customer demand can lead to bad customer relations. A supervisor in charge of inventory management should look over their inventory on a regular basis to make sure enough products are in stock.

Proper forecasting should be undertaken in order to help MSD overcome such problem. Forecasting will help MSD be able to know how to order, how much to order and when to order. MSD needs to make sure that it orders as required and avoid over stocking as that is the capital tied up that can be used elsewhere in the organization and also MSD needs to avoid ordering small amount which will not last longer and hence shortages
can occur along side with stock out problems and this at the end will make MSD incur unnecessary costs.

### 4.6.3 Too much distressed stock in inventory
Distressed stocks are products in inventory that has or will soon pass the point where it can be sold at the normal price before it expires. This happens all the time in medical stores. As a particular medicine nears its expiration date, then MSD discount the item in order to move it quickly before it expires and becomes poisonous for human consumption. Such stock can be the result of over stocking that was done by the organization previously. This is why many organizations are discouraged to hold many inventories as in turn the items will reach their expiration date and they will need to be sold out quick before they expire and bring loss to the organization.

Having too much inventory also is not good for the organization especially like MSD as items can easily expire and be harmful for human consumption. Items that have short shelf life cycle and slow moving items should not be bought at excess as items with short shelf life will expire in short period of time and also slow moving items will eventually expire as they will stay for such long period of time without being used.

### 4.6.4 Excessive inventory in stock and unable to move it quickly
This is probably the most common problem for most businesses. Cash-flow comes from moving inventory. If MSD has huge amount of inventory and they do not move it will end up losing money. This may happen due to stiff competition which rises within the country by other manufactures like Shelly’s Pharmacies, Mansoor Daya and Chemicals and others. Having also different manufactures in the same country costs MSD to be left with extra inventory on hand which cannot easily be sold.

Large inventory which comprise slow moving items with a short shelf life will only bring loss to the organization. The competitors will always take advantage of such factor hence it is important for MSD to make sure that such items are not bought in excess and kept in storage in order to avoid losses. Slow moving items especially the ones also with the short shelf life are needed to be kept at minimal number in order to avoid tying up capital that can be used up elsewhere in the organization, and also to avoid keeping them for long time in which at the end they just expire and became
harmful for human consumption. Also, slow moving items when bought in excess, they only occupy a space that can be utilized by storing other items in the warehouse.

4.6.5 Computer inventory systems are too complicated
The problem here is that many of these computer programs are not user-friendly like application of FEFO inventory control method for employees who computer ignorant. Computer software developers do not take into accounts that most of the people who will actually be using these systems especially those in the developing countries that they may to understand its installation and how to use it.

These has made difficulty for MSD employees to undertake their work smoothly as many found it is hard to work with computers and prefer paper work. This has been seen on the usage of FEFO method to identify the expiration date of items in the house. Employees found it as a bit complicated and they need to be trained on how to use it since it is very important in their daily operations especially at the warehouse.

4.6.6 Items get misplaced
Even if the computer accurately shows the item as in stock, it may have been misplaced somewhere at the warehouse, or in the wrong location within a store. This can lead to a decrease in profits due to lost sales and higher inventory costs because the item must be re-ordered. Plus MSD must spend the time for employees to track down the misplaced item which was wrongly misplaced within a warehouse. It is hard to track down the items that have been misplaced or stolen in the warehouse. Proper allocation of the items or arrangements of the items should be highly encouraged to all the employees in the warehouse responsible with the inventory keeping.

Since MSD receives large number of inventories most of the times, it is important for them to make sure that they sort all the common items together and store them in one area in order to avoid misplacing such items. Since the warehouse is big and constitute many different kinds of items, it important to allocate common items at the same place so that it will be easy when you need them one can easily retrieve them from its location. Unlike throwing the items whenever a space is found, this will eventually lead to misplacing the items. Also failure to know where the items are, this may encourage theft because a warehouse officer or responsible people for keeping inventory will never know what is missing and where to find it.
When necessary MSD can use coding which is the process of giving or assigning name, number or name and number to the items that are in the warehouse in order to simplify storage and retrieving of such items in the warehouse. Coding can be done by classifying the items and allocating them depending on their colour, end user i.e. the supplier of the items being kept in the warehouse, source of supplier of such items and others. This is a simplest way of storing and retrieving the items in the warehouse. And it will help MSD avoid incurring unnecessary costs by re ordering the items that have been misplaced or by using the items that were kept for safety purposes in case of stock out. The employees will only need to be trained on how to undertake this and then it can be used to simplify their work in the warehouse.

