Inventory Management and Financial Performance in Pharmacies

Case Study: Arua municipality

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INVENTORY MANAGEMENT AND FINANCIAL PERFORMANCE OF PHARMACIES.

CASE STUDY: ARUA MUNICIPALITY

An Undergraduate Dissertation presented to the Faculty of Business Administration and Management in partial fulfillment of the requirements for the ward of a Bachelors Degree of Business Administration and Management

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Dedication:

I wish to dedicate this research to my Friends Amito Tracy Judith, Namugumya Joanita and family who encouraged and supported me throughout this period of my studies and when conducting and writing this research project.

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I wish to recognize the efforts of a number of individuals who contributed to the successful completion of this research. Special appreciation goes to my supervisor, Dr Mukokama; I wish to sincerely acknowledge her professional advice, support, guidance and motivation during the research, thank you very much.

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Table of Contents

List of tables

List of figures

Abstract

Inventory management is essential on how well storage is kept. Limited scientific research has been undertaken to examine the factors that influence financial performance under the Implementation of inventory management. Failure of appropriate inventory management in place, financial performance is affected by the organization having too much and too little stock which could damage the operation of the business through issues like having obsoletes, demand when there is no stock due to improper management.

This study was based on a topic which is inventory Management and financial Performance of Pharmacies aimed at ascertaining the factors that influence the financial performance of inventory management in pharmacies in Arua municipality. The research questions under this study were; what is the relationship between ABC and organizational financial performance.

What is the relationship between Economic Order Quantity and organizational financial performance? What is the relationship between Just in Time production and organizational financial performance?

The research study used primary data which was collected through the use of questionnaires with respondents as the employees of the pharmacies in the chosen case study in Arua municipality. The data collected was analyzed using descriptive statistics obtained from SPSS.

CHAPTER ONE:

GENERAL INTRODUCTION

1.0. Introduction

Inventories are the current assets which are expected to be converted within a year in the form of cash or accounts receivables. Thus, it is a significant part of the assets for the business firms. Actually, inventories are the goods that are stocked and have a resale value in order to gain some profit. It shows the largest costs for the trading firms, wholesalers and retailers. Normally, it consists of 20-30% of the investment of the total investment of the firm. Thus, it should be managed in order to avail the inventories at right time in right quantity. Inventory refers to the stock of the resources which are held to sales or future production. It can be also viewed as an idle resource which has an economic value. So, better management of the inventories would release capital productively.

Inventory control implies the coordination of materials controlling, utilization and purchasing. It has also the purpose of getting the right inventory at the right place in the right time with right quantity because it is directly connected with the production. This implies that the profitability of the firm is directly or indirectly affected by the inventory management.

The researcher intends to study how inventory management affects financial performance in various sectors basing on pharmacies in Arua town council as the case study. The types of inventory management such as the just in time approach , economic order quantity and the ABC analysis must be put into use if pharmacies require effective management and rescued crisis like resource wastage. This chapter looks at the background of the study, the problem statement, broad objective, and specific objectives and research questions, significance of the study,

justificationand conceptual framework**.** So after various discussions and analysis it will be seen that really if there is any impact of the inventory management over the financial statement of the pharmacies or not.

1.**1. Background to the study.**

Inventory management is the process of determining the right amount of inventory and ordering, receiving, storing, and keeping track of it, Gitman, MacDaniel (1992). It can also be referred to as the systems and strategies businesses use to ensure that they have adequate suppliers of raw materials for production and finished goods for shipment to customers while also minimizing the inventory carrying costs.

Inventory management is a critical management issue for manufacturing companies; Inventories are vital to the successful function of manufacturing organizations. According to Buffa, sarin (2007), it can also be defined as the management of materials in motion and at rest Coyle (2009).

In the past inventory management was seen to be necessary, excess inventories were considered overstocking beneficial but today firms have started effective inventory management Susan, Michael (2000). Managers now than ever before need reliable and effective inventory control in order to reduce costs and remain competitive, Closs (1989). And according to Dobler and Burt (2006) inventory alone accounts for as much as 30% of the organization invested capital. There are several reasons for keeping inventory, too much stock could result in funds being tied up down, increase in holding cost, deterioration of materials, obsolescence and theft on the other hand shortage of materials can lead to interruption of product for sales, or customer relations and underutilized machines and equipment.

Different departments within the same organization adopt different attitude towards inventory for example sales management department might desire large stock in reserve to meet virtually every demand that comes on the other hand , the finance department would always argue for a minimum investments in stocks so that the funds could be used elsewhere for other better purposes, Vohra (2008;427)

Companies looked at solving the distribution problem through maintaining inventory at various locations throughout the chain, however the dynamic nature of the market place makes holding inventory a risky and potentially unprofitable business. Customers usually buying products are constantly changing and competitors are continually adding and deleting products. Demand changes make it almost asure bet that the company will have the wrong inventory. The cost of holding inventory also means most companies cannot provide a low cost product when funds are tied in inventory, Anon(1990).

In (1985) Kurt salmon associates were commissioned to conduct a supply chain analysis, the results of the study showed the delivery time for the apparel supply chain from raw material to consumer , was 66 weeks long, 40 weeks of which were spent in warehousing/transit. The long supply chain resulted in major losses to the industry due to financing the inventory and lack of the right product in the place at the right time.

For a company, how to get effective and reasonable inventory management to reduce costs becomes an important topic in an enterprise management Yiwen (2010). Inventory management is one of the most important areas of financial management for a firm that is by selling products. It helps to prevent too much inventory because it ties upon the shelves of valuables that is cash by increasing overheads costs, increasing financial holding costs therefore decreasing inventory

and too little inventory causes loss of customer good will and increase risk of loss of market sales, anon.

The amount of inventory that should be kept depends on various factors and upon the activity that is defining the stock, Wild (2002).

1.2. Problem statement

A good inventory management framework is a requirement for every organization. Management strongly binds inventory management to financial performance that is to say with poor management financial management is affected positively and negatively. Inadequate control of inventory can result into both under and over stocking of items. Understocking results into missed deliveries, lost sales, dissatisfied customers. The major problem is maintaining the delicate balance between too little and too much. Too little inventory may result in poor service, service, stock outs, brand switching and loss of market share and too much leads to higher costs because of money tied in inventory that it may become obsolete, Roger et al (2003). Storing excess inventory is costly because the space and financial resources invested in the goods can often be put to better use elsewhere. As the same time however, inadequate inventory stores can result in costly production shut downs or delays in filing customer orders, Laurie (1995).

Inventory management and control are crucial to a firm because mismanagement of inventory threatens a firm's viability, Sprague and Wacker (1996).Too much inventory consumes physical space, creates financial burden, and increases possibility of damage, spoilage and loss. In this context the lean production principle pioneered by Womacket al(1990) has been linked to reduced inventories on the other hand, too little inventory often disrupts manufacturing operations and increase the likelihood of poor customer service.Medicines and medical supplies

consume the major portion of the hospital expenses. The rising of drugs and medical supplies costs directly affect the total expenses of the hospital. Thus, inventory system should be developed in a cost effective manner. The stock systems that support enough products to each department are needed. However, the overstock causes more financial problems and spends more time to resolve. Conversely, drug shortages can unpleasantly affect drug treatment, delay medical processes, and may result in medication error. Many causes of drug shortages were described i.e. unexpected demand, natural disasters. Thus, over and unnecessary of drugs having very less used over a period of time and lower stocking should be prevented. Bo li (2013).

Cited by Bo li (2013), among the problems existing in the Chinese PSC, inventory management is one of the most critical ones. In order to offer the medical supplies when needed, most of the Pharmaceutical companies in China have to hold large inventories, which ties up the cash, reduces operational efficiency, and increases the risk of medicine expirations, Feng Liu(2011), Shao, Ji (2006).

1.3. Broad objectives of the study

To investigate the relationship between inventory management and financial performance in pharmacies.

1.4. Specific objectives to the study.

- To examine the effect of the ABC approach on financial performance.
- To evaluate the effectiveness of the Economic Order Quantity on financial performance.
- To assess the effect of the Just in Time approach on financial performance.

1.5. Research questions.

- What is the relationship between ABC and organizational financial performance?
- What is the relationship between Economic Order Quantity and organizational financial performance?
- What is the relationship between Just in Time production and organizational financial performance?

1.6. The scope of the study.

1.6.1. Content scope.

The study focuses on the relationship between inventory management and financial performance. According to Coyle et al (2003), changes in inventory levels have an impact on return on assets (ROA). Thus reduction in inventory usually improves ROA which is a positive indicator of performance of current and potential investors. They continued that when sales decline, inventory levels often increase which has a double edged effect on profits, thus higher inventory holding cost as well as negative impact in ROA. However, the financial success of many evaluated firms in academia and industry is often credited to their ability to decrease inventory levels whilst admitting that unreasonably low inventories can be as damaging to a firms profitability as unreasonably high inventories, and attempts to link absolute inventory levels to the stock price have had limited success, Chen et al (2005a, 2005b), lai (2005). Therefore there are mixed and some admittedly paradoxical evidence to claim that inventory management is associated with financial performance.

