INVENTORY MANAGEMENT AND ORGANIZATION PRODUCTIVITY

CASE STUDY OF TORORO GENERAL HOSPITAL,

TORORO DISTRICT, UGANDA

BY

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A RESEARCH REPORT SUBMITTED TO THE COLLEGE OF ECONOMICS AND MANAGEMENT IN PARTIAL FULFILLMENT OF THE REQUIERMENTS FOR

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DECLARATION

I, Akware Juliet declare that this information is truly my own effort. However I give due respect and acknowledgement to the authors and presenters whose work I referred to, as identified in the report and references.

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SIGNATURE..... DATE..10/06/2015.....

APPROVAL

This research proposal has been submitted for examination with the approval of the following

Supervisor:

MRS: KYOTUHAIRE LYNN.

Signed: ..... Date: 10/06/2015

ACKNOWLEDGEMENT.

With Avery great pleasure, I would love to take this chance and time to give thanks to the almighty living creator for his love and power he has given me all this far I have gone.

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Thanks be to you all.

May God bless you.

List of abbreviation

T.G.H .	Tororo General Hospital.
PLM	Procurement and logistics Management.
SCM	Supply Chain Management.
PPDA	Public Procurement and Disposal of public Assets Act.
EMHSLU	Essential Medicines and Health Supplies List for Uganda.
FIFO-	First in First Out.
FEFO	First Expiry First Out.
AMC	Average Monthly Consumption.
MOH	Ministry of Health.
SURE	Securing Ugandan Rights to Essential medicines.
MRP-	Material Requirement Planning
LIFO	Last In First Out
JIT-	Just In Time
ROTA	Return on Total Assets.

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ABSTRACT

The theme of the study was inventory management and organization productivity. The casestudy was Tororo general Hospital.

Sample sizes of 50 respondents were used. A descriptive survey design involved the use of questionnaires for data collection.

The research had various objectives and these included; general objective, this was to establish relationship between inventory control and firm performance in manufacturing sector, and specific objectives to identify the various control systems, examine the various problems associated with the systems and to establish the relationship between the systems and performance of Tororo Genral Hospital.

The findings arose from a study that was conducted. The data was analyzed using frequency counts and percentages aimed at establishing the relationship between Inventory control and firm performance in the manufacturing sector.

In conclusion, the study signifies a relationship between the inventory management and organization productivity Tororo general hospital though findings revealed that among other factors that some employees do not influence the existence of control systems.

The researcher recommends that for all institutions, public resources management systems should provide a basic structure understandable to all stakeholders about how well resources are being utilized for the common interests. All public officials in Uganda should take planning as a critical obligation on their part and as a foundation for effective and efficient utilization of resources and tax payers' money.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Inventory has been a big component of management with in so many organizations in dealing with goods and materials, or those goods and materials themselves, held available in stock by a business. It is also used for a list of the contents of a household and for a list for testamentary purposes of the possessions of someone who has died. Costs of production are expenses incurred by a organization when producing its goods and services. (J.S.Chandan, 2000).

According to Jayeff (1998) argued that from a financial perspective, inventory management is not a small matter. Oftentimes, inventory is the largest asset item on a manufacturer's or distributor's balance sheet. As a result, there should be a lot of management emphasis on keeping inventories. The objectives of inventory reduction and minimization are more easily accomplished with modern inventory management processes that are working effectively for improved productivity. The inventory management is much more complex than an initiated understand. In fact, in organizations, the inventory control department is perceived as little more than a clerical function as it is probably not very effective. The result of this to inventory management is lots of material shortages, excessive inventories, high costs and poor customer service (Briers, 1999). Too much inventory and not high enough customer service is very common, but unnecessary. There are proven techniques that can help accurately industry customer demand and to calculate the inventory needed to meet defined level of customer service.

The word "inventory" has been defined in many ways, as indicated in the literature. Three definitions have been chosen seem to be more appropriate to the topic developed in this dissertation. "Inventories are stockpiles of raw materials, suppliers, components, work in process, and finished goods that appear at numerous points

throughout a organization's production and logistics channel"(Ballou, 2004). According to the American production and inventories society (APICS), 2004), inventory management is "a branch of business management concerned with planning and controlling inventories" and the role of inventory management is to maintain a desired level of specific product or items.

Kakuru (2000) asserts that, inventory can also be referred to stock of raw material, work in progress, finished products and supplies of items such as stationary, fuel etc. According to Chase, Jacobs and Aquilano (2004), inventory is the stock of any item or resource used in an organization. An inventory system is the set of polices and controls that monitor levels of inventory and determine what levels should be maintained, when stock should be replenished, and how large orders should be. Inventory management involves keeping stock at the most favorable levels so that stock out or wastage is avoided. Inventory constitutes between 50-70% of the main element costs of the organization's and its management therefore is critical to enhance sales, profitability and liquidity (Saleem, 2005). Inventories smoothen out business activities there by enabling the business to be flexible in purchasing, operations and marketing (kakuru 2003).

Inventory management is primarily about specifying the size and placement of stocked goods. Inventory management is required at different locations within a facility or within multiple locations of a supply network to protect the regular and planned course of production against the random disturbance of running out of materials or goods. The scope of inventory management also concerns the fine lines between replenishment lead time, carrying costs of inventory, asset management, inventory forecasting, inventory valuation, inventory visibility, future inventory price forecasting, physical inventory, available physical space for inventory, quality management, replenishment, returns and defective goods and demand forecasting (Wilberforce, 2007). Balancing these competing requirements leads to optimal inventory levels, which is an on-going process as the business needs shift and react to the wider environment.The aim of inventory management is to hold inventories at the lowest possible cost, given the objectives to ensure uninterrupted supplies for

ongoing operations. When making decision on inventory, management has to find a compromise between the different cost components, such as the costs of supplying inventory, inventory-holding costs and costs resulting from insufficient inventories (Hugo, Baden horst- Weiss and Van Rooyen 2002).According to Wild (2002), inventory control is the activity which organize the availability of items to the customers. It coordinates the purchasing, manufacturing and distribution functions to meet the marketing needs. This role includes the supply of current sales items, new products, consumables; spare parts, obsolescent items and all other supplies. Inventory enables a company to support the customer services delivery, logistic or manufacturing activities in situations where purchasing or manufacturing is too protracted, or because quantities cannot be provided without stocks.

Tororo Municipality is found in Tororo district, in eastern Uganda. The district is well established with raw materials like limestone, prosperous. The environmental favours agriculture where many crops are grown like maize, potatoes, cassava, millet, beans, cow peas, sim sim, bananas, green peas, onions, cotton, rice, and yams. They also rear animals like cows, sheep, goats, pigs, and rabbits. The district is being bordered by Mbale in the North, Malaba in the east, Bugiri in west and Busia in South.

1.2 Statement of the Problem

Inventory management is believed to be a presenting factor for better Tororo General Hospital productivity; Tororo General Hospital is not performing to the owners' expectations. Information sharing and inventory management are key important factors for the downstream chain. They enable Tororo General Hospital in the chain match demand with supply. However Tororo General Hospital in the downstream in Uganda Hospital face problems of lack of information sharing and poor inventory management which has affected their ability to satisfy their customers. (Nsamba 2000) indicates that there are poor returns when it comes to inventory management and this is displaced due to organization's failure to meet customer needs in the appropriate times when orders are placed and this is mainly due to shortages in inventory and other Tororo General Hospital requirements due to poor inventory management techniques used by organizations. And this therefore

resulted to the topic of the research study on inventory management and Tororo General Hospital productivity.

1.3 Purpose of the study

The purpose of the study it to examine the effects of inventory management on the productivity of Tororo General Hospital.

1.4 Objectives of the study

This study was based on the following objectives;

(i) To analyze the inventory management system used by Tororo General Hospital.

(ii) To evaluate factors affecting inventory management and productivity of Tororo General Hospital.

(iii) To establish the relationship between inventory management and Tororo General Hospital productivity.

1.5 Research Questions

The research was guided by the following research questions:

(i) What inventory management systems are used by Tororo General Hospital?

(ii) What factors affect inventory management and Tororo General Hospital productivity?

(iii) What is the relationship between inventory management and Tororo General Hospital productivity?

1.6 The Scope of the Study.

1.6.1 Content scope

The study examined the role of inventory management on organization productivity .The study was limited to: analyzing inventory management systems, factors affecting inventory management and Tororo General Hospital ' productivity and the relationship between inventory management and organization's productivity .

1.6.2 Geographical scope

The study was conducted from Tororo general hospital, in Eastern division of the municipality 300 meters away from town along station road, opposite The Aids Supports Organization (TASO) in Tororo district in Eastern Uganda.

1.6.3 Time scope

The study lasted for the period of three months that is to say from March to June 2015

1.7 The Significance of the study

The study was very significant to the different stakeholders that include; management, the Researcher, Suppliers, Consumers and Government Tororo General Hospital in the following ways;

The study was very significant to the different stakeholders that includes; organization's management, consumers of the Hospital services and organization in that the study will help the selected Tororo general Hospital management to develop an organized thinking on the importance of inventory management practices in Tororo General Hospital.

The study was of paramount importance to academicians and practitioners as the proposed framework is expected to uncover many neglected relationships that are of interest to managers in the local government.

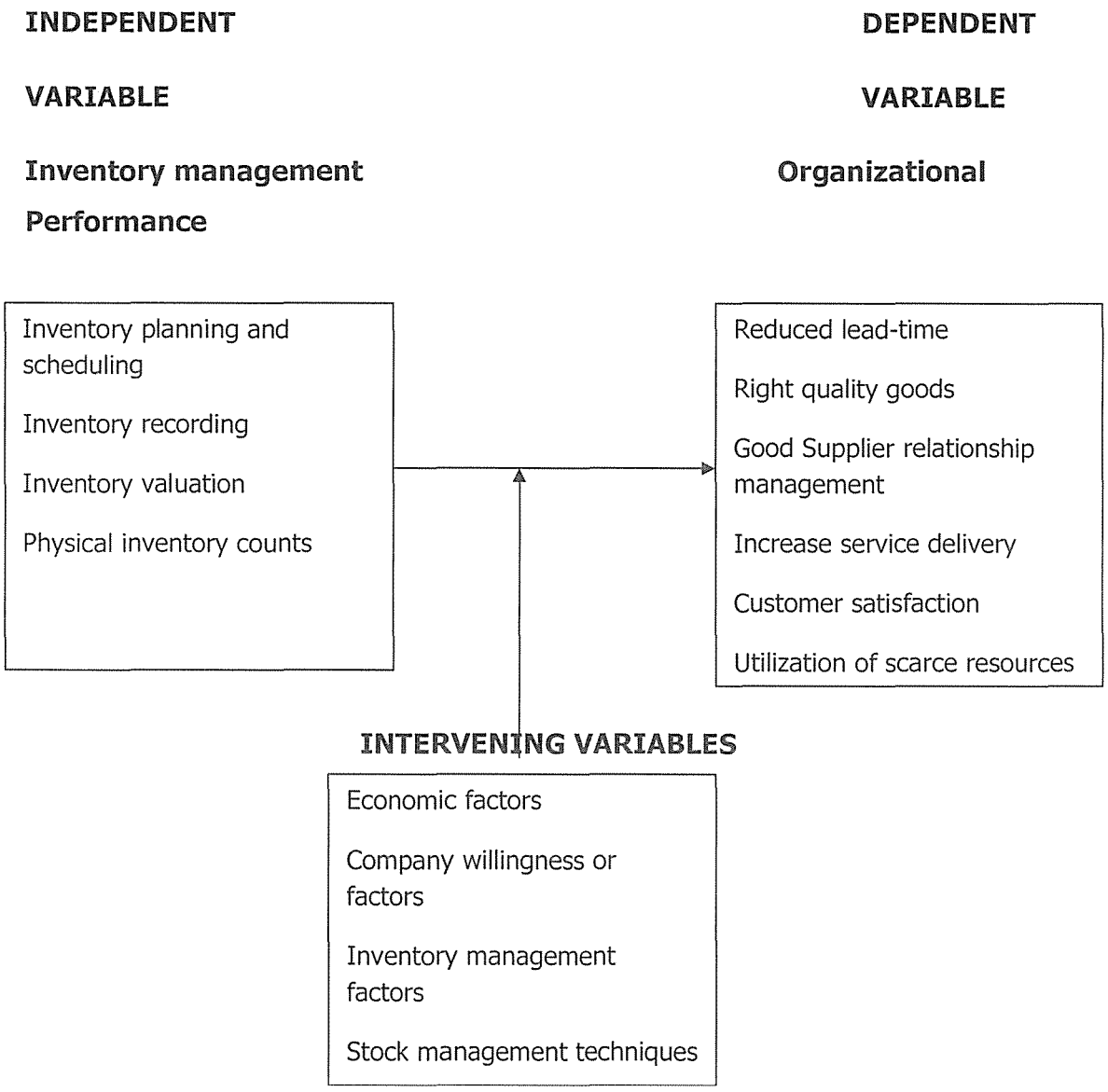
The study provided useful guide to corporate logistic and procurement managers in formulating their corporate logistic and operational strategies.