4.6.7 Expired goods received through aids
This is a very common problem encountered at MSD when they receive medicines which have expired and are not safe to be used for human consumption as they are poisonous. Whenever they came through such a case, MSD has opt to destroy such items by burning them since they cannot return them as they came in as aid and also they cannot keep them as they are of no use. This always makes MSD looks like a dumping place for medicine which have short shelf life cycle and that they are going to expire soon.

Such medicines have short shelf life and also they are slow moving items in which they can be stored for long and ending up expiring in the warehouse. It is important for MSD to learn to reject such items as they will only be made as a dumping area by the developed countries.

4.6.8 Conflict among Managers or Employees
At MSD, inventory managers and employees are hired to manage and protect the inventory items as a method of control. However, several managers and employees can prove to be a problem especially when there is a conflict or lack of understanding between them or when the communication levels are not effective between them all. A daytime warehouse manager may remove items from the warehouse for an emergency shipment or any other kind of shipment but forget to mention the removed inventory items from the warehouse to the night time warehouse officer. This will usually cause a conflict when a supervisor will ask for information concerning that item and its shipment. Good communication among workers will eventually create a good working
environmental condition and also will promote team working within the organization’s employees.

Such cases may cause confusion during stock taking as the items have been moved out of the warehouse and some of the employees are unaware of such shipments, theft can also easily take place since the employees do not work as a team to achieve the same goal and works separately and also to some employees this will discourage their working morale.

4.6.9 Inaccurate Quantities
Inaccuracy occurs most of the time at the warehouse with large number of inventories to deal with everyday. This remains one of the biggest problems facing all warehouses not only at MSD only. At MSD inaccuracy takes shape in many forms, such as inaccurate quantities, inaccurate storage locations, inaccurate pricing and inaccurate identification of the items in the warehouse. This is due to unskilled warehouse officers, lack of trainings to develop the people responsible with controlling inventory in the warehouse, in appropriate storage of the items and poor arrangements of the items in the warehouse, improper records keeping of the items movement within and outside the organization, theft of the items available in the warehouse that is done by the employees of the organization and others of like. At some point in time MSD experience an inaccurate quantity of one or more products in their warehouse. Often, an inaccurate quantity of products stems from one of the other areas of inaccuracy. An item placed in the wrong location of a warehouse can get overlooked when searching for inventory. This leads to an inaccurate count of the inventoried item in a warehouse.

**Researcher’s interpretation upon inventory problem**
From the researcher’s views, in order for MSD to see the effectiveness of inventory control it should undertake inventory control as it is required. The problems encountered during inventory control will continue to be there if MSD will not take any initiative measures to properly dealing with them. Close monitoring of such problems and taking serious corrective measures upon them will help MSD to improve its success.

The inventory problems will have a room to occur since MSD deals with a very large number of inventories that needs to be taken care of closely. By seeing the importance
and contributions of inventory in the organization, MSD needs to take necessary actions to reduce and even to eliminate such problems that will affect its operation and reduce the success of the whole organization at large.

Since MSD spends public funds it is required by the Public Procurement Act to make sure that all of its procurement activities are done properly and accordingly in order to make sure that the public funds are not going into waste. Every organization will be faced with problems what matters is how to handle such problems on time before they became difficult to eliminate them. And also the employees should realize the importance of using the public funds and this will keep them from stealing the items in the warehouse. Hence it is important for MSD to make sure that it overcome such problems and undertakes procurement according in order for its actions to be justifiable in the eyes of the public in which MSD spends its money from.