1.6.2. Geographical scope.

The study was carried out in Arua town. Arua is approximately 440 kilometers (270mi) by road, northwest of Kampala, the capital of Uganda. And approximately 195 (121mi) by road, west of Gulu the largest town in Northern Uganda. The study will be looking at the pharmacies based in the town municipality mainly. The population of the Arua town according to the 2014 national population census was at 62657. Arua has got pharmacies that provide poor services that is financial along with it due to problems identified from the various ways of how people carry out their own inventory, hiked prices too which has pushed many to settle for traditional medicines.

1.6.3. Time scope.

The study was carried out from a period of 2013-2016 which seemed to get the needed data in order to finish compilation.

1.7. Significance of the scope.

The study conducted will help on with the knowledge about inventory management and financial performance. To the policy makers that is ministry of health, it will provide them with the best methods of managing inventory which will help in the reduction of stock outs, too much stock and wastage of resources.

1.8. Justification of the scope.

The research was carried out to improve the techniques of inventory in order to promote the positive impacts of inventory management on financial performance like profits, enough sales returns. The other reason behind this research is also to understand what causes stock-ins and

stock outs in order to reduce on their occurrences in pharmacies so that financial performance of these pharmacies can boost up. Inventory management is essential for a business to succeed good management of ones company's stock decreases excess inventory and ensures that there is enough products on hand to meet customer demand, Heather.

1.9. Conceptual framework

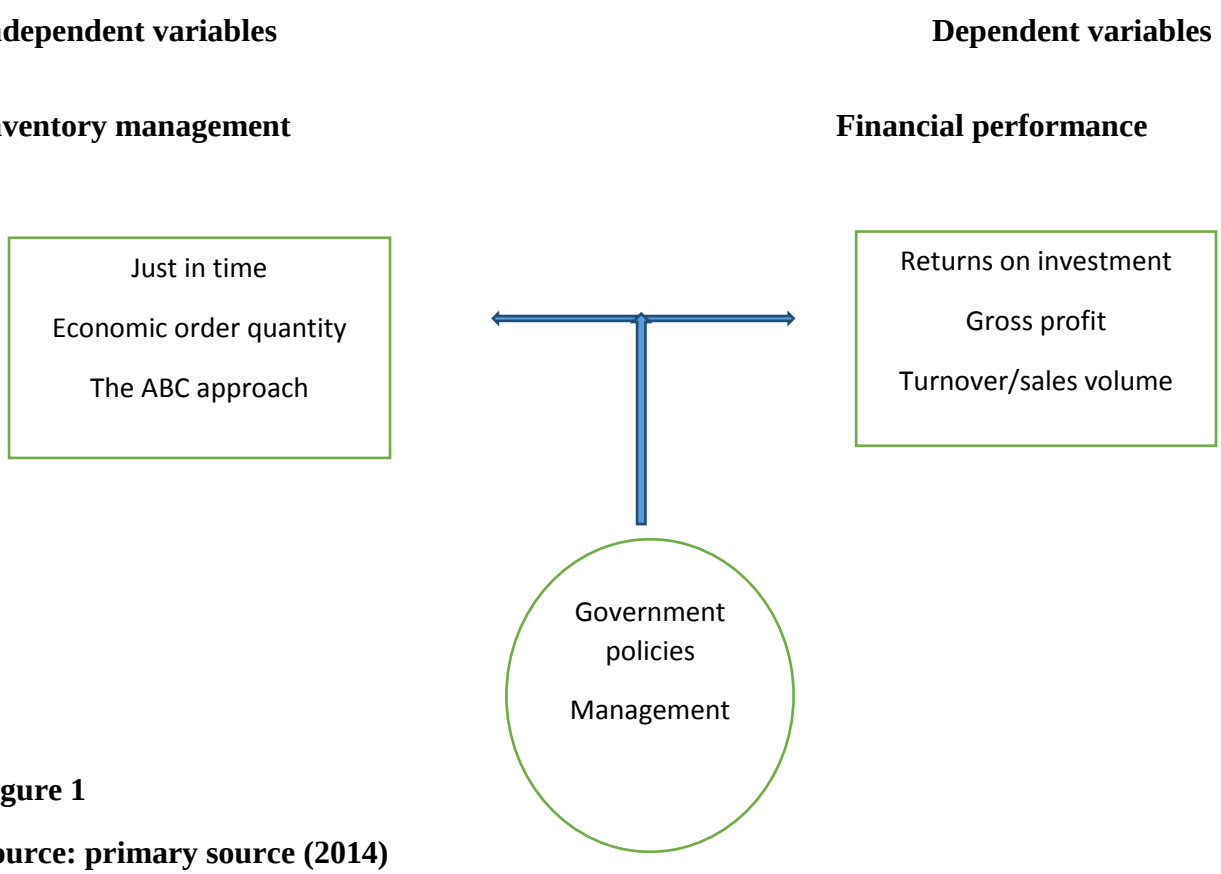

Figure 1

Source: primary source (2014)

From the framework, the intervening variable is compared to the dependent variable. That is examining the government policy and financial performance from the resource based view port, different types of companies operation in different situations require different government policy.

Management and financial performance is looked at because with effective management goals of an organization are easily achieved and one can tell the difference between a success and a failure that is there is monitoring of daily activities which help in planning and operating more efficiently.

Economic factors have been determined as the intervening variables that is factors that can relate the independent and dependent variable.

1.10. Conclusion

This chapter has provided a given overview of what the study is all about that is inventory management and performance. It is essential to find out what other authorities say about the topic of the study.

CHAPTER TWO

LITERATURE REVIEW

2.0. Introduction.

This is a chapter that shows the existing literature on major issues of inventory management as the independent variable and product distribution as the dependent variable. It talks about the relationship between the two variables and later the relationship between the dimensions of the independent variable and the dependent variable and then the conclusion.

2.1. Inventory management.

Inventory management is primarily about specifying the shape and percentage of stocked goods, Redempta (2012). According to Wang Y (2014) a good inventory management system could provide some assurance and support for fine operation of enterprises. The right amount of inventory can meet customer un certainty in acquiring products at any time which would avoid customer dissatisfaction for out of stock can guarantee continuity of production, prevent stop operation caused by bottle neck material. In Drury (1995) cited in Redempta (2012), firms that maintain proper inventory management increase customer relations and customer satisfaction due to uninterrupted supply. According to Symes S. et al cited in Kumar A, Inventory control systems will also prevent excessive levels of inventory, particularly important for perishable items such as medications. The right choice of the inventory model is crucial for the success of inventory management, Vrat P (2014). Inventory decisions belong to the operational level and their impact is not so obvious however its influence on the supply chain has been increasingly recognized in the last years and philosophies like just In time or lean manufacturing consider the reduction also a basic principle , N.M Hernandez Gonzalez et al (2014).

Inventory control systems have been shown to be flawed by inefficiency and inaccurate data. Theoretical methods currently use of mathematical formulae based on unrealistic assumptions. These models are therefore unreliable and inconclusive. The findings of the study in the article therefore represent an important contribution to inventory theory and to the knowledge base. The results indicated that all inventory control systems in which six sigma techniques were implemented provided a decreased out of stock rate when compared, Watson J.W, Moliver N and Gosset K. (2014). In Lacey (1986) cited in Redempta (2012), inventory management is a strong tool towards meeting delivery deadlines, customer fulfillment, high products and all customer satisfaction and increasing loyalty to the firm.

According to Talerzadeh A.A (2012), Inventory management is a common problem to all organizations in any sector of the economy. Problems of stock control include maintenance, storage and insurance of stocks, periodic checking of inventories and position of suitable records. Therefore the purpose of inventory is to avoid a shortage of necessary materials or merchandise yet not have too much capital tied up in inventory Musoke J.C.

Improper management of inventory leads to stock out costs and delayed delivery, Redempta A (2012).

Inventory management and control are crucial to a firm because mismanagement of inventory threatens a firm's viability, Sprague and Wacker (1996). Too much inventory consumes physical space, creates financial burden and increases possibility of damage, spoilage and loss.

Inventory management is the art and science of maintaining stock levels of a given group of items incurring the least cost consistent with other relevant targets and objectives set by management, Jessop (1999). It is important for managers in organizations that deal with

inventory, to have in mind, the objective of satisfying customer needs and keeping inventory costs at a minimum level. Drury (2004) asserts that inventory costs include holding costs, ordering costs and shortage costs. Holding costs relate to costs of having physical items in stock. These include insurance, obsolescence and opportunity costs associated with having funds which could be elsewhere but are tied up in inventory.

Magad and Amos (1989), assert that the primary objective of inventory management is to improve customer service. This is done through protection against stock out due to demand variability in the market place.

