AN IMPACT OF INEFFECTIVENESS OF STOCKTAKING ON ENTERPRISE RESOURCE PLANNING (ERP) SYSTEM: THE CASE OF MEDICAL STORES DEPARTMENT (MSD).

By:
Laurent A. Bagoye

A dissertation submitted to Dar es salaam Campus College in Partial Fulfillment of the Requirements for the Award of the Degree of Masters of Science in Procurement and Supply Chain Management (MSc. PSCM) of Mzumbe University.

2013
CERTIFICATION

We, the undersigned, certify that we have read and hereby recommend for acceptance by the Mzumbe University, a dissertation entitled “An impact of Ineffectiveness of Stocktaking on the Enterprise Resource Planning (ERP) System: The Case of Medical Stores Department”, in partial fulfillment of the requirements for the award of Master of Science in Procurement and Supply Chain Management (MSc. PSCM) Degree of Mzumbe University.

........................................
Major Supervisor

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Internal Examiner

Accepted for the Board of

........................................
DEAN/DIRECTOR, PRINCIPAL, FACULTY/DIRECTORATE/SCHOOL, CAMPUS COLLEGE BOARD
DECLARATION

I, Laurent Arsen Bagoye, do declare that, this dissertation is my own work and to the best of my knowledge it has not been submitted and it will not be submitted to any Higher Learning Institution for a degree or a similar academic award.

Signature of Student………………………………………………………………………

Date…………………………………………………………………………………………
ACKNOWLEDGEMENT

First and foremost I thank God for showing me his unfailing love and courage in writing this dissertation. As we know, dissertations are the product of the combined efforts, of people.

I would like to express my heartfelt gratitude to my supervisor Prof. Damas Muna for his immeasurable support, constructive advices, suggestions and comments which made this research work successful.

Special thanks should go to Mzumbe University, Dar es salaam Business Campus lecturers who worked hard to ensure that they add value to my knowledge.

I also obliged to acknowledge my employer, Medical Stores Department for releasing me to attend this course. I would also acknowledge the support and encouragement i got from the Director of Finance and Administration, Mr. Hussen Shaban and the Director of Logistics, Mr. Hery Mchunga..

I would also express my sincere gratitude to my Warehouse Manager, Mr. Emmanuel Kimaro and the Principal Warehouse Officer,Ms Mellina G. Mwaipungu for their advice and patience while pursuing this course.

Many thanks should go to the employees of Warehouse and Finance Department for responding to the questionnaires adequately which made this study a success.

I deeply acknowledge the use of reference materials from different authors as listed in the list of references. I would specially want to convey my deepest gratitude to my family for the encouragement during the whole period of my study.

Finally, to all those caring friends and people whom I haven’t mentioned in my note of thanks, just know that you’ve played some role in motivating me to make it this far. I know I’ve done my best, to accomplish what I could, thank you and be blessed always.
DEDICATION

This research report is dedicated to my beloved daughters, Rose Laurent, Maria Laurent and my wife Grace Emmanuel for their tolerance, all have missed me many times while attending this course, therefore they deserve a lot of thanks. Moreover, for my parents Mr. & Mrs. Arsen Bagoye for encouraging me throughout the period of this course.
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<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>AD</td>
<td>Administration Department</td>
</tr>
<tr>
<td>C&amp;CD</td>
<td>Clearing and Claims Department</td>
</tr>
<tr>
<td>DANIDA</td>
<td>Danish International Development Agency</td>
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<tr>
<td>DBD</td>
<td>Data Base Department</td>
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<tr>
<td>DCZO</td>
<td>Directorate of Customer Service and Zonal Operations</td>
</tr>
<tr>
<td>DFA</td>
<td>Directorate of Finance and Administration</td>
</tr>
<tr>
<td>DIS</td>
<td>Directorate of Information Systems</td>
</tr>
<tr>
<td>DL</td>
<td>Directorate of Logistics</td>
</tr>
<tr>
<td>DPTS</td>
<td>Directorate of Pharmaceuticals and Technical Services</td>
</tr>
<tr>
<td>EPI</td>
<td>Expanded Program on Immunization</td>
</tr>
<tr>
<td>ERP</td>
<td>Enterprises Resource Planning</td>
</tr>
<tr>
<td>IAD</td>
<td>Internal Audit Department</td>
</tr>
<tr>
<td>IND</td>
<td>Indent Department</td>
</tr>
<tr>
<td>LD</td>
<td>Legal Secretary Department</td>
</tr>
<tr>
<td>MIS</td>
<td>Management Information System</td>
</tr>
<tr>
<td>MOHSW</td>
<td>Ministry of Health and Social Welfare</td>
</tr>
<tr>
<td>MSc.PSCM</td>
<td>Masters of Science in Procurement Supply Chain Management</td>
</tr>
<tr>
<td>MSD</td>
<td>Medical Stores Department</td>
</tr>
<tr>
<td>NACP</td>
<td>National AIDS Control Program</td>
</tr>
<tr>
<td>PRD</td>
<td>Procurement Department</td>
</tr>
<tr>
<td>QAD</td>
<td>Quality Assurance Department</td>
</tr>
<tr>
<td>SD</td>
<td>Sales Department</td>
</tr>
<tr>
<td>TD</td>
<td>Transport Department</td>
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<td>ZS</td>
<td>MSD Zonal Stores</td>
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ABSTRACT

Stocktaking is a very important procedure in many organizations. Most of the organizations must prepare financial statements at the end of every financial year. Thus by definition stocktaking is the process of counting, weighing and measuring the quantity of stock balances and recording of items being counted. The main objective of this study is to find out the Ineffectiveness of Stocktaking which can cause costs as well as improper and unplanned financial statements in an organization.

The topic of this study was An Impact of Ineffectiveness of Stocktaking on the Enterprise Resource Planning (ERP) at Medical Stores Department (MSD), headquarters in Dar es Salaam, Tanzania. It is the study requirement of master program at Mzumbe University. Therefore, in summary, this report will present the areas where the organization annual stocktaking complied with annual financial statement and the points at which did not comply in the proceedings of stock balances and recording of items being counted as well the study will present possible reasons behind that hinder its compliance and the possible solution to overcome the same in future.

By using various data collection method including questionnaire, interview, observation and documents the researcher was able to collect relevant data and reach into conclusion. To get relevant data of the study, questionnaires, interview, observation and review of records from different sources were applied. The major findings in this study was that, mismatch between the figures of opening and closing stock are likely to be used in the final accounts, which culminates to wrong trading results of the firm.

The study reveals various weaknesses that can be termed as challenges on achievement of planed and proper financial statement.
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CHAPTER ONE

INTRODUCTION

1.0 Introduction
Stocktaking is a very important procedure in many organizations. Most of the organizations must prepare financial statements at the end of every financial year. Thus by definition stocktaking is the process of counting, weighing and measuring the quantity of stock balances and recording of items being counted. The main objective of this study is to find out An impact of Ineffectiveness of Stocktaking which can cause costs as well as improper and unplanned financial statements in an organization.

1.1 MSD’s Background Information
Medical Stores Department (MSD) is among the many organizations in Tanzania which needs to apply various strategies in order to meet its objectives as well as contributing to the growth of Tanzanian economy. It is an autonomous department within the Ministry of Health and Social Welfare (MOHSW) that was established by the Act of Parliament in September, 1993 to perform three core activities, namely to Procure, to Store and to Distribute essential healthcare products to all Tanzania government hospitals and health facilities, including authorized non-governmental organizations providing health services in Tanzania. The department is a non-profit organization, and is required to operate commercially in a self-sustaining budget, and ensure provision of quality healthcare products at all times and at affordable prices.

Apart from performing the mentioned three core functions, MSD also provides other services on behalf of the Tanzanian government through the MOHSW including clearing, warehousing and distributing healthcare products donated or purchased by other National and International Organizations like UNICEF, JICA, DANIDA EPI, TACAIDS and others which donate health items through the MOHSW.

The main Vision of MSD is “to provide drugs and medical supplies of required quality closer to customers at affordable prices and at all times”. In order to fulfill this vision, MSD gradually opened strategic zonal stores which have now reached nine. They include Tabora zone serving Kigoma and Tabora regions; Mwanza zone serving Kagera, Mwanza,
Shinyanga and Mara regions; Mbeya zone serving Mbeya and Rukwa regions; Iringa zone serving Iringa and Ruvuma regions; Mtwara zone serving Mtwara and Lindi regions; Tanga zone serving Tanga region, Moshi zone serving Moshi, Arusha and Manyara regions; Dodoma zone serving Singida and Dodoma region; and Dar es salaam zone which serves Dar es Salaam, Morogoro and Coast regions. The Zones provide services to more than 5000 health facilities countrywide, which includes 1 National hospitals, 3 referral hospitals, 17 regional hospitals, 219 designated district hospitals (including authorized non-government organizations), 481 health centers, and 4679 dispensaries. (URT, 2009).

The department has more than 220 drugs, 570 Medical devices and laboratories in its list of essential drugs and medical supplies (catalogue items). The range of products includes also many non-catalogue items coming through various donors like, Clinton Foundation, CIDA etc; various program under the Ministry of Health like TB & leprosy, Family planning, NACP, EPI, NMCP etc. The range of products includes many other special items including cold chain refrigerators, Dental chairs, x-ray plant and so on.

When MSD was established, a manual system was being used in all operations in all its stores, and this proved to be a source of inefficiency. In order to cope with the globalization, as well as rapid technological changes, MSD had to undergo various transformations in order to survive the competitive business environment and operate commercially. It therefore adopted Enterprise Resource Planning (ERP) system referred to as ORION n 2002, to be used in all operations.

Since the introduction of ERP system, performance has reasonably been improved although not to the desired scale. A number of problems have been noticed and reported in relation to accuracy of inventory records in the system, making them unreliable and often not trusted. A study that was done by DANIDA in 2003 reported this problem of inaccurate inventory data in the system. “The implementation of the management Information system is still ongoing and there are a number of problems that have to be urgently addressed. There is little control over the inventory because of problems with the
ORION warehouse and inventory modules, as well as infrequent and ineffective physical counts”. (DANIDA, 2003, (p.1).

The problem of data integrity has got worse as time went by, which led to external parties calling for system audits. It was reported in the Audit Report on Global Fund Grants to Tanzania issued on June 2009 that “MSD’s Orion computerized inventory management system cannot be relied upon to provide MSD management and the MOHSW with accurate information to monitor and react to problems in the supply chain”. (Global Fund Report, June 2009).

It further reported that 78% of the stock items reviewed had stock adjustments, but the reasons why these errors arose were not apparent. For example, the report showed that stock balances of antiretroviral combination drugs (Lamivudine 150mg + Stavudine, and Zidovudine 300mg + Lamivudine) were reduced (adjusted negatively) by 99 percent and 85 percent respectively to align with the low stock on hand at the end of 2008. Further, the antifungal medicine had a positive adjustment of 300 percent of stock in the books while biohazard bags had a positive adjustment of 17 times the available stock on hand at the end of 2008.

The same problem has been reported in various interdepartmental meetings and internal memos, calling for employment of a number of new staffs as stock verifiers and perpetual controllers. One of the internal memos from Warehouse Manager pleaded for the replacement of the “current system” due to the fact that the data in the system is completely unreliable. (Warehouse Manager, Inter office Memo, dated 1st May, 2010).

In some occasions wrong decisions have been made especially on procurement quantification and on setting delivery schedules which lead to either stock-outs or overstocking. Sales staffs have been spending a lot of time running out to the warehouse to see what is actually on the shelf before serving a customer basing on what appear in the system.

MSD operations are organized in five directorates that execute different roles in the Department, and they are:

i. Directorate of Finance and Administration (DFA)
ii. Directorate of Customer Service and Zones operations (DCZO)
iii. Directorate of Procurement and Technical Services (DPTS)
iv. Directorate of Logistics (DL)
v. Directorate of Information System (DIS)

This is illustrated in the organization chart below:

**Fig. 1.1: MSD Organizational Structure**

Source: http://www.msd.or.tz

**Key:**

DPTS - Directorate of Pharmaceuticals and Technical Services
DL - Directorate of Logistics
DFA - Directorate of Finance and Administration
DCZO - Directorate of Customer Service and Zonal Operations
DIS - Directorate of Information Systems
PR - Procurement Department
C&C - Clearing and Claims Department
QA - Quality Assurance Department
T - Transport Department
IN - Indent Department
1.1.1 MSD Integrated Programs

MSD is integrated with all the major programs executed under the Ministry of Health and Social Welfare (MOHSW); it serves many people in the country by collaborating with government agencies in procuring, clearing, storing and distributing their requirements throughout the nation.