The research was to provide further grounds for understanding inventory management in practice and clearly relate the findings for today's dynamic company ,thus providing a ground for further research in institutions of higher learning.

In addition, specific patterns of inventory management practices were revealed which further encouraged Hospital managements to implement this technique and possibly improve their organization's productivity.

The Researcher was able to understand in details inventory management practices and relate the findings to the real situation.

1.8 Conceptual framework



2.0 Introduction

This chapter presents literature on the relationship between inventory management practices and organizational productivity. The presentation follows the order of the objectives, to analyze the inventory management system used by organizations, to

evaluate factors affecting inventory management and productivity of organizations and to establish the relationship between inventory management and organization productivity.

2.1 Inventory Management system used by the organizations.

In order to achieve the objectives of minimizing stock related costs, organizations should maintain adequate levels of stock in order to enable smooth business operations. A number of practices have therefore been advanced to handle these costs. Kalyango (2001) highlights the following practices that minimize stock related costs;

Inventory Planning and Scheduling: This is how units of stock are required by an organization in a given period to enable smooth business operations. A good stock plan set in advance will enable planners to set procurement/ purchase dates and quantities that are consistent with the plan to avoid disruptions due to inventory shortages (Dilworth 1992).

Inventory Recording: Accurate and up-to- date stores records are keys to effective stores management. The basic procedures include counting and recording promptly after receipt or production and whenever there is a store transaction, issue of stores should be properly authorized and show details such as code number, quantity of the transaction and the voucher reference (Muller, 2003). It is undertaken by organizations to reduce the errors of stock management and to ensure accurate and reliable stock records. It involves spot checks/ surprise checks, stock taking, which is the physical counting and measuring of quantity of each item in stock and recording the results (Brooks et al 2007).

Documents used in inventory include

Purchase requisition note. Document raised by either the storekeeper or user department to the purchasing officer requesting for inventory /materials.

Goods received note. Document prepared on receipt of stock to the stores.

Stock record card/Bin cards: used for recording materials received and used in the store. Bin card has three columns which include the receipt column, issue column and Balance column. **Materials return note.** These permit the unused materials to be returned to the store from the production department and other user departments.

Shortages note. This is a document issued by the stores department to requisition information him/her that materials required are in short supply or not available in the store.

Scrap note. This is a document used for recording scrap generated and it allows such a scrap to be handed over to the store department in exchange for good materials (Kamukama 2006). Inventory recording is undertaken by organizations to reduce the errors of stock management and to ensure accurate and reliable stock records. It involves spot checks/ surprise checks, stock taking, which is the physical counting and measuring of quantity of each item in stock and recording the results (Brooks et al 2007).

Inventory Valuation: - It is also a stock control technique, which refers to the establishment of the value of stock and therefore its implication on the profits. Lucey (1994) identified the following methods of stock valuation; First in First out (FIFO), Last in First out (LIFO) and the average price method.

First in First out (FIFO) is a method whereby prices of goods are determined by depending on the oldest stock until all the units are finished and then the second oldest is used to determine the prices and the trend continues. According to (Kamukama, 2006) FIFO method follows the principle that materials received first are

issued first. After the first lot or batch of materials purchased is exhausted, the next lot is taken up for supply. The inventory is priced at the earliest costs. This means that the unused raw materials (closing stock) are constituted by the goods which were not recently purchased.

Physical Inventory Counts: - The inventory value should be provided to UIS Accounting Office within one week after the fiscal year end. Adjustments to correct discrepancies must be adequately documented by management (Piasecki, 2003).

Inventory control: Inventory control is the activity which organizes the availability of items to the customers of the organization. It co-ordinates the purchasing, manufacturing and distribution functions to meet the marketing needs. This role includes the supply of current sales items, new products, consumables, spare parts, obsolescent items and all others supplies (wild, 2002).

Lysons and Gillingham (2003) write that inventory/stock control refers to the techniques used to ensure that stocks of raw materials, WIP and finished goods are kept at levels which provide maximum service levels at minimum costs. An effective Inventory Control System should; Minimize time and carrying costs, Maintain sufficient stock for smooth production, sales operation and on sufficient customer service. And control investment in inventories or keep an optimum level (Pandey, 2002). Different business concerns may apply different inventory practices to meet specific requirements and circumstances to help in containing the costs associated with inventory.

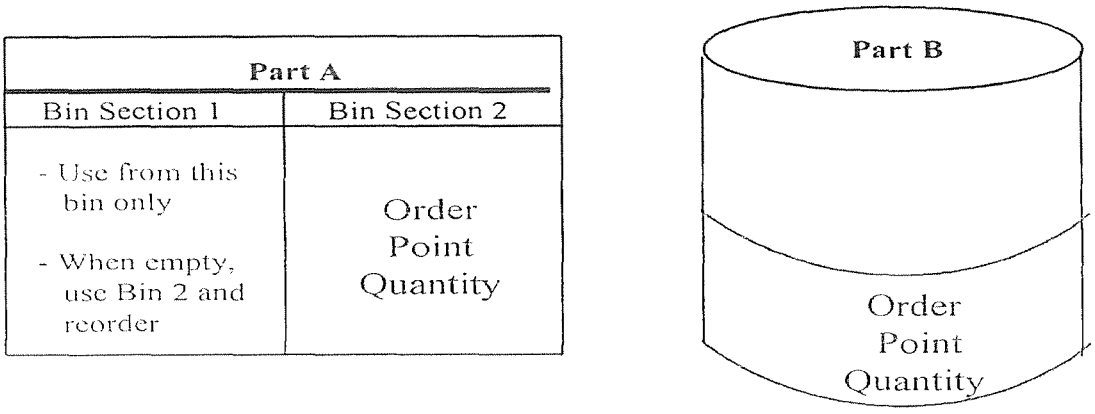
ABC Analysis: This has already been covered before, but is also regarded as a material control tool. It's considered as the best approach and based on the principle of selective control. The maxim is "put your effort where the results are

maximized. (Kamukama, 2006). ABC analysis: Brown (Bloomberg, Lemay and Hanna 2002) notes that the ABC analysis categorizes products based on importance. Importance may come from cash flows, lead time, stock outs, sales volume, or profitability. Once the ranking factors is chosen, break points are chosen for classes A, B, C and soon.

The 80-20 concept is particularly useful in distribution planning when the products are grouped or classified by their sales activity. The top 20 percent might be called A times, the next 30 percent B items, and the remainder C items. Each category of items could be distributed differently. For example, A items might receive wide geographic distribution through many warehouses with high levels of stock availability , whereas C items might be distributed from a single, central stocking point(e.g. a plant) with lower total stocking level than for the A items. B items would have an intermediate distribution strategy where few regional warehouses are used (Ballou 2004).

Two bin system: This method is common used when materials are relatively inexpensive or non-essential. The inventory is divided and placed in two separate compartments or bins. The first bin contains quantity of items that will be used between the time an order is received and the cover the usage between the dates of placing an order to the date of delivery. New supply is ordered as soon as the first bin is empty. (Axsater, 2006)

Figure 1 Two-Bin System



As shown in Figure1, the two bin method for replenishing material is easy to implement and equally easy to use for tracking usage. In the Part A diagram, items

are used from the first section of the bin only. When all the material is used, the second section of the bin is opened for use and an order is placed with the vendor for a refill. In the Part B diagram, the item is placed in a barrel or keg. When the item level falls to the lower section of the keg, the item is reordered

Just –in- time (JIT) system. This is a demand –pull" system under which products are only manufactured to satisfy a specific customer order (Horngren 1999). As the name suggests the idea is that inventories are acquired and inserted in production at the exact times they are needed, this requires efficient purchasing, very reliable suppliers and an efficient inventory handling system.(Van Horne:p469).In this system supplier delivers the components and parts of the production line just in time to be assembled. Other names for this or very similar methods are zero inventories and stockless (Koonzt: 2003p448). Just-in-time inventory management is an approach which works to eliminate inventories rather than optimize them. The inventory of raw materials and work-in-process falls to that needed in a single day. This is accomplished by reducing set-up times and lead times so that small lots may be ordered. Suppliers may have to make several deliveries a day or move close to the user plants to support this plan. (Muckstade et al 2010).

Inventory Levels: - This is a stock management technique, which involves controlling the amount of stock held by an organization. The main aim of this technique is to strike a balance between profitability and liquidity to ensure that there is no under or over stocking. According to Kamukama (2006) short adherence to stock control should be established in order to minimize the costs associated with stock. Organizations should therefore determine the level of stock they require so that excess or inadequate stock is avoided. Several Authors indicate that organizations should establish the following practices in order to avoid undesirable stock levels i.e. the re-order level, average stock level and maximum stock level, minimum stock level of safety stock.

Re-order level is a level fixed between and represents a stage at which emergency and immediate steps have to be taken for acquiring new stock. It gives a warning to the stores that materials have reached the lowest point and if no emergencies are taken, they will be completely exhausted. The re-order level must be sufficient enough to cover the maximum possible consumption of stock during the reorder period. Re-order level = Maximum daily usage x maximum lead time/period.

Inventory Costs: According to Floyd D, Successful inventory management involves balancing the costs of inventory with the benefits of inventory. Many small business organization's owners fail to appreciate fully the true costs of carrying inventory, which include not only direct costs of storage, insurance and taxes, but also the cost of money tied up in inventory. The main of inventory management techniques is to ensure that costs associated with inventory are minimized. These cost include holding /carrying costs, ordering costs and purchase costs which make a sum of total stock costs (Kamukama, 2006). Carrying /holding costs are expenses incurred to keep the inventories in the business, from the time of receipt to the time they enter the production or marketing functions. those costs associated with the maintenance of inventory in the costs such as salaries and wages paid to stores staff and also storage charges, opportunity costs of funds tied up in inventories , risk that the inventories will become obsolete while storage, lighting, security , insurance, heating and other charges needed to maintain the value of the inventories. (Kamukama, 2006).

These are cost of inventory storage, handling and insurance together with the required rate of return on the investment in inventory. (Pandey, 2002) .Inventory carrying costs are those costs associated with the amount of inventory stored. Lower inventory cost is desirable and reflects better inventory management. According to Gourdin (2001:62:63), said that holding (or carrying) costs are such as storage, handling, insurance, taxes, obsolescence, theft and interest on funds financing the goods. These charges increase as inventory levels rise. In order to minimize carrying

costs, management makes frequent orders of small quantities. Holding costs are commonly assessed as a percentage of unit value, i.e. 15 percent, 20 percent, rather than attempting to derive a monetary value for each of these costs individual. This practice is a reflection of the difficulty inherent in deriving a specific per –unit cost for, for example, obsolescence or theft.

Ordering costs include costs of buying inventory from the suppliers such as transport/carriage inwards costs, postage costs, inspection costs and insurance costs. In purchase of raw materials or other items, these costs represent the clerical costs involved in placing an order as well as certain costs of receiving and checking the goods once they arrive. For finished goods inventories ordering costs involves scheduling a production run. (Van Horne 2002). Costs associated with overstocking include opportunity costs, security, storage costs, stock taking costs, pilferage and obsolescence costs among others. Costs associated with under stocking include redundancy costs /expenses stoppage costs, lost reputation (Kamukama 2006).

According to Gourdin (2001:62:63), Ordering costs are those costs associated with placing an order, including expenses related to personnel in purchasing department , communications and the handling of the related paperwork. Lowering these costs would be accomplished by placing a small numbering of orders, each for a large quantity. Unlike carrying costs, ordering costs are generally expressed as a monetary value per order. According to Gourdin (2001:62:63), Stock –out costs include sales that are lost, both short and long term. These charges are probably the most difficult to compute, but arguably the most because they represent the costs incurred by customers (internal or external) when inventory policies falter. Failure to understand these costs can lead management to maintain higher (or lower) inventory levels than customer services delivery requirements may justify.

