



**INVENTORY MANAGEMENT AND FINANCIAL PERFORMANCE OF SMALL
AND MEDIUM ENTERPRISES: A CASE STUDY OF FERDSULT
ENGINEERING SERVICES LTD - UGANDA**

BY

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DECLARATION

I, Mary Natukunda, declare that this dissertation is entirely my own original work, except where acknowledged and that this work has never been submitted before to any University or Institution of higher learning for the award of a degree or certificate or for other academic purposes

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APPROVAL

This dissertation was conducted under our supervision and was submitted for examination with our approval.

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DEDICATION

This work is dedicated to my beloved mother Mrs. Kevin Nyakahoza Karureeta.

It is also dedicated to my children, Paula, Mark and Chloe for their moral support which was of great significance to this piece of work.

In a special way, the study is dedicated to my Brother Eng. Ferdinand Mugisha who encouraged me to further my studies and nurtured the idea with moral and financial support.

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LIST OF ABBREVIATIONS

CVI : Content Validity Index

ICRG: International Country Risk Guide

ILO: International Labor Organization

IMF : International Monetary Fund

IT : Information Technology

OECD: Organization for Economic countries Development

RFID: Radio Frequency Identification

SMEs: Small and Medium Enterprises

UPC: Universal Product Code

URA : Uganda Revenue Authority

ABSTRACT

The study sought to investigate the relationship between inventory management and financial performance of SMEs using Ferdsult Engineering Services Ltd as a case. The study was guided by three objectives namely; to investigate the relationship between purchase plan and financial performance of Ferdsult Engineering Services Ltd, to examine the relationship between stock levels and financial performance of Ferdsult Engineering Services Ltd and to find out the relationship between stock record keeping and financial performance of Ferdsult Engineering Services Ltd. The study used a case study design with qualitative and quantitative approaches. Data were obtained from 64 Ferdsult staff. It were collected using structured questionnaire, documentary review guide and interview guide. The study established that there is a positive, moderate and significant relationship between purchase plan, stock level maintenance and stock record keeping with financial performance of Ferdsult Engineering Services Ltd. The study concluded that purchase plan is important in the financial performance of Ferdsult Engineering Services Ltd. This is attributed to ordering procedures which enhance stability for continuity which improves availability of the services and that inventory minimizes costs and challenges associated with storage as inventory targets appropriate inventory that maintaining safety stock makes and helps SMEs and Ferdsult in particular to break even in financial performance. Safety stock increases sales and knowledge of inventory influences selection of quality products that are on demand. In addition inventory helps the firm to come up with perfect and accurate anticipation inventory and forecast demand which influences positively financial performance. It further concluded that inventory record keeping is crucial in financial performance of the Ferdsult. It minimizes leakage and fosters for proper accountability. Inventory records fosters for management to easily make a follow up for reconciliation of all the goods that are purchased. This influences optimal and full deployment of the resources for organizational profitability. The study recommends that SMEs Managers, Proprietors and Directors should develop and adopt usage of purchase plans in their transactions so as to have coordinated procurement which will eliminate duplication and double purchasing.

CHAPTER ONE

INTRODUCTION

1.1 Introduction

Inventory management is emerging as a crucial determinant of business profitability and productivity in the globalised competitive economy (Kothari, 2001.). However, the efficacy and management of inventory to attain business goals remain unascertained (Chen et, al 2007). This study examined the relationship between inventory management and financial performance of Small and Medium Enterprises (SMEs) using a case of Ferdult Engineering Services Ltd . In this study, inventory management was conceived as the independent variable while financial performance of SMEs as the dependent variable. This chapter presents the background, statement of the problem, the general objective, specific objectives, research questions and hypotheses. The chapter also presents the conceptual framework, the significance, justification, scope, and operational definition of concepts.

1.2 Background to the Study

1.2.1 Historical Background

According to Lutz (2004), inventory management was first invented by Adam cited in the Bible when he named all the animals and Noah when he counted the clean and unclean beasts for the Ark. The world's earliest known writing (5300 years) described inventory owners, amounts, and suppliers (Dr. Gunter Dreyer of the German Institute of Archaeology cited in Screther 2004). However, Benq (2006) reveals that inventory control goes back further than writing. Inscriptions in Egyptian and Babylonian

warehouses and granaries had pictures that represented the inventory owner and numbers representing amounts in stock and taxes due.

Accurate inventory management came up with computers that evolved partly from the advanced mechanical calculator designed by Charles Babbage in the 1820s (Lockard, 2012). Since then, advancements have been made especially after the industrial revolution. In 1889 a man named Herman Hollerith invented the first punch card that could be read by machines. Harvard University took Hollerith's idea in the 1930s and created a punch card system for businesses. Another team at Harvard University designed the first modern check-out system in the early 1930s. In 1932 a Harvard University Business Administration team led by Wallace Flint came up with the first known automatic checkout/inventory control design. In 1934 Wilson developed the optimal order quantity technique basing on Harris/s of 1913 known as a classical economic order quantity formula.

In the 1960s, a group of retailers mostly grocery stores got together and came up with barcode method for tracking inventory. There were several barcodes before they were standardized with the Universal Product Code (UPC) in 1974. It's still the most-used barcode in the United States today. In the mid-1990s, companies started experimenting with inventory management software that would record data as products were scanned in and out of warehouses. To day, even small and midsize businesses can find affordable inventory management software to meet their needs.