The integration of the vertical programs activity or function into MSD is seen as a reasonable means of reducing costs and therefore increasing effectiveness and economy. The Major integrated programs that have shifted some of the functions to MSD are as follows:

The Expanded Program of Immunization (EPI) which took over the procurement, clearance, storage and distribution of BCG and DPPT, the vaccines have regularly been cleared, stored and distributed by MSD. The National AIDS Control Program (NACP): MSD has been performing all the functions of partly procuring all orders for ARV’S, clearance, storage as well as distribution to all hospitals and regions in coordination with the program’s regional coordinators.

Malaria Control Programs: MSD performs all the functions of partly procuring, storage as well as distributing to Districts via zonal stores, TB and Leprosy programs: MSD performs the procurement of their special orders, clearance, storage and their distribution to districts (http://www.msd.or.tz).

1.1.2 The Objectives of the Directorate of Logistics

The Medical stores department has one of the most complete logistical networks in Tanzania. The network consists of 8 zonal stores, a central office and a warehouse in Dar
es Salaam. Each zone has all the required facilities to handle all types of items including cold chain items. Specifically, the network is characterized by the following items:

- A full fleet of modern truck, operating from Dar es Salaam to zones every two weeks
- Monthly vaccine delivery to all zones
- Three month delivery to cycle to all indent customers
- Potential piggy back service for smaller quantities on existing distribution capability to store cold chain items
- Full management information system (MIS) supplying up to date information on all aspects of logistics, order status, inventory and deliveries.

The MSD delivers goods at the same price nationwide, whether in Dar es Salaam or Mtwara, he delivery price are the same due to its volume operations and highly competitive bidding and it provides the least costly transportation solution to the customers. Intensive and highly professional financial management assures that the government and donor finance is used wisely, transparently and to the benefits of the population (http://www.msd.or.tz).

1.1.3 The Objectives of Directorate of Pharmaceuticals & Technical Services
Pharmaceuticals and technical services deal with every aspect of selecting appropriate products for use in the health sector. The directorate works in collaboration with a number of other ministries of health agencies, all primarily working towards the same goal, furnishing the most appropriate healthcare products of the highest quality at the most reasonable prices.

- Quality
The MSD works in collaboration with the pharmaceutical board in verifying that all medical products selected, imported and sold are complaint with the laws and standards of Tanzania and the pharmaceutical and poisons Act of 1978, MSD does not deal with any product that does not conform to the highest standards of the law.

- Cost
Competitive international and local bidding and evaluation are detailed, thorough and transparent operations that adhere to strict rules and regulations. Based upon need
analysis, a tender is advertised by the MSD for specific products and quantities. Bids are received at a public meeting and further evaluated by MSD directorate of pharmaceuticals and technical services. All decisions for final purchase and awards of contracts are made by the MSD.

- **Availability**
  Upon approved of the bids, the directorate of pharmaceutical and technical services proceeds to contact the supplier and establish the parameters of the agreement including timing of staggered deliveries, payment and delivery guarantees and once again verifications and compliance upon receipt of goods at MSD, the product is warehoused in the Dar es salaam central warehouses and eventually transshipped to zonal warehouses or delivered in some cases directly to the health facilities (http://www.msd.or.tz)

**1.1.4 Objectives of the Directorate of Information**
With the generous assistance of DANIDA, the Danish Government development agency, assistance was provided for a programmed of total computerization of MSD. An intensive effect of over one and half year culminated into a modern electronically based system of overall information sharing involving every aspect of the departments’ operations from orders to deliveries, with critical focus on expiry date controls and inventory management among them. This system provides a firm foundation of information technology that remains flexible to accommodate future needs for programmed expansion or addition.

The management information system (MIS) will provide the core for the Ministry of health and social welfare future logistical management information system responsible for the better forecasting and management of the nations health care requirements generated in the field among the dispensaries and health centers.

**1.1.5 Objectives of the Directorate of Finance and Administration**
The nature of MSD business is essentially the management of a drug supply chain that entails the process of procurement, storage and distribution functions. The three functions form part of the drug management cycle. However, for the three functions to tie together in a sustainable manner, management support systems are required. That is, there should be functional organizational structure, adequate and sustainable financing arrangements, reliable management information systems and motivated staff.
The function of the Directorate of Finance and Administration is therefore to ensure that MSD has adequate management support systems and resources, and that it manages those resources in a sustainable manner. In this regard, its long-term goals and objectives are as follows:

- To ensure that the accounting system, procedures and records are maintained in a form that conforms to the best commercial accounting standards and generally accepted practices, and safeguards resources against wasteful activates.
- To ensure that sound management information systems and business processes are developed, maintained and continuously improved to support the process of management systems and procedures based on sound commercial management systems and procedures based on sound commercial principles and practices are installed to ensure judicious use of resources (physical assets, inventories, investments, cash and people) and best return on investments.
- To ensure that there is a functional organizational structure and supportive organizational culture for attainment of organizational goals and objectives.
- To ensure that the right number and caliber of staff are recruited, developed maintained and motivated to attain excellence in performance (http://www.msd.or.tz).

1.1.6 Objectives of the Directorate of Sales and Customer Services

The directorate was formed to serve the customers by increasing personal contract, decentralization of empowerment and focusing on critical areas such as zonal sales back up, customer service, back order and complaints management.

The MSD is constantly striving to improve the level of service and customer salutation. With the recent institution of connecting all zones electronically to the central office, all information and product statuses as well as orders are shared at once.

A new program to measure the delivery and percentage performance of all zones and the overall MSD overall has recently been created to focus on meeting the challenges of stock availability.
1.2 Statement of the Problem

Annual stocktaking is very important in all organizations; it is this exercise, which reveals out the actual stock balances for the financial ending year, hence financial statements are prepared.

Information existing in an ERP system database is normally used throughout the organization because of the integration nature. If inaccurate data is entered into the common database, the wrong data may have a negative effect throughout the organization.

Most organizations/companies experience deficiencies in undertaking annual stocktaking and hence suffer or experience a lot of getting wrong figures which are used in the final accounts as opening and closing stock.

The MSD is faced with that problem, that is, deficiency in stocktaking exercise, as the result wrong figures of opening and closing stock are likely to be used in the final accounts, which culminates to wrong trading results of the firm.

However, there is also a problem of physical identification by quality, unit of issue, package size: number of primary packages per carton, package code, expiry dates, manufacturing dates for drugs/medical supplies, damage and defective goods batch/lot number serial number in case of equipment and location or by name for other which may cause discrepancies.

The introduction of ERP system, performance has reasonably been improved although not to the desired scale. A number of problems have been noticed and reported in relation to accuracy of inventory records in the system, making them unreliable and often not trusted. A study that was done by DANIDA in 2003 reported this problem of inaccurate inventory data in the system.
<table>
<thead>
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<th>Drug/item</th>
<th>Unit of issue</th>
<th>Stock at start of 2008</th>
<th>Receipts</th>
<th>Total issues</th>
<th>Stock adjustment</th>
<th>Expir ed</th>
<th>Goods in transit</th>
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Source: (Global Fund Grants to Tanzania Audit Report June, 2009)
It was further reported that 78% of the stock items reviewed had stock adjustments, but the reasons why these errors arose were not apparent. For example, the report showed that stock balances of antiretroviral combination drugs (Lamivudine 150mg + Stavudine, and Zidovudine 300mg + Lamivudine) were reduced (adjusted negatively) by 99 percent and 85 percent respectively to align with the low stock on hand at the end of 2008. Further, the antifungal medicine had a positive adjustment of 300 percent of stock in the books while biohazard bags had a positive adjustment of 17 times the available stock on hand at the end of 2008 as shown in the table 1.1 above.

Regarding to the above problems the researcher decided to assess the challenges between annual stocktaking and financial statement and the related impacts so as to examine process, procedures, policy, performance, strategies and principles of annual stocktaking annual preparation as regards to MSD regulations and make scientific decisions which will improve efficiency in stocktaking and which could make the organization to reduce costs hence to become more effective in terms of funds utilization and service provision.

1.3 Research Objectives
1.3.1 General Objective
The overall objective of this study was to assess the factors that influence inaccurate and ineffectiveness of stocktaking at MSD.

1.3.2 Specific Objectives
The study focused on the following specific objectives:-

i. To find out whether the MSD staff has the required knowledge and competence especially in the functions related to ERP management in cycle counting and stocktaking.

ii. To identify any weaknesses in the data capturing process, policies and procedures during cycle counting and stocktaking that may lead to having wrong data in the system.

iii. To find out whether lack of proper means to identify ownership of items stored at MSD during the receiving, picking, cycle counting and stocktaking lead to ineffectiveness of stocktaking.

iv. To find out whether the improper use of unit of measure and pack code of items stored at MSD contribute in ineffectiveness of stocktaking.
1.4 Research Questions

1.4.1 Main Research Question

The main question was, what factors influence the ineffectiveness of stocktaking data in the ERP system?

1.4.2 Specific questions

The study addressed following research questions:-

i. Are the MSD system users involved in the functions related to inventory management i.e. receiving, picking, cycle counting and stocktaking have the required knowledge and competence?

ii. Are the procedures and policies for data capturing during receiving, picking, updating and stocktaking available and followed?

iii. Are there proper means of identifying ownership of the incoming goods, during the picking and during the stocktaking?

iv. Are there any improper uses of unit of measure and pack codes during the receiving, picking and stocktaking exercise?

1.5 Significance of the study

1. To MSD

i. It will identify specific factors, which tend to hinder the stocktaking procedures.

ii. It will add to current stock of knowledge to stocktaking team.

iii. To enable the management of MSD to review its policy on stocktaking procedures, so as to maximize efficiency in preparation of financial statements.

2. To future Procurement and Supply Chain Management Student:

i. The research will act as a source of literature review.

ii. It will help to recognize the importance of stocktaking as vital to other organizations.

3. To the public and other organizations

It would be used as a reference by other organizations with similar obligations of providing services to the public in general.
1.6 Limitation of the study
This research study aimed at coming up with possible alternative solutions to the challenges facing MSD on annual stocktaking compared with financial statement. The findings are limited to the extent to which the management of MSD applies proper procedures on annual stocktaking for its goods and decision making. All data was also limited to the information available in the company records, minutes, journals and in house publications of the institution. The hardship experienced by researcher was financing and confidentiality of information but more effort applied to meet the research objectives.

1.7 Scope of the Study
The research methodologies used in this study were projected to correspond with the researcher’s professional skills and knowledge at the level of masters’ candidate of Mzumbe University. In accordance to this, the research procedures had to be adhered but there were some of the limitations that were encountered when conducting research such as financial constraints and confidentiality. This study is self-sponsored. Owing to financial constraints and time limitations, the researcher did not undertake study in all MSD zonal offices. Rather, the researcher limited the study at MSD Headquarters located at Keko mwanga in Dar es Salaam, and was limited to Directorate of Finance and Administration Department was given priority for the study. MSD employees were approached for the study. Other MSD departments were approached for gathering information, but not in detail as was the case with Warehouse department. Much of the required information for this research pertaining to annual stocktaking was obtained from MSD Headquarters. Therefore the population to be drawn as sample was sufficient enough to represent the other warehouses.

1.8 Organization of the Study
This study is presented in five chapters. The first chapter consists of the background of the research problem, statement of the problem, research questions, objectives of the study, and significance of the study. The second chapter gives the relative literature review through theoretical and empirical literature to reflect the nature of the study. The third chapter describes the research methodology, area and population of the study, sample type
and size, data collection methods, type of data and schedule of activities. Chapter four is devoted for presenting findings and analysis of data based on respondents, and through intensive discussions relating to the research objectives. Chapter five is the last chapter which presents the summary of the main findings, conclusion, recommendations, implications of the findings, limitations of the study and area for further study.
CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Introduction
This chapter provides highlights on reviewed literatures for the purpose of understanding what is already known An Impact ineffectiveness of stocktaking on the ERP system. It begins with defining the meaning of key concepts which have been used in the study. Theoretical basis of the study is part of the chapter which looks at stocktaking procedures and its importance in an organization, inventory records accuracy, causes of ineffectiveness records in annual stocktaking as well as what can be done to ensure accurate inventory data in the system.