Cost of goods sold: Goods sold to customers are assets called inventory. Inventory measurements can be surprisingly difficult. Different inventory measurement approaches can lead to wide variations in reported profits or losses. The difference between a product's sale price and its cost is called the gross margin or gross profit. Obviously, the higher the margin, the better. The cost of the product is called cost of goods sold. We would hope that computing gross profit would involve a simple subtraction of the total cost of goods sold from total sales. Alas, things turn out to be more complicated. (Mbabazi Mary 2004)

Transport costs; this is the most important costs that every company must incur, because it is very essential as far as proper inventory management is concerned. This is due to poor roads and high prices of fuel. The most common modes of transport used by most manufacturing organizations especially coca cola are road transport, railway, transport among others. Allowing different inventory flow assumptions means that two businesses with identical operating results can report dramatically different amounts of profit. To avoid this possibility, GAAP would have to require that all organizations use the same inventory flow assumptions. As desirable as it might be for GAAP to reduce the number of acceptable, but widely divergent inventory flow assumptions, this is not likely to happen any time soon. This means that financial statement users must be aware of the effect of these flow assumptions in comparing one organization's productivity to another. (Masiko Hirary 2005).

2.2 Factors affecting inventory management and organization's productivity.

Inventory management can be affected by general economic factors, company factors, uncertainty risks and ambitions.The level of economic conditions affects inventory management in that things like inflation, high taxes affect management decisions on spending since they affect the anticipated profits by increasing costs of production and also affecting the budgeted expenses that increases (Pandey, 2002).

Company factors which affect inventory management may be the unexpected occurrences which management might not have planned for and they may end causing abnormal losses to the organization in this case. Incidences like employee strikes change in the management and other internal factors may also have a negative impact on the productivity of the organization and this may lead to its collapse. Change in the ambitions of the inventories affect the productivity of the organization in a way that this will divert management objectives and goals which may be caused by diversion of inventories resources to other profit making ventures.

Inventory management factors affecting can interfere with the organization's profits and customer service. They can cost a business more money and can lead to an excess of inventory overstock that is difficult to move. Most of these problems are usually due to poor inventory processes and out-of-date systems (Gourdin et al, 2001).

Lambert et al (2001), mentions a number of factor affecting inventory management and productivity of organizations which include: unqualified employees in charge of inventory, using a measure of productivity for their business that is too narrow, a flawed or unrealistic business plan for a business for the future and not identifying shortages ahead of time. Having people in charge of inventory without adequate training, experience or who neglects the job will lead to inventory problems that will result into poor organizational productivity. The use of a measure of productivity for business that is too narrow. This is a situation where the productivity measure are not wide enough and do not encompass all the aspects of the organization. Many areas get overlooked and can lead to either inventory shortages or inventory stockpiling.

A flawed or unrealistic business plans leads to failure in predicting how well a organization's may do in the future. This affects inventory management because if a

company predicts more growth than they actually experience, it can lead to an overstock of inventory. The opposite is true if forecasters do not predict enough growth and are left with not enough inventories. Failure to identify shortages a head leads to lack of enough products in stock to meet customer demands which spoil customer relations. The staff in charge of inventory management should look over their inventory on a regular basis to make sure enough products are in stock (Granville, 2007).

According to Braglia (2004) and Montanari (2004) are bottlenecks and weak points in delivery which slows down deliveries and systems; "bullwhip effect" an over-reaction by an organization to changes in the market that leads to un necessary over overstocking; distressed stock in inventory; excessive inventory in stock and unable to move it quickly enough; inaccurate computer assessment of inventory items for sale and complicated computer inventory systems. The above factor affecting inventory management led to over stocking, under stocking and Inventory costs which reduces the working capital required. Holding stock is an expensive business; it estimated that the cost of holding stock each year is 1/3 of its production or purchasing (Johnson, 1998). The cost include: interest on capital invested in stock, storage space - rent, lighting, heating, refrigeration and air conditioning, Insurance and security, deterioration and obsolescence, loss of future sales and labour frustrations over stoppages (Granville, 2007).

Inventory management is one of the important key activities of any organization more a profit making business like supermarket. It is important in logistics planning and control, production process, purchasing and satisfaction of customer's services all of which are importance in organizational productivity of an organization like supermarket. Inventory accounts should be reconciled on a monthly basis. The reconciliation should verify that the value of the inventory held in the inventory system is equal to the value in the inventory account on the general ledger, and involve adjusting either or both of the balances for transactions that may be out of

sync at the end of the financial period (e.g. unpaid invoices, product returns, etc.) The business manager, working with the UIS Accounting Office, is responsible for ensuring that the inventory accounts are reconciled.

Inventory management is an important concern for managers in all types of businesses. For companies such as J C Penny limited, which operate on relatively low profit margins, poor inventory management can seriously undermine the business. The challenge is not to pare inventories to the bone to reduce costs or to have plenty around to satisfy all demands, but to have the right amount to achieve the competitive priorities for business most efficiently (Krajewski and Ritzman 1999:544).

Since some variances are always present due to the timing of transactions, business managers should recognize that the business system and the general ledger might never be exactly equal. Therefore business managers should establish a threshold for acceptable variances and manage the reconciliations with theses established parameters (Granville, 2007). Damaged, obsolete and missing items should be written-down or written-off immediately upon discovery, to avoid overstatement of the inventory value. Material write-offs or write-downs should be researched. Unit managers must support adjustment requests with written explanations. The write-off transaction should involve crediting the inventory account directly and expensing the same amount to the Inventory Write-offs account.

This is a stock management technique, which involves controlling the amount of stock held by an organization. The main aim of this technique is to strike a balance between profitability and liquidity to ensure that there is no under or over stocking. According to Kamukama, 2006, short adherence to stock control should be established in order to minimize the costs associated with stock. Organizations should therefore determine the level of stock they require so that excess or inadequate stock is avoided. Several Authors indicate that organizations should

establish the following practices in order to avoid undesirable stock levels i.e. the re-order level, average stock level and maximum stock level, minimum stock level of safety stock. Re-order level is a level fixed between and represents a stage at which emergency and immediate steps have to be taken for acquiring new stock.

It gives a warning to the stores that materials have reached the lowest point and if no emergencies are taken, they will be completely exhausted. The re-order level must be sufficient enough to cover the maximum possible consumption of stock during the reorder period.

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The factors that contribute to inventory valuation risks are purchasing practices, obsolescence, accuracy of sales, and product lifecycles. UIS/OAS recommends managing risks by maintaining low safety stocks and minimum purchase lots, utilizing just in time purchasing practices, managing product end-of-life issues brought on by aging components or new product introductions, and by utilizing inventory minimization strategies such as vendor-managed inventories. The business manager is responsible for the proper valuation of inventory and for ensuring that detailed documentation is retained of the inventory valuation. The two inventory valuation methodologies utilized in UIS are average cost and specific identification. (Muller, 2003).

Finally, according to the U.S Bureau of Census (Ballou 2004:326-328), inventories are found in such places as warehouses, yards, shop floors, transportation equipment and on retail store shelves. Having these inventories on hand can cost between 20 and 40 percent of their value per year. Therefore, carefully managing inventory levels makes good economic sense.

2.3 Organization productivity

According to Knowton (1980), organization productivity refers to how efficiently, effectively and timely an organization meets its goals. Organization productivity can be defined in terms of profitability and productivity. Burchman (1995), business organizations are concerned with productivity in the pursuit of their goals. The productivity of the organization as a whole determines its survival.

Drunker (1995), defines productivity as the balance between all factors of production that will give the greatest output for the smallest effort. He further identifies that it's measured in a number of ways; Profitability is used to measure economic soundness of the use of factors of production, production volume and hence evaluating the productivity of organizations.

According to Dwivedi (2005), he defined profitability as an income accruing to the equity holders in the same sense as wages accrue to labour, rent to the owners of rentable assets and interest to the money lenders. Profitability is form profits which is denoted by Greek letter n and it is defined to be the difference between total revenue (TR) and total cost (TC) that is to say profits = total revenue-total cost.

When total revenue is the total money received from the sale of goods and service and total costs being the amount of money the organization spent to produce these goods/services (Ian Jacques, 2003). In support to Drinker. Kakuru (2005) also defined profitability as the difference between the revenue generated by corporate organization and expenses incurred during the operation of the business. He

further classified that various costs incurred by these organizations some of which are fixed costs like rent while other are variable costs which can easily change for example electricity expenses and the corporate organizations can easily achieve increased sales revenue through extensive sales promotions so it is so important to these organizations to reduce these costs while maximizing sales revenue. More So Brinker (2002).

Defined profitability as the difference between the revenue generated and the costs incurred to produce the same revenue during a given accounting period so to him corporate organizations should aim at increasing sales revenue and reduce costs incurred so that they achieve the desired levels of profitability. In support to Brinker, Pandey (2002) defined profitability as the difference between revenues and expenses over a period of time (usually a year) where profit is the ultimate output of a company so he concluded that an organization will have no future is it fails to make sufficient profits.

According to Patel (2004) defines profitability as the difference between the organizations revenues realized from the sale of product or service and the expenditure incurred relating to the same accounting period and he further elaborated that the organization should aim at minimize operating expenses while as increasing on the sales revenues which automatically leads to profitability in these organizations.

Measurement of organization Profitability on organization productivity is basic on following factor.

Profitability is measures to show how the organization is effective. Profit is a difference between revenues and expenses over a period of time. Profit can be measures in various ways and gross profit is between sales and of sales sold (Pandey, 2002). Pandey (2002) identified that corporate organizations can easily

determine measure the profitability level by through using profitability ratios. According to him this can be measured after preparing financial statements. He further clarified that net profit is obtained after subtracting operating expenses like interest, taxes and electricity from the gross profit, hence net profit margin ratio is measured by dividing profit after tax by sales and it can be illustrated as below.

$$\text{Net profit} = \frac{\text{Profit after tax}}{\text{Sales}}$$

Through comparison to industry average the higher the ration show profitability and lower ration to the industry is not encouraged. In support to Pandey (2002), Kakuru (2005) indicated that through profitability ratios the organization's ability to earn a return can easily be measured where he further clarified that this return is normally a margin either by sales, a portion of capital invested or portion of assets used and for net profit he also came up with the following.

$$\text{Formular.Net profit} \quad \frac{\text{Earning After tax}}{\text{Total Sales}}$$

In his conclusion he remarked that it shows a return on every unit of sale after taking into account both cost of sale and expenses and the higher the ration in relation to the industry average ratio the higher the profitability of these organization and vice versa.

According to Nkundabanyanga (2004), defined profitability as a return expected by the management in relation to what it invested. To him profitability can be measured by using.

$$\text{Gross Net profit} = \frac{\text{Gross profit margin}}{\text{Total Sales}}$$

Whereas increase in gross margin in relation to the industry average indicates reduction in cost of industry sales which increases the profitability of the organization?

Return on Investment: Gillingham (2001), Investment refer to the net assets employed by the organization and organizations can easily measure the profitability of any investment so as to base on the ending result either invest or not and the following method was stated for return on investment analysis

$$\text{Return on Investment} = \frac{\text{Earning after tax}}{\text{Investment}}$$

Gross profit margin: Home (2006) indicated that gross profit is the difference between the revenues of the organization which is the amount realized from the sale of a product/service by an organization with the costs the was incurred to produce that revenue in other wards it's the earnings before subtracting depreciation, interest and taxes (EBIDT) that is

$$\text{Gross profit Margin} = \frac{\text{Gross profit}}{\text{Sales}}$$

Where gross profit = sales - cost of goods sold. A high gross profit margin ration indicates high sales, good management and profitability which higher selling prices, low-costs of goods sold, whereas a low gross profit margin ratio indicates low profitable organization. But he stated that in order to come up with that analysis, the ratio obtained should be compared to the industry average ratio.

Return on total assets (ROTA):- Gillingham (2001) indicated that the return on assets of these corporate organizations productivity can be measured to identify whether the total assets are idle or not and he derived the method which can be used to measure the return of total assets which is; Return on Investment

Earnings after tax (EAT)

Total Assets

Where assets total is a function of current assets plus fixed assets and also in his conclusion he stated that the higher ration in relation to the industry average ration shows that the total assets are having much return to the investors and the lower ratio compared to the industry average shows that assets are idle.