Another promising technology from 1970s for tracking inventory is the Radio Frequency Identification, or (RFID), which uses a microchip to transmit product information -- such

as type, manufacturer and serial number to a scanner or other data collection device. It is superior to barcodes in several ways. For instance, it reads the information from several yards away, making it ideal for tracking items stacked on high shelves in warehouses. It can also encode more data than a bar code and in some systems tells merchants if an item is out of place in the store, providing excellent anti-theft characteristics. Another popular means of automated inventory control is vendor-managed inventory (Zenthil 2004). However, even up to day some business enterprise still use the traditional manual inventory management approach. Financial performance origins can be traced back to the time when commerce was started during the Pareto rule (Manish 2010) .

On the other hand, Small and Medium business enterprises are synonymous with business because even large enterprises were once small (Sabel and Zeitlin 1997; Lamoreaux, Raff, and Temin 2003). Firms initially tended to be small, to specialize in a particular process or technique, and to collaborate with other small, highly specialized firms in order to satisfy customers' wants (Scranton 1983 and 1989; Enright 1995). The Industrial development however, gave rise not only to small numbers of very large firms but also to large numbers of firms of small and intermediate sizes. Shanada (2006) reports that the term SME was originally developed by the Canadian Government. The relative proportions of each varied across industries and countries with patterns of specialization. SMEs were first recognized in Organization for Economic Cooperation and Development (OECD) countries with emphasis of partnership for registration to access funding . On the African continent, SMEs were first recognized in Nigeria (Ekpenyong and Nyong,1992). Currently SMEs are important commercial enterprises in the development of countries contributing to revenue through taxation and employment.

However, most of them are facing challenges of productivity and profitability due to competition amongst themselves, limited working capital and market.

1.1.2 Theoretical Background

The theory that guided this study was the Discrete Servo Theory to Inventory Control developed by Vassian (1955). The theory propounds that there should be emphasis on the analysis of inventory using replenishing inventory case. The principles of the theory emphasise on minimising variance of the inventory. The reorder system and rule is derived which paves basis to address inventory variance. The theory helps to appreciate inventory level variance basing on sales forecasts and system constants. In relation to this study, the theory helps to address the inventory problems of too great or too small quantities of stock which can cause business failures and consequently affecting financial performance. The theory sets for business an informed basis for what quantity of items to order and how often to order for them to maintain the overall stock level, minimize variance and improve customer services by limiting sock outs.

Goetz (2004) while discussing the ` Discrete Servo Theory to Inventory Control, gives it strengths for monitoring stock levels periodically or continuously to strike an optimum investment in inventory since it costs much money to tie down capital in excess inventory and reduce turn over due to scarcity of some items. The theory is in agreement with the Economic Order Quantity Model (EOQ) which has been developed to take care of the weaknesses emanating from the traditional methods of inventory control and valuation, which to some extent has proved useful in optimizing resources and thus, minimizing associated costs. Inventories that are inefficiently managed may apart from affecting sales create an irreparable loss in market for companies operating in highly competitive

industry. Invariably, a company must neither keep excess inventories to avoid an unnecessary tying down of funds as well as loss in fund due to pilferage, spoilage and obsolescence nor maintain too low inventories so as to meet production and sales demand as at when needed.

1.2.3 Conceptual Background

Inventory management according to Kotler (2000), refers to all the activities involved in developing and managing the inventory levels of raw materials, semi-finished materials and finished good so that adequate supplies are available and the costs of over or under stocks are low. Drury (1996) defined inventory as a stock of goods that is maintained by a business in anticipation of some future demand. This definition was also supported by Schroeder (2000) who stressed that inventory management has an impact on all business functions, particularly operations, marketing, accounting and finance. He established that there are three motives for holding inventories, which are transaction, precautionary and speculative motives. Brinlee (2010) looks at inventory management as a system of overseeing the flow of inventory through a business and that it is an integral part of any company. It involves ordering, price comparison, space management, shipping, receiving, and controlling the products to make sure the inventory gets neither too high nor too low.

On the other hand, financial performance of small and medium enterprises is the dependent variable. Financial performance according to Chell (2008) is a measure of a firm's overall financial health over a given period of time, it is a measure of revenue from operating income or cash flow from operations. Lazer (2003) defines financial performance as the total return on an investment over a period of time. It can be positive, representing a gain in value, or negative, representing a loss. Financial performance is an

indicator of business success or failures which can be seen from ROI, ROE, cash flow liquidity and others. It is the important end result of the organization performance as it exhibits the sustainability of the business (Green et al., 2008; Wallenburg and Weber, 2009). The financial performance is related with every performance of the organization and is being affected by performances of marketing, investment and logistics (Green et al., 2008; Wallenburg and Weber, 2009), including the information technology's effect and the internal and external organization's cooperation (Chen and Hsiao, 2008). financial performance has various indicators, for example, profitability, market shares, return on sales (Agus and Hassan, 2005), return on investment, average profit and the increase of profit (Chien and Shih, 2007), increase on sales (Chen and Hsiao, 2008) increase on return of investment and increase on net profits (Gao et al., 2007).

Small and Medium Enterprises (SMEs) are defined as enterprises which: employ fewer than 250 persons and have an annual turnover not exceeding EUR 50 million or an annual balance sheet total not exceeding EUR 43 million (European Commission, 2003). Inventory affects profitability and consequently financial performance. Rosenblatt (1977) affirms that the cost of maintaining inventory is included in the final price paid by the consumer and affects the company's profits. Keth et al., (1994) stated that the major objective of inventory management and control is to inform managers how much of a good to re-order, when to re-order the good, how frequently orders should be placed and what the appropriate safety stock is, for minimizing stock outs. Thus, the overall goal of inventory is to have what is needed, and to minimize the number of times one is out of

stock. Successful inventory management seeks to control a balance associated between the inventory that comes in and the inventory that goes out.