2.1.1. The Economic order quantity

The Economic order quantity model was developed by F.W.Haris in 1913. But still R.H Wilson is given credit for his early in depth analysis of the model, Arsham (2006). The model is also known as the Wilson EOQ model. According to this model, some costs (ordering costs) decline with inventory holdings while others rise and that total inventory associated cost curve has a minimum point. This is the point where inventory total costs are minimized. The economic order quantity is the level of inventory that minimizes the total inventory holding cost and ordering cost.

In a study it was realized that an Economic order quantity model is not always sufficient when slow and fast moving items are involved in one system. If an EOQ < 1 is obtained, the item is managed with the wrong inventory model, in general an EOQ model is fully adequate for medium and slow moving items. It was remarked that the combination of a fixed order and multi product production EOQ model will most probably be sufficient for the improvement of stock control inventory management. The EOQ model provides a base line understanding of the

variables related to inventory management. However the model is not practical for real business scenarios, because assumptions underlying the model are unrealistic, Watson J.W, Moliver N and Gossett K (2014). According to IWU, Hycinth Chukwudi, et al (2014 pg. 307-317), combination of a fixed order EOQ model and multi product EOQ model was most probably sufficient. It was also found that re-order points and EOQ may change and also in EOQ models, the re-order points sometimes coincide or occur close together.

Economic order quantity can assist a company in maximizing profits because it finds the number of units the company should add to its inventory with each one of its order to minimize the total cost of inventory and increase profits. Inventory costs that are taken in to account with EOQ include holding costs, order costs and shortage costs. With EOQ a company's inventory is monitored a fixed amount is ordered each time that inventory a predefined reorder point. The reorder point is a level of inventory that minimize both holding costs and inventory order costs through tradeoffs.

EOQ decreases the overall cost of inventory and increases the profits through tradeoffs.

2.1.2. The Just in time approach.

According to Gary Armstrong (2000) during the past decade, many companies have reduced their inventories and related costs through JIT logistics systems. Through such systems, producers and retailers carry only small inventories of parts or merchandise, often only enough for a few days of operations. New stock arrives exactly when needed rather than being stored in inventory until being used. JIT systems require accurate fore casting along with fast frequent and flexible delivery so that new suppliers will be available when needed. However these systems result in substantial savings in inventory carrying and handling costs.

E,Bary (1986), this system takes a very lean approach to inventory for example YKK is the world's biggest producer of zippers, it has no ware house and ships goods directly from the production line to distributers. Critics of the JIT method caution that while it is suitable for firms and industries that have suppliers very closely located to distributors, it poses the risk of a productive idle time when parts are not available because they have been inventoried too leanly. Also extended planning periods are required making reactions to short term changes difficult. Nevertheless, general motors executive director of logistics operations states, that the benefit of a lean inventory management policy must be weighed against potential stock out problems and the resultant lost sales, which will eventually return to haunt all of the firms in the channel of distribution in the long run.

JIT systems force tighter manufacturing coordination which provides a greater control on the quality of the products. Plant capacities are increased by lower inventory levels and minimal parts rejection which in turn improves the overall plant productivity.

In a manufacturing system, a just in time procurement and supply system is important for reducing cost and responding to customer's requirement quickly. Successful implementation of a JIT system needs supplier cooperation in small of size delivery and in bound logistics cost reduction. The results highlight the importance of cooperation between suppliers and manufacturers in just in time production practices Quangzhou P.R (2014). In Germain et al (2008) cited in Zhang W (2014), to many Japanese companies implemented just in time strategy to lower its inventory which has helped them achieve competitive advantage in the global market. Philosophies like just in time consider the reduction of stock as a basic principle, N.M Hernandez Gonzalez et al (2014).

2.1.3. The ABC analysis approach.

The medical store is one of the most extensively used facilities in any hospital where a large amount of money is spent on purchases on a recurring basis. This emphasizes the need for planning designing and organizing the medical store in a manner that results in efficient clinical and administrative services. The need of the hour is that we follow the principles of rational drug use and inventory management techniques so that in the existing budget we can cater to more number of patients. Drug inventory management helps in designing appropriate measure.

ABC analysis popularly known as always better control is an important tool worldwide to identify items that need greater attention for control. According to it, 10% items consume 70% of the budget (category A) net 20% consume about 20% of the budget(category B) and the remaining 70% account for just 10% of the budget(category C). Therefore there is need for carrying out this analysis regularly and as well as the inventory management tools for effective and efficient management of the medical stores, along with close supervision on items belonging to important categories.

According to Pareto's theory, ABC analysis popularly known as always better control is a very useful approach to material management based on pareto's principle of vital few and trivial many based on the capital investment of the item. A management technique for effective management of medical store in hospitals stated that cost analysis (ABC analysis) has been found to be effective in the management of a medical store, Dr kumar (2014). A. In Steven Symes et al cited in Dr kumar (2014), he stated that the ABC Inventory method offers advantages over non classification methods in the areas of conflict, SKU level management and order fulfillment. In Wei (2009) cited Zhang W (2014), ABC is to group items according to annual sales in an attempt

to identify the small number of items that will account for most of sales and they are the most important elements to control for effective inventory management.

Grouping items in to groups that is ABC allows managers to focus first on the items that require the most frequent attention, thus ensuring that there are enough of these items on hand when needed. Items that require less attention are focused on next, and items that are require the least amount of attention are focused on last. This approach does not determine which items are more important than others but simply assists with determining how material is ordered and how often. This approach prevents dollars from being tied up in items that are sitting idle, as well as presents critical parts from running out

Grouping inventory using the ABC approach.

- Improves over all material availability while reducing excess and obsolete material.
- Focus on material with the highest dollar effect.
- Minimizes the probability and severity of stock outs and effectively uses inventory .management staff time

2.2. Financial Performance

In the words of Frich Kohlar, the performance is a general term applied to apart or to all the conducts of activities of an organization over a period of time often with reference to past or projected cost efficiency, management and responsibility or accountability or the like. Thus not just the presentation, but the quality of results achieved refers to the performance. Performance is used to indicate firms' success, conditions and compliance.

Henceforth financial performance refers to the act of performing financial activity. In broader sense, financial performance refers to the degree to which financial objectives has been accomplished. It is the process of measuring the results of a firm's policies and operations into monetary terms. It is used to measure firms overall financial health over a given period of time and can be used to compare similar firms across the same industry.

Financial performance is a subjective measure of how well a firm can use assets from its primary mode of business and generate revenues. This term also used as a general measure of a firms over all financial health over a given period of time and can be uses to compare similar firms across the same industry or to compare industries or sectors in aggregation.

2.2.1. Returns on investment.

Returns on investment is expressed as the ratio of profits to investments. For manufacturers, investments include capital, machinery, buildings and land as well as inventory. For wholesalers and retailers, inventory and buildings constitute the majority of their investments. An ROI objective would be specified as a specific percentage of the total capital employed.

Clinical pharmacists working in hospitals, ambulatory care clinics, physicians' offices and community pharmacies provided a significant return on investment according to a November 2008 review articles published electronically in pharmacotherapy.

In a review of 93 studies published between 2001 and 2005, pharmacist interventions evaluated included general pharmacotherapeutic monitoring, targeted drug management and disease state management. Forty five of these studies included full economic evaluations, 31 of which showed a positive economic impact through direct reductions. In medication expenditures or an indirect reduction in costs associated with adverse drug events.

The benefit to cost ratios from 15 studies ranged from 1.02:1 to 34.61:1, with a median of 4.81:1, which means that for every $ 1 invested in clinical pharmacy services, $ 4.81 was realized through lower costs or another economic benefit. ROI is a revealing measure of how well managers are doing. Most companies have alternative uses for their funds. If the returns in a business aren't at least as high as outside uses. Some firms borrow more than others to make investments, Perreaultjr, McCarthy (2002 pg. 679).

Under experience curves, there are seven categories of variables that appear to influence the returns on investment, competitive position, industry/market environment, budget allocation, capital structure, production processes, company characteristics and change action factors.in a given industry therefore, the producer with the largest volume and corresponding market share should have the lowest marginal cost. This leader in market share should be able to underprice competitors and as a result achieve an acceptable return on investment.

2.2.2. Gross profit.

A company stock price in large part is driven by the company's ability to generate earnings. Therefore it is useful for investors to analyze the profitability of a company before investing in it. One way to do this is by calculating and tracking various profit margins, which reflect how efficiently a company uses its resources. Profit margins are expressed as a ratio, specifically earnings as a percentage of sales by expressing margins as a percentage we are able to compare the profitability of different companies more easily.

Margins allow investors to judge, over time management's ability to manage costs and expenses and to generate profits.

Management's success or failure determines the company's profitability. Strong sales growth is meaningless if management allows costs and expenses to grow dispropriately. In this approach three key profit margin ratios are looked at that is a gross profit margin, operating profit margin and net profit margin.

The gross profit margin measures the profit a company makes from its cost of goods sold. Cost of sales represents expense related to labor, raw materials and manufacturing overhead used in the production process and it is calculated as follows

Gross profit margin = (sales-cost of goods sold) divided by sales.