2.4 Relationships between inventory management and organization productivity.

Inventory management is the integrated function of purchasing activities so as to achieve minimum coordination and optimum expenditure (kakuru, 2006). For organizations to perform well, it has to apply proper inventory management system and control techniques. In this case the organization must consider inventory as a key factor that will determine its profitability and in order to maximize profitability, inventories must be acquired ahead of sales as levels of inventory largely depend on sales or demand of the products.

Based on the long- term and short-term goals of the organization productivity measures may be financial and market productivity and customer satisfaction. The financial and market productivity factor is operational zed in terms of market share, return of total assets, annuals sales growth (Tan, Kannan & Handfield, 1999). The customer satisfaction dimension is measured by total product value to the customer; meeting quality standards set by the customer, understanding customer needs, retention of loyal customers and alignment of organizations goal in terms of customer needs (Daugherty, Ellinger, & Dale, 1995)

During the past decade, the research for organization productivity measurement has been extremely active (Neely 1999). Many successful productivity measurement frameworks have been presented and implemented in organizations. These measurement frameworks, such as the Balanced Scorecard, determine how measures are chosen for a measurement system and how they can be used. The starting point of this article is that since there are well established measurement

frameworks already available, there is no need to construct yet another framework for building organization productivity measurement systems. Instead, the focus is on solving the specific challenges that are related to applying productivity measurement to knowledge intensive organization.

At the moment, there is a fairly common understanding between organization productivity measurement researchers that the best way of measuring organization productivity is to use some kind of comprehensive measurement system. Some of the well-known productivity measurement frameworks at the moment are the Balanced Scorecard, the Productivity Pyramid, and the Productivity Prism (Kaplan and Norton 1992 and Neely and Adams 2000).

The organization manager should therefore aim at maintaining an optimum level of inventory in the right quantity, quality and at the right time thus maximizing benefits and minimizing losses in funds tied up when over investment in inventories is done (Kabera, 1996).

CHAPTER THREE

METHODOLOGY

3.0 Introduction

This chapter presents the methodology that was used in the study; it gives research design and the methods that were used to collect data from the field. It gives a summary of the research design, sample population and size, data collection instruments, data type, data processing and presentation and the anticipated problems during the process of data collection and analysis.

3.1 Research Design

The research was based on both the qualitative and quantitative research designs. A case study was chosen as the most appropriate research strategy. Saunders et al (2003) define a case study as "a strategy for doing research which involves an empirical investigation of a particular contemporary phenomenon within its real life context using multiple sources of evidence". This fits well with the author's intention to investigate a real life issue through a variety of data collecting methods. Jankowicz (2000) suggests the appropriateness of a case study when the proposal focuses on a set of issues in a single organization.

The qualitative research design was descriptive in nature and this enabled the researcher to meet the objectives of the study. Statements were used to assign variables that were adequately measured using numbers and statistics. The quantitative research design was used in form of mathematical numbers and statistics assigned to variables that would not be easily measured using statements or theme.

3.2 Study Population

The study involved the staffs as well as clients of Tororo general Hospital located on Municipality in Tororo district in eastern Uganda. The total populations were around 120 staff members as well as Golf Hospital and the sample population was 120.

3.3 Sample Frame and sample size

3.4 Sample size

The sample size of the study was determined by using Sloven's formula that states that

$$n = \frac{N}{1 + Ne^2}$$

Where **n** is sample size, **N** is population size, **e** is the error term

Given that the population size is 45, the sample size will be

$$n = \frac{120}{1 + 120(0.05)^2}$$

$$\frac{120}{1 + 120(0.0025)}$$

$$\frac{120}{1.3}$$

$$n = 92$$

The sample size of the study was 92.

3.4 Sampling Technique

The study participant was chosen using a purposive sampling technique because of the nature of the research where the respondents were identified before the researcher went for data collection.

3.5 Source of Data

3.5.1 Primary Data

Primary data was gathered from respondents from Tororo general Hospital Located on Tororo municipality in Tororo District in eastern Uganda who were assumed to give first hand information on the subject under study.

3.5.2 Secondary Source

Secondary data was got from sources like; Annual reports, Journal articles, internet, magazines, newspapers and books related to the subject of the study. These were consulted at length to extract the information required to support the findings from the study respondents.

3.6 Data Collection Methods

The study incorporated the use of various methods in the process of data collection in a bid to come up with sound, concrete and credible research findings. The researcher therefore amalgamated the use of questionnaires, interviews and documentary analysis in the process of collecting primary data.

3.6.1 Questionnaires

The researcher administered questionnaires to selected top employees as well as customer of Tororo general hospital, in Eastern division of the municipality 300 meters away from town along station road, opposite The Aids Supports Organization (TASO) in Tororo district in Eastern Uganda. The relevance of this was that, the questionnaires were convenient and less time consuming. With management staff as well as customer who may not have time for an appointment, emails of the questionnaires were sent to the respondents to be filled. These questionnaires were piloted as recommended by Saunder et al (2003) who writes that, piloting helps ensure validity and reliability and also said to pilot helps to refine the questionnaire so that respondents will have no problem in answering the questions and there will be no problems in recording the data.

3.6.2 Interviewing

The researcher used formal interviewing as a method of data collection and the interviews offered a chance to explore topics in depth and allow interaction between the researcher and the respondents, such that any misunderstanding of the questions and answers that were provided could easily be corrected. The researcher interviewed the lower level employees of the organization using the interview guide. This was used to tap the vital information that would not have been collected using the questionnaires from the top level and management employees.

3.7 Reliability and validity

Validity

It measures the extent to which a research instrument measures in which it was intended to measure or the extent to which the research findings can be generalized to other populations. To test the validity of the instrument, the researcher used first inter-judge co-efficiency of validity. Three expert judges were to make independent appraisal of the items in the questionnaires. Their results were used to establish the content validity Index (CVI) using the following formula;

$$CVI = \frac{\text{No. of judges declared item valid}}{\text{Total number of judges}}$$

Reliability

The reliability of the instrument was done using the test re test method. The researcher carried out a pretest using part of the sample and analyze it and later using the same respondents re test using the same questionnaires and the results were correlated. The r value was about 0.6.

3.8 Data Analysis and Management

After collecting all the necessary data, these data was coded and edited, analyzed and rephrased to eliminate errors and ensure consistency. It involved categorizing, discussing, classifying and summarizing of the responses to each question in coding frames, basing on the various responses. This was intended to ease the tabulation work. It also helped to remove unwanted responses which were considered insignificant. . Data was collected from the field with the use of study instruments which were classified into meaningful categories. This enabled the researcher to bring out essential patterns from the data that was used to organize the presentation. Data was entered into a computer and analyzed with the use of SPSS. Finally, a research report was written from the analyzed data in which conclusions and recommendations were made.

3.9 Research Procedure

The study was to observe all those procedures followed in research. Using the letter of introduction obtained from the college of economics and management science, the

researcher introduced to every respondent reached at, fully explaining the purpose of research. After getting their consent, where I conducted the research. The researcher also built the confidence of the respondents by assuring them that their views were confidential and was to be used only for academic purposes.

3.10 Limitation of the Study

Time planned to collect data not enough and this as a result delayed the researcher to write a research report in a specified scheduled time .This required research assistants from the field to save time.

The study anticipated a problem of not finding all respondents in the study area especially the top management as well as clients. The researcher however, arranged with them to fix appropriate time in order to collect reliable and valid information.

The researcher further faced a problem of some respondents not providing information at first relating to the study variables. However, researcher had to explain to them that the information would be only for academic purpose while making them to understand the study variables.

The study was also expensive in terms of stationary. However the researcher tried to mobilize financial resource from her relatives for the study to be completed.

CHAPTER FOUR

PRESENTATION, ANALYSIS AND INTERPRETATION OF THE RESEARCH FINDINGS

4.0. Introduction

This chapter deals with presentation, interpretation and analysis of key findings. The findings on the impact of inventory control systems and performance of manufacturing industries are presented in frequency tables and percentages as indicated by the tables.

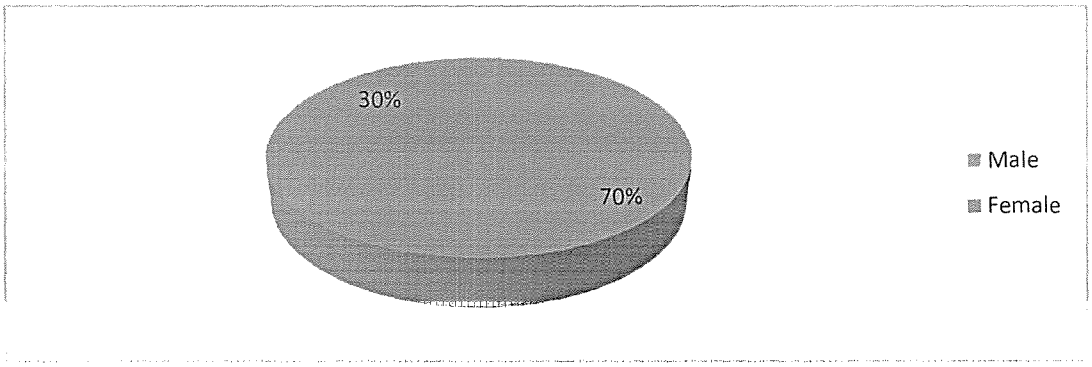
4.1. Demographic characteristics of respondents

Table 1: Gender of respondents

	Frequency	Percent
Male	35	70
Female	15	30
Total	**50**	**100**

Source: Primary Data, 2014

Figure 1 showing Gender of respondents



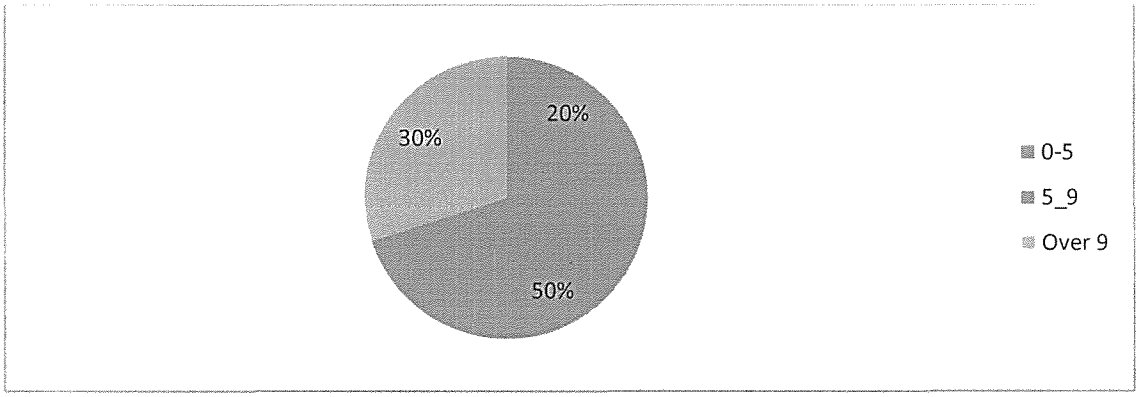
The responses indicate that male respondents were the majority (70%) as compared female counterparts (30%). This implies that the institution employees more male compared to their female counterparts.

Table 2: Period at the current job

Duration (years)	Frequency	Percent
0-5	10	20
5-9	25	50
Over 9	15	30
Total	**50**	**100**

Source: Primary Data, 2014

Figure 2 showing period of stay at the current job



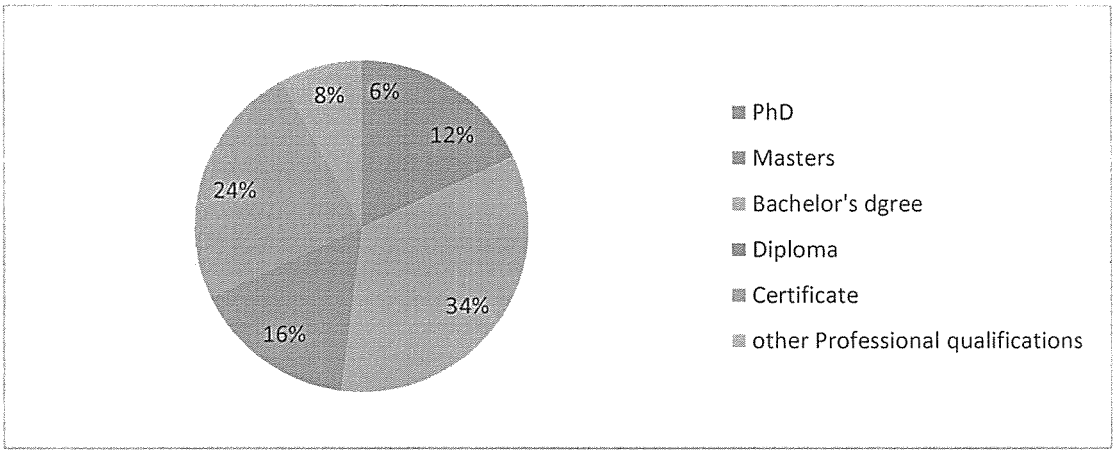
Responses indicate that most of the employees had spent 5-9 years (50%), followed by over 9 years (30%) and 0-5 years (20%). This implies that the institution maintains its human resources thus are able to gain experience on the jobs/tasks they do.