Furthermore, Mackvit (2004) mentions that inventory is a quantity or store of goods that is held for some purpose or use and the term may also be used as a verb, meaning to take inventory or to count all goods held in inventory. Inventory may be kept "in-house," meaning on the premises or nearby for immediate use; or it may be held in a distant warehouse or distribution center for future use. With the exception of firms utilizing just-in-time methods, more often than not, the term "inventory" implies a stored quantity of goods that exceeds what is needed for the firm to function at the current time. Brinlee (2010) looks at inventory management, or inventory control as an attempt to balance inventory needs and requirements with the need to minimize costs resulting from obtaining and holding inventory.

Biederman, (2004) affirms that balancing of the various parts of inventory management means paying attention to these key elements: time, calculating buffer stock, movement of products, and accurate record keeping, ordering, price comparison, space management, shipping, receiving, and controlling the products to make sure the inventory gets neither too high nor too low. It further involves protection against theft, Transfer excess inventory stock to another branch or office that might need it, 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, returns and defective goods, and demand forecasting. Balancing these competing requirements leads to optimal

inventory levels.. These elements have helped to formulate the objectives of the study while the rest form extraneous variables.

1.2.4 Contextual Background

Small and Medium Enterprises (SMEs) are one of the principal driving forces in the development of an economy because of its significant contribution in terms of number of enterprises, employment, output and exports in most developing as well as developed countries. SMEs in Kampala district are in agricultural processing, manufacturing service sector, supplies, real estate contracts retail and wholesale business to mention among others. They form the bulk of business in Kampala in terms of imports, exports, employment and raising revenues for development.

Ferdsult Engineering Services Ltd is an SME in the electricity engineering services and equipment supplies. It has its administrative headquarters in Kampala city at Diamond Trust building and various sub offices in areas with concessions and contracts. It has its major ware house in Lugazi- Mukono district where all equipment used in electrical installation are kept. These include all electrical appliance attire required to extend electricity of all varying strengths in Uganda and its neighboring countries. It takes on governments contracts to extend electricity to various parts of the country. In other parts, it purchases and sells electricity to consumers in concession with Rural Electrification Agency. The electrical equipment used by Ferdsult Engineering Services Limited include transformers, electrical wires and solidal cables, meters, engines , electric poles to mention among others. The concession areas from the period 2007 -2012 include but not limited to Kyenjonjo, Bukakata, Kagadi, Kibale, Kihiihi, Kitwe, Sanje, Rugombe,

Kanungu, Muhanga, Kamwenge and Isingiro Each of these has a concessional store to supply engineering works requirements.

Ferdsult engineering services has inventory management practices at its main ware house in Lugazi. Incoming goods are recorded while those leaving the warehouse are equally recorded. The store managers are in place to manage inventory and liaise with other departments for this noble cause. There is a system and plan to manage materials right from requisition, purchase and supply or provision of the particular goods to concession areas. Both periodic audits and materials status audits are conducted for purposes of inventory reconciliation with financial performance (Ferdsult Engineering Works Management Status Report 2011). In spite of this effort, according to Ferdsult engineering services warehouse Report (2008), there were items that had run obsolescent in store while others were getting worn out before use. According to Ferdsult Engineering Works material status Report (2012) on the Rwamucucu-Muhanga-Kissizi Rugyeyo project, there was poor storage of materials mixed up with poor records making it difficult to know the stored items and balances of particular items prompting to keep estimating material requisition. The report further identified poor utilization of inventory space with materials scattered which occasionally caused loss from leakage.

In addition, the Ferdsult Engineering Works Audit Report on the review and revenue collection and management (2011) showed that there has been fraud of double purchasing when items still exist in stores. There was variance between the quantities of units of energy supplies amounting to 2.128.786KWh while part of the data was missing for reconciliation of sold energy. In addition, items on quick demand usually run out of

stock causing impromptu ordering. Automated inventory management has not been installed apart from a camera for safety precautions. The existing software has inadequate password management yet without audit trail functionality. There is lack of an information security policies and procedures. (Ferdult Engineering Works Draft Report for IT systems Audit 2012). It is therefore not clear how inventory management is related to financial performance at Ferdult Engineering Services Ltd which formed the basis of this study.

1.3 Statement of the Problem

Business enterprises are apparently putting reasonable effort to inventory management so as to enhance their financial performance (Kirschman 2007). Companies are managing their inventory through recording, purchase plan, stock level management, planned ordering and receiving supplies so as to balance stock to reap on sale turn over and minimize tying capital through overstocking (Biederman, 2004). Equally so, Ferdult has implemented the inventory management practices like digital camera recording, recording coming and outgoing stock and constant reconciliation of records. The belief is that effective inventory management will gradually and consequently step up the financial performance of the organization.

In spite of these inventory management practices, Ferdult Engineering Services Ltd still experiences a sorry state of her financial performance. The organization is experiencing loss and leakage of materials, stock outs of pertinent equipments for use and lost sales are common with certain high demand products while warehouses are bulging with inventory (Ferdult Engineering Services Adhoc report on materials for the Kabira

Mutaka & Ruhinda Buhunga projects 2011& Ferdsult Engineering works Report on Fuel Usage and accountability in Rwamucucu –Muhanga-Kisiizi Project 2012). It is also common that available quantities in the record systems aren't accurate in relation to stock. There is also lack of coordination between purchase plan, supply chain and concession store which leads to purchase of same products that are still available in store leading to poor space management, items running obsolescent, poor quality safety stock and holding capital (Ferdsult Engineering Services Material status Report, 2012). This situation deserves extensive investigation so as to inform management on inventory improved practices lest this situation will affect the financial performance of the firm and consequently its growth. This study therefore investigated the relationship between inventory management and financial performance at Ferdsult Engineering Services Ltd.