2.2 Theoretical Literature Review

2.2.1 Definitions of Concepts

- **Stocktaking**
All department holding stocks are required to undertake a formal stocktaking of all items at least once every year. The following issues should be taken into account;

  i. During stocktaking the number of quantity of items listed be physically counted and marked on the count sheet.

  ii. Stocktaking records are retained for all audit examination in order to verify that stock controls are operating adequately.

  iii. Departments must determine their approach to stocktaking and whether it will include one of annual counts or ongoing cycle counts.

  iv. It is recommended that cycle comes to be performed on a monthly basis.

  v. The stocktaking process commences with the running of a report within the inventory module to generate a count sheet, which will enable the users to mark against a listing of items held as physical quantity of items found within the store or locations.

(http://www.ox.ac.uk webmaster).

David Jessep and Alex Morrisin (1986:141), define stock checking as another check on physical quantity which may be applied either regularly or intermittently. It can be done by checking the receipt quantities, and issue counted check by the receiver.
Jessop and Morrison (1994:175), add that stocktaking enables many organizations to compare its physical stock against the stock records.

If a physical quantity does not agree with the balance shown on the record card the discrepancies will reveal either surplus or deficiencies.

Tesha (1999), defines stocktaking the process of counting, weighing and measuring the quantity of stock balances and recording the results, which involves also the physical verification of condition of items being counted.

2.2.2 Enterprise Resource Planning (ERP)

The main objective of an Enterprise Resource Planning (ERP) common database is to coordinate the whole business and share information among business functions from upstream to downstream processes in the supply chain. Lysons, K. & Farrington, B. (2006), has defined ERP as “the latest and possibly the most significant development of Material Requirement Planning (MRP) and Manufacturing Resources Planning (MRPII). While MRP allows manufacturer to track supplies, work-in process and the output of finished goods to meet sales orders, ERP is applicable to all organizations and allow managers from all functions within the organization to have consolidated view of what is taking place throughout the organization”.

Wikipedia has defined ERP as “an Integrated Computer-based system used to manage internal and external resources including tangible assets, financial resources, materials, and human resources”. It facilitates the flow of information among various functions within an organization as well as managing the connection between the organization and its outside stakeholders.

ERP has been defined by ERP FAN (2008) as a system which attempts to integrate several data sources and processes of an organization’s information into a unified system and use of common database. Common database allows every department in the organization to store and retrieve information in real-time and also allows information to be more reliable, accessible, and easily shared.

ERP is characterized by the use of common database for information. According to Scribd Inc (2010), “ERP is a software that allows companies to (1) Automate and integrate
many of their business processes, (2) share a common data base and business practices throughout the enterprise, and (3) input data in one location, that can be processed with other data and accessed as informational reports in a real-time environment.

2.2.3 Cycle Counting or Perpetual Inventory

Cycle counting which is sometimes known as perpetual inventory, is physical inventory counting process used by organizations to count a number of items in a number of areas within the warehouse without having to count the entire list of inventory. In cycle counting a sampling technique is applied where by certain number of items is counted to represent the count for all items in the warehouse.

Annual stocktaking and cycle counting play an important role in attaining accurate inventory records when conducted appropriately. Otherwise it may as well be a source of inaccurate data in the system. Therefore the ability to make accurate physical counting of inventories is one factor that must be considered in improving the accuracy and reliability of inventory records. Accurate count is critical in verifying if inventory actually exists and that on-hand balances agree with financial and inventory records. The effectiveness of stock counting processes can influence the accuracy of information it produces (http://logistics.about.com/od/operationalsupplychain).

Jessop and Morrison (1994), argue that after investigation, both stock records and account require adjustment in respect of declared discrepancies, this may be done directly from stock sheets or by a special discrepancy report and listing all the items concerned. It is normal practice for discrepancy form to be approved by the stock controller or some other appropriate authority before the adjustment are made and the discrepancies are summarized to show that they were no surplus or deficiency on each classification.

Cater (1985), argues that the location and correction of any major stocktaking discrepancies is a very costly, often ending up the stores management having to write–off stock as lost. It is therefore vital once the cause of discrepancy has been successfully isolated, that certain measures are taken to ensure prevention of similar error at the next stocktaking.
These measures should include the following:

- A complete review and overall check of security system should be carried out if theft or fraud is suspected.
- Consultations should be held between the stores and the other departments whose action can affect the accuracy of stock taking so as to ensure that they realize and appreciate the role their actions play.
- Stores documentation must be closely examined to ensure that all the data needed to control the stock is provided, clearly quickly and accurately.
- The existing system of control should be closely studied to ensure that any faults can be eradicated.

2.2.4 Stocking Procedures

According to Jessop and Morrison (1986), blind stocktaking is the name given to the system whereby the person taking stock is given no prior information about the vocabulary, numbers, descriptions, stock record balances or locations of the items he is to check and is not allowed access to stock record or bin card.

The theory is that the check will be more reliable as the stock taker has the knowledge of what is supposed to be in stock. He has to locate and identify stores for himself, he is obliged to count every item and he is not open to any temptation to skip his work accepting identification or qualities as appearing on the stock record cards.

The advantages of blind stocktaking:

- Where a stock taker finds major discrepancies on his first physical count he can recheck straight away.
- Where he finds a thrilling discrepancy he can ignore it and avoid unnecessary adjustments.
- It simplifies clerical work where the stocks agree with the card balance.

The disadvantages of blind stocktaking:

- It is laborious
- It is slow
- It requires more staff
- It requires more experienced staff with knowledge of the physical characteristics of the stock held.
• Errors are likely to occur because of wrong identification.

2.2.5 Stocktaking Team

It is common practice for stocktaking to be done by a team of two people, or more for the following reasons:

(a) Where quantities are not large, the counting or weighing can be done by one man and the clerical work by the other.

(b) Where large items have to be measured or weighed, two men can usually operate more satisfactorily than one.

(c) Where two people are concerned, they will to some extent check other work, thus minimizing errors.

2.2.6 Stocktaking by Stock Keeper

Jessop and Morrison (1986), argue that occasionally stock keepers are required to take stock of their own stores for balance sheet purposes without outside assistance or expansion. This practice it is recommended because of the following reasons:

• It exposes him to the temptation of canceling genuine discrepancy to avoid criticism of his work.

• It provides an opportunity for deliberate fraud in any case but it is still advisable to have the help of storekeepers in the process of stocking because they know the stocks. They are therefore able to find and identify items quickly.

2.2.7 Required Qualifications of Store Staff

Some scholars argue that qualified store staff should possess the following qualifications.

• They should attain adequate education levels like those issued by institutions of high learning and professional board qualifications in the supplies and procurement field such as CPSP or Advance Diploma in Procurement and Supplies

• They should be of high integrity, qualified stores personnel should respect their work and be good examples to others.

2.2.8 Internal control and organization of stocktaking

Stocktaking requires good control and organization if it is to be done properly; this applies to both continuous and periodic counts. The main reasons for internal control and organization of stocktaking are:
• The staff responsible for the custody of stock, or for maintaining the detailed stock records or control account should not do the counting unless an independent person makes a check.

• For each stocktaking, written instructions should be issued to all centers dealing with the organization which conduct stocktaking.

• The written instructions should be reviewed and approved by a responsible officer before being issued.

• Concerning supervision, it is emphasized that competent supervisors, should be appointed for each area. Each supervisor should make test count and review all his areas to ensure that all stock has been counted and the counts recorded.

• Regarding the arrangement of stock items it is emphasized that stock items should be well arranged and conveniently stacked or binned at all times. The racks or bins should be marked with all relevant information as to size, grade, origin job for which required, or similar details, so as to aid identification. Moreover, obsolete, defective and slow moving stock should be segregated or be readily identifiable.

• During the counting exercise, each team of stocktaking should consist of one person with specialized knowledge for identification of items of stock and make the count and a second person to record the results of the count and to check the accuracy by making a second count.

• Furthermore, the stocktaking sheet or cards should be in standard form and designed to show all essential information. They should be completed in ink or ball point-pen and should be initiated or signed by the person checking the stock.

• Regarding the cut off, there must be adequate cut off producers to ensure that the purchases, production and sales records are closed at the points which coincide exactly with the stocktaking or closing of the stock records. Movements of the stock or materials during stocktaking must also be controlled to prevent the items from being omitted from the count or counted more than once.

• Moreover, the consignment or other stock held by third parties should be properly identified as the client own stock, as part of the control over such stock. But arrangements must be made to exclude such items from the final stock sheets. If accounting records are kept for stock, the physical counts
should be compared with such records, which should be adjusted immediately for all discrepancies.

2.2.9 Inventory Records

In the private sector, the term inventory generally refers to items or property that are held for sale as finished goods, or are in the process of being produced or assembled for sale (i.e., work in process), or raw materials and supplies used in producing goods, offering services, and accomplishing operational missions (GAO-02-447G, 2002). Inventory represents a significant portion of assets in government and private sector. Managers and other decision makers need to know how much inventory is available and where it is located in order to make effective budgeting, operations, and financial decisions so as to have business that works better and at less cost. This can be achieved if the inventory held is well recorded.

Inventory records or stock records have been defined as manuals or computer-based records of an item’s quantities which are on hand, committed (allocated) to firm, or on order. It includes also the history of the transactions in each inventory item. Inventory record facilitates inventory management which seeks to control a balance between the inventory that comes in and the inventory that goes out. Managing the acquisition, production, storage, and distribution of inventory is critical in controlling costs and to achieve efficiency in operations. In order to have proper inventory accountability it is important that detailed records of what has been produced or procured be maintained, as well as being properly reported in the organization’s books of accounts. The books of accounts should have detailed asset records which are necessary to provide for the physical accountability of inventory. The cost of inventory should be charged to operations during the period in which they are used. The physical controls and accountability of inventory reduce the risk of undetected theft and loss, unexpected shortages of critical items and unnecessary purchases of items already on hand. These controls improve visibility and accountability over the inventory, which help in ensuring continuation of operations, increased productivity, and improved storage and control of excess or obsolete inventory (GAO-02-447G, 2002).
2.2.10 Inventory Records Accuracy

According to Strategos Inc., Inventory Record Accuracy is a measure of how closely official inventory records match the physical inventory. The accuracy is measured as physical quantity compared to the computer record. It includes knowing what is on hand and where it is stored. To a customer, inventory accuracy means material is on the shelf in the right place and right quantity, ready for a customer when it is needed at distributor’s point. For a distributor, inventory accuracy means error free and profitable operations for efficiency. Without accurate inventory records it is very difficult to know what inventory is available and how much money is invested on it. (http://www.mayerelectric.com/inventory-accuracy-assurance.aspx)

Inaccuracy refers to less-than- inventory accuracy level set by an organization. Some organization set an accepted minimum level of acceptability for inventory record accuracy e.g. when inventory accuracy level is set to be 95 percent, it means that for every one hundred inventory balance records, ninety-five must be perfect. The periodic inventory or counting is often used to track accuracy level and validate the company’s value of inventory on its financial statements. Some of organizations do not track their accuracy on a day-to-day basis. Instead they may determine accuracy by physical stock taking that they take periodically, usually once a year.

Inaccurate data in the ERP system may not only lead to errors in planning but it is costly. QUALITY Journal (1998), reported that data error rates of 1-5% are typical, with estimated immediate cost of about 10% of revenue. Customers, suppliers, distributors and employees are negatively affected by inaccurate data. The effects may include non order fulfillment, inaccurate billings and other inconveniences.

2.2.11 Inventory Counting

Inventory counting or physical inventory is a process of counting the number of each type of product held in store. It helps in ensuring that the stock on hand balances what is in the records. Physical inventory which is sometimes known as stocktaking involves the process of not only counting but also weighing or measuring the inventory held in any organization which can be raw materials, work in process, finished goods or supplies, expressed in quantitative and/or financial terms (Morrison A et al, 1986).
2.2.12 Unit of Measure

According to Wikipedia dictionary, a unit of measure is the same as a unit of account of market value. Goods for sale are priced using a unit of account. In this manner the value is measured by the seller basing on same unit that is expressed to the buyer (http://wikipedia.org).