Table 3: Respondents'' Highest Qualification

Qualifications	Frequency	Percent
PhD	3	6.0
Master's	6	12.0
Bachelor's degree	17	34.0
Diploma	08	16.0
Certificate	12	24.0
Other professional qualifications	04	08.0
Total	**50**	**100.0**

Source: Primary Data, 2014

Figure 3 showing the respondents highest qualification



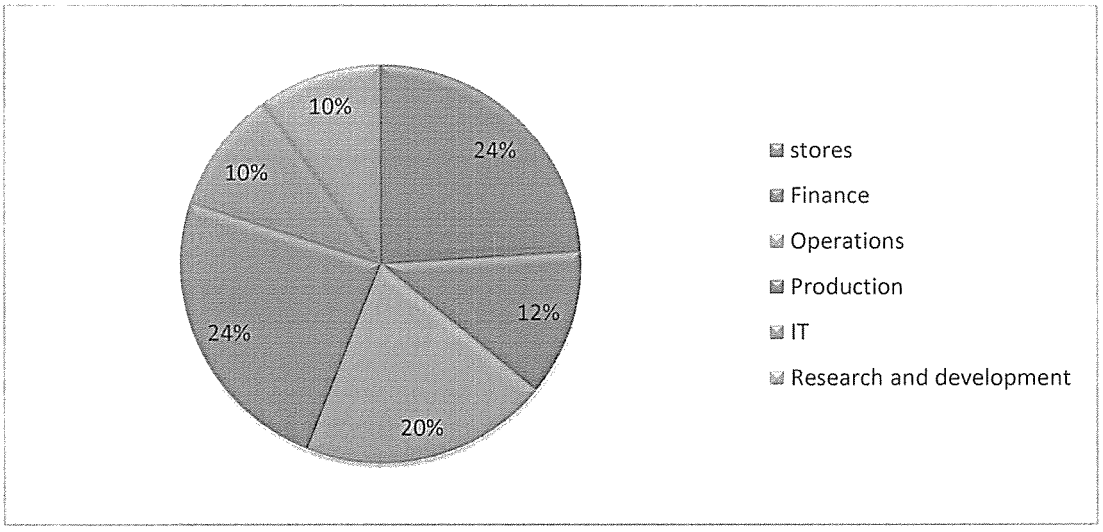
Majority of the respondents had attained Bachelor's (34%), followed by Certificates (24%), Diploma (16%), Master's (12%), other professional qualifications (8%) and (6%) PhD. This indicates that the organization recruits persons with necessary qualifications required to execute particular tasks.

Table 4: section/ department of Attachment

	Frequency	Percent
Stores	12	24.0
Finance	6	12.0
production	10	20.0
Operations	12	24.0
IT	05	10.0
Research & development	05	10.0
Total	**50**	**100.0**

Source: Primary data, 2014

Figure 4 showing section/department of attachment



Most of the respondents were from stores and production department (24.0%) and (24.0%) respectively, followed by operations (20.0%), finance (12.0%), and IT &Research and development both stood at 10.0% each. This means that most responses were obtained from stores and production departments which were the main areas of interest to the researcher.

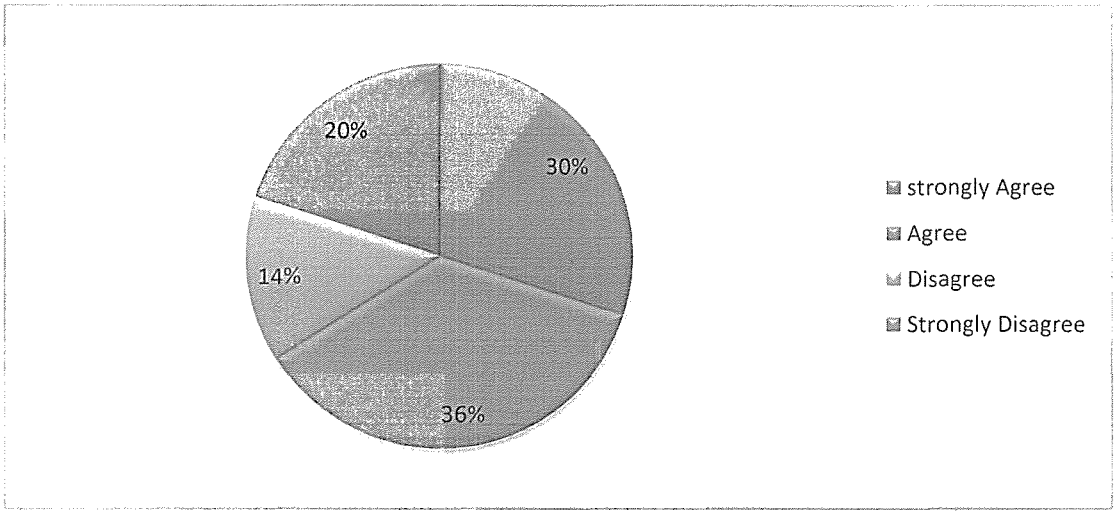
4.2. Inventory Control Systems

Table 5: Whether the organization has an inventory policy?

Response	Frequency	Percent
Strongly Agree	15	30.0
Agree	18	36.0
Disagree	07	14.0
Strongly Disagree	10	20.0
Total	**50**	**100.0**

Source: Primary data, 2014

Figure 5 showing whether the organization has an inventory policy?



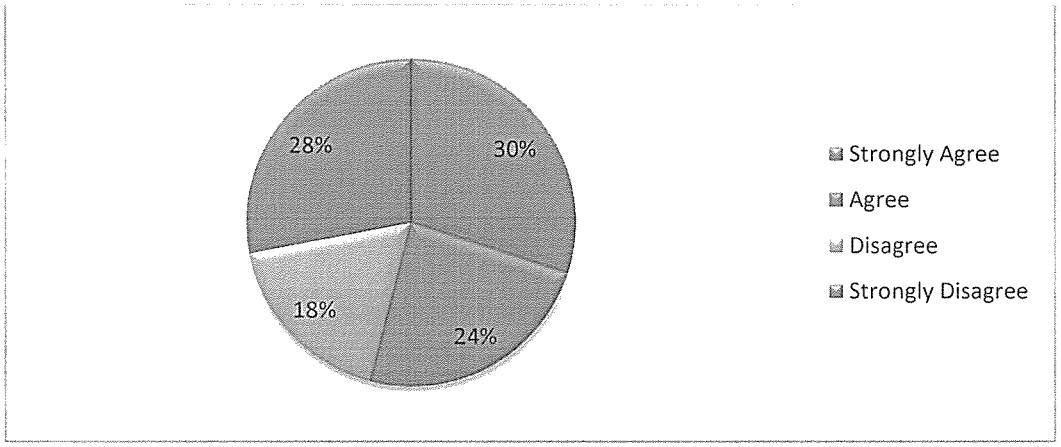
Most of the respondents (36%) agreed that the institution has an inventory policy, followed by (30%) strongly agree, (20%) strongly disagree, while (14%) disagreed. This means that the institution has an inventory stock policy in place.

Table 6: Whether the organization uses MRP as an inventory control policy?

Response	Frequency	Percent
Strongly Agree	15	30.0
Agree	12	24.0
Disagree	09	18.0
Strongly Disagree	14	28.0
Total	**50**	**100.0**

Source: Primary data, 2014

Figure 6 showing whether the Organization uses MRP as an Inventory Control policy



From the above table, 30% of the respondents strongly agreed that the institution uses MRP as inventory control policy, followed by 28% strongly disagree, 24% agree, while 18% disagreed. This implies that some respondents are not sure of the control policy employed.

Table 7: Whether the organization employs VMI to guard against stock outs?

Response	Frequency	Percent
Strongly Agree	15	30.0
Agree	12	24.0
Disagree	09	18.0
Strongly Disagree	14	28.0
Total	**50**	**100.0**

Source: Primary Data, 2014

Figure 7 showing whether the organization employs VMI to guard against stock outs?

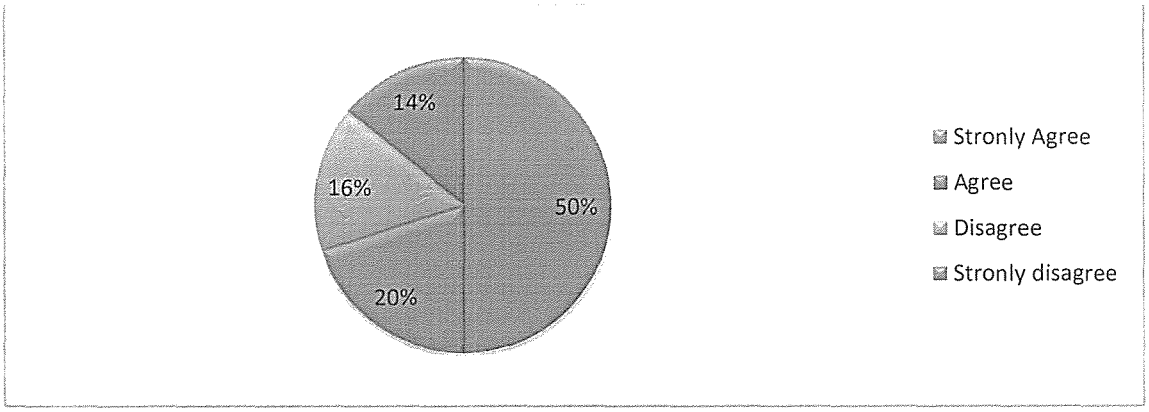


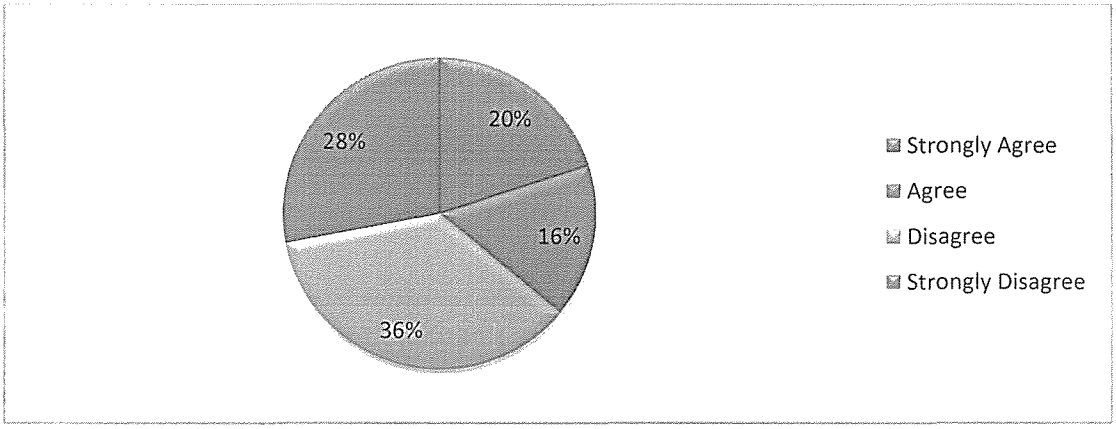
Table above indicate that majority of the respondents, 50% strongly agreed that the institution uses VMI as an inventory control policy, followed by 20% agree, 16% disagree, while 14% strongly disagreed. This implies that the institution employs VMI techniques of inventory control.

Table 8: Whether employs JIT to ensure continuous operations?

Response	Frequency	Percent
Strongly Agree	10	30.0
Agree	08	16.0
Disagree	18	36.0
Strongly Disagree	14	28
Total	**50**	**100.0**

Source: Primary Data, 2014

Figure 8 showing whether employs JIT to ensure continuous operations?