A company uses its gross income to fund such company activities as research and development and marketing which are important for generating future sales. A prolonged decline in the gross profit margin is a red flag for possible impending negative pressure on sales and ultimately earnings. Trends in the gross margin reflect a company's basic pricing decisions and material costs. However management generally cannot exercise complete control over these costs.

According to Adam J Fein (2014) gross profit equals a pharmacy's revenues minus the costs of products (net of discounts and returns) bought from a manufacturer or a wholesaler. Gross margin expresses gross profit as a percentage of revenues. A drug stores total revenues come prescription drugs, over the counter products, vitamins and other merchandise. A typical independent pharmacy generates more than 90% of its revenues from prescriptions.

Gross profit measures the portion of revenues available for a pharmacy's operating expenses and operating income. The operating expenses include non-owner payroll expenses, the wages taxes and benefits paid to the pharmacy's staff, owner compensation e.g. wages taxes, the general business expenses i.e. rent, license fees

Operating income equals gross profits minus operating expenses.

To be profitable, a pharmacy's gross profits must exceed its operating expenses. For example increasing owner compensation will decrease operating profit. A pharmacy could report a net loss if the pharmacy owner chose to pay himself a larger bonus instead of reporting a positive net profit.

2.2.3. Turnover/sales volume.

This is the quantity or number of goods sold or services sold in the normal operations of a company in a specific period.

The purposive of sales commissions is to align incentives by giving sales representatives a cut of each sale, it motivates them to make more sales, which increases sale volume by more than enough to cover the additional cost of the commission payments. It is essential to keep sales volumes up so as to emphasize and stay competitive with the existing rivals.

It is performance measure used to evaluate the efficiency of an investment or to compare the efficiency of a number of different measurements.

2.3. Inventory management and financial performance.

In the US, Sanghal (2005), studied the effect of excess inventory on long term stock price Performance. The study estimated the long run price effects of excess inventory using 900 excess inventory announcements made by publicly traded firms during 1990-2002. These announcements were clear and unambiguous acknowledgement by a firm that was suffering from excess inventory. Examples included instances of production curtailment, temporary shut downs, price mark downs, promotion to liquidate inventory and inventory write offs to deal with excess

inventories. He found evidence suggesting that stock market partially anticipates excess inventory situations and that firms do not recover quickly from negative effects of excess inventory.

In Malaysia, Agus and Noor (2006) examined the relationship between inventory management practices and financial performance. The study measured the Manager's perceptions of inventory and supply chain management practices and the level of performance in the industry. The practices included lean inventory systems, Technology and strategic supplier partnerships. They employed a structured questionnaire, which was designed to assess the companies in terms of the described dimensions. The sample companies were randomly chosen from manufacturing companies in Klang valley, Malaysia. The findings suggested that inventory Management practices have significant correlations with profitability and return on sales (ROS).

Roumiantsev and Netessine (2005) investigated the association between inventory management policies and the financial performance of a firm. The purpose of the study was to assess the impact of inventory management practices on financial performance across the period 1992-2002.They used conventional firm specific variables (inventory levels, margins, and lead times) as explanatory variables. They found no evidence that smaller relative levels are associated with financial performance as measured by return on assets. Eckert (2007) examined Inventory management and the role it plays in improving customer satisfaction. He found a positive relationship between customer satisfaction and supplier partnerships, education and training of employees, and technology.

In Greece, Koumanakos (2008), studied the effect of inventory management on firm performance 1358 manufacturing firms operating in three industrial sectors in Greece, food textiles and chemicals were used in the study covering 2000 – 2002 period. The hypothesis that

lean inventory management leads to an improvement in a firm's financial performance was tested. The findings suggested that the higher the level of inventories preserved by a firm, the lower the rate of return. In conclusion, most of the studies reviewed concentrated on conventional firm level variables such as inventory levels, demand and lead time. Little attempt was made to capture the perceptions of managers about the impact of inventory management practices on firm financial performance. Agus and Noor (2006) did measure the perception of managers about the impact of inventory management practices on financial performance of manufacturing firms in Malaysia.

However, circumstances in Malaysia could be different from those in Arua. This study seeks to investigate the impact of inventory management practices on financial performance of pharmacies in Arua district.

2.3.1. ABC and Financial performance.

Cagwin and Bouwman (2002) conclude that implementation of ABC has to be seriously questioned, the relationship between performance and ABC implementation cannot be clearly established. Accordingly, Bromwich and Bhimani (1989) argue that even though ABC changes product costs substantially, there is yet little to suggest that it enhances profitability Innes and Mitchell (1990) supported this view by stating unequivocally that there is no evidence to date that ABC improves corporate profitability.

ABC may have an indirect rather than a direct effect on performance through an intervening variable that mediates the relationship between the ABC and firm performance Shields, Dang and Kato (2000).

Many firms have started to practice improvement of competitiveness. In order to achieve this goal, firms have used advanced process and cost management techniques such as activity based costing for process improvement and increase competitiveness of the organizations, Baykasoglu and Kaplanoglu (2008).

Activity based costing (ABC) helps many firms to improve competitiveness by empowering in managerial decision making Behesti (2004), Nachtmann and Al-Rifai (2004). The core idea of ABC is the production of products/services generates activities which consume resources. The cost unit is to focus on the activity necessary to produce product/services because the costs of resources are traced to various /services based on various activities.

The previous research reveals that a bigger number of companies use ABC method in providing timely accurate and understandable and accessible cost information Adams (1996). And solution to overcome the distortion in the product costs by traditional costing system, Kaplan (1994).

The impact of ABC on organizational financial performance has been studied by several authors especially in the Anglo Saxon countries like the U.S and the UK for example according to partisans, the ABC method can reduce the inexactitude about the cost allocation and improve the performance Ittner et al (2002). Shields (1995) from an empirical study conducted in the United States, showed that 75% of respondents said that the use of ABC resulted in improving in financial performance and only 25% who said the opposite. This result was confirmed later by McGowan and Klammer (1997).

ABC has been found to be effective and most preferable for pharmacy store. ABC analysis is common to perform the analysis with past consumption data and monetary value. In this there are items which have low capital investment and consumption but is lifesaving.

2.3.2. EOQ and Financial performance.

Inventories are part of current assets which are expected to be converted to another form of working capital within less than one year, occupy a significant portion of business assets in most commercial enterprises. Keeping this fact in mind, the existence of inventories implies proportionally significant financial investment. Therefore inventory optimization is really an optimization of financial decisions when it comes to the cost of acquiring and holding an inventory. Forming and holding inventories is basically initiated by the desire to ensure the continuity of operations of the trading company.

One of the models used to determine the optimal order quantity is the EOQ model that well organized companies often apply in practice. Under the optimal order size we assume the quantity of the product that provides the lowest total holding and acquiring costs of inventories. If the costs of one order are proportionally larger, obtaining supplies should be carried out in large quantities. In contrast, as quantity of orders increases, the average amount of investments in inventories increases, together with the holding costs

While today's automated computer systems certainly facilitate a JIT system by maintaining a perpetual inventory, more information is needed to maintain an optimal inventory level and customer satisfaction. To assist the pharmacy manager in making purchasing decisions, the ideal inventory level is also needed.

2.3.3. Just in Time and Financial performance.

In today's pharmacy business inventory is often received dial and many pharmacy practice environments control inventory by ordering products to arrive just in time as it's needed for sale. This is known as a Just in Time inventory control method. JIT is a quality control process aimed at reducing inventory costs. This method can benefit a pharmacy business by reducing average inventory and even improving customer satisfaction when stock outs do not occur. JIT inventory control is generally not sensitive to rapid changes in demand, for example during allergy cough and cold medications.

Just in time refers to a collection of practices that eliminate waste. Its elements include shared product design with suppliers and customers, movement towards single sourcing proximate suppliers, reduced machine set up times and total preventive maintenance. It is an inventory strategy that is implemented to improve the return on investment of a business by reducing inventory and its associated carrying costs. In order to achieve JIT, the process must have signals of what is going on everywhere within the process JIT can lead to dramatic improvements in a manufacturing organizations return on investments, quality and efficiency. It emphasizes that production should create items that arrive when needed, neither earlier or later.

The operation of a lean inventory system such as JIT and MRP result in relatively low inventory levels. The ware housing costs and material handling costs are significantly reduced. This increases return on assets through decreases conversion costs.

JIT production methods generally lead to greater operational flexibility, improved quality and lead time reductions. Because JIT and lean manufacturing systems focus on allowing the customer to pull material through the process, only replenishing inventories upon receipt of an order, the impact of such systems should be manifest in the inventory and asset turnover metrics. If the reduction in assets and improved efficiency reduces overall costs, then there should be a

subsequent increase in the firms return on assets. As resources are freed by the elimination of non-value added activities, productivity is expected to rise, as should labor utilization. It is reasonable to expect that reductions in accounts receivable and inventory, along with increases in productivity, will also positively impact cash flow from operations, making the firm a more efficient converter of resources to cash. Great is the volume of studies that have been performed to assess the effect of lean systems on the financial health and productivity of various industries and varied are both the analytical approaches taken and the results obtained.