1.4 General Objective

To investigate the relationship between inventory management and financial performance of SMEs using a case study of Ferdsult Engineering Services Ltd.

1.5 Specific Objectives

1. To investigate the relationship between purchase plan and financial performance of Ferdsult Engineering Services Ltd.
2. To determine the relationship between stock levels and financial performance of Ferdsult Engineering Services Ltd.
3. To establish the relationship between stock record keeping and financial performance of Ferdsult Engineering Services Ltd.

1.6 Research Questions

1. What is the relationship between purchase plan and financial performance of Ferdult Engineering Services Ltd?
2. What is the relationship between maintaining stock levels and financial performance of Ferdult Engineering Services Ltd
3. What is the relationship between stock record keeping and financial performance of Ferdult Engineering Services Ltd

1.7 Hypotheses

1. There is no significant relationship between purchase plan and financial performance in SMEs There is no significant relationship between maintaining stock levels and financial performance in SMEs
2. There is no significant relationship between stock records keeping and financial performance in SMEs.

1.8 Conceptual Frame Work: Inventory management and performance of SMEs

The conceptual framework in fig 1 gives the relationship between the variables of study. The conceptual framework is adopted and modified from Kotler (2000), Schroeder (2000) and Chell (2008) by the researcher. Kotler (2000) and Schroeder (2000) substantiate what actually inventory management is which forms a corner-stone to come up with the variables of the study that are presented as predictor independent variables. On the other hand, Chell (2008) elaborates the meaning of financial performance which constitutes the basis for coming up with the indicators of financial performance as the dependent/outcomes variables of this study.

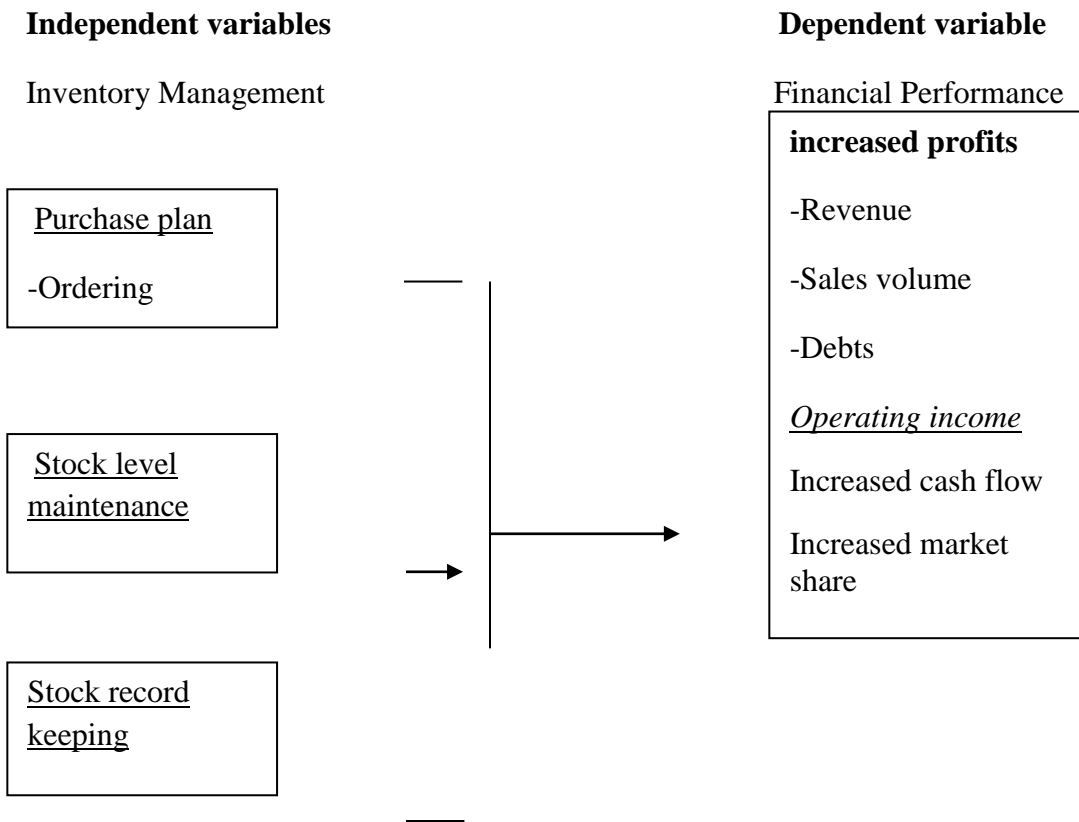


Fig1: Relationship Between Inventory Management and Financial Performance:
Source: Adopted and Modified from Kotler (2000), Schroeder (2000) and Chell (2008)

by the researcher.

In fig 1, inventory management is the independent variable while financial performance of SMEs is the dependent variable. It is therefore assumed that financial performance of SME is influenced by the level of inventory management. Inventory management is operationalised into purchase plan, stock level maintenance and stock record keeping. On the other hand, financial performance has indicators such as increased profits, operating capital and asset performance increased market share and operating income., Arrows have been used to indicate the flow of the relationships.

The conceptual framework is Adopted and Modified from Kotler (2000), Schroeder (2000) and Chell (2008). Kotler (2000) and Schroeder (2000) elaborate and define inventory management which helped to come up with predefined independent variables while Chell (2008) substantiates on financial performance which helped to come up with the indicators of the dependent variable.

In the conceptual framework it is assumed that the purchase plan of the SME will influence the ordering procedure and storage space management. These in turn will influence the level of stock maintained at the firms warehouse to met customer service and determine future demand. These will influence the system of recording inventory for safety control and accountability. These facets will influence the financial performance in terms of profitability, asset performance level of stock maintained and recording purposes

1.9 Significance of the Study

The study will be of value to the following categories of people;

The findings of the study will inform business planners on decisions regarding purchases, production and supply to customers so as to maximize efficiency, productivity and profitability. This they can achieve by maintaining inventory levels and proper inventory management.