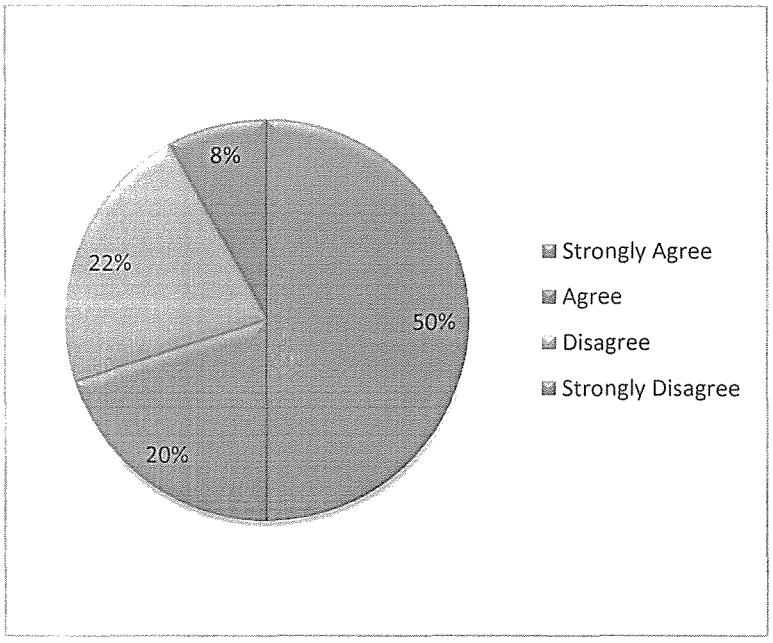
Majority of the respondents, 36% disagreed that the institution employs JIT, followed by 28% strongly agree, while 16% agreed. This implies that the institution does not employ JIT to ensure continuity of operations.

Table: 9 whether materials are periodically reviewed to ascertain status

Response	Frequency	Percent
Strongly Agree	25	50.0
Agree	10	20.0
Disagree	11	22.0
Strongly Disagree	04	8.0
Total	**50**	**100.0**

Source: Primary Data, 2014

Figure 9 showing whether materials are periodically reviewed to ascertain status



From the above table, majority of the respondents (50%) strongly agreed that the institution periodically reviews its inventory status to ascertain inadequacies, followed by 22% disagree, 20% agree, while 8% strongly disagreed. This implies that the institution undertakes periodic reviews of its inventory.

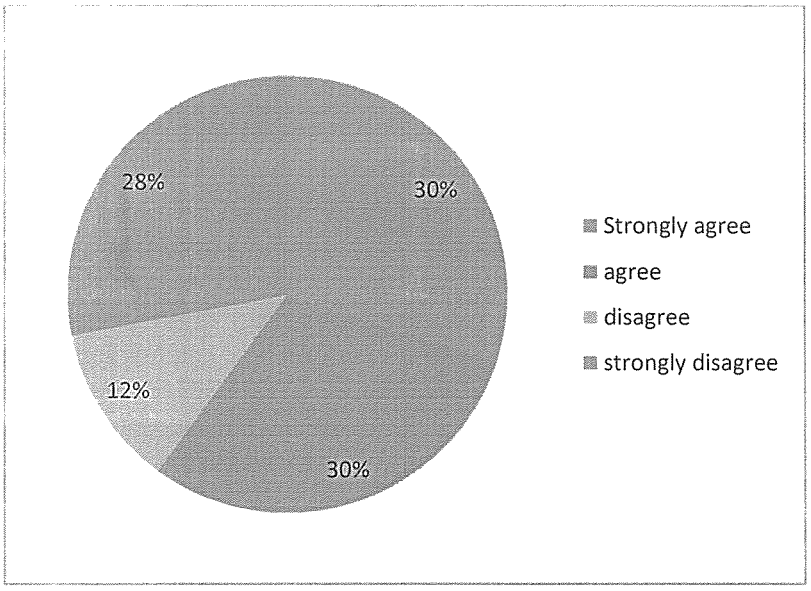
4.3. Problems Associated with Inventory Control Systems

Table 10: whether the institution experiences overstocking situations?

Response	Frequency	Percent
Strongly Agree	15	30.0
Agree	15	30.0
Disagree	06	12.0
Strongly Disagree	14	28.0
Total	**50**	**100.0**

Source: Primary data, 2014

Figure 10 showing whether the institution experiences overstocking situations?



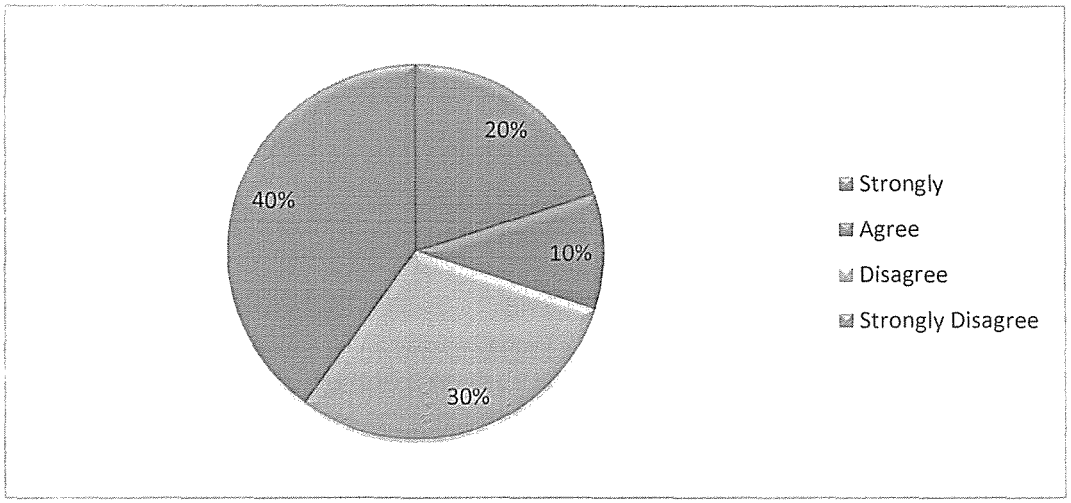
Responses indicate that the institution experiences overstocking situation (30%) strongly agreed and agreed respectively, followed by 28% strongly disagree, while 12% disagreed. This implies that the institution experiences overstocking situations.

Table 11: whether lost sales are a result of stock outs?

Response	Frequency	Percent
Strongly Agree	10	20.0
Agree	05	10.0
Disagree	15	30.0
Strongly Disagree	20	40.0
Total	**50**	**100.0**

Source: Primary Data, 2014

Figure 11 showing whether lost sales are a result of stock outs?



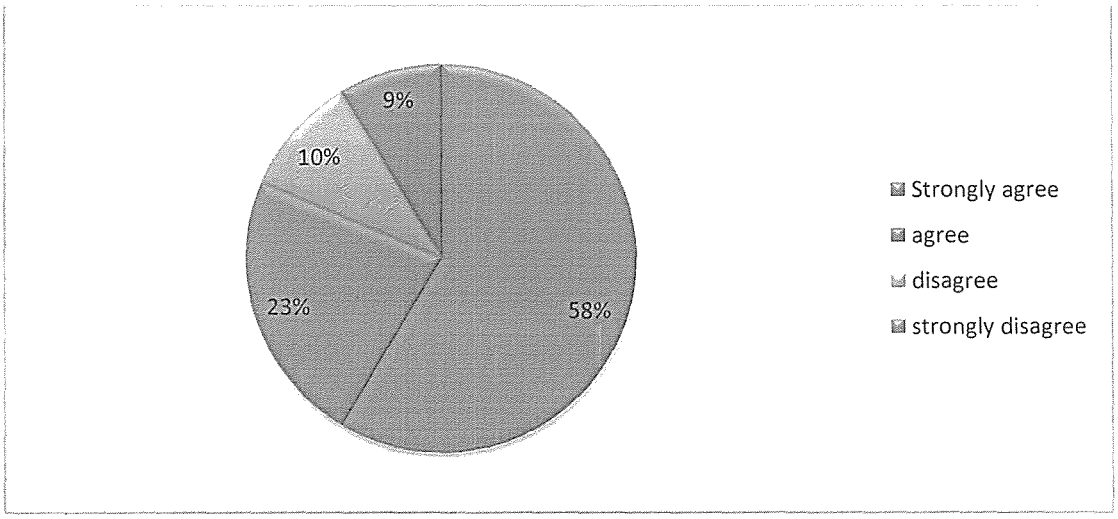
From the above 40% of the respondents strongly disagreed that lost sales don't result from stoke out situation in the institution, followed by 30% disagree, 20% strongly agreed while 10% agreed. This implies that lost sales do not result from stoke out situation at the institution.

Table 12 : whether holding cost result from inadequate inventory control systems

Response	Frequency	Percent
Strongly Agree	18	36
Agree	12	24
Disagree	06	12
Strongly Disagree	14	28
Total	**50**	**100.0**

Source: Primary Data, 2014

Figure 12 showing whether holding cost result from inadequate inventory control systems



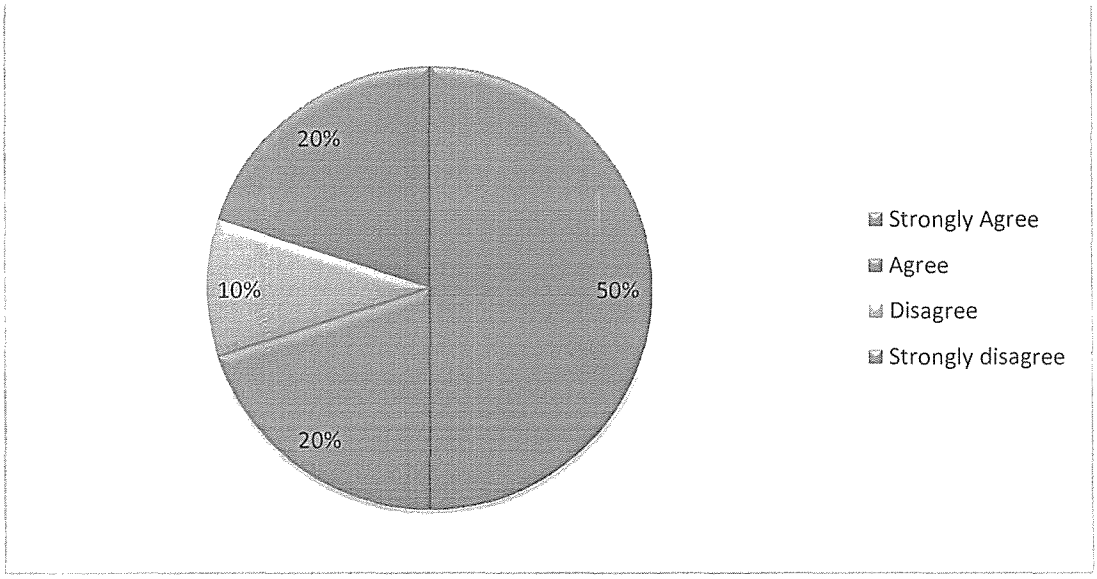
Majority of the respondents 36% strongly agreed that holding cost result from inadequate inventory control systems followed by 28% strongly disagree, 24 % agree while 12% disagreed. This implies that the institution suffers from holding costs brought about by inadequate inventory control systems in place.

Table 13: whether longer lead-times reduce flexibility to respond to customer needs?

Response	Frequency	Percent
Strongly Agree	25	50
Agree	10	20
Disagree	05	10
Strongly Disagree	10	20
Total	**50**	**100.0**

Source: Primary Data, 2014

Figure 13 showing whether longer lead-times reduce flexibility to respond to customer needs?