CHAPTER THREE:

RESEARCH METHODOLOGY

3.0. Introduction.

The chapter presents the methods and technique of inquiry that were used in the collection of data. The researcher used the both the qualitative and quantitative approach in collection of data. The covered areas are the research design, study population, area of study, sample size, sampling techniques, data sources, and methods of data collection, data analysis and presentation.

3.1. Research design

The researcher will adopt the case study design because it involves an empirical investigation of a particular contemporary phenomenon that is the pharmacies in Arua municipality as all counties could not be covered in order to make a generalization basing on qualitative and quantitative research. With the case study design, the researcher won't look at the large numbers of people but rather a few people in depth. This can be achieved by allocating a sample size from the study population.

According to Flick (2000) the importance of the research is to make sure all the aspects of the study are addressed and executed in the right sequence. This helped the researcher to use time and resources well and reduce cost.

3.2. Study population.

A population refers to the total number of elements in a given study. According to the pharmaceutical society of Uganda's list of approved pharmacists and pharmaceutical outlets, only 9 have been approved in Arua district for example Glo Wander Pharmacy, Ltd,Mart

Agencies, Joint Medical Store, Health Care, Prime Health Care, Super care Pharma. The population of the study will cover the employees in the mentioned pharmacies. This population consists of up to 40 employees and its right for the study because they are exposed to the practice of inventory management and will provide information that is vital for the study.

3.3. Area of the study.

The area of the study was carried out in Arua district with in Arua town council. Arua as a case study came about because the researcher frequents it a lot and wanted to address issues at hand indirectly by carrying out research mainly about inventory management and financial performance in the area.

Arua district is in northern Uganda but at the north west of the sub region. The district headquarters are located about 425 kilometers (264 mi) by road, northwest of Kampala, the coordinates are: 0300N, 3110E, it was carried out in Arua municipality.

It covered the pharmacies in Arua because of the need to provide a balanced view of the findings from all the pharmacies in that specified area.

3.4. Sample size.

A sample size is defined as collection of some elements of population.

The sample size determined was chosen because it is easier to manage and will generate enough results for the study.

A sample size of 30 employees was determined from the different existence of pharmacies allocated in the sample. According to the Krejice and Morgan's table (1970), a population of 10 employees can be represented by a sample size of 10 respondents .See appendix 111.

3.5. Sampling procedure.

Sampling in research refers to the process of selecting the individuals who will participate in the research study, Fraenk and Wallen (2010). A sample is any part of the population whom the researcher deliberately selects for the purpose of investigating the population. It's that part of population that is taken to represent the rest of the study population.

3.5.1. Judgment sampling.

The research was carried out by the use of judgment sampling where it involved the choice of subjects who were in the best position of the sector being researched.

3.5.2. Simple Random sampling.

It was used because of the ability to ensure that specific groups are represented ever proportionally in the sample for example gender. When using this method a population of 30 people were selected randomly but with 5 from each pharmacy that opened in the municipality then. The technique is referred to because according to Oso and Onen (2005:35) it selects samples without bias from the accessible population.

3.6. Data source.

The primary source of data collection was used whereby the respondents were the staff working at the various pharmacies located in the limited area. Usually the primary source guarantees accuracy because it is an occurrence from the original source.

The secondary source was also of great importance when collecting that is to say, books, journals to look at reviews by different authors, magazine, newspapers, online journals, pdfs and generally the use of internet were used.

3.7. Method of collection.

3.7.1. Questionnaires.

Sets of questionnaires were given to 30 different people where by both open and closed ended questions were set for the respondents to answer. They were designed standardly in order to get uniformity in the answers got. This was the main method used to get information since employees could complete the questionnaire besides work time.

3.7.2. Interviews

For issues to deal with pharmacies, the researcher found this a relevant method because it allows a two way communication. It was used mainly to gather both quantitative and qualitative information. The interviews were not carried out on phone but rather face to face. In this case, they were able to ask questions and at the same time compare by noting down the information from the respondents Evaluation. The interviewed parties were the nurses in charge, the lab assistants and any three patients. This method was meant to overcome the problems the respondent didn't understand that is the ongoing business.

With the case study being used as a research design, the best method used by the researcher was the application of questionnaires and interviews. That is to say questionnaires were formulated and given out to the people in order to retrieve answers to questions that were being asked in the research study. With interviews, effectiveness would be by carrying it out face to face or on phone, this helped the researcher get to the in depth of the data being looked for that may not have been easily got through other methods.

3.8. Data analysis and presentation.

3.8.1. Quantitative data analysis

In this state of analysis, data from questionnaires were encoded, entered in to a computer, edited for consistency and later analyzed by the statistical package for social sciences (SPSS). Regression, correlation and descriptive analysis were used for frequencies and measures of central tendency were done to ascertain answers to the research questions, tables, and charts were generated to guide interpretation of results.

Qualitative data. Data which was obtained from interviews was edited to provide and make the available information collected to be precise and concise. It's this that supplemented quantitative data.

3.8.2. Quality control.

When using questionnaires a test and retest method was used for reliability. That is say questionnaires were given out to the sample population and then waited for its feedback after that the same was given out to another sample population. Then the results compared whereby the answers that seemed close justified its reliability. Expert view was used to test for validity. That is to say people well versed with information are approached and interviewed in order to get relevant information from them.

The interview guide were pretested by the use of supervisors to ensure that the questions follow a correct order. The guide was updated whenever necessary hence amounted to the validity of the information.

3.9. Measurement of variables.

The independent variable which is inventory management has two basic types of measurement which are accuracy and velocity (inventory returns). Inventory returns measures how many times a company's inventory has been sold. The dimensions being the ABC analysis, Just in Time production and the Economic Order Quantity. The dependent variable which is financial performance and is measured by EBIT. The dimensions are returns on investment, gross profit and turn over/sales volume.

3.10. Study limitation.

On carrying out the interview method, one of the respondents the researcher encountered with did not respond easily. The person thought that the researcher was coming from the local government and made her hesitant on providing accurate information.

The researcher faced a problem of language that is via interacting with the respondents. This made it difficult for the questions such as when in the interviewing process question formulation became an issue. But this was overcome by interpreting the direct to the local language in ways possible.

Resource limitations also came about as a limitation that is what was budgeted for didn't meet the assumed prices but rather it exceeded hence affecting the researcher by having to encroach on her own personal allowances.

There were cases of unwillingness by respondents to answer the questionnaires accurately and then there were some who answered positively throughout under the influence that their bosses were on looking hence not annoying them by lying however it was overcome by promising to

keep responses anonymous for those who were scared about their identity being disclosed and afraid of losing their jobs.

The time dimension provided was a snap shot hence not all information was accessed because one key factor was limited. And the fact it was the sample size as where less information was got since few persons were chosen.

3.11. Conclusion.

In this chapter the researcher discussed the research design, study population, area of study, sample size, sampling techniques, data sources, and methods of data collection, data analysis and presentation. The principles of research were followed so as to minimize errors and bias this would ensure the study being objective and scientific.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND DISCUSSION OF FINDINGS.

4.0. Introduction.

This chapter provides the key findings of the research on the effect of inventory management on financial performance. The study gathered observations on whether inventory management through its methods like Just in Time, Activity Based Costing approach, Economic Order Quantity model has an effect on the performance of organizations. Thus this chapter provides the analysis and interpretation of data which was obtained from the questionnaires that were distributed to the various employees of pharmacies in Arua municipality. The relationship between Inventory management and financial performance was assessed using the results obtained from the questionnaires after which mean and standard deviation was used to measure the variation with the use of SPSS.

4.1. Response Rate.

30 questionnaires were distributed to various respondents chosen to be a part of the sample to be analyzed and luckily all were returned. This information was collected from various random employees on duty by then in the various pharmacies through random sampling and the questionnaires were directly administered to these employees. The research was conducted to find out the effect inventory management has on financial performance. With reference to the questionnaires received, the respondents were both men and women totaling 30 in that the male respondents were 16 and the female respondents were 14. This represented a response rate of 75% which was got by dividing the number of questionnaires received by the sample size and multiplying it by 100%.

4.2. Background information.

The gender and age of the respondents, the age of the different respondents, the highest level of education of the respondents and the numbers of years the respondents have been working with the organization to determine the level of expertise or experience of the respondents was used to determine the background information of the respondents based. Descriptive statistic tables involving mean and standard deviation were used to establish the background information on the respondents as presented below.

4.2.1. The Gender distribution of respondents.

The study details of the respondents respective gender is presented in the table below,

Table 1: Gender of the Respondents.

GENDER	FREQUENCY	PERCENTAGE
Male	16	53.3
Female	14	46.7
Total	30	100.0

Source: Primary Data

The table above shows that total number of respondents was 30 which comprised of 16 male taking 53.3% and 14 females with a percentage of 46.7%.This shows that more males are employed this could be because of the simple fact there are less women in the science field which translates it into less women in the pharmacy alongside other reasons like fear of the profession.