A unit of measure has been mentioned to be one of the internal inventory tools that will keep the inventory counts accurate. Stocking unit of measure should be defined to accommodate the way goods are stored in the warehouse in such a way that when goods are received in carton/cases, but broken down into smaller units for the purpose of simplifying storage or issuing, the stocking unit of measure should be “each”. If they are stored in the carton then the stocking unit of measure should be “carton”. It was further commented that if the item is valued in “each” but received in carton, stocking unit of measure should be “carton” and the system should be told how many “each” are in each carton. Carton conversions should be well defined in the system in order to avoid mistakes that may occur especially when the number of “each” varies in several cartons for the same item (Good Inventory Practices, 2002).

2.2.13 Methods of Stocking

Mahanga (1987), gives two main methods of stocktaking. These methods are discussed hereunder:

(i) Periodic Stocktaking

By periodic stocktaking means the whole of stock is covered at the same time at the end of a given period, usually the end of financial year, or in some cases at quarterly intervals. Theoretically, stocks should be counted on the date of the balance sheet, but practice has provided that this is not always possible.

The periodic stocktaking has the following advantages,

- The stocktaking is carried out on non-working days and therefore the stock takers have time to count carefully and check any discrepancies.
- Accurate stock evaluation figures can be provided for the annual balance sheet and accounts.

The disadvantages of periodic stocktaking are:

- There is considerable disorganization of the operations for a day, two, a week or even at end of each financial year or twice a year.
Many people who are taking inventories are not sufficiently familiar with the goods to be able to describe them accurately.

The store must be completely closed to ensure an accurate account.

The inventory of all articles are taken with the same frequency, whether they are slow moving articles which remain in store and parts are used daily.

(ii) Perpetual (continuous) stocktaking.

This is the method whereby stocktaking is taken continuously throughout the year in accordance with a predetermined program so that each item is physically verified at least once in the course of the year or more frequently if required.

The potentialities of perpetual stocktaking is fully displayed if complete and detailed stock records are kept, showing receipt issues and material balances kept on a day to day basis i.e. continuous inventory recording system.

The system whereby stock records are written daily in such a manner that at any time the records show the quantity of inventory available, hence to every issue or receipt a new balance is shown.

Advantages of this method are:

- The long and costly work of periodic stocktaking is avoided.
- It is not necessary to close up or stop production and store operation so as to carry out a complete physical stocktaking.
- The verification extends to comprising the actual inventory with the authorized Maxima and minima, thus ensuring that adequate inventories are maintained within the limit.
- It facilitates the preparation of monthly accounts and interim profit and loss accounts.

This method has the following disadvantages.

- The major disadvantage is that, major discrepancies need a great deal of time to investigate properly, because of the continuous nature of this type of checking, the Time devoted to investigate will be limit.
2.2.14 Reasons for Stocktaking

1. To prepare of financial statements, which show the performance of the company over time, these statements include balance sheet, profit and loss accounts and others.
2. To enable the company compare its physical stocks with stock records.
3. To disclose the possibility of fraud, pilferage, theft, loss or any other irregularity in handling items.
4. To give an indication to the management whether the stock is well managed or not i.e. revealing weaknesses.
5. To keep stores staff alert all the times, knowing that stock will have to be counted sometimes physical counting should be shown within the balance sheet.

In stocktaking process, identification of stocks in storage is very important, otherwise some of the materials may be left uncounted which may affect the stock balances as per records.

2.3 Empirical Literature Review

Jen-Her Wu and Yuh-min Wang (2002), carried out a study focusing on enterprise sizes and Industry sectors to compare their differences on ERP implementation development, package selection and user satisfaction in Taiwan. They found out that the root of high ERP failure is the gap in interests between customer organizations and ERP vendors. They further pointed out that the misfit is a common problem when adopting ERP packages and may be worse in Asia because the business models underlying most foreign ERP packages reflect European or US industrial practices.

According to the survey done by Umble J. E. & Umble M. M. (2002), on ERP implementation it was revealed that about 65% of executives believed that ERP implementation has a moderate chance of success due to poor planning, poor leadership, inadequate education and training to all relevant personnel, mismatch between the technological imperative of the system and the existing structure. There could be some more reasons contributing to that level of belief and therefore it is critical to identify and understand those factors that largely contribute to the success or failure of ERP implementation other than only poor planning, poor leadership, inadequate education and
training, mismatch between the technological imperative of the system and the existing structure.

A study on the implementation of ERP system in higher education environment in Australia, revealed that most evaluation studies of ERPs focus on technical issues or implementation processes, which do not provide an explanation about ERP’s positive or negative effects, or whether ERP work well or poorly with a specific user in a particular business environment. The study recommended for evaluation on the most critical factors that potentially determine the impacts from the ERP system implementation (http://e-construction.pm.umd.edu/publications).

Empirical research on user acceptance and implementation effectiveness of ERP done by HAN Jidong, CHENG Dong, revealed that when users perceived ERP fit for their needs, they will be influenced in their perceived usefulness and consequently influence their adoption and therefore implementation effectiveness of ERP system. These imply that the ERP user should gain in-depth understanding of the client business process before the implementation. The more compatible and the new system is the more useful the user will feel it and the easier for the user to accept it. The more useful and easier to use an ERP system for employees to accomplish their tasks, the more the system will be used effectively.

Otieno J.O. (2010), did a study on implementation of ERP in the state-owned Uchumi supermarket in Kenya. The study revealed that ERP system was poorly integrated and implemented, staffs were poorly trained, and costs were unjustifiable. This led to the state-owned Uchumi supermarket chain closing down in June 2006 after admitting that it was insolvent, as a result of over-ambitious expansion and poor installation of the ERP system. It was concluded that there is a need for understanding ERP implementation practices in less developed countries, because these countries are facing additional challenges on economic, cultural and infrastructure which influence ERP adoption, implementation, and use.

In Tanzania a study on factors affecting the quality of data in a computerized store system was conducted by Soka (2004). This study was carried at Tanzania Railways Corporation, which was facing difficulties in having current stores information in the system. It was
learnt that although there was a computerized store system that was designed to improve the quality of data, the system could not meet this objectives due to various factors including poor quality.

Kauzen (2006), in his study on stocktaking recommended that the storehouse operation should be closed while stocktaking is taking place. He also recommended that the movement of stock should be stopped while stocktaking exercise is in force. Therefore it is a task of the overall coordinator of stocktaking exercise to make sure that specific instructions are given to each team, including stock takers and also to the other staff such as the sales department members and administration members so that they may inform their customers about the dates of stocktaking for the needful actions.

Kaguo (2005), in his research on ineffectiveness of stocktaking established that there is a problem of identifying stock in storehouse which may cause stock discrepancies. The study also found out that there is always a problem of mixing up materials from consumables to non consumables which always make it a difficult exercise in comparing the company’s physical stock and book balance.

Muro (2007), in his study on effectiveness of stocktaking recommended the following:

- Determine who will count, if you are using bar-code equipment, one person can count a section of a warehouse, but if you are using count cards or sheets, it is often better to have two persons who will count independently. This is especially true if you are using count sheets rather than count cards, when forming the counting team, pair an experienced person who will record the quantities.
- Clean up warehouse

If all of the materials in the warehouse is in its proper bin location, it will be easier and faster to conduct accurate stocktaking. That is why it is important to make sure that every piece of every item is located before the counting process begins.

The clean up should be completed not less than two weeks before the date of the stocktaking. After all materials are in proper place they should be labeled and a description on them properly done. One should make sure that all borrowed materials are
returned and kept at their original places as soon as possible before the commencement of the exercise.

2.4 Conceptual Framework

In order to assist in the selection of the significant variables for inaccurate inventory records in the ERP system, a number of possible relevant factors that influences inaccurate inventory records in the ERP system from the reviewed literatures have been identified. These factors have been grouped into two i.e. factors associated with inaccurate procedures and quality of system and factors associated with human errors.

In trying to understand the relationship between the influencing factors of inaccurate inventory records in the ERP system following pictorial framework (Figure 2) can be used to depict the relationship.

Conceptual frameworks can act like maps that give coherence to empirical inquiry. Because conceptual frameworks are potentially so close to empirical inquiry, they take different forms depending upon the research question or problem.
Factors associated with human:
- Omission of item from the physical count
- Incorrect or miscount during physical counting
- Improper recording or reconciliation of counts results
- Fails to accurately record what materials are received as soon as they are received
- Fails to accurately record where materials are put away
- Pick the wrong materials for a customer order, or put the shipment on the wrong truck, or mislabel the shipment
- Fails to track unallocated inventory as well as physical inventory
- Mistakes made during the process of entering the data in the computer
- Counting item in a unit of measures different from the one in the system

Factors associated with inaccurate procedures and quality of system:
- Errors in cut-off
- System deficiencies due to system being extended beyond their original intent
- Incomplete/unavailability of user manual
- Existence of inadequate organizational policies on system security, privacy, and rules of use; data sharing and availability
- Procedures incapable of being executed in a regular basis with normal care
- Use workers with inadequate training and experience
- Making the adjustments to the on-hand balances in the system basing on those counts without having time to adequately investigate the variances
- Unfamiliar or inexperienced workers are involved in the counting

Figure 2.1 Conceptual Framework on ineffectiveness of stocktaking

Source: Researcher’s Construction, 2013
CHAPTER THREE

3.0 RESEARCH METHODOLOGY AND PROCEDURES

3.1 Introduction
In this chapter the researcher provides details on the methodology to be used in collection of data and information on the study. It includes the area of the study, research design, collection methods, sample size, sampling methods and data analysis.

3.2 Research Design
According to Mark Saunders, Phillip Lewis and Adrian Thornhill (2009), research design is the general plan on how the researcher will go about answering the research questions. The design specifies the sources of data collection, and it considers the constraints that may be encountered such as access to data, time and money. Kothari (2004), defines research design as the “conceptual structure within which the research will be conducted; it constitutes the blueprint for the collection, measurement and analysis of data”.

This research employed a case study research design where by an exploratory research was conducted at Medical Stores Department (MSD) Head office in Dar es Salaam, currently applying an ERP system. A case study research design involved an in-depth and detailed study of a unique phenomenon whereby a single unit extensively studied in its natural settings. The researcher preferred this design because it allows application of all possible data collection techniques namely; observation, questionnaires, interviews, and documentary reviews.

3.3 Area of the Study
The research was carried at the Medical Stores Department situated at Keko Mwanga in Dar es Salaam. Selecting MSD to be a case study the researcher was motivated by various reasons, it was cost effective, particularly in terms of travel, accommodation and other considerations. In addition, it was be easier to get relevant data for the problem under study probably provide relevant solution to MSD.

3.4 Data Collection Procedures
3.4.1 Types of Data to be collected
The researcher used two types of data in this study, that is, primary data and secondary
data. Primary data will be obtained through questionnaires, observation and interviews, while secondary data was obtained through organizational reports and documentary sources, which are readily available at MSD.

3.4.2 Primary Data
3.4.2.1 Interviews
Personal unstructured interviews were corrected to supplement the questionnaires, in order understand various operations performed in the system in detail, challenges and problems being faced with the system users, as well as obtaining their general opinion on what could be the reasons for the discrepancies in the stocktaking report.

3.4.2.2 Questionnaires
The researcher used structured questionnaires in collecting data for analysis. This method capturer the intended information from the respondents who are using ERP system in their daily activities at MSD. Most of the data for the study was collected through this method. The questionnaire appears as an appendix in this report.

3.4.2.3 Observation
Direct observation was used by the researcher in various sections as the way to get primary information; the researcher visited the MSD Head offices in order to observe the matter. Therefore, direct observation enabler the researcher to get quality information and therefore provide relevant conclusion about the challenges on ineffectiveness of stocktaking at the MSD.

3.4.3 Secondary Data
The researcher used relevant reports and documents available at MSD offices to collect data pertaining to the ineffectiveness of stocktaking in ERP system. Other data and information was collected mainly from other research reports and published materials in the internet and websites.