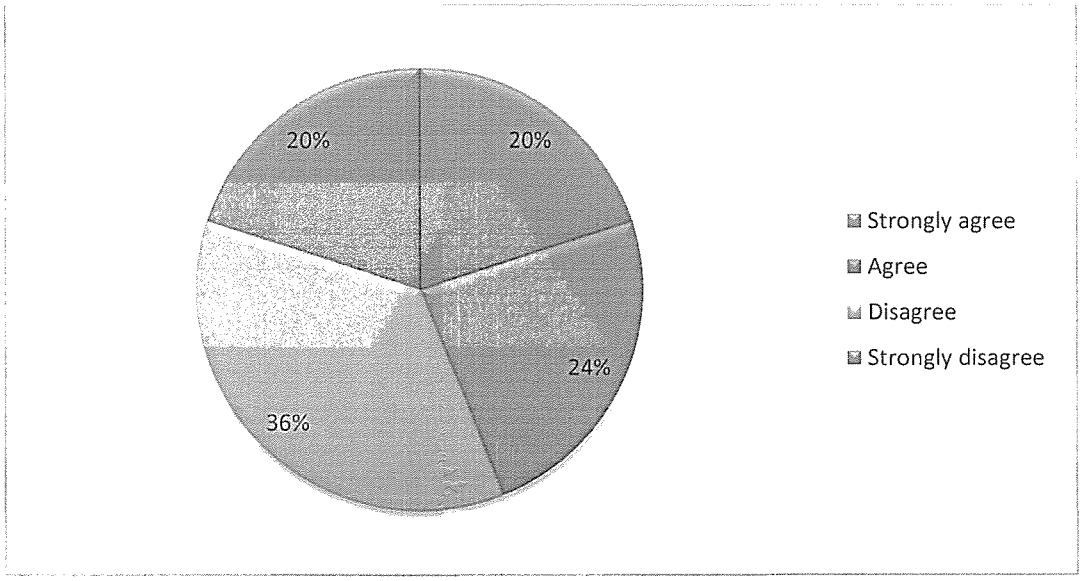
Responses indicate that most respondents, 50% strongly agreed that longer lead-times reduce flexibility to respond to customers needs, followed by 20% strongly disagreed and agree respectively while 10% disagreed. This indicate that institution delays to responds customer needs due to longer lead-times.

Table 14: whether the institution experiences material shrinkage or obsolescence?

Response	Frequency	Percent
Strongly Agree	10	20
Agree	12	24
Disagree	18	36
Strongly Disagree	10	20
Total	**50**	**100.0**

Source: Primary Data, 2014

Figure 14 showing whether the institution experiences material shrinkage or obsolescence?



Analysis of finding from the above indicate that 36% of the respondents disagreed to the notion that the institution experiences material shrinkage or obsolescence then followed by 24% agree,20% while 20% agree and disagreed respective. This implies the institution does not experience incidences of material shrinkage and or obsolescence

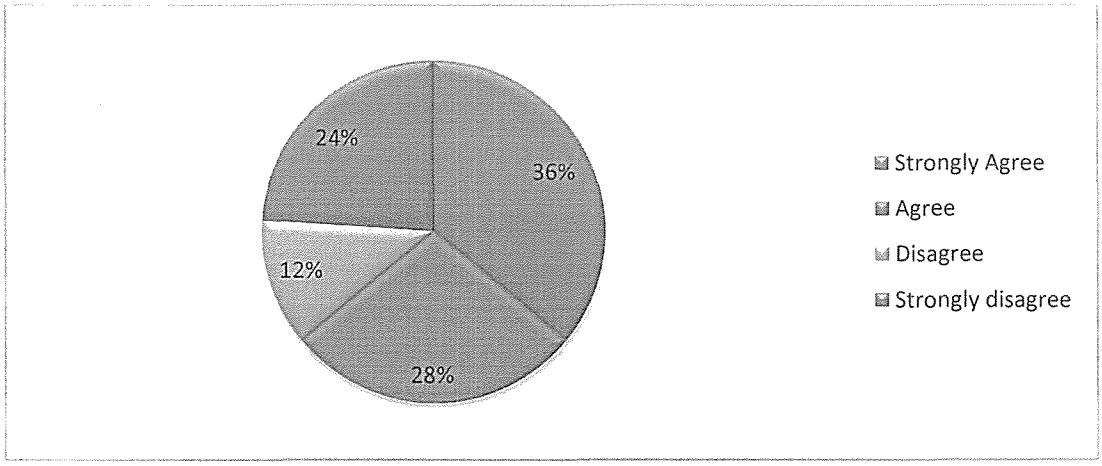
4.4 Relationship between inventory control and firm performance

Table 15: whether improvement in delivery schedule and rate of obsolescence reduce inventory costs?

Response	Frequency	Percent
Strongly Agree	18	36
Agree	14	28
Disagree	06	12
Strongly Disagree	12	24
Total	**50**	**100.0**

Source: Primary Data, 2014

Figure 15 illustrating whether improvement in delivery schedule and rate of obsolescence reduce inventory costs?



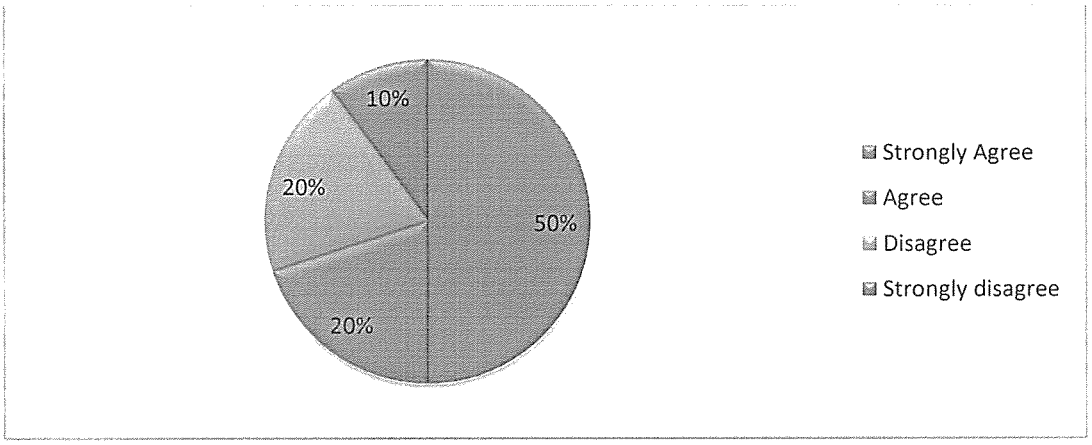
From the above 36% of the respondent strongly agreed that improvement in the delivery schedule and rate of obsolescence reduces inventory costs, followed by 28% agree, 24% strongly disagree while 12 % disagreed. This shows that the institution is committed to reducing costs through improvement in delivery and reduction in obsolescence rate.

Table 16: whether material availability improves the institutions return on investment.

Response	Frequency	Percent
Strongly Agree	25	50
Agree	10	20
Disagree	10	20
Strongly Disagree	05	10
Total	**50**	**100.0**

Source: Primary Data, 2014

Figure 16 illustrating whether material availability improves the institutions return on investment.



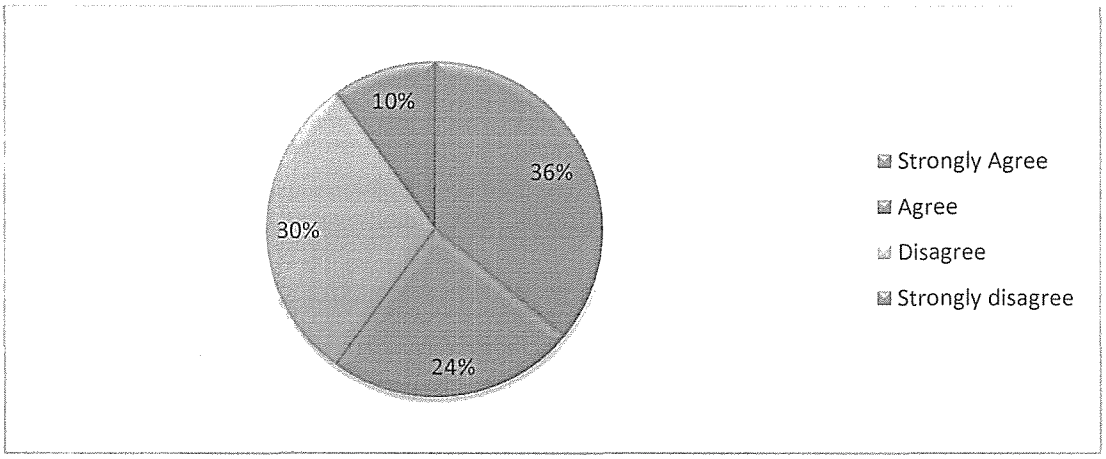
From the finding it reveals that 50% of the respondents strongly agreed that material availability improves the instructions return on investment, followed by 20% agreed and disagreed respectively while 10% strongly disagreed. This shows that availability of material within the institution increases its return on investment.

Table 17: whether efficient and effective inventory control systems eliminate waste?

Response	Frequency	Percent
Strongly Agree	18	36
Agree	12	24
Disagree	15	30
Strongly Disagree	05	10
Total	**50**	**100.0**

Source: Primary Data, 2014

Figure 17 showing whether efficient and effective inventory control systems eliminate waste?



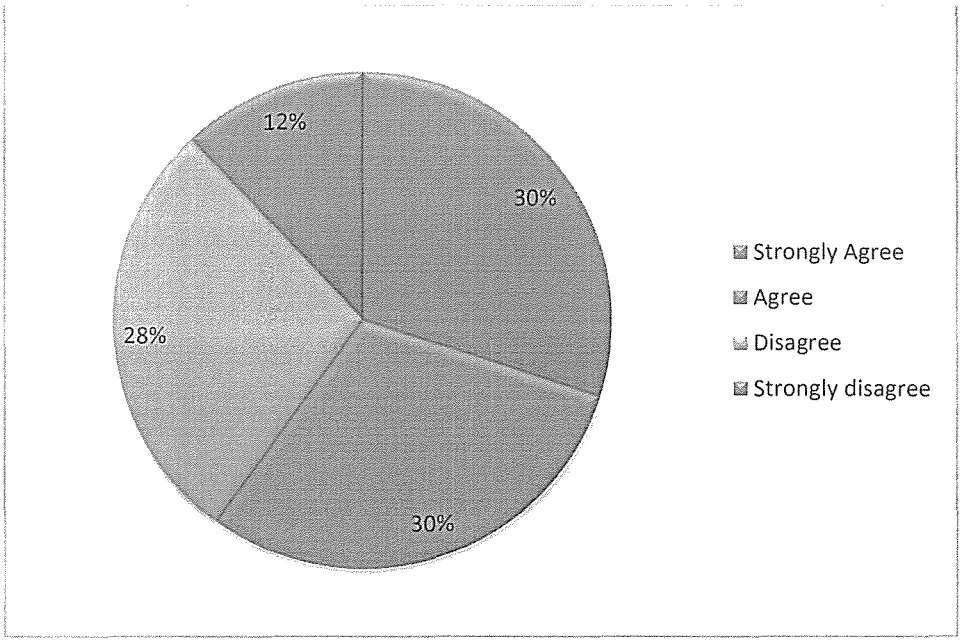
Responses indicate that most respondents 36% strongly agreed that efficient and effective inventory control systems eliminate waste, followed by 30% disagreed 24% agreed while 10% strongly disagreed this implies that the institution strives to eliminate waste through an efficient and effective control system.

Table 18: whether increased profitability is associated with proper inventory control in the institution?

Response	Frequency	Percent
Strongly Agree	15	30
Agree	15	30
Disagree	14	28
Strongly Disagree	06	12
Total	**50**	**100.0**

Source: Primary Data, 2014

Figure 18 illustrating whether increased profitability is associated with proper inventory control in the institution?



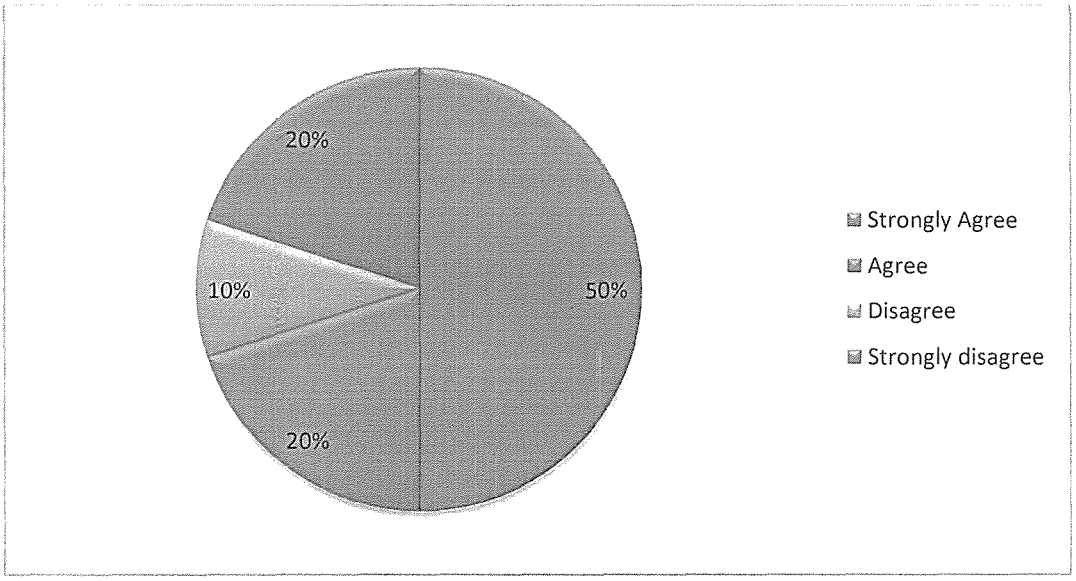
Findings above revealed that 30% of the respondents strongly agreed that material availability improves the institution's return on investment followed 28%disagree while 12% strongly disagreed. This implies that the increased profitability associated with proper inventory control.