4.2.2. Age group of the respondents.

The study obtained details about the age groups of the respondents for purposes of understanding their age and possibly the experience they possess in their respective positions. Details of the findings are shown in table below;

Table 2: Age Group of Respondents.

YEARS	FREQUENCY	PERCENTAGE%
20-29 years	13	43..3
30 -39 years	10	33.3
40-49 years	7	23.3
50-59 years	0	0
60 years and above	0	0
Total	30	100

Source: Primary Data

The table above shows that out of 30 respondents 43.3 % respondents are within the age of 20-29 years,33.3% respondents within the age of 30-39 years, 23.3% are between 40-49 years, 0% between 50-59 years and 0% 60 years and above. This implies that the largest percentage of employees is between the ages of 20-29 years.

The organization employs the youth probably because they are eager to work and could work for longer hours unlike other age groups and basing on it being pharmacies there's need of hiring a strong age group due to carrying of breakable items that pharmacies do have.

4.2.3. Level of Education.

The study obtained details about the particular levels of education of the respondents as shown in the table below.

Table 3. Level of Education of Respondents

LEVEL OF EDUCATION	FREQUENCY	PERCENTAGE%
O-level	1	3.3
A-level	9	30.0
Diploma	11	36.6
Certificate	4	13.3
Degree	5	16.6
Masters	0	0
Total	30	100

Source: Primary Data

The table above shows the various levels of education of the different respondents. That is 3.3% for O-level, 30.0% for A-level, 36.6% for Diploma, 13.3% for certificate, 16.6% for degree level

and 0% for masters. The largest percentage belongs to the Diploma category with a percentage of 36.6% followed by A-level with 30.0 %. basing on the information most of the employees have diplomas this could be so because research shows most people with preliminary levels of education work more effectively in comparison to those with degrees.

4.2.4. Duration Worked.

The study obtained details the length of time the various respondents have spent in the organizations and it is shown below:

Table 4: Duration Worked

YEARS	FREQUENCY	PERCENTAGE%
1-5 years	15	50
6-10years	15	50
11-15years	0	0
16 years and above	0	0
Total	32	100

Source: Primary Data

The table above shows that 15 respondents fall in the 1-5 years taking a percentage of 50%, 15 respondents for 6-10 years taking a percentage of 50% and the rest with nothing. This indicates that new employees are retained always in the pharmacy because of their ability to learn and

their zeal to work by being hard working. Then 6-10 years, these could be in order to maintain the organization from loss of resources in case they get mishandled.

4.3. Descriptive statistics for Economic Order Quantity.

Table 5: Mean and standard deviation of Economic Order Quantity.

Question	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean	Standard deviation
EOQ model is not always sufficient when slow and fast moving items are involved in one system.	10.0%	33.3%	43.3%	13.3%	0%	2.6000	.85501
EOQ can assist a company in maximizing profits.	0%	6.7%	36.7%	46.7%	10.0%	3.6000	.77013
EOQ decreases the overall cost of inventory.	0%	23.3%	46.7%	26.7%	3.3%	3.1000	.80301
It increases the profits through tradeoffs.	0%	10.0%	30.0%	20.0%	0%	3.7000	.91539

Source: Primary Data

4.3.1. EOQ model is not always sufficient when slow and fast moving items are involved in one system.

The results of the study showed that 10.0% strongly disagree, 33.3% disagree, 43.3% are neutral, 13.3% agree, 0 % strongly agree, a mean of 2.6000 and standard deviation of .85501. The mean is below average hence there is a negative response which shows that the population claims it is sufficient.

4.3.2. EOQ can assist a company in maximizing profits.

The results of the study showed that 6.7% disagree, 36.7% are neutral, 46.7% agree, 10.0% strongly agree, a mean of 3.6000 and standard deviation of .77013. The mean is above average hence there is a positive response that it does assist in maximizing profits that is by finding the number of units the company should add to its inventory with each one of its order to minimize the total cost of inventory and increase profits Hycinth Chukwudi, et al (2014 pg 307-317),

4.3.4. EOQ decreases the overall cost of inventory.

The results of the study showed that 23.3% disagree, 46.7% are neutral, 26.7% agree, 3.3% strongly agree, a mean of 3.1000 and standard deviation of .80301. The mean is above average hence there is a positive response which shows that without effective economic order quantity there will be an increase in the overall costs of inventory. According to this model, some costs (ordering costs) decline with inventory holdings while others rise and that total inventory associated cost curve has a minimum point. This is the point where inventory total cost is minimized. The economic order quantity is the level of inventory that minimizes the total inventory holding cost and ordering cost. Arsham (2006).

4.3.5. EOQ increases the profits through tradeoffs.

The results of the study showed that 10.0 % disagree, 30.0% are neutral, 20.0% agree, a mean of 3.7000 and standard deviation of .91539. The mean is above average hence there is a positive response which shows that EOQ increases profits. With EOQ, a company's inventory is monitored and a fixed amount is ordered each time that inventory reaches a predefined reorder point. The reorder point is a level that minimizes both inventory holding costs and inventory order costs. Evan Tarver (2014).

4.4. Descriptive statistics for Just in Time.

Table 6: Mean and standard deviation of Just in Time

Question	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean	Standard deviation
New stock arrives exactly when needed rather than being stored.	0%	0%	23.3%	33.3%	43.3%	4.2000	.80516
JIT systems require accurate fore casting.	0%	20.0%	26.7%	40.0%	13.3%	3.4667	.97320
JIT systems force tighter manufacturing coordination which provides a greater control on the quality of the products.	0%	20.0%	50.0%	26.7%	3.3%	3.1333	.77608
A JIT procurement and supply system is important for reducing cost and responding to customers' requirement quickly.	0%	13.3%	46.7%	36.7%	3.3%	3.3000	.74971

Source: Primary Data

4.4.1. With JIT new stock arrives exactly when needed rather than being stored.

The results of the study showed that 23.3% are neutral, 33.3% agree, 43.3% strongly agree, a mean of 4.2000 and standard deviation of .80516. The mean is above average hence there is a positive response which shows that new stock arrives exactly when it's needed and this leads to less tied up inventory in the stores.

4.4.2. JIT systems require accurate fore casting.

The results of the study showed that 20.0% disagree, 26.7% are neutral, 40.0% agree, 13.3% strongly agree, a mean of 3.4667 and standard deviation of .97320. The mean is above average hence there is a positive response which shows without fore casting, just in time will not be used effectively. It is so that new suppliers will be available when needed Gary Armstrong (2000).

4.4.3. JIT systems force tighter manufacturing coordination which provides a greater control on the quality of the products.

The results of the study showed that 20.0% disagree, 50.0% are neutral, 26.7% agree, 3.3% strongly agree, a mean of 3.1333 and standard deviation of .77608. The mean is above average hence there is a positive response to the statement. In accordance to E, Bary (1986) Plant capacities are increased by lower inventory levels and minimal parts rejection which in turn improves the overall plant productivity.

4.4.4. A JIT procurement and supply system is important for reducing cost and responding to customer's requirement quickly

The results of the study showed that 13.3% disagree, 46.7% are neutral, 36.7% agree, 3.3% strongly agree a mean of 3.3000 and standard deviation of .74971. The mean is above average

hence there is a positive response which shows that the system is designed to only react when one is of need and this is effective in reducing of costs being tied up.

4.5. Descriptive statistics for Activity Based Costing.

Table 7: Mean and standard deviation of Activity Based Costing.

Question	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean	Standard deviation
It allows managers to focus first on the items that require the most frequent attention.	0%	0%	30.0%	50.0%	20.0%	3.9000	.71197
It focuses on material with the highest dollar effect.	0%	0%	26.7%	53.3%	20.0%	3.9333	.69149
Minimizes the probability and severity of stock outs.	0%	0%	26.7%	50.0%	23.3%	3.9667	.71840
Effectively uses inventory management staff time.	0%	0%	26.7%	53.3%	16.7%	3.8000	.84690
Improves overall material availability while reducing excess and obsolete material.	3.3%	3.3%	43.3%	50.0%	3.3%	3.5333	.62881

Presents critical parts from running out.	0%	6.7%	26.7%	36.7%	26.7%	4.8667	5.57540
This approach prevents dollars from being tied up in items that are sitting idle.	13.3%	30.0%	40.0%	10.0%	6.7%	2.6667	1.06134

Source: Primary Data

4.5.1. ABC allows managers to focus first on the items that require the most frequent attention.

The results of the study showed that 30.0% are neutral, 50.0% agree, 20.0% strongly agree, a mean of 3.9000 and standard deviation of .71197. The mean is above average hence there is a positive response which supports that ABC analysis popularly known as always better control is an important tool worldwide to identify items that need greater attention for control. According to it, 10% items consume 70% of the budget (category A) net 20% consume about 20% of the budget(category B) and the remaining 70% account for just 10% of the budget(category C). Therefore there is need for carrying out this analysis regularly and as well as the inventory management tools for effective and efficient management of the medical stores, along with close supervision on items belonging to important categories.