The findings will inform policy makers to design better inventory management strategies. This can be attained by writing out circulars and guides that inform and improve practices. It can further be attained through conducting workshops and seminars on the policy recommendations

The findings will give a basis to procurement officers and inventory managers on the strategies for inventory management and updating. This can be achieved by utilizing inventory records and improving inventory practices

The findings of the study will contribute to existing knowledge on inventory management and financial performance. This will facilitate to build a population enlightened on inventory since it is essential in day to day lives of people.

1.10 Justification

Inventory management account for a significant element within company business. It is able to spell the performance of the organizations transactions from the various perspectives. It therefore remains core for analysis of businesses financial performance and management of companies business transactions (Brethil, 2006). It therefore should be given prominence, although attention in previous studies have concentrated on profitability, productivity and efficiency not putting much emphasis on inventory yet it is the foundation of business enterprises. Wiersema, (2007) seems to simply that the simple way for firms to enhance financial performance is to harness the principles of inventory management. Volinger (2007) emphases that enterprises that on the right business truck are those with that consider inventory management prime the agenda. To this end many businesses the world over, have continued to operate on marginal profits and survival while others have experienced demise yet when they had strong build up inventory systems (Aloka 2012). The occurrence of such situations and paradoxes make it pertinent the explore the opportunities and strengths embedded in inventory management . in regard to financial performance of SMEs.

1.11 Scope of the Study

1.11.1 Geographical Scope

The study was carried out at Ferdsult Engineering Services Limited situated in Kampala Capital City Authority in the central region of Uganda. Ferdsult Engineering Services Ltd was chosen because it is a fast growing SME, and meets all characteristics of SMEs and yet it has inventory management issues. It has its HQs in the city centre at Diamond Trust building 7th and 8th floors. It has a ware house in Lugazi Mukono district and several concession stores which rotate as the concessions and contracts rotate

1.11.2 Content Scope

This study focused on the relationship between inventory management and financial performance of SMEs using Ferdsult Engineering Services Ltd as a case. There are many elements of inventory management, but this study focused on purchase policy, stock level maintenance and stock record keeping. These were chosen because they are core predictors of financial performance of enterprises which is the reason why they exist.

1.11.3 Time Scope

The study considered the time period of 2010-2012. This period was chosen because it was recent where records can easily be traced and respondents can easily recall events in this time period. The period of three years can give a trend and comparative analysis on the variables studied.

1.12 Operational Definition of Terms.

For the purposes of this study, the following terms shall mean thus:

Purchase Plan: this refers to the system and strategy used by the firm for ordering of stock in relation to available space in stores and anticipation of future demand or future availability of the same product.

Ordering Procedure: this refers to requisition and receipt of goods in relation to how the goods will be delivered whether in bulk or in small quantities and when goods should be ordered whether on a specified basis like quarterly or premising on stock.

Storage Facility costs: this shall mean the amount of time the product spends in warehouse in relation to depreciation, consumption of space that would otherwise be used for storage of other goods that might be kept in other hired stores and the personnel in charge of that storage ,

Stock level Maintenance: this shall mean the mechanism of maintaining inventory that is not too low and high but appropriate for business. This means that all the time, the store or ware house ought to have the necessary stock for transactions

Improved Customer Service: shall mean that customers will always find the goods and services they want available. This will minimise the switching costs of customers to other firms for similar products

Demand forecasting: ensuring that business will not run out of stock of goods and services. This means that the firm will plan and stock required goods in anticipation of the market situation and basing on calendar year records

Stock Record Keeping: a list of goods and services that have come in store and out of store and in stock for a certain period of time. The firm can be able to track the stock bought and sold in a certain period of time and which period of the year has more sales or purchases

Safety Control; mechanisms that limit stealing/defrauding of goods and services from inventory. This is meant to check loss of stock in store and on transit either to store from purchases or on the supply chain transit.

Audit: a report of stock detailing the source of goods and where they have been used in a specific period of time with reconciliation to finances. This will include both internal and external auditors who may be hired by the firm

Accountability: an account of what has come in store and out in a specific period of time detailing whether there was proper use or not of the inventory

Increased Profit: this shall mean the margin between expenditure and income and whether it is adequate to propel the firm to capital investments and development.

Operating Income: the available income for investment in business at any one time that facilitate in having adequate and necessary inventory by the firm. This is the cash the firm has for transactions.

Asset Performance: this refers to the assets owned by the firm and the conditions in which they are to function properly and efficiently .

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The study investigated the relationship between inventory management and financial performance of SMEs using Ferdsult Engineering Services Ltd as a case study. This chapter, presents the review of literature related to the study. Articles, journals, text books and other sources that bear insight to the study have been reviewed and discussed. The chapter is structured under theoretical, conceptual reviews and the summary of literature review

2.2 Theoretical Review

The suitable theory that guided this study was the Discrete Servo Theory to Inventory Control developed by Vassian (1955). The Theory emphasises optimum levels of inventory at any one time available and that inventory management should as much as possible limit variance of inventory. In relation to this study, it guides company's purchase plan and stock level appropriation. To this end, Waters (2002) mentions that inventory management should ensure the delivery of service levels to customers by ensuring that inventory is available in accordance with need, forecast, future stock requirements, optimize stock levels ensuring a correct mix of stock type and quantity to meet budgetary and service level requirements. In addition, the theory facilitates tracking and analysis of transactions, customer buying patterns, and inventory performance which is attained through inventory recording. This gives companies a powerful competitive edge (Lee and Billington 2002). It also informs purchase policy on levels of stock to be

maintained at any one time. This enhances the financial performance of the company, as this will limit errant stock outs and tying working capital in redundant stock. Furthermore, proper record keeping will control defrauding and safety of commodities because when inventory is controlled it aids auditing and accountability of transactions thus propelling financial health of the company in question.