Table 19: whether efficient inventory control enables the institution to remain competitive in the market place?

Response	Frequency	Percent
Strongly Agree	25	50
Agree	10	20
Disagree	05	10
Strongly Disagree	10	20
Total	**50**	**100.0**

Source: Primary Data, 2014

Figure 19 showing whether efficient inventory control enables the institution to remain competitive in the market place?



Majority of the respondents 50% strongly agreed that instituting efficient inventory control enables the institution to remain competitive in the market place, agreed and strongly disagree 20% respectively, while 10% disagreed. This shows that inventory control systems are source of competitive advantage especially in manufacturing sector.

CHAPTER FIVE

SUMMARY CONCLUSION AND RECOMMENDATIONS

5.0 Introduction

This chapter contains the discussions of the findings, summary conclusions and recommendations. It presents the discussion based on the objectives set out in the research study.

Results on Demographic Characteristics

This section discusses the results on the demographic characteristics of respondents

Sex of Respondents

Majority of the respondents **(table 1)** were male 35 (70%) as compared to the female counterparts 15 (30%). This could be attributed to the low involvement of women in the search for jobs.

Period of stay at current Jobs

Table 2 showed that most of the respondents. 25 (50%) had been in employment for over a period of 5-9 years. This implies that institution maintain it human resources and it able to gain experience.

Respondents' highest levels of qualification

Findings from table 3, indicated that majority of the respondents had the necessary qualifications with at least 68% possessing the required academic job qualifications plus other additional requirements. This implies that the organization employs individuals with necessary skills and knowledge.

5.1 Summary of the findings

5.1.1 Inventory Control Systems

Findings from table 5 indicate that the institution has an inventory policy 36%, and that the institution employs MRP as an inventory policy 30% (table 6). Also responses indicated that that the institution uses VMI 50% (table 7), and to some extent JIT (table 8) 20% plus periodic reviews 50% (table 9) as inventory control Systems to guard against fluctuations in inventory. This is in accordance with O'Dennell, Maguire, Mclvor, & Humphreys (2006), outline that sophisticated techniques have been applied to this reduction such as genetic algorithms to determine optimal ordering at each echelon. Similarly Mustaffa & Potter,

(2009) in their study suggested that application of the vendor managed inventory system leads to higher service levels to customers and improvements in key supply chain variables such as decreasing stock -outs and elimination of the bullwhip effect. Further Kazim, (2008) identified the various inventory control systems that have been implemented by various industries as such as vendor managed inventory and forecasting and replenishment.

5.1.2 Problems Associated with Inventory Control

Findings revealed that the institution experiences overstocking problems 30% (table 10), lost sales do not result from Stock outs 40% (table 11), holding costs result from inadequate control systems 36% (table 12), longer lead-times reduces flexibility 50% (tablel3), and that the institution does not experience shrinkage 36% (table 14). Graman and Magazine (2006), argued that today, the cost of holding inventory, extensive product proliferation and the risk of obsolescence, especially in rapidly changing market make the expense of holding large inventories or finished goods excessive and that high demand items naturally have safety stock assigned them. Accordingly Wallin (2006), observed that customers are more satisfied if the time taken to deliver their products is less than the time they are willing to wait once they have placed an order. Flexibility is paramount in meeting the delivery deadlines (Gunasekara, 2001). Reduction in lead times means that products and information flow in a seamless manner which allow all the supply chain members to respond to

the customers 'needs quickly while maintaining inventory to a minimum (Brewer, 2000).

5.1.3 Relationship between Inventory Control and Firm performance

Analysis of findings reveal that improvements in delivery schedules reduces inventory costs 36% (table 15), material availability improves return on investment5O% (table 16), efficient and effective control eliminates waste 36% (table 17), profitability is associated with proper inventory control 30% (table 18) and, efficient Inventory control enables the institution to remain competitive 50% (table 19). This is in agreement with Berling, (2011), who observed that maintaining optimum levels of inventory is important in an organization because excess inventory results in stock holding costs (rental charges, opportunity costs, obsolescence costs, breakages, pilferage) and inadequate inventory (stock outs) is also costly as customers may leave to competitors. For each sale that an organization does loose as a result of stock outs, the company not only looses profits but also customers who may be dissatisfied and source for an alternative reliable supplier (Knights, 2008). Ewuolo, et al,

(2005) also noted that when inventory management (maintaining adequate inventory levels) is carried out efficiently, it ensures that the materials needed in an organization are available in the right quality, quantity thus avoiding issues of overstocking and under stocking and ultimately guaranteeing customer satisfaction and increased profits. Accordingly Rajeev, (2008) stressed the need for business enterprises to embrace effective inventory management practices as a strategy to improve their competitiveness.

5.2 Conclusion

The study sought to establish the relationship between Inventory Control Systems and Performance of Tororo Cement Industries (U) Ltd.

Basing on the study objectives, there was a significant relationship between inventory control system and performance of the Tororo Cement Industries (U) Ltd though findings revealed that among other factors, that some employees are do not influence the existence of control systems.

The study also showed that the institution experiences overstocking situations with increasing holding costs. The researcher therefore infers that the institution and it still has a long way to improve on the inventory control Systems if the objectives of inventory control are to be achieved.

5.3 Recommendations

Basing on the study findings, the researcher makes the following recommendations.

The institution should put in place capacity building programmes as mechanism for building professionalism through training to ensure proper administration and management of inventory. This will enable the institution to track changes and/or monitor the usage and movement materials both within and outside the production areas.

The institution should device a mechanism of tracking deliveries of its inventory in transit so as to keep pace with the changing customer need. This will enable the institution to reduce on its lead time and improve service level to its customers.

The institution should ensure that the control systems in place are efficient and effective to track changes in inventory if heavy investments in inventory are to be avoided. This can be done by continually reviewing the control systems in place for errors and/or obsolescence.

5.4 Area for Further Research

1) Inventory Control System and customer service management

2) Computerized Inventory Tracking Systems and Order fulfillment

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APPENDICES

APPENDIX A:

Questionnaire for Staff of Tororo general Hospital

Dear respondent,

I am Akware Juliet conducting a research on ***"The effect of Inventory Management on organization productivity"***. Therefore I kindly request you to spare a few minutes of your busy schedules to fill this questionnaire to enable me accomplish this task. Your honest and sincere responses will be highly appreciated for academic purposes and shall be treated with utmost confidentiality. I thank you very much for your cooperation.

Please indicate the extent to which you agree with each of the following statement about your organization by indicating with a tick in the box of your choice. Use the scale below on each of the sections and indicate on the answer sheet next to the number of the corresponding statement the number which best represents your answer.

Use the key below answering the following questions: Apply a tick where applicable using the following key.

SA – Strongly Agree, A – Agree , NS – Not Sure, D – Disagree

SD – Strongly disagree

SECTION A: BACK GROUND INFORMATION ON THE RESPONDENT (Please tick in the appropriate Box)

1. Sex: Male ☐ Female ☐

2. Age: 20 – 30 years ☐

31 – 40 years ☐

41 - 50 years ☐

51 – 60 years ☐

60 and above ☐

3. Marital status:

Single ☐

Married ☐

Separated ☐

Divorced ☐

4. Level of Education:

Primary ☐

Secondary ☐

Diploma ☐

Degree & Post –graduate ☐

Others (specify) .....

What position do you hold at the Tororo General Hospital?

6. Which department do you belong to?

Top management ☐

Stores ☐

Purchasing ☐

Accounts ☐

Please specify.....

SECTION B: INVENTORY MANAGEMENT PRACTICES USED BY TORORO GENERAL HOSPITAL AND THEIR EFFECTIVENESS.

	SA	A	D	SD
There are various Inventory management practices used Tororo Hospital				
Accurate and up-to- date stores records is an Inventory management practices used Tororo Hospital				
Good stock plan is an inventory management practices used by Tororo Hospital				
Proper accounting and recording is a means of inventory management in most Tororo Hospital				
Spot checks/surprise checks help in inventory management in Tororo Hospital				
Proper stores management is a form of inventory management in Tororo Hospital				
What type of stock do you hold 1.Raw materials 2.Work in progress? 3. Finished goods. 4. Stock supplies. 5.All the above				
Which documents are used in recording inventory information? 1. Bin card Material 2. Requisition note 3.Stock cards. 4. Purchase requisition note. 5.others (specify).				

SECTION C: FACTORS AFFECTING INVENTORY MANAGEMENT AND ORGANISATION'S PRODUCTIVITY

	SA	A	D	SD
What are the factor affecting inventory management towards organization productivity?				
The level of economic conditions such as inflation, high taxes leading to increasing costs of production and also affecting the budgeted				
Company factors which affect inventory management such unexpected occurrences from management, employee strikes				
Unqualified employees and unrealistic business plan in charge of inventory, using a measure of productivity affect inventory				
Changes in the ambitions of the inventories affect the productivity of the organization.				
Holding or carrying costs are such as storage, handling, insurance, taxes, obsolescence, theft and interest on funds financing the goods.				
Ordering Cost such as Requisitioning, Purchase ordering or setup, Transportation, Receiving, inspecting and receiving at the ware				
Poor evaluation and monitoring hinders inventory Management toward organization in Tororo Hospital				
Shortage costs or stock out costs include Loss of profit on account sales lost caused by the stock out, Loss of future sales customers migrate to other dealers, Loss of customer goodwill and Extra costs associated with urgent replenishment purchases Measurement of shortage cost attributable to the organization's failure to meet customers demand				
Weak management systems factor in Hospital is a challenge to in Inventory Management toward organization productivity				
Bureaucratic constraints factor in Tororo general Hospital hinders the operation of inventory management toward organization productivity				

SECTION D: IMPORTANCE OF INVENTORY MANAGEMENT PRACTICES ON THE ORGANISATION PRODUCTIVITY OF HOSPITAL.

	SA	A	D	SD
ıventory Management practices contribute greatly to the organization roductivity of Tororo Hospital				
ıventory Management helps in inventory planning and scheduling				
rocurement/purchase dates and quantities are improved by inventory ıanagement practices				
ost reduction in Hospital is a result of inventory management practices				
ıventory Management helps in effective stores management				
ıternal coordination in Tororo general Hospital can be improved by ıventory management				
ıproved customer service can be realized with inventory management				
ood management practices to inventory Management in Tororo ospital				

Thank you for sparing your precious time and God bless you

APPENDIX I: WORK PLAN

Item/Time	March	April	May	June	June
Data Collection					
Data Analysis					
Data Presentation					
Clear Report Writing/ Dissertation					

APPENDIX I1: Budget

Item	Quality/quantity	Unit cost	Total cost
1. Proposal Writing			
Stationary			
Ruled Paper	2 reams	10,000=	20,000=
Note book	4	2,500=	10,000=
Printing	30 pages	500=	15,000=
Photocopying	30 pages	100=	3000=
Pens	1 box	3,000=	3,000=
Box file	2	5,000=	10,000=
Clip board	2	3,500=	7,000=
Subtotal			**68,000=**
2. Data Collection			
Allowance	6 days	20,000=	120,000=
Subtotal			**188,000=**
3. Data Analysis			
Transcription Allowance	6 days	20,000=	120,000=
Analysis Allowance	6 days	20,000=	120,000=
Subtotal			**240,000=**
4. Report writing			
Secretarial services			
Typing	50 pages	500 per page	25,000=
Printing	50 pages	500 per page	25,000=
Photocopying	50 pages	100 per page	5,000=
Binding	4 books	20,000= each	80,000=
Subtotal			**135,000=**