4.5.2. ABC focuses on material with the highest dollar effect

The results of the study showed that 26.7% are neutral, 53.3% agree, 20.0% strongly agree, a mean of 3.9333 and standard deviation of .69149. The mean is above average hence there is a

positive response which shows that most respondents agree to the fact that ABC focuses on material with the highest dollar effect.

4.5.3. ABC Minimizes the probability and severity of stock outs

The results of the study showed that 26.7% are neutral, 50.0% agree, 23.3% strongly agree, a mean of 3.9667 and standard deviation of .71840. The mean is above average hence there is a positive response which shows in according to the respondents ABC minimizes the probability and severity of stock outs.

4.5.4. ABC Effectively uses inventory management staff time

The results of the study showed that 3.3% strongly disagree, 26.7% are neutral, 53.3% agree, 16.7% strongly agree, a mean of 3.8000 and standard deviation of .84690. The mean is above average hence there is a positive response to wards the statement.

4.5.5. ABC improves overall material availability while reducing excess and obsolete material.

The results of the study showed that 3.3% disagree, 43.3% are neutral, 50.0% agree, 3.3% strongly agree, a mean of 3.5333 and standard deviation of .62881. The mean is above average hence there is a positive response this is so because only commodities that weigh 70% of importance are looked at first.

4.5.6. ABC presents critical parts from running out

The results of the study showed that 6.7% disagree, 26.7% are neutral, 36.7% agree, 26.7% strongly agree, a mean of 4.8667 and standard deviation of 5.57540. The mean is above average hence there is a positive response to the fact that critical parts are prevented from running out.

4.5.7. This ABC approach prevents dollars from being tied up in items that are sitting idle.

The results of the study showed that 13.3% strongly disagree, 30.0% disagree, 40.0% are neutral, 10.0% agree, 6.7% strongly agree, a mean of 2.6667 and standard deviation of 1.06134. The mean is above average hence there is a positive response this is so because reorders are only done when one of the bins in the bin system gets empty hence it prevents dollars from tying up.

4.6. Descriptive statistics for Turnover /Sales Volume.

Table 8: Mean and standard deviation of Turnover /Sales Volume.

Question	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean	Standard deviation
It is a measure used to evaluate the efficiency of an investment.	0%	0%	30.0%	50.0%	20.0%	3.9000	.71197
It motivates them to make more sales.	0%	0%	30.0%	53.3%	16.7%	3.8667	.68145
It is essential to keep sales volumes up so as to emphasize and stay competitive with the existing rivals.	0%	0%	20.0%	60.0%	16.7%	4.9667	5.51735

Source: Primary Data

4.6.1. Sales volume/turnover is a measure used to evaluate the efficiency of an investment.

The results of the study showed that 30.0% are neutral, 50.0% agree, 20.0% strongly agree, a mean of 3.9000 and standard deviation of .71197. The mean is above average which shows a positive response to the statement.

4.6.2. Sales volume/turnover motivates them to make more sales.

The results of the study showed that 30.0% are neutral, 53.3% agree, 16.7% strongly agree, a mean of 3.8667 and standard deviation of .68145. The mean is above average hence there is a positive response this is so because when it's seen that there is turn over then there will be motivation for sales.

4.6.3. Turnover / sales volume is essential to keep sales volumes up so as to emphasize and stay competitive with the existing rivals.

The results of the study showed 20.0% are neutral, 60.0% agree, 16.7% strongly agree, a mean of 4.9667 and standard deviation of 5.51789. The mean is above average hence there is a positive response which shows that a firm needs to know its rank among its competitors in order to improve on its services to outcompete.

4.7. Descriptive statistics for Gross Profit.

Table 9: Mean and standard deviation of Gross profit.

Question	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean	Standard deviation
Management's success or failure determines the company's profitability.	0%	0%	26.7%	50.0%	23.3%	3.9667	.71840
It equals a pharmacy's revenues minus the costs of products.	0%	0%	36.7%	53.3%	10.0%	3.7333	.63968
It measures the portion of revenues available for a pharmacy's operating and operating income.	0%	13.3%	33.3%	53.3%	0%	3.4000	.72397
A prolonged decline in the gross profit margin is a red flag for possible impending negative pressure on sales and ultimately earnings.	0%	0%	23.3%	66.7%	10.0%	3.8667	.57135

Source: primary data

4.7.1. Management's success or failure determines the company's profitability.

The results of the study showed that 26.7% are neutral, 50.0% agree, 23.3% strongly agree a mean of 3.9667 and standard deviation of .71840. The mean is above average hence there is a positive response. This is so because the way management manages the company's resources costs and accounts affects how profits are realized.

4.7.2. Gross profit equals a pharmacy's revenues minus the costs of products.

The results of the study showed that 36.7% are neutral, 53.3% agree, 10.0% strongly agree, a mean of 3.7333 and standard deviation of .63968. The mean is above average hence there is a positive response. This is so because profits determine the extra money incurred on top of the costs of products other than the costs inclusive.

4.7.3. Gross profit measures the portion of revenues available for a pharmacy's operating and operating income.

The results of the study showed that 13.3% disagree, 33.3% are neutral, and 53.3% agree, a mean of 3.4000 and standard deviation of .72397. The mean is above average hence there is a positive response. This is because profits to a business are looked at as revenues to the business hence the positive response.

4.7.4. In gross profit a prolonged decline in the gross profit margin is a red flag for possible impending negative pressure on sales and ultimately earnings.

The results of the study showed that 23.3% are neutral, 66.7% agree, 10.0% strongly agree, a mean of 3.8667 and standard deviation of .57135. The mean is above average hence there is a

positive hence a prolonged decline in gross profit margin comes about as a result in decline in sales earnings.

4.8. Descriptive Statistics for Returns on Investment

Table 10: Mean and Standard Deviation of Returns on Investment

Question	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean	Standard deviation
It is a revealing measure of how well managers are doing.	0%	0%	16.7%	50.0%	33.3%	4.1667	.69893
It measures the amount of return on investment relative to the Investments cost.	0%	16.7%	33.3%	43.3%	6.7%	3.4000	.85501
It isn't necessary the same as profit.	3.3%	13.3%	40.0%	36.7%	6.7%	3.3000	.91539
It is a measure of profitability that indicates whether or not a Company is using its resources in an efficient manner.	0%	0%	33.3%	53.3%	13.3%	3.8000	.66436

Source: Primary Data

4.8.1. Returns on investment is a revealing measure of how well managers are doing

The results of the study showed that 16.7% are neutral, 50.0 % agree, 33.3% strongly agree, a mean of 4.1667 and standard deviation of .69893. The mean is above average hence there is a positive response which shows how well managers manage the funds provided by investors.

4.8.2. Returns on investment measures the amount of return on investment relative to the investments cost.

The results of the study showed that 16.7% disagree, 33.3% are neutral, 43.3% agree, 6.7% strongly agree, a mean of 3.4000 and standard deviation of .85501. The mean is above average hence there is a positive response that is on getting returns it's easily weighed and based with the cost incurred.

4.8.3. Returns on investment isn't necessary the same as profit.

The results of the study showed that strongly disagree 3.3%, 13.3% disagree, 40.0 % are neutral, 36.7% agree, 6.7% strongly agree, a mean of 3.3000 and standard deviation of .91539. The mean is above average hence there is a positive response which shows that one can get back returns on investment but necessarily make profits.

4.8.4. Returns on investment is a measure of profitability that indicates whether or not a company is using its resources in an efficient manner.

The results of the study showed that 33.3 % are neutral, 53.3% agree, 13.3% strongly agree, a mean of 3.8000 and standard deviation of .66436. The mean is above average hence there is a positive response which shows management can look at a firm's turnover to estimate the efficiency in the organization.

CHAPTER FIVE:

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.0. Introduction.

This chapter gives summaries about the findings in chapter four in accordance to the variables with emphasis on the dimensions; conclusions are made based on the findings and then recommendations for improvements in regards to the study on inventory management and financial performance of pharmacies.

5.1. Summary of findings.

Inventory management plays an important role in the financial performance of pharmacies. With the use of the ABC approach, just in time and the EOQ model pharmacies are entitled to better financial performance brought about by inventory management. This study's main purpose was to establish the influence of inventory management on the financial performance of pharmacies in Arua. The study was conducted using a case study design with a target population of 40 and data was collected using structured questionnaires.

The dimensions were used to establish the influence of inventory management on financial performance in pharmacies. The information got was measured on a 5 point Likert scale ranging from strongly disagree, disagree, neutral, agree and strongly agree. For inventory management the findings showed that 13.3% respondents agree that EOQ model is not always sufficient when slow and fast moving items are involved in one system, 46.7% agree and 10.0% strongly agree that EOQ can assist a company in maximizing profits, 26.7% agree and 3.3% strongly agree that EOQ decreases the overall cost of inventory, 20.0% agree that It increases the

profits through tradeoffs. The researchers view is that Economic order quantity does have an impact on inventory management though the essence at which respondents neutral response showed that some do not have an idea of how the method is applied.