However, Matheur (2001) discussing the Discrete Servo Theory to Inventory Control, mentioned that its validity was affected by seasonality, changing tastes and preferences. This implies that changing tastes and season can lead to overstocking and redundant capital. This can result when forecasting plans are affected. This can culminate to holding capital and damage. To this end, much as inventory management skill is important in business performance, it becomes critical when interplayed with business basics such development and market research (Aloca 2012).

2.3 Conceptual Review

Brinlee (2010) looks at inventory management as a system of overseeing the flow of inventory in a company's transactions. This informs the business on ordering, price comparison, space management, shipping, receiving, and controlling the products to make sure the inventory gets neither too high nor too low thus improving sales performance, stock management, capital performance and profit margins thus by leading to a health financial position. On the other hand, Lazer (2003) defines financial performance as the total return on an investment over a period of time. It can be positive, representing a gain in value, or negative, representing a loss. It is therefore assumed that when there is proper inventory management while minimizing inventory costs, there will

be improvement in financial performance in terms of profit margins, improved sales and asset performance.

The principal goal of inventory management involves having to balance the conflicting economics of not wanting to hold too much stock thereby having to tie up capital so as to guard against incurring of costs such as storage, spoilage, pilferage and obsolescence and, the desire to make items or goods available when and where required in terms of quality and quantity so as to avert the cost of not meeting such business goals and targets. If an item is not stocked when the customer wants it, the company loses a customer not only on that item but also on many other items in the future. This affects sales turn over which will affect profit margins and consequently financial performance (Gaur et al. 2005).

Gaur and Kesavan (2006) affirm that proper inventory management leads to smooth inventory turnover especially when there is capital intensity to address stock requirements. To this end, Gaur et al. (1999) demonstrate that the financial excellence of retailing companies comes from various operational strategies that may involve low or high product margins and low or high inventory turns . Inventory management promotes corporate governance in the company. Magdi and Nadereh (2002) stress that inventory management is about ensuring that the business is run well and investors receive a fair return. Megir (2009) affirms that inventory management provides governance and the system by which business corporations function, Uche (2004) and Akinsulire (2006) mention that financial scandals around the world and the recent collapse of major corporate institutions in the USA, South East Asia, Europe and Nigeria such as Adelphia, Enron, World Com, Commerce Bank and recently XL Holidays have shaken investors' requiring tight controls promoting transparency and accountability.

2.4.1 Purchase Plan and Financial Performance

The purchase plan spells out when, how and the volume of goods and services to purchase. Wiersema, (2007) notes that a purchasing professional must understand inventory management principles to so as to remain valuable. It is important to know how much inventory and when to order for such inventory. This take into account ordering procedure and storage costs in order for the firm to enhance profitability of the firm (Volinger 2007). Under this section, purchase plan has been discussed under dimensions as ordering procedure and storage costs.

2.4.1.1 Ordering Procedure and financial performance

Volinger(2007) affirms that a firm needs to ascertain and must know when to reorder materials for inventory. Generally, this point in time is determined when the quantity of materials in stock decreases to a certain level, called the reorder point. Volinger(2007) and Matheur (2007) found significant positive relationship between established ordering procedure of goods and financial performance among small scale enterprises. The former study was in Australia using country data sets while the later was in Tennessee using a random sample of SMEs. Whether these findings have similar analogies for SMEs in KCCA given the different geographical context and time deserves inquiry.

The importance of lead-time as a measure of inventory effectiveness has been mentioned by Rabinovich, Martin and Philip (2003). Hopp (2004) and Ptak & Smith (2011) found firms with ordering appropriation more profitable and stable than firms that had haphazard procedures. They are of the opinion that long lead times and large usage fluctuation call for higher re-order stock levels and vice-versa.

Narayana (2004) affirms that appropriating purchase remains important. Smaller purchasing lots imply more work in purchasing department. Frequent ordering in small quantity is considered as an important strategy especially for SMEs considering the nature of capital intensity. However, Volinger(2007) and Matheur (2007) found that small appropriations of the discussed nature limit SMEs to get the benefits of quantity discount if the purchase requirement quantity of material remains less to enable them get bulk discount benefits.

A project to improve Inventory Management (IM) in a United Kingdom based SME found the importance of categorizing stock and setting ordering policies. Flores, Wang, and Burgess (2003); Rajagopalan and Malhotra (2001) study trends in inventory levels at US firms over time to test the widely held belief that inventory management has improved due to the introduction of just-in-time (JIT) practices and information technology (IT) system implementations. Using a large sample of firms from the US Census Bureau that includes both private and public companies, they find that material and work in process inventories decreased in most of the two-digit Standard Industrial Classification (SIC) industries from 1961 to 1994. This study was conducted in an industrial setting and considered inventory in industry process which is equivalent to process of inventory order in service sector, what actually happens at Ferdsult Engineering services in not clear which makes it deserve extensive investigation

Hopp (2004) underscored the importance ordering procedure in manufacturing and service operations citing that if a company purchases insufficient quantities of an item or the wrong item it may be unable to meet contract obligations to supply products on time. Similarly, Ptak and Smith (2011) found that where a company purchases

excessive quantities of an item, money is wasted - the excess quantity ties up cash while it remains as stock and may never even be used at all. Zahr (2005) found significant moderate positive relationship between planned ordering procedures and profitability in US, France and Germany SMEs. High significance was found in those firms that mostly had use of e-Procurement strategies and highly computerized inventory systems.