3.5 Sampling Procedures and Sample Size
3.5.1 Sampling Procedures
Non-probability technique known as purposive or judgmental sampling was applied in getting answers from the respondents. The main reason for the choice of this sampling
technique is that it allows the use of only those employees who can provide relevant data for the study, with different level of skills, education as well as responsibilities, and particularly those using the ERP system in their daily activities.

### 3.5.2 Sample Size

The researcher selected a sample size of 55 respondents. This number was drawn from the number of employees working in different sections at MSD, Dar es Salaam Headquarters as indicated in the table below:

**Table 3.1: The distribution of expected sample size**

<table>
<thead>
<tr>
<th>Category of Department</th>
<th>Number of Staff</th>
<th>Expected Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Head of Warehouse</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Principal Warehouse Officer</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Senior Warehouse Officer</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>Warehouse Officer</td>
<td>10</td>
<td>6</td>
</tr>
<tr>
<td>Warehouse Assistant</td>
<td>10</td>
<td>7</td>
</tr>
<tr>
<td>Head of Finance</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Accountant</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Assistant Accountant</td>
<td>7</td>
<td>5</td>
</tr>
<tr>
<td>Inventory Analyst</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Perpetual Controller</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Quality Control</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>Data entry during stocktaking</td>
<td>10</td>
<td>5</td>
</tr>
<tr>
<td>Procurement</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>Clearing</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Sales DRO1</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Dispatch HQ</td>
<td>7</td>
<td>5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>88</strong></td>
<td><strong>55</strong></td>
</tr>
</tbody>
</table>

Source: Researcher’s construction, 2013

### 3.6 Measurement Procedures

The variables used in the study were divided into (i) dependent, i.e. outputs, which depends on the extent of variability of the (ii) independent variables i.e. inputs. In this
An impact of ineffectiveness of stocktaking records is the dependent variable, while independent variables include:

i. Knowledge and experience of ERP system users.
ii. Availability and adherence to policies and procedures in performing various functions in the system
iii. Usage of pack code and unit of measure
iv. Identification of grade/ownership of items

The above independent variables were used to ascertain whether they influence in the ineffectiveness of stocktaking records in the ERP system.

3.7 Data Management and Analysis

a) Data Management
According to Boba (2005), data management is the development and execution of architectures, policies, practices and procedures in order to manage the information lifecycle needs of an enterprise in an effective manner.

The researcher collected data through questionnaires that are designed to fulfill the requirements of the research questions. Then the data were summarized, coded, synchronized and presented for depicting the reality of the study ready for the next step of analysis.

b) Data Analysis
In this study, the primary purpose of data analysis was to find evidences from the field in order to answer the research questions. The data were analyzed qualitatively and quantitatively using the Statistical Package for Social Sciences (SPSS) software, but models, case study were applied to analyze qualitative data, also measuring data tendency was applied to analyze statistical data like measuring mean, mode, median, disperse and so forth. In data presentation especially with quantitative data analysis, the researcher has used graphs, histograms, bar and pie charts, frequency polygon.

3.8 Ethical Issues
Ethical practices have evolved over a large span of time, if followed in spirit, offer protection to work/effort of the researcher as well as that of others. A following ethical norm at all stages remains unchanged.
During the work stage
The first and foremost expectation from the researcher before (s)he undertakes research work on a given topic in an area is a clear determination of what has been done and reported in the open literature on the topic. It is desired that the researcher also undertakes a survey of closely related topics.

During the writing stage
Knowing the difference between ethical and unethical practices in technical writing requires an understanding of plagiarism, paraphrasing, and quotation.

Plagiarism
“To use someone else’s exact words without quotation marks and appropriate credit, or to use the unique ideas of someone else without acknowledgment, is known as plagiarism. In publishing, plagiarism is illegal; in other circumstances, it is, at the least, unethical. You may quote or paraphrase the words or ideas of another if you document your source.

Paraphrasing
“When you paraphrase a written passage, you rewrite it to state the essential ideas in your own words. Because you do not quote your source word for word when paraphrasing, it is unnecessary to enclose the paraphrased material in quotation marks.

Quotations
“When you have borrowed words, facts, or ideas of any kind from someone-else’s work, acknowledge your debt by giving your source credit in footnote (or in running text as cited reference).
CHAPTER FOUR

PRESENTATION, ANALYSIS AND DISCUSSION OF THE FINDINGS

4.0 Introduction
This chapter presents the study findings obtained and from the analysis made on data and information obtained from the respondents. The objective of making data presentation and analysis is to:-

- Provide facts of the research work carried out.
- Provide answers to the research questions of the study.
- Form origin of discussion, conclusion and recommendation made in the next chapter.

The findings of this research report are consistently based on personal interviews, questionnaires and observation made during the field work. The findings of the study are based on forty (40) respondents out of fifty five (55) who filled and returned the questionnaires. This implies that the response rate for this was 73%, which is considered as satisfactory and therefore warrants further analysis. The response rate is shown on the table 4.1 below.

The interview was conducted to various people from different sections at MSD so as to find information for assessing the factors influencing ineffectiveness of stocktaking in ERP system. The interviewees were very much cooperative after comprehending that the research work was intentionally required for the award of Master of Science in Procurement and Supply Chain Management degree of Mzumbe university.
Table 4.1: The Distribution of Respondents by category

<table>
<thead>
<tr>
<th>Category of Respondent</th>
<th>Frequency of respondents</th>
<th>% of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Head of Warehouse</td>
<td>1</td>
<td>100</td>
</tr>
<tr>
<td>Principal Warehouse Officer</td>
<td>2</td>
<td>100</td>
</tr>
<tr>
<td>Senior Warehouse Officer</td>
<td>3</td>
<td>75</td>
</tr>
<tr>
<td>Warehouse Officer</td>
<td>4</td>
<td>67</td>
</tr>
<tr>
<td>Warehouse Assistant</td>
<td>5</td>
<td>71</td>
</tr>
<tr>
<td>Head of Finance</td>
<td>1</td>
<td>100</td>
</tr>
<tr>
<td>Accountant</td>
<td>2</td>
<td>100</td>
</tr>
<tr>
<td>Assistant Accountant</td>
<td>4</td>
<td>80</td>
</tr>
<tr>
<td>Inventory Analyst</td>
<td>2</td>
<td>100</td>
</tr>
<tr>
<td>Perpetual Controller</td>
<td>2</td>
<td>67</td>
</tr>
<tr>
<td>Quality Control</td>
<td>3</td>
<td>75</td>
</tr>
<tr>
<td>Data entry during stocktaking</td>
<td>3</td>
<td>60</td>
</tr>
<tr>
<td>Procurement</td>
<td>2</td>
<td>67</td>
</tr>
<tr>
<td>Clearing</td>
<td>2</td>
<td>67</td>
</tr>
<tr>
<td>Sales DRO1</td>
<td>2</td>
<td>100</td>
</tr>
<tr>
<td>Dispatch HQ</td>
<td>2</td>
<td>40</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>40</strong></td>
<td><strong>73</strong></td>
</tr>
</tbody>
</table>

Source: Researcher findings, 2013

4.1 Data analysis and interpretation

The questionnaire was distributed to Warehouse and Accounts departments; the questionnaire was purposely prepared by the researcher to obtain accurate information which significantly addressed the research questions and research objectives. The findings from the questionnaire given to respondents addressed the following research objectives:

i. To find out whether the MSD staff has the required knowledge and competence especially in the functions related to ERP management, in cycle counting and stocktaking.

ii. To identify any weaknesses in data capturing processes, policies and procedures during cycle counting and stocktaking that may lead to having wrong data in the system.
iii. To find out whether lack of proper means to identify ownership of items stored at MSD during the receiving, picking, cycle counting and stocktaking lead to ineffectiveness of stocktaking.

iv. To find out whether the improper use of unit of measure and pack code of items stored at MSD contribute in ineffectiveness of stocktaking.

4.1 Findings from Warehouse operations

Warehouse operations are under the Directorate of Logistics. MSD warehouses are well designed, with physical location code that can easily be used in identifying physical location of an item. The codes are alphanumeric with 9 characters representing Warehouse Number (numeric), Aisle (alphabet), Bay (numeric), Level (alphabetic) and Position (numeric). For example location code B3A1BB01A is translated as Warehouse B3, Aisle BB, Bay 01, level A; These locations are well defined in the ERP warehouse module.

Accountability and responsibility of safe custody of inventory in the warehouse as well as accuracy of inventory records in the system has basically been given to the Warehouse officer. There are several employees working in different sections in the warehouse reporting to the warehouse officer. All these employees perform different functions under different capacities in the ERP system. Activities performed in the warehouse especially after the introduction of ERP system require all employees in the warehouse to be well trained, disciplined in the use of the system, highly committed and faithful in order to ensure accurate inventory records in the system, because mistakes committed by one employee affects performance of other employees.

Activities performed in the warehouse which are directly involved with inventory records in the system are discussed below.

4.1.2 Receiving section

Employees in this section receive all the incoming goods, prepare inspection forms, arrange received goods on pallets according to batch numbers and fill in Put-Away Forms (PAF). Information filled in these forms includes: item description, item code, quantity, expiry date, supplier, location code and ownership code. Recording of ownership code in the PAF depends on what has been indicated on the Purchase order (PO) and Shipment Advise & Landed Cost Entry. Sometimes PO and Shipment bear many lines of ownership
grade as such the receiving section staff use own experiences to assign the ownership grade. In this case they sometime assign wrong ownership code, leading to wrong inventory records in the system.

A forklift driver picks the goods and puts them in the location indicated on the PAF. The forms are signed by the driver to prove that the goods have been placed on the correct location as per the forms and handed over to the receiving staff responsible for entering details of goods received in the computer. In some instances, forklift drivers find that the location indicated on the PAF is already occupied. In such cases, they are allowed to put the goods in another location but must amend the PAF to reflect the new location and return the amend PAF to the responsible receiving officer who should capture the new location in the system. For several occasion drivers have not been amending the PAF, and even where the drivers amended the PAF, receiving officers are not capturing the new location information in the system thus introducing inaccurate inventory records in the system. It is therefore very important for the receiving staff to ensure that all information filled on the PAF is correct and that forklift drivers put the goods on the correct locations. Failure to this will lead to have wrong inventory records.

4.1.3 Inventory control section

Employees in this section manage pallet location in the ERP system, prepare picking instruction forms (PIF), prepare and generate location transfers and zones transfers. In performing these activities they should ensure that any movement of stock from one pallet location to another is handled correctly to ensure system inventory accuracy. In some instances they delay or completely forget to amend information in the system when Pickers have reported picking the items from different locations other than the ones indicated on the PIF. This results into having wrong information in the system, creating a vicious cycle of printing PIF with wrong pallet positions, expiry and batch number; Pickers using own experiences to pick an item from different location and recording on PIF; Warehousing Officers delaying or completely forgetting to use the amended PIF to update information in the system; printing new PIF without amendments on subsequent order; and the cycle goes on and on, leading to wrong inventory records in the system.

4.1.4 Perpetual counting

Perpetual inventory controllers perform perpetual counting and where discrepancies are found, they propose adjustments. Accuracy of perpetual counting is sometimes affected by
movements of stocks because no clear cut-off as it is done while all the other business transactions also had been performed.

4.1.5 Annual stocktaking

According to governing rules stocktaking at MSD is carried before the end of financial year i.e. in the month of June of every year. All items stored in the warehouses are counted with exemption of non-inventory items like samples, written off items etc.

Blind count is applied where the stock-taker is provided with pre-filled stocktaking sheets showing important identification information but without balance quantity for the item to be counted. The required preparations done in order to ensure that all items are counted include:

- Cut-offs procedures

Cut-off date is sent to all sections in order to prevent inventory movement during the stocktaking. All transactions (receipts, location transfer, issues, customer returns, adjustments etc) are completed before any report or counting sheets are printed. Transaction of any kind is prohibited until full inventory counting is finished. Under emergency circumstances the movement of stock is permitted and in this case issues are performed under proper supervision, using manual document and capturing of all manual transactions into the system is done sometimes later when the system is officially allowed to be used by IT department. Capturing of the information from manual document into the system is sometime delayed or forgotten completely.

Some deliveries are allowed in the warehouse especially those from out of the country suppliers, as they cannot be left at ports or airport. These deliveries are normally set aside in special area (receiving bay) waiting for completion of stocktaking exercise.