The unqualified employees should be trained in order to qualify them for undertaking proper inventory control, help them understanding the FEFO method of inventory control as it is crucial in the organization’s daily activities. Shortages should be identified on time in order to avoid stock out problems, stocks which are going to expire soon should not be kept longer in the warehouse and they should be moved out first, they should avoid over stocking as that extra inventory means it is the capital that is tied up which can be used somewhere else, and there should be proper handling and sorting of items which help them not to misplace the item. MSD receives many items at one time so it likely that the items may be misplaced. After inspecting the items, it is important for responsible warehouse personnel to store the items that are common in one area in order to avoid them to be misplaced.

4.7 Inventory Control Method
After thoroughly analysis of the questionnaires and interview the best method which was mentioned. The method was designed to provide an efficient system for deciding what, when and how much to order depending on the date of expiring of the items. The method used is:-

4.7.1 First Expired First Out (FEFO) method of inventory control
First-Expired-First-Out (FEFO) is a sorting method used by MSD that ensures that the items, those with the earliest expiration dates, are picked first. According to the
questionnaires filled by the MSD employees in the warehouse, apart from mentioning this method some went further by explaining the criteria which should be met for this method to work easily which are:- The item/good must have a serial/lot number on it, there should be serial specific warehouse tracking field selected to track the items and every item should be posted in the system with their expiration date to help the system identify easily the items/goods with the earliest expiration date. One should note that, the items/goods are moved in the order of their earliest date of consumption regardless of the date of entry in the system. It is the simple way of handling and moving the items/goods by prioritizing their date of expiry by moving the ones with the earliest expiration date first. This is done by the help of computerized system that is found at MSD. The system helps MSD a lot since it deals with different and many inventories at once and at times if they couldn’t have such system it could have been difficult to keep track of which items to be shipped out first.

By using this method, it has helped MSD to succeed on their daily operations as items/goods are moved early before they have expired and it is easy for them to monitor the expired items and move them out instead of keeping many items which have expired. This also has helped MSD to practice this method on logistics and transportation as items with the earlier date of consumption are shipped first as it is important to ship items/goods with the shortest remaining shelf life first to reduce waste and increase profitability.

However, implementing an effective First Expired First Out (FEFO) program is not as easy as it seems especially when two items have the same expired date. Under such case, MSD has optioned it system to select the one item with the lowest serial number first and in case the two items have the same serial expiration date and same serial number, then the system will select the item that was registered first to be moved out first.

**Researcher’s own Interpretation on FEFO method**

The researcher was able to observe that, using FEFO methods real does help MSD a lot since they deal with large number of items and using manual system to see the expire date for every item in the ware house will take them ages. The system detects each item date of expiring and helps the responsible personnel to move such item out first before it becomes poisonous or it became dangerous to be used for human consumption.
Regardless as item has been registered when in the system, the FEFO methods will show you its date of expiring.

However, the use of FEFO method has helped MSD to reduce unnecessary costs and waste as it helps MSD to remove items that have expired, to detect the items that have shorter shelf life, and also it has helped MSD to be able to identify the slow moving items which have short shelf life so that they can buy them in small quantities in order to avoid incurring unnecessary costs of buying them at large and incurring unnecessary procurement costs for the organization.

The FEFO method also requires personnel who are computer literate as they will know how to operate with the system. The level of education of the employees at MSD who deals directly with receiving and storing goods especially the warehouse people should posses computer skills that will help them work with FEFO system accordingly. Failure to know how to operate with a system may cause MSD to incur unnecessary costs that can decrease the organization profitability and that may cause MSD to keep large inventory which have expired and of no use for human consumption. Personnel dealing with this should posses computer skills and also should be trained often for any updates upon the system so that they can be able to keep up with the new versions of the system instead of remaining behind with the old version. Computer simplifies work, so it is important for them to make use of it. And also considering the nature of the items found at MSD and the number of the items involved, dealing with them manually and keeping records on papers will only bring losses to the organization and decrease organization’s performance because it is hard to deal with large number of items on papers without any computer system to help.