For just in time the findings show 33.3% agree and 43.3% strongly agree that new stock arrives exactly when needed rather than being stored. 40.0% agree and 13.3% strongly agree that JIT systems require accurate fore casting, 26.7% agree and 3.3% strongly agree that JIT systems force tighter manufacturing coordination which provides a greater control on the quality of the products, 36.7% agree and 3.3% strongly agree that a JIT procurement and supply system is important for reducing cost and responding to customer's requirement quickly. It's evident that just in time is an effective way of management on financial performance because most of the respondents' response was positive to the statement and the fact that with just in time new stock arrives exactly when it's needed and this leads to less tied up inventory in the stores.

The findings of Activity Based Costing were as follows 50.0% agree and 20.0% strongly agree that it allows managers to focus first on the items that require the most frequent attention, 53.3% agree and 20.0% strongly agree that it focuses on material with the highest dollar effect, 50.0% agree and 23.3% strongly agree that it minimizes the probability and severity of stock outs, 53.3% agree and 16.7% strongly agree that it effectively uses inventory management staff time, 50.0% agree and 3.3% strongly agree that it improves overall material availability while reducing excess and obsolete material. 36.7% agree and 26.7% strongly agree that it presents critical parts from running out, 10.0% agree and 6.7% strongly agree this approach prevents dollars from being tied up in items that are sitting idle.

5.2. Conclusions.

From the study based on inventory management and financial Performance in pharmacies, the researcher concludes that the indulging of inventory management through its various methods like JIT, EOQ, and ABC is critical to an organizations financial performance. This is because every organization needs inventory and the way the inventory is carried out will effect on the financial performance of the organization.

5.3. Recommendations.

From the study of inventory Management on financial Performance of pharmacies, the researcher recommends the following;

The study recommends that management should promote the following as a way of improving performance towards inventory management and financial performance. That is motivation, training, which helps employees to effectively apply the knowledge in reducing costs being tied up.

Inventory management has an impact on the financial performance of organization therefore organizations should research about and test more strategies that potentially could improve the inventory management. Effective inventory management has a positive impact on financial performances hence there should be clear guidelines to support inventory management in the organization and the efforts too should be formalized to enhance good financial performance.

5.4. Suggestions for further research.

Due to limited time and resources, the researcher was not able to cover all the possible ways in which inventory management affect financial performance. There are other factors apart from the

methods of inventory management that is Activity Based Costing, Just in time and Economic order quantity that affect financial performance. Therefore more research is required on this particular topic to find more about the factors.

Further research could also focus on inventory management and financial performance on other sectors so as to make comparisons with inventory management and financial performance in pharmacies as well as entities outside the geographical scope of this study.

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APPENDICES

Appendix 1: Questionnaire

Introduction:

Dear Respondent,

I am Kiiza Joan Ayikoru an undergraduate student of Uganda Martyrs University in the faculty of Business Administration and Management. I am conducting a research about the effect of inventory management on financial performance in the public sector that is to say pharmacies as a requirement for the award of a Bachelors' Degree in Business Administration and Management. Your honest response will be a great contribution towards the accomplishment of my research objectives and will be treated with utmost confidentiality, anonymity and be used for academic purposes only.

Thank you a lot for your treasured cooperation and time.

SECTION A;

Background information about the respondents. (Please tick where appropriate).

1. Gender/sex

Male ☐ Female ☐

2. Age group

20-29years ☐ 30-39years ☐ 40-49years ☐ 50-59 years ☐ 60+years ☐

3. Highest level of education

☐ ☐ ☐ ☐

O Level A Level Diploma Certificate

Degree ☐ Masters ☐

4. How long have you worked with the organization

1-5years ☐ 6-10 years ☐ 11-15 year ☐ 16 years and above ☐

In Sections B and C below,

It's important that you carefully evaluate statements honestly and correctly. Please tick the statements appropriately basing on your level of agreement as signified as follows;

Strongly Disagree (1), Disagree (2), Neutral (3), Agree (4), Strongly Agree (5).

SECTION B

(I) INVENTORY MANAGEMENT

Economic order quantity (EOQ)

It is the order quantity that minimizes total holding and ordering costs for the year. Even if all the assumptions don't hold exactly, the EOQ gives us a good indication of whether or not current order quantities are reasonable.

	Statement	**1**	**2**	**3**	**4**	**5**
1	EOQ model is not always sufficient when slow and fast moving items are involved in one system.					
2	EOQ can assist a company in maximizing profits.					
3	EOQ decreases the overall cost of inventory.					
4	It increases the profits through tradeoffs.					

Just In Time

It is an inventory strategy companies employ to increase efficiency and decrease waste by receiving goods only as they are needed in the production process, thereby reducing inventory costs.

	Statement	1	2	3	4	5
1	New stock arrives exactly when needed rather than being stored.					
2	JIT systems require accurate fore casting.					
3	JIT systems force tighter manufacturing coordination which provides a greater control on the quality of the products.					
4	A JIT procurement and supply system is important for reducing cost and responding to customers' requirement quickly.					

Activity Based Costing (ABC) analysis approach

It is a costing methodology that identifies activities in an organization and assigns the cost of each activity with resources to all products and services according to the actual consumption by each.

	Statement	**1**	**2**	**3**	**4**	**5**
1	It allows managers to focus first on the items that require the most frequent attention.					
2	It focuses on material with the highest dollar effect					

3	Minimizes the probability and severity of stock outs					
4	Effectively uses inventory management staff time					
5	Improves overall material availability while reducing excess and obsolete material.					
6	Presents critical parts from running out					
7	This approach prevents dollars from being tied up in items that are sitting idle.					

II, Financial performance

Turnover/sales volume

	Statement	**1**	**2**	**3**	**4**	**5**
1	It is a measure used to evaluate the efficiency of an investment					
2	It motivates them to make more sales					
3	It is essential to keep sales volumes up so as to emphasize and stay competitive with the existing rivals.					

Gross profit

	Statement	**1**	**2**	**3**	**4**	**5**
1	Management's success or failure determines the company's profitability.					

2	It equals a pharmacy's revenues minus the costs of products.					
3	It measures the portion of revenues available for a pharmacy's operating and operating income.					
4	A prolonged decline in the gross profit margin is a red flag for possible impending negative pressure on sales and ultimately earnings.					

Returns on investment

	Statement	**1**	**2**	**3**	**4**	**5**
1	It is a revealing measure of how well managers are doing					
2	It measures the amount of return on investment relative to the Investment's cost.					
3	It isn't necessary the same as profit.					
4	It is a measure of profitability that indicates whether or not a Company is using its resources in an efficient manner.					

Thank you!

Appendix 11: Introductory Letter

Uganda Martyrs University

making a difference

Office of the Dean
Faculty of Business Administration and Management

Your ref.:
Our ref.:

Nkozi, 16th March, 2016

To Whom it may Concern

Dear Sir/Madam,

Re: Assistance for Research:

Greetings and best wishes from Uganda Martyrs University.

This is to introduce to you KIIZA JOAN AMIKORU who is a student of Uganda Martyrs University. As part of the requirements for the award of the Degree of Bachelor of Business Administration and Management of the University, the student is required to submit a dissertation which involves a field research on a selected case study such as a firm, governmental or non governmental organization, financial or other institutions.

The purpose of this letter is to request you permit and facilitate the student in this survey. Your support will be greatly appreciated.

Thank you in advance.

UGANDA MARTYRS UNIVERSITY
OFFICE OF THE DEAN
16 MAR 2016
FACULTY OF BUSINESS ADMINISTRATION & MANAGEMENT
SIGN:.....

Yours Sincerely,

Mr. Edward Segawa
Associate Dean

Uganda Martyrs University P.O. Box 5498 - Kampala - Uganda
Tel: (+256)038-410603 Fax: (+256) 038-410100 E-mail: bam@umu.ac.ug

Appendix 111: Krejice and Morgan Table

N	*S*	*N*	*S*	*N*	*S*
10	10	220	140	1200	291
15	14	230	144	1300	297
20	19	240	148	1400	302
25	24	250	152	1500	306
30	28	260	155	1600	310
35	32	270	159	1700	313
40	36	280	162	1800	317
45	40	290	165	1900	320
50	44	300	169	2000	322
55	48	320	175	2200	327
60	52	340	181	2400	331
65	56	360	186	2600	335
70	59	380	191	2800	338
75	63	400	196	3000	341
80	66	420	201	3500	346
85	70	440	205	4000	351
90	73	460	210	4500	354
95	76	480	214	5000	357
100	80	500	217	6000	361
110	86	550	226	7000	364
120	92	600	234	8000	367
130	97	650	242	9000	368
140	103	700	248	10000	370
150	108	750	254	15000	375
160	113	800	260	20000	377
170	118	850	265	30000	379
180	123	900	269	40000	380
190	127	950	274	50000	381
200	132	1000	278	75000	382
210	136	1100	285	1000000	384

Note.—*N* is population size. *S* is sample size.

Source: Krejcie & Morgan, 1970