Stocktaking sheets without the on-hand quantities are printed basing on storage Bin locations. Pre filled information on these sheets include item number, description, location code, ownership code, pack code and unit of measure. Blank counting sheets known as supplementary sheets are also printed. They are used to record items in the warehouse that are not on the pre-filled counting sheets.
4.1.6 Order picking

Pickers picks items as per the Material Queue Report (MQR) that indicate pallet position (bin/warehouse), part numbers, unit of measure, lot number, grade code, quantity and description to be picked. Occasionally part time job workers are being provided with the MQR to do the picking of goods. In some instances they pick items from locations other than the ones indicated on the MQR due to unavailability of the items in the indicted locations or failure to access that location as it may be at a higher level and the handling equipment may not be readily available. When items are picked from different location, pickers are supposed to indicate the location on which the picking was made, but in some cases they forget to record the correct location where the goods have actually been picked, or may report wrong location. Not only pickers pick goods from wrong location but sometimes they may pick item bearing different ownership code. Afterwards the system is updated basing on the information filled manually on the MQR. Accuracy of information on MQR will therefore affect accuracy of inventory records in the system.

4.1.7 Stock counting and reconciliation

Inventory report is printed after completion of data entry and forwarded to accounts section for comparison with the closing inventory value. If the stock records disagree with stock counts different individuals are assigned to perform a second or even third count as found necessary. No one has ever been held responsible for the wrong counting or inaccurate data entry in the previous stocktaking although huge discrepancies are being reported. This may be due to the problem of identifying an individual among many counting team members who might have actually caused such error bearing in mind that one item is being counted by different individuals in several locations due to random location method. Data entry for the same item is also being done by several individuals as it may be reported in several counting sheets.

Adjustments are performed at a later stage for the purpose of ensuring that inventory value reported in the books of accounts are of a reasonable amount when compared to the closing inventory value before stocktaking. Counted figures are been treated as opening balance at the beginning of every respective financial year. Surplus or deficit reports are prepared but reconciliation has never been done since the introduction of ERP system. In this case therefore there is a very big possibility of having a wrong opening balance in the system that is different from the actual quantity on hand.
4.1.8 Ownership of goods stored in MSD warehouses

About 1200 different items owned by MSD, together with other several healthcare items owned by other organisations within MOHSW. A number of projects dealing with healthcare items under the MOHSW have been developed and all of them have been using MSD warehouse facilities randomly. Volume and value of goods that have been stored in the MSD warehouses have been increasing every year, increasing the problem of shortage of storage space. Storage space problem has complicated the pallet location management in the system. Sometimes it results into placing an item on location that makes it difficult to pick during order fulfilment, and in extreme cases inventory can be lost. Internal movement of goods from one pallet position to another position is very likely to be performed and sometimes without following the laid down procedures. All these result into having wrong information in the system that may lead to having wrong inventory records.

Various ownership codes are being used in separating ownership of the same product in the ERP system. These grades are being indicated on the put away forms during receiving process, and the same codes are entered in the system.

The study revealed that ownership of the product is not always indicated on the Put Away Form (PAF). Even where ownership is indicated on PAF, instead of gluing the PAF on the pallet, it is glued on one of the boxes placed on the pallet. If it happens that the box glued with the PAF is issued, physical identity of ownership become difficult.

4.1.9 Physical counting

All items in the warehouse are counted and recorded on pre-filled counting sheets printed from the system, which indicate among other things ownership code. It is common in every stock counting exercise to find out several items missing in the pre-filled counting sheets, lying in the warehouse, and sometimes without clear description. In this case the stock counters use own initiative to identify not only the description but also unit of measure and ownership code, and in most cases grade MD, AD, SP, AA, AG, AF, AE, AC is always reported on the sheets. The danger in this act is to include a non-owned item together with owned items resulting to overstating the inventory records.

Every counting team is assigned its counting zone such as A1, B1, C1, B2, B3, B4 and required to count and report all items in the assigned Bin. According to the current format
of the pre-filled sheets, the counter is required to count and report the quantity, quantity per carton, counted basing on intact pack size/code, as well as the number of loose units (if any) basing on unit of measure with team leader name, date and time. The system itself converts the input number of units basing on pack size, to get quantity of stock on hand in unit of measure.

Stocktaking team headed by a Manager who is appointed by the Management involve stock counters as well as stock taking supervisors of various qualifications and from various sections within MSD. Instructions regarding the stocktaking exercise are provided by stocktaking chairman in a meeting held before the commencement of the counting. It is very likely that employee working in other sections apart from the warehouse do not know how to treat pack code and unit of measure in the counting. No proper training has been given to stock counters, especially those not working in the warehouse on how to treat these units. Poor knowledge on quantity how to use unit of measure and pack size contribute to overstating or understating the counted stock quantity.

4.2 Whether the MSD system users are involved in the functions related to inventory management i.e. receiving, picking, cycle counting and stocktaking have the required knowledge and competence

The findings, on the table above show that most of staff have experience and professional qualification in their current positions. The table shows that most of the personnel have 3 – 4 years at their current positions. However, the maximum experience of the selected staff at MSD Warehouse and Finance Department is Five (5) years but, most of staff have already worked with other MSD zones offices and other organizations, MSD headquarters is not their first appointment, therefore, experience is not a big problem since the personnel already have basic knowledge in procurement.

Moreover, both departments (Warehouse & Finance) have skilled and qualified staff, of all ranks. The maximum qualification in the department is Master degree, and the minimum qualification is Form Four. Every head of the section have at least a professional qualification.

Table 4.2 provides a summary of findings from the respondents.
Table 4.2: Distribution of respondents on the required knowledge and competence

<table>
<thead>
<tr>
<th>Category Of Employee</th>
<th>No. Of Employees</th>
<th>No. Of Years In Current Position</th>
<th>Qualification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Head of Warehouse</td>
<td>1</td>
<td>5 years</td>
<td>Masters degree plus professional qualification CSP</td>
</tr>
<tr>
<td>Principal Warehouse officer</td>
<td>2</td>
<td>3 years</td>
<td>Masters degree plus professional qualification CSP</td>
</tr>
<tr>
<td>Senior Warehouse Officer</td>
<td>4</td>
<td>5 years</td>
<td>2-Master’s degree plus CSP 2-CSP</td>
</tr>
<tr>
<td>Warehouse Officer</td>
<td>6</td>
<td>4 years</td>
<td>4- CSP 2-Advance diploma</td>
</tr>
<tr>
<td>Warehouse Assistant</td>
<td>7</td>
<td>1-4 years</td>
<td>2 -Advance diploma 2 - Diploma in Material Mgt 3 -Form –Four</td>
</tr>
<tr>
<td>Head of Finance</td>
<td>1</td>
<td>5 years</td>
<td>Master’s Degree plus Professional CPA</td>
</tr>
<tr>
<td>Accountant</td>
<td>2</td>
<td>4 years</td>
<td>Master’s degree plus CPA</td>
</tr>
<tr>
<td>Assistant Accountant</td>
<td>5</td>
<td>3 years</td>
<td>3-CPA 2-Advance diploma</td>
</tr>
<tr>
<td>Inventory Analyst</td>
<td>2</td>
<td>4 years</td>
<td>Masters degree Plus CSP</td>
</tr>
<tr>
<td>Perpetual Controller</td>
<td>3</td>
<td>3-5 years</td>
<td>2 – CSP 1 – Advance diploma</td>
</tr>
<tr>
<td>Quality Control</td>
<td>4</td>
<td>3 years</td>
<td>Diploma in Pharmacist</td>
</tr>
<tr>
<td>Data entry during stocktaking</td>
<td>5</td>
<td>4 years</td>
<td>3 - Masters Degree plus CSP 1 – CPA</td>
</tr>
</tbody>
</table>
4.2.1 Knowledge on the use of ERP system

Respondents using ERP in their daily activities were requested to indicate whether they know how to use ERP system properly or not. The aim of this question was to see if ERP users were properly trained on how to use the system in performing their duties.

Basing on the number of the responses, 92.5% of them had the general knowledge on the use of the ERP system. Only one respondent disagreed to have the general knowledge, representing only 7.5% of total responses.

Table 4.3: Distribution of respondent’s knowledge on the use of ERP system

<table>
<thead>
<tr>
<th>Methods</th>
<th>Frequencies</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have knowledge</td>
<td>37</td>
<td>92</td>
</tr>
<tr>
<td>Do not have knowledge</td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td>Total responses</td>
<td>40</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Research findings, 2013

The findings on table 4.3, can alternatively be presented by the pie- chart below;
4.2.2 Knowledge on the level of comfort in the use of ERP system

Respondents with general knowledge on the use of ERP system were further requested to indicate their knowledge on the comfort level in the use of ERP system.

Basing on the number of respondents with general knowledge in the use of ERP system, 54% of them confirmed to have ERP knowledge comfort level of more than 60%, which according to the researcher this level is satisfactory for any system user to perform his/her duties correctly in the system as shown in the table below.

Table 4.4: Distribution of respondents on knowledge comfort level in the use of ERP system

<table>
<thead>
<tr>
<th>Methods</th>
<th>Frequencies</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Above 80%</td>
<td>15</td>
<td>41</td>
</tr>
<tr>
<td>Below 80% but above 60%</td>
<td>20</td>
<td>54</td>
</tr>
<tr>
<td>Below 60%</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Total responses</td>
<td>37</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Research findings, 2013

The findings on table 4.4 can alternatively by the pie-chart below;
Table 4.2: Pie chart of respondents showing the comfort level in ERP

![Pie chart showing comfort level in ERP](image)

Source: Research findings, 2013

4.2.3 System user Training Methods

Respondents with general knowledge on the use of ERP system were requested to select among six methods applied in acquiring their knowledge on using the ERP system.

The collected data revealed that most of the employees have not been trained appropriately, thus leading to possibility of working around the system without following the standard operating procedures. Trained by MSD IT staff was first ranked and this was mentioned by 37% of respondents, second ranked is trained by MSD colleague with 25%, third ranked is trained through MSD in house training programs by 20%, fourth ranked is by using own skills and experience by 8%, followed by MSD orientation program on employment and trained in IT institution by 5% each as shown in the table below.

Table 4.5: Distribution of respondents on system user training methods

<table>
<thead>
<tr>
<th>Methods</th>
<th>Frequencies</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trained in IT institution</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Trained by MSD IT staffs</td>
<td>15</td>
<td>37</td>
</tr>
<tr>
<td>Trained by my MSD colleague</td>
<td>10</td>
<td>25</td>
</tr>
<tr>
<td>Trained though MSD in-house training programs</td>
<td>8</td>
<td>20</td>
</tr>
<tr>
<td>MSD orientation programmed on employment</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Using own skills and experience</td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td><strong>Total responses</strong></td>
<td><strong>40</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Source: Research findings, 2013
The findings on table 4.5 can alternatively be presented by the pie-chart below;

**Figure 4.3: Pie chart of respondents showing the system user training**

![Pie chart showing system user training](image)

Source: Research findings, 2013

### 4.3 Whether the procedures and policies for data capturing during receiving, picking, updating and stocktaking are available and followed

#### 4.3.1 Experience on stocktaking

Respondents were requested to indicate whether they had ever been involved in the physical counting of items during the stocktaking exercise at MSD. The aim of this question was to know whether the selected respondents had ever been involved in stock counting at MSD and therefore aware of procedures and policies involved in the stock counting.

Out of 40 respondents, 95% of them agreed to have experience of doing stock counting, while 5% respondents disagreed. as shown in the table below.
Table 4.6: Distribution of respondents on experience on stocktaking

<table>
<thead>
<tr>
<th>Methods</th>
<th>Frequencies</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Involved in stock counting during stocktaking</td>
<td>38</td>
<td>95</td>
</tr>
<tr>
<td>Not involved in stock counting</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Total responses</td>
<td>40</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Research findings, 2013

The findings on table 4.6 can alternatively be presented by the pie-chart below;

Figure 4.4: Pie chart of respondents showing experience on stocktaking

Source: Research findings, 2013

4.3.2 Counting units

Respondents were requested to indicate which among two different counting units they were supposed to count. The objective of this question was to identify if proper counting instructions were being provided and if they were being adhered to.