After observing the practice of controlling inventory, trainings should be conducted whenever necessary I order to keep the warehouse people up to dated and to teach those new tricks that will help them identify items that have expired. Since it has been mentioned that on the problems encountered during inventory one of them being computer systems are too much complicated, MSD I ought to take it as a challenge and train it employees on how to work with such systems since it helps the whole organization at large.
CHAPTER FIVE
SUMMARY CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction
After having seen the necessity of having inventory control in an organization, as it helps the organization be able to know when to order, how much to order and how to order the organization now is able to make the procurement decisions properly. Proper inventory control helps the organization realize suitable inventory control methods to use depending on the nature of the items found in the organization. The researcher was able to make analysis from what the researcher expected from the study against the actual results that were obtained at the end of the study and make some recommendations to the organization. The recommendations will help the organization to establish itself in a better way. This is because the recommendations will act as a solution to the organization problems that have been seen and identified in the study. The issue of inventory should be a concern of everybody in the organization in order for it to succeed.

5.1 Summary
The study exploded the stock and inventory control system of the organization in order to make sure that there is proper inventory control in the organization. The study aimed at examining if there was effective inventory control by using MSD as a case study. The study explored the stock and inventory control systems used at MSD where by FEFO method was pointed out as the only method used at MSD for controlling inventory effectively. And the study pointed out all the principles that are needed to be followed when dealing with the inventory movements within and outside the organization. There are principles of controlling the inventory during receiving of inventories which involves the use of delivery note as evidence when receiving the items in the warehouse. Also the principle of controlling the inventory during inspection of the items received to make sure that all the items received are of right quality, quantity and standard and also to make sure that they are suitable for human consumption. Another principle is of controlling the inventory during issuing of the items outside the warehouse which involves the use of a gate pass as evidence of the items being sent outside the warehouse. And another principle found was a principle of controlling
inventory in case of rejecting items in which in most cases such rejected items are obtained through aids from the developed countries. There were also other few and minor principles established for the organization which were to make sure that all stocks are verified before entering the store and that MSD should use combined requisition and issuing in the process of ordering and issuing of stock. By following all those principles the organization will eventually be able to control its inventory without any problems. It was observed that, if working inventory control is efficiently managed, the investment made by MSD can contribute to overall success of the organization since inventory is controlled properly.

The proper circular flow of stock does not occur automatically as there principles to follow and the proper inventory control method to abide to. It is essential responsibility of management and procurement officials to guide it in a proper way required and by adhering to all the principles used at every stage of controlling inventory. Every inventory within and outside the warehouse should be monitored and closed supervised. Efficient control must be provided by the management such as authorization of stock before receipt and issuing by the warehousing department in order to smoothen operation activities and eliminate any problems that may rise when controlling inventory.

Therefore, for good performance, the organization should strive for alleviating the vulnerability of stock by installing sufficient and effective control over inventory, following inventory control principles established and adopting suitable inventory control method for their organization. Also in order for the system of effective control of inventory to be good at the organization and helps it to its success, the MSD organization should be able to monitor stock authorization, recording and custody procedures along side with managerial supervision, authorization of stores personnel and review of store records over a certain period of time.

### 5.2 Conclusion

From the study, researcher expected that inventory control methods e.g. FEFO, LIFO and bin card system at MSD will be difficult to implement since MSD deals with different varieties of medicines which needs proper and close monitoring of such inventories and employees especially in the warehouse do not have that knowledge of using FEFO method properly as it is required. The FEFO method requires people with
computer skills as they will be required to enter every item received in the warehouse in the system electronically. The method helps to ship out the items with the earliest date expiry so that they can be used first before becoming poisonous to human consumption. Fail to identify which items to ship out first, this will only bring loss to the organization and MSD will only incur unnecessary cost which can easily be avoided.

Since MSD receives large number of inventories to deal with directly every day, it was expected to fail in controlling such large number of inventories. This is because of large number of inventories with different expiring dates, from different suppliers, with different storage conditions and different room temperatures as some needs to be refrigerated as the ones stored at Keko. That is to say, failure to control inventory by MSD will results to rise of different problems which may cost the organization success. And since MSD invest much in its inventory, hence failure to control inventories will simply mean a fall in organization success. They need to be careful on how they spend public funds as they are accountable for any misconduct.