Chen et al,(2002) found that efficient purchasing and purchasing management can make or break a business. The authors found that efficient purchasing can produce significant savings. Benq (2006) agrees with above that planned material ordering leads to optimum use of resources. However, the author cautioned that planned purchase is most aptly applicable and operational in stable economies where the price index does not experience instabilities. This rules out the possibilities of speculations and instant shortages that may culminate in disruptions in the supply-purchase management.

2.4.1.2 Storage performance and financial performance

The storage performance generally means how to reach better level of storage and delivery of products or services. Currently, storage performance extends its scope to cover cooperation at firm level and as a part of the business supply chain (Wingwon and Piriyaikul, 2010). In order to generate mutual benefits and strengthen the business alliance of the firm, it needs to focus on raw materials, products, the production distribution plan and the storage data base linkage with the supply chain(Tracey, 19981). The accuracy of the flow of logistic activities, supply chain and punctuality of the store data are key to firms competitiveness (Kim, 2006). The store data management is one of

the elements for business to link with the vision, mission, strategies and assessment for keeping the business existence and sustainability (Hsiao and Melody, 2007).

Joseph and Chan (2005) found that those businesses that adopted supply chain concept in storage had a shorter production time and lower stock inventory than their competitors by 50% and with time product to market faster than their competitors by 17% . Nevertheless, the storage linkage operation must rely on the management capability to manage business, cost structure, financial stability, production schedule and data base by focusing jointly on administration for the profits and the ratio of investment on the resources (Bowersox and Daugherty, 1995). Storage performance strengths generate differences and a competitive advantage (Barringer and Iveland, 2008) amid the constant changing business environment of either the expanding or shrinking economic status Wallenburg and Weber (2005) revealed that storage performance with logistics cost and logistics service in particular had affected the financial performance. The study of Salam (2005) also revealed that the logistics and supply chain management had affected the competitive advantage as well.

Bokpin, (2008) found that holding costs affected financial performance of firms. These are carrying costs that result from maintaining the inventory. Inventory in excess of current demand frequently means that its holder must provide a place for its storage when not in use. This could range from a small storage area near the production line to a huge warehouse or distribution center. A storage facility requires personnel to move the

inventory when needed and to keep track of what is stored and where it is stored. If the inventory is heavy or bulky, forklifts may be necessary to move it around.

Black (2002) and Stevenson (2005) report that firms that hold unnecessary large inventory has extra costs than their counterparts who held appropriate inventory. This was attributed to the fact that storage facilities require heating, cooling, lighting, and water. The firm must pay taxes on the inventory, and opportunity costs occur from the lost use of the funds that were spent on the inventory. Also, obsolescence, pilferage (theft), and shrinkage are problems. All of these things add cost to holding or carrying inventory especially if the purchase plan fails to factor in such issues.

Bent (2005) found that the cost of holding inventory was enormous and thus advocates for minimum inventory. Similarly, Charlock (2003) found that firms that applied Just-in-time (JIT) philosophy that advocates the lowest possible levels of inventory had levels of performance than those that held big inventories. JIT espouses that firms need only keep inventory in the right quantity at the right time with the right quality even to "zero inventory". However, Reeb (2004) tends to disagree with the above while discussing the Theory of constraints (TOC) which is a philosophy which emphasizes that all business management actions should center around the firm's constraints. While inventory should be at the lowest level possible in most instances, there should be some buffer inventory.

2.4.2 Stock level Maintenance and Financial Performance

Matheur (2007) mentions that there is a minimum stock that an operating firm must maintain in order to operate sufficiently. This is normally called the safety stock. This

facilitates the firm to meet customer services and forecast demand. This make the firm meet it functional obligations consequently enhancing financial performance. The dimensions discussed under stock level maintenance include customer service and demand forecasting.

2.4.2.1 Customer Service and Financial Performance

Elorantha and Raisanen (1988) argue that one of the reasons for keeping reasonable amount of inventory items has been related to customer service. This is also intended to ensure continuity and minimize customer switching off costs. Flores, Wang, & Burgess, (2003) conducted a study in UK inventory management practices and findings showed that there was need for a more formal procedure to calculate its inventory policy parameters of arriving at maximum and minimum inventory level. The findings showed that increasing number of backorders and lost sales lead to lower profitability. The study recommended following a more scientific approach than the currently used rules of thumb to establish inventory policy parameters with the objective of optimizing their inventory cost.

Wiersema, (2007) retaliated that inventory records concerning stock are critical in any company businesses. If an item runs out of stock unexpectedly, production may stop, or a customer be forced to go elsewhere. Boucher (2008) mentions that record keeping helps to do way with distressed or expired stock. Distressed inventory is inventory whose potential to be sold at a normal cost has passed or will soon pass. In certain industries it could also mean that the stock is or will soon be impossible to sell.

Kahn et al. (2002) report evidence that economy-wide supply-demand matching has significantly improved financial performance of companies. Comin and Mulani (2004) find that firm-level sales volatility has increased due to higher product variety, shorter product life cycles and other microeconomic factors. The authors however go ahead to mention that these attributes are a result of inventory management. Thomas and Zhang (2002), analyzes various ways in which changes in balance sheet items impact stock returns. Interestingly, they find that the negative relationship between accruals and future abnormal returns is mainly due to inventory changes.

Mankiw (2010) mentions appropriating stock inventory can be used as a hedge against price increases and inflation. Salesmen routinely call purchasing agents shortly before a price increase goes into effect. This gives the buyer a chance to purchase material, in excess of current need, at a price that is lower than it would be if the buyer waited until after the price increase occurs. Baumol and Blinder (2008) report that intended inventory investment which occurs when a firm expects that sales will be high enough is health for firms performance. This addresses short-term fluctuations in the timing of customer purchases and curbs the risk of temporarily being unable to supply the product when a customer demands it. To avoid that prospect, the firm deliberately builds up its inventories and thus it engages in positive intended inventory investment by deliberately producing more than it expects to sell.