Selection for number of units basing on unit of measure was ranked first with 62% of respondents. The second option i.e. both a and b, got 25% of total respondents. These results indicate that the instructions on counting units were either not understood correctly, not followed or not adequate provided. It can be translated that the recorded counted units might have been be understated or overstated as shown in the table below.
Table 4.7: Distribution of respondents on counting units

<table>
<thead>
<tr>
<th>Counting units</th>
<th>Frequencies</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Number of units basing on pack code only</td>
<td>5</td>
<td>13</td>
</tr>
<tr>
<td>b. Number of units basing on unit of measure only</td>
<td>25</td>
<td>62</td>
</tr>
<tr>
<td>c. Both a &amp; b</td>
<td>10</td>
<td>25</td>
</tr>
<tr>
<td><strong>Total responses</strong></td>
<td><strong>40</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Source: Research findings, 2013

The findings on table 4.7 can alternatively be presented by the pie-chart below:

**Figure 4.5: Pie chart of respondents showing the counting units**

Source: Research findings, 2013

4.3.3 Reporting counting units

The same trend of responses was observed on question 4 of part B, which requested the respondents to select among two counting unit figures which were to be reported on the stocktaking sheet. The figures were either (i) number of units basing on pack code or (ii) number of units basing on unit of measure. Option one was mentioned by 7% respondents, and the second option was mentioned by 75% of respondents as shown in the below.
Table 4.8: Distribution of respondents on reporting counting units

<table>
<thead>
<tr>
<th>Reporting counting units</th>
<th>Frequencies</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Number of units basing on pack code</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>b. Number of units basing on unit of measure</td>
<td>30</td>
<td>75</td>
</tr>
<tr>
<td>c. Both a &amp; b</td>
<td>7</td>
<td>18</td>
</tr>
<tr>
<td>d. None of the above</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total responses</strong></td>
<td><strong>40</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Source: Research findings, 2013

The findings on table 4.8, can alternatively be presented by the pie-chart below;

**Figure 4.6: Pie chart of respondents showing the reporting counting units**

Source: Research findings, 2013

4.4 Whether there is proper means of identifying ownership of the incoming goods, during the picking and during the stocktaking

4.4.1 Identifying Ownership

Respondents were requested to indicate whether all counted stock belonged to MSD or not. The intension was to know whether there were stock that belonged to another party in the MSD warehouses during the stock counting and whether they were counted or not.
The majority of all respondents disagreed to the question. Seventy nine per cent of respondents replied that all counted stock did not belong to MSD while 13% of respondents could not tell whether the goods were really belonged to MSD or not, meaning that they might have included third part inventory to MSD inventory or the other way round.

### Table 4.9 Distribution of respondents on identifying ownership

<table>
<thead>
<tr>
<th>Methods</th>
<th>Frequencies</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Belonged to MSD</td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td>Not belonged to MSD</td>
<td>31</td>
<td>79</td>
</tr>
<tr>
<td>Not known whether they belonged to MSD or not</td>
<td>5</td>
<td>13</td>
</tr>
<tr>
<td>Total responses</td>
<td>39</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Research findings, 2013

The findings on table 4.9, can alternatively be presented by the pie-chart below;

### Figure 4.7: Pie chart of respondents showing identification of ownership

Source: Research findings, 2013
4.4.2 Ownership Grade Identification Methods

Respondents who replied that the counted stock did not belong to MSD only were requested to select among 5 tentative means which they used in identifying owners of the counted items. The aim of this question was to know if there was a clearly defined means of identifying the correct ownership for counted items.

Out of the five listed methods, “reading on pre-numbered tags placed at the location of the item” was ranked first, being selected by majority of the respondents 32%, followed by “asking my colleague” by 25%, then by “reading on the stocktaking sheet” by 20%. The fourth method was by “reading on the carton” 15%, and the last in ranking was by “the use of own experience” 8%. Although the correct method of identifying the ownership ranked first by 32%, this rate is not satisfactory to eliminate the possibility of having wrong inventory record due to poor means of identifying ownership. The method of asking a colleague ranked second with 25% which is quite high. Although it is an alternative way of identifying the owner, it depends on whether the individual being asked is having correct information or not.

Table 4.10: Distribution of respondents on ownership grade identification methods

<table>
<thead>
<tr>
<th>Methods</th>
<th>Frequencies</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. By reading on the stocktaking sheet</td>
<td>8</td>
<td>20</td>
</tr>
<tr>
<td>b. By reading on the pre-numbered tag placed at the location of the item</td>
<td>13</td>
<td>32</td>
</tr>
<tr>
<td>c. By reading on the carton</td>
<td>6</td>
<td>15</td>
</tr>
<tr>
<td>d. By asking my colleague</td>
<td>10</td>
<td>25</td>
</tr>
<tr>
<td>e. Using own experience</td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>40</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Source: Research findings, 2013

The findings on table 4.10, can alternatively be presented by the pie-chart below;
4.5 Whether there is any improper use of unit of measure and pack codes during the receiving, picking and stocktaking exercise

4.5.1 Identify Unit of Measure
Respondents who had been involved in the stock counting were requested to select among 6 tentative means they used in identifying unit of measure for the counted items. The objective of the question was to find out various means being used in identify the correct units of measure for the counted stock.

40 respondents confirmed to have been involved in stock counting. Reading in the price catalogue was selected by the majority of the respondent making it to be ranked first at 33%. “reading on the stocktaking sheet” ranked second by 30%, “by reading on the cartons/package” ranked third by 15%, “asking colleague” ranked fourth by 10%, “reading on the inventory tag placed at the location of the item” fifth ranked by 7%, and the last in ranking was by “the use of own experience” 5%. The most appropriate way of identifying the correct unit of measure in the stock counting is by reading on the stocktaking sheet but according to the collected statistics, it has been ranked second. Other alternative means which are not very appropriate are also being used evidencing that there is possibility of using wrong unit of measure in the stock counting, like when asking a colleague is
depends on whether the individual being asked is having a correct information or not as shown in the below.

Table 4.11: Distribution of respondents on identify unit of measure

<table>
<thead>
<tr>
<th>Methods</th>
<th>Frequencies</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. By reading on the cartons/package</td>
<td>6</td>
<td>15</td>
</tr>
<tr>
<td>b. By reading on the stocktaking/counting sheet</td>
<td>12</td>
<td>30</td>
</tr>
<tr>
<td>c. By reading on the inventory tag placed at the location of the item</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>d. By reading in the price catalogue</td>
<td>13</td>
<td>33</td>
</tr>
<tr>
<td>e. By asking my colleague</td>
<td>4</td>
<td>10</td>
</tr>
<tr>
<td>f. Using own experience</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td><strong>Total frequencies</strong></td>
<td><strong>40</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Source: Research findings, 2013

The findings on table 4.11, can alternatively be presented by the pie-chart below;

Figure 4.9: Pie chart of respondents showing the handling unit of measure

Source: Research findings, 2013
4.5.2 Proper Ways of Handling Unit of Measure

Responded who did the counting were requested to indicate whether they were required to do any conversion before writing the counted units on stocktaking sheet. The objective of the question was to find out whether clear instruction were provided on proper ways of handling the unit of measure and pack unit/pack code, and whether those instructions were being adhered to.

The majority of the respondents agreed to have done conversion before writing down the counted figure. Responses agreed to the question at a rate of 90% of all responses, while those disagreed rated at 10%. These responses provide evidence that the reported inventory record in the system overstated in the stocktaking. This is due to the fact that the conversion factor is built in the system basing on the pack code. So the converted counted figure once entered into the system, the conversion is once again done by the system, producing a very wrong figure.

Table 4.12 Distribution of respondents on proper ways of handling unit of measures

<table>
<thead>
<tr>
<th>Methods</th>
<th>Frequencies</th>
<th>Percentages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes, did conversion before writing the counted units</td>
<td>36</td>
<td>90</td>
</tr>
<tr>
<td>No, did not convert before writing the counted units</td>
<td>4</td>
<td>10</td>
</tr>
<tr>
<td>Total responses</td>
<td>40</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Research findings, 2013

The findings on table 4.12, can alternatively be presented by the pie-chart below;

**Figure 4.10: Pie chart of respondents showing the handling unit of measure**

Source: Research findings, 2013
4.5.3 Wrong Unit of Measure

Respondents who were involved in re-counting of stock in the stocktaking were requested to select the most common source of error on the counted figures among six possible sources. Respondents answered this question selecting wrong unit of measure to be the most common sources of error at frequency of 28%, followed by mis-keying of figures when entering the data into the system by 20%, omission, double counting, wrong ownership of the stock included in the inventory, counting of unserviceable stock, and the last one which was included by one respondent is one item having two different item code with different description.

Table 4.13: Distribution of respondents on wrong unit of measure

<table>
<thead>
<tr>
<th>Methods</th>
<th>Frequencies</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Incorrect unit of measure used in counting</td>
<td>11</td>
<td>28</td>
</tr>
<tr>
<td>b. Wrong grade/ownership of the item counted</td>
<td>5</td>
<td>12</td>
</tr>
<tr>
<td>c. Wrong figures entered in the system due to mis-keying</td>
<td>8</td>
<td>20</td>
</tr>
<tr>
<td>d. Omission</td>
<td>6</td>
<td>15</td>
</tr>
<tr>
<td>e. Double counting</td>
<td>6</td>
<td>15</td>
</tr>
<tr>
<td>f. Counting of un-serviceable stock</td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td>g. Any other causes? <em>(please mention them)</em> - One item having two different item code with different description</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>40</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Source: Research findings, 2013

The findings on table 4.13, can alternatively be presented by the pie-chart below;
Figure 4.11: Pie chart of respondents showing the wrong unit of measure

- a. Incorrect unit of measure used in counting
- b. Wrong grade/ownership of the item counted
- c. Wrong figures entered in the system due to mis-keying
- d. Omission
- e. Double counting
- f. Counting of un-serviceable stock
- g. Any other causes? (please mention them) - One item having two different item code with different description

Source: Research findings, 2013
CHAPTER FIVE

SUMMARY, CONCLUSION AND POLICY IMPLICATIONS

5.0 Introduction
This chapter concludes and recommends what the researcher found in the course of this study. Is a summary of all facts examined, analyzed, focused leading to success and making this study useful.

5.1 Summary
This study was on” An Assessment of Ineffectiveness of Stocktaking on the Enterprise Resource Planning (ERP) System, using the case study of Medical Stores Department”. This case study was carried out to measure the challenges which cause the mismatch between annual stocktaking and financial statement.

As we know the major objective of stocktaking is based on the fact that any organization needs to reveal out the actual stock balances for the financial ending year, hence financial statement are prepared. This idea draws upon the concept that the requirement of stocktaking reduces the problem of physical identification by quality, unit of issue, package size: number of primary packages per carton, package code, expiry dates, manufacturing dates for drugs/medical supplies, damage and defective goods batch/ lot number serial number in case of equipment and location or by name for other which may cause discrepancies.

This research was guided by the following research questions;

   i) Are the MSD system users involved in the functions related to inventory management i.e. receiving, picking, cycle counting and stocktaking have the required knowledge and competence?
   ii) Are the procedures and policies for data capturing during receiving, picking, updating and stocktaking available and followed?
   iii) Is there proper means of identifying ownership of the incoming goods, during the picking and during the stocktaking?
   iv) Is there any improper use of unit of measure and pack codes during the receiving, picking and stocktaking exercise?
The case study research design was used because it enabled the researcher to study the organization in a particular unit. A sample size of 40 respondents was selected using simple random sampling. The methods which were used to collect data were questionnaires, interviews and observation, as well as documentary reviews.

The findings on question one revealed that 92.5% of respondent had the general knowledge on the use of the ERP system. Only one respondent disagreed to have the general knowledge, representing only 7.5% of respondents.

The findings on question two revealed that 95% of respondents agreed to have experience of doing stock counting, while 5% respondents disagreed.

The research findings on question three revealed that 79% respondents replied that all counted stock did not belong to MSD while 13% could not tell whether the goods really belonged to MSD or not, meaning that they may have included third part inventory to MSD inventory or the other way round.