Due to the findings obtained from the study, the actual results obtained from the study made the researcher able to conclude that; there is a need to follow the inventory control methods and principles established for controlling inventory at MSD. Every organization has to establish its own principles to help them control their inventory properly and also find a suitable inventory control method which will be suitable for the items found in the organization. In order for MSD to succeed they need to avoid any misconduct that may cause problems and also to be able to contribute on the success of the organization. And also the method of inventory control should be implemented in the best way possible so that the organization can be able to improve its success.

The organization at large should be aware and be able to approve the means that are used to control the inventory and also monitor all the inventory movement within and outside the organization. As MSD receives large number of inventories every day, it is important for MSD to have close monitoring of the inventory in the organization. Therefore it is important to monitor all the inventory movements within the organization and make close follow up so that the organization does not fail to control its inventory properly. This in the end will help the organization promote the proper control of the inventory and also be able to control the funds used in the inventory of their organization. Also the establishment of a good system of operation activities such as
transportation and warehousing activities closely will help control the problems that can arise during inventory control and hence help to the organization success.

### 5.2 Recommendations

The researcher was satisfied that MSD have good system of controlling inventory despite of the problems that have been identified in the study and through the recommendations provided by researcher, if the organization wishes to overcome the problems encountered during inventory control may have to follow the recommendations made to them by the researcher.

The following are my recommendation to the management of MSD upon the inventory control;

Computerized system should be adopted in order to reduce manual activities which cost more time and cannot be accurate at all operations that can be used electronically. This will also increase accuracy of the information about the inventories or items that are available in the warehouse with their date of expiring. It will also be easy to verify the items available in the warehouse with the number of items shown on the bin card. Trainings should be conducted upon the application of such computer systems in the organization especially for FEFO method which is very important in the organization. MSD should also consider the use of electronic procurement during the issuing of items from the warehouse as this will help the organization performs its activities electronically. As we have seen how FEFO methods helps in controlling inventory and keeping track of all the items in the warehouse, it is important for MSD to use computerized systems for its daily activities. Failure to detect the items that have been expired will only bring loss to the organization. And also having computerized systems for all the inventories entering the organization, will surely helps to prevent theft as all the items entering the organization warehouse are going to be registered.

Staff should be trained in order to gain more knowledge and experience in inventory control to avoid damages of material due to lack of knowledge that results to the poor management of inventory. Establishment of training programs also helps to develop optimum means to undertake and execute inventory. Typically, issues involving inventory accuracy, damage and product identification can get traced back to human error. Improperly trained warehouse personnel create inventory issues that better-trained
personnel regularly avoid. For example, an under-qualified forklift driver is more likely to damage products during inventory put away and retrieval than an experienced forklift driver. Proper training increases a warehouse’s efficiency and productivity and decreases inventory management issues. Staff will know how to handle all kinds of inventory found in the warehouse according to their nature and storage conditions, be able to identify the items which have become harmful for human consumption, they will also be able to identify the damaged items, deals with computerized systems like FEFO and help the organization in achieving its goal of catering for the public needs.

Coding methods should be used and closed monitored in order to help the whole process of storing and retrieving the inventories in the store. Coding by name, end user, colors, or by supplier will smoothen the process of retrieving items from the warehouse. Warehouse employees should be trained to use coding methods and classification so that they can simplify their work when storing items and when they want to retrieve such items for issuing. Coding will help the organization in proper arrangements of the items in the warehouse to help remove theft and misplacing the items all the times and also improving the way of retrieving the items from the warehouse.

New system of arrangement in the store should be adopted to increase the space in the store, avoid destructions of items in the store and enable retrieving of items in the store. This system will help to make follow up on the items that are expired or have been damaged as it will be easy to notice them in the open. The items will look neat and properly arranged in the warehouse, and also proper arrangements of the items in the warehouse will mean that the items cannot easily damaged one another as they will not be squeezed in just one place and also it will help in retrieving of the items from the warehouse and also it will help to easily point out the missing items from the warehouse.