2.4.2.2 Demand forecasting and Financial performance

Moore (2006) notes that forecasting is a necessary assumption in all inventory control. Without estimating customer demand, inventory cannot be controlled and shortage costs

are practically inevitable. The biggest hurdle faced with forecasting is that forecasting is predominately subjective in nature; assumptions are drawn, but forecasts rarely involve quantitative fact. Hendricks and Singhal (2005) show that supply chain disruptions are very costly to public companies, since they cause a substantial loss in market value especially when forecasts fail to meet demand. Bargal(2008) found that inventory records were a critical score card in anticipating demand using previous inventory history.

Singhal (2005) analyzes the long-run stock price effects of excess inventories. He finds that the stock market partially anticipates excess inventory situations and the negative effect of excess inventory is significant mean abnormal returns due to excess inventory. Roumiantsev and Netessine (2005b) do not find a relationship between the return on assets and inventory levels but instead find that superior earnings are associated with the speed of change/responsiveness in inventory management. This is premised on decisions determining how much inventory to hold as hedge.

.Charlock (2003) found that in order for a firm to stay in business, it must have the products that the customer wants on hand when the customer wants them. If the customer can get the good from some other source, he or she may choose to do so rather than to meet demand later and any instances, if a good is not in inventory, a sale is lost forever. Similarly, Macbenit (2005) reports that inventory is used to smooth demand requirements in a market where demand is somewhat erratic. Inventory allows the firm to maintain a steady rate of output thus avoiding the cost of hiring and training new personnel. Building up inventory in anticipation of an increase in demand which is often called anticipation inventory which enhances profitability.

Studies by Liedholm et al. (1994) and Paul (2001) indicate that a large number of small enterprises fail because of non-financial reasons such as a lack of forecasting or planning skills,. Cronje et al. (2003) stipulates that one of the primary causes of failure in a small enterprise is poor management. This is also echoed by Longenecker et al.(2006) who argue that SMEs are more vulnerable to managerial weakness as a result of a lack of professional staff who can make inventory planning appropriately. Longenecker et al.(2006) found that most SMEs were un able a strike a brilliant balance on the safety stock. Some kept below the optimum while the others kept inventory above maximum.

2.4.3 Stock Record Keeping and Financial Performance

Stock keeping is a mechanical process that records the routine economic activities of a business (Rogers et al, 1995). Stock record keeping refers to the recording of financial transactions and events either manually or electronically (Larson et al,1999). Stock record keeping is the analysis, classification and recording of the business transactions in the books of accounts (Saleemi , 2008). Record keeping can be defined as the recording of financial transactions and events in books of accounts in a systematic manner. Transactions include sales, purchases, income, and payments by an individual or organization. Manil (2004) mentions that stock record keeping can help firms to have grip of inventory status, set projections and goals for the business. Proper record keeping helps to compare present financial status to previous year records. This in turn help to analyze firm growth rate. The record keeping informs the management to check leakage stock and informs basis for accountability. The dimensions under stock record keeping include leakage and accountability.

2.4.3.1 Leakage Control and Financial Performance

Cohen (2002) mentions that leakages of goods and services pose a challenge to all countries. Lewis (2006) reports that inventory can help to provide a balance that can check leakage. Badhan (2005) reports that in Ethiopia, users and providers in focus groups reported the stealing of public sector goods and resale in the private market was common. Moser (2002) found that in Costa Rica, 32 percent of the public indicated that they had prior knowledge of theft in government stores of government goods and services.

The average leakage rate for drugs in Uganda stores was estimated at 73 percent, ranging from 40 to 94 percent across 10 public health facilities. High demand drugs, such as those that treat malaria, were the least available to patients because health workers and the Health Unit Management Committee members expropriated them (McPake et al. 1999). To this note Moser (2002) affirms that inventory management is the key to limit such leakages. However, Musgrave (1998) mentions that all depends on transparency and integrity. .

Megir (2009) found that inventory management reduced safety by 70% in companies especially where inventory was computerized and serialized. Once the goods are registered in inventory the system has to account for them at the end of inventory period. This implies that all goods and services in the inventory have streamlined system which leads to financial performance. The computerized camera system also records all the transactions in the inventory store and therefore any un authorized transaction may be tracked. To this note, Uche (2004) and Akinsulire (2006) find that inventory systems introduce corporate culture in companies there by reducing safety and leakage.

2.4.3. 2 Accountability and Financial Performance

Mousa (2003) mentions that inventory records known cost and a price list is developed for anticipated costs on items in the general category of supplies and services. This gives possible general economic position that can often be comparable. The staff in the inventory and budget execution should be accountable for control throughout the fiscal year. Kelvin (2003) Miskel (2007) and Rabin et al (1996) categorically reveal that with inventory management, expenditure patterns are easily examined and compared to budget plans. This gives impetus for corrective action, where necessary. Koven (2003) and Bartle et al (2008) mention that inventory serves as the source documents for transactions where comparison of the revenue and expense can be articulated.

Jaakkola (2006) and Kim (2006) concur that inventory management allows to able to define or determine the cost of goods sold during the certain period. This is premised on knowledge of beginning inventory, the amount of purchases, and the ending inventory amounts. This is due to availability and use of periodic and perpetual inventory. . Under the periodic method the firm periodically determine the amount of goods remaining in inventory where periodic is defined once every accounting period and usually at the end of the accounting period. Knight G (2