Research findings on question four, revealed that 100 of respondents confirmed to have been involved in stock counting. Reading in the price catalogue was selected by the majority of the respondent making it to be ranked first at 33%, “reading on the stocktaking sheet” ranked second by 30%, “by reading on the cartons/package” ranked third by 15%, “asking colleague” ranked fourth by 10%, “reading on the inventory tag placed at the location of the item” fifth ranked by 7%, and the last in ranking was by “the use of own experience” 5%. The most appropriate way of identifying the correct unit of measure in the stock counting is by reading on the stocktaking sheet but according to the findings, it has been ranked second. Other alternative means which are not very appropriate are also being used evidencing that there is possibility of using wrong unit of measure in the stock counting, like when asking a colleague is depends on whether the individual being asked is having a correct information or not.

5.2 Conclusion
MSD have About 1200 different items owned by MSD, together with other several healthcare items owned by other organisations within MOHSW. A number of projects dealing with healthcare items under the MOHSW have been developed and all of them
have been using MSD warehouse facilities randomly. All items in the warehouse are counted and recorded on pre-filled counting sheets printed from the system. Most of staff have experience and professional qualification in their current positions. Moreover, both departments (Warehouse & Finance) have skilled and qualified staff, of all ranks but most of the employees have not been trained appropriately, thus leading to possibility of working around the system without following the standard operating procedures. The most appropriate way of identifying the correct unit of measure in the stock counting is by reading on the stocktaking sheet.

The reported inventory record in the system overstated in the stocktaking. This is due to the fact that the conversion factor is built in the system basing on the pack code. So the converted counted figure once entered into the system, the conversion is once again done by the system, producing a very wrong figure. The most common source of error on the counted figures among six possible sources. Respondents answered this question selecting wrong unit of measure to be the most common sources of error at frequency followed by mis-keying of figures when entering the data into the system omission, double counting, wrong ownership of the stock included in the inventory, counting of unserviceable stock, and the last one which was included by one respondent is one item having two different item code with different description.

5.3 Policy Implications

i. The Ministry of Health and Social Welfare should form permanent and independent monitoring evaluation teams that will report direct to the Ministry identify areas of improvement in the ERP system and advice the Ministry accordingly. The team should also empower to suggest corrective actions to all weaknesses identified including the recommendation and suggestion to the Ministry.

ii. Medicine storage is one of the core functions of MSD. The frequent of ineffectiveness of stocktaking on Enterprise Resource Planning system and financial statement is a result of inefficient annual stocktaking. This need to be resolved on priority basis and more comprehensive stocktaking procedures must be put in place.

iii. Government should improve infrastructure to reduce network problems hence increase computer communication for ERP system user.
iv. Adequate training should be given to the counting staff especially on how to treat the pack code and units of measure.

v. Data record should be improved by counters and handled with extra care. Data entry staff should be those who are conversant with pack codes and units of measure in order to detect abnormal errors on the counting sheets. Management can think of an alternative ways of capturing data like “bar code reader” in order to minimise human errors in counting, reading from the counting sheet and mis-keying.

vi. It is proposed that cycle/perpetual counting be improved. An advantage of this is that it can eliminate annual stocktaking, which is normally taken to provide a figure for the books of accounts. Perpetual counting can effectively be used to ensure that inventory records are always accurate. At the end of financial year, instead of closing business for many days and conducting annual stocktaking, only a few days can be used for ‘cut-off’ procedures and once completed, inventory reports can be printed that will be treated as ‘closing stock’ as well as ‘opening stock’ for the following financial year.

5.4 Area for further study

The study noted some problems with the use of enterprise Resource Planning system (ERP) at MSD annual stocktaking 2012/2013, one of the problems is some delays in getting information entered into the system, system ledger report, stock adjustment report, detailed stock on hand report and stocktaking sheet in receiving areas which cause all stocks to be deleted, all this problems leading late compilation stocktaking and financial statement. For this reason the researchers excited to highlight for other researcher to find the causes of these problems whether they originate from incompetent user of the ERP system or from poor design of the ERP system itself. Therefore, the study suggests evaluation on the use of ERP information system in all warehouses.
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APPENDIX I

QUESTIONNAIRES

Dear respondent,

My name is Laurent Bagoye. I am a student of Mzumbe University pursuing Masters of Science Degree in Procurement and Supply Chain Management.

This questionnaire is intended to collect information for evaluating factors influencing ineffectiveness of stocktaking records in the ERP system, the case study of Medical Stores Department (MSD). This study is conducted as partial fulfillment of the requirement for the award of Masters of Science in Procurement and Supply Chain Management. Hence the information provided will be treated in strictly confidential. You are kindly requested to participate in this study by providing appropriate responses to questions in the spaces provided. I am looking forward to getting your cooperation in filling the questionnaire.

Thanking you.

PERSONAL INFORMATION

1. Questionnaire number-----------------------------

2. Date of interview-------------------------------

3. Gender 01=Male ( ) 02=Female ( )

4. Highest level of formal education attained
   01=Primary School
   02=Secondary School
   03=High School
   04=College (other than University)
   05=University

4. Job title----------------------------------------

Experience in a job---------------------------------

Duration of employment at MSD
   A. Less than one year
   B.1 to five years
   C. More than 5 years ( )
**Part A:**

The main purpose of questions in “part A” is to find out if the lack of required knowledge and experience of stocktaking in the use of ERP system at MSD, leads to errors in financial statement.

1. Are you using ERP system in your daily activities? [yes] [no]

   *(Tick that apply)*

2. If “yes” to Q 1 above, in which section among the following:

   *(Tick all that apply)*

   a. Receiving
   b. Stock counting
   c. Picking
   d. Perpetual counting
   f. Any other? *(please specify)*

3. For how many years have you worked in the specified section? [years]

4. Do you know how to use the ERP properly in your section? [yes] [no]

   *(Tick that apply)*

5. If “yes” in Q 4 above, to what extent (what is your comfort level)

   *(Tick the appropriate)*

<table>
<thead>
<tr>
<th>Above 80%</th>
<th>Below 80% but above 60%</th>
<th>Below 60%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
6. If “yes” in Q 4 above, how did you come to know what you know?

*Tick all that apply*

- a. Trained in IT institution
- b. Trained by MSD IT staffs
- c. Trained by my MSD colleague
- d. Trained though MSD in-house training programmes
- e. MSD orientation programme on employment
- f. Using own skills and experience
- g. Any other *(please specify)*

7. If “No” to Q 4 above, what could be the reasons *(please list them)*

i. ........................................................................................................................
ii .....................................................................................................................
iii........................................................................................................................

8. Were you provided with instruction manual on how to Use the system in performing your role? *(Tick that apply)*

<table>
<thead>
<tr>
<th>yes</th>
<th>no</th>
</tr>
</thead>
</table>

9. Do you think you need extra training on how to use system?

<table>
<thead>
<tr>
<th>yes</th>
<th>no</th>
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</table>

11. If “yes” to Q. 9 above, on which areas you would like to be trained?

i. ........................................................................................................................
ii .......................................................................................................................
iii........................................................................................................................
**Part B:**

The main purpose of questions in “part B” is to find out if the improper use of “unit of measure” and “pack code” are the cause of ineffectiveness of stocktaking during stock counting.

1. Have you ever been involved in physically counting the item during the Stocktaking/counting exercise at MSD?  

<table>
<thead>
<tr>
<th></th>
<th>yes</th>
<th>no</th>
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</table>

2. If “yes” to Q 1 above, how did you know the unit of measure of counted item *(Tick all that apply)*

- a. By reading on the cartons/package
- b. By reading on the stocktaking/counting sheet
- c. By reading on the inventory tag placed at the location of the item
- d. By reading in the price catalogue
- e. By asking my colleague
- f. Using own experience
- g. Any other means? *(please mention them)*

3. What were you supposed to count *(tick all that appropriate)*

- a. Number of units basing on pack code only
- b. Number of units basing on unit of measure only
- c. Both a & b
4. Which figure were you required to report on the stocktaking sheet (*tick all that apply*)

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<table>
<thead>
<tr>
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<tbody>
<tr>
<td>a. Number of units basing on pack code</td>
<td></td>
</tr>
<tr>
<td>b. Number of units basing on unit of measure</td>
<td></td>
</tr>
<tr>
<td>c. Both a &amp; b</td>
<td></td>
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<tr>
<td>d. None of the above</td>
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</table>

5. Were you supposed to do any conversion before writing the counted Units on stocktaking sheet?  

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<tbody>
<tr>
<td>yes</td>
<td>no</td>
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</table>

6. If “yes”, which conversion was being made among the following (tick all that apply)

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<table>
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<tbody>
<tr>
<td>a. Number of counted boxes times unit of measure</td>
<td></td>
</tr>
<tr>
<td>b. Number of counted boxes times pack code</td>
<td></td>
</tr>
<tr>
<td>c. Any other way? (please indicate)</td>
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</tbody>
</table>

7. Have you ever been involved in re-counting of item during the stocktaking Exercise at MSD?  

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<tbody>
<tr>
<td>yes</td>
<td>no</td>
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</table>

8. If “yes” to Q.7 above, did you find any discrepancy between the first Counted figure on the stocktaking sheet and re-counted figure?  

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<tbody>
<tr>
<td>yes</td>
<td>no</td>
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</tbody>
</table>
9. If “yes” to Q 8 above, what was the main cause of the discrepancy *(Tick all that apply)*

   a. Incorrect unit of measure used in counting
   b. Wrong grade/ownership of the item counted
   c. Wrong figures entered in the system due to mis-keying
   d. Omission
   e. Double counting
   f. Counting of un-serviceable stock
   g. Any other causes? *(please mention them)*

10. Have you ever been assigned a task of inventory adjustments after Stocktaking exercise?  

    | yes | no |
    |-----|----|

11. What were the causes of errors *(Tick all that apply)*

    a. Incorrect unit of measure used in counting
    b. Wrong grade/ownership of the item
    c. Wrong figures entered in the system due to mis-keying
    d. Omission
    e. Double counting
    f. Counting of un-serviceable stock
    g. Any other causes? *(please mention them)*
**Part C:**

The main purpose of questions in “part C” is to find out if lack of proper means to identify ownership of items stored at MSD during the counting process lead to overstatement or understating financial statement of MSD after stocktaking.

1. Have you participated in the counting role in any of the previous Stocktaking exercises?  
   - **yes**  
   - **no**

2. During the exercise did all the goods in the warehouse belong to MSD?  
   *(tick what is appropriate)*
   - **yes**
   - **No**
   - **I don’t know**

3. If the answer is “**yes**” to Q.2 above, was there a fixed location for the items that did not belong to MSD?  
   - **yes**  
   - **no**

4. If the answer is “**No**” to Q2 above how could you identify ownership of item counted? *(Tick all that apply)*
   - a. By reading on the stocktaking sheet
   - b. By reading on the pre-numbered tag placed at the location of the item
   - c. By reading on the carton
   - d. By asking my colleague
   - e. Using own experience
   - f. Any other means? *(please mention them)*
5. If the answer is "I don’t know" to Q.2 above how did you identify grade / ownership of item counted? (Tick all that apply)

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</thead>
<tbody>
<tr>
<td>a.</td>
<td>By reading on the stocktaking sheet</td>
</tr>
<tr>
<td>b.</td>
<td>By reading on the pre-numbered tag placed at the location of the item</td>
</tr>
<tr>
<td>c.</td>
<td>By reading on the carton</td>
</tr>
<tr>
<td>d.</td>
<td>By asking from my colleague</td>
</tr>
<tr>
<td>e.</td>
<td>Using own experience</td>
</tr>
<tr>
<td>f.</td>
<td>Any other means? (please mention them)</td>
</tr>
</tbody>
</table>

6. Were all the goods in the warehouse included in the pre-printed Stocktaking sheets? yes  no

7. If “No” to Q6 above, were you given supplementary stocktaking sheet to fill in Details of counted items found missing in the pre-printed stocktaking sheet? yes  no

8. If “yes” to Q7 how did you identified the grade/ownership of the item found missing in the pre-printed stocktaking sheet? (Tick all that apply)

<p>| | |</p>
<table>
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<tr>
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<tbody>
<tr>
<td>a.</td>
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<td>c.</td>
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<tr>
<td>d.</td>
<td>Using own experience</td>
</tr>
<tr>
<td>f.</td>
<td>Any other means? (please mention them)</td>
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Thank you for your corporation.