The management should employ enough people with relevant skills in the store section so as to reduce the workload to the supplies officer and his subordinates. This will motivate store people since their workload has been reduced and hence they can be able to concentrate on the work left on their hands. Skilled personnel are key to any organization in achieving the organization’s goals. And from our study, it is important to have skilled people dealing with such large number of inventories everyday and be able to control it in a proper way as it is required.
Management should improve security by the use of security cameras, sensors and other security equipments in order to improve the security of the organization and reduce theft and fraud. Also should improve proper authorization in the process of issuing and recording of inventory. Only authorized personnel should enter in the warehouse and non-authorized personnel should be strictly prohibited from entering the warehouse. Minimizing and monitoring the movement of people in the warehouse helps to improve security in the warehouse. Theft should be highly discouraged at any cost since the organization is using the public funds in which they are accountable to make sure that it is used accordingly.

Also by using FEFO method, MSD should make close monitoring of the items by checking the date of expiring of such items everyday in order to make sure that those items that are going to expire soon are easily identified and moved out before they expire. This should be done every day so that expired items will be moved out. There should be continuous check of items in the system everyday in order to deal with the ones that have reached their expiration date.

Proper allocation of stock and labeling; since there are many employees and they differ in views and also since MSD deals with large number of items daily hence it becomes difficult for them to locate each item as it supposed to be. Mistakes in location are varied. It may be that the location of items is wrong as when the items most frequently picked are located in the innermost part of the warehouse, making the picking of stocks take longer. It can also be that an item cannot be located because it was placed in the wrong location by just one lazy ware house officer and the item eventually will get lost or misplaced somewhere else. And also a mistake in labeling may result in the needed item not being found. It may also result in wrong handling and storage. Procedures must be established to prevent such occurrences of wrongly labeling and allocating the items in the warehouse.

There should be a recording keeping of all the materials leaving the warehouse. There should be appropriate paperwork for every type of stock withdrawal or even software that can be used to keep records that are leaving a warehouse apart from using a gate pass note that shows the items that have been moved out only. Under no circumstances should material leave the warehouse without being entered in the computer as this will also help in time for stock tacking. Establishment and maintenance of accurate stock
location will also help record keeping for such inventory. Proper record keeping and accurate recording will help MSD take control over any movement of materials in the warehouse and prevent thefts in a warehouse.

Improving good customer service; a good relationship with customer obviously will increase the success of the organization. MSD should keep good and in a proper manner inventory records so that when customers call fill the form for ordering the items from the warehouse, they can be served quickly. A fast response time usually means the customer gets a better impression of the company. This can be achieved if MSD knows exactly what inventory they have in a warehouse and where it is stored, so that it can be retrieved promptly and fill customer orders efficiently. The ability to deal with inquiries and fill orders quickly means that MSD is able to serve more customers and move more inventories through the organization, resulting in higher profit and success for the whole organization. If customers have to wait for responses or products as they are supposed to wait for 14 days, MSD should try to minimize the number of such days for serving a customer at least to 7 days. This will help to build a good relationship with customers.
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ANNEXES

APPENDIX 1

Interview Checklist

i. As an organization do you have an effective inventory control system?

ii. So far which success can you reveal that have been brought about by effective inventory control?

iii. What are the principles and methods that you have established to control inventory in this organization?

iv. Are there any problems hinder the effectiveness of inventory control, if the answer is YES what are they?

v. What methods you have employed so far to overcome such problems?

vi. Do you follow all the proper procedures for handling inventory in your organization?

vii. As an organization, have you ever faced stock out problems? And if yes, how do you deal with such problem?

viii. How does your organization treat excessive inventory as it is a capital that is tied up?

ix. Does your organization provide seminars and trainings concerning effective inventory control? How were they conducting such seminars and trainings?

x. Can you explain in details the environmental condition at your organization?

xi. What are the reasons for keeping inventory at your organization?
APPENDIX 2

Special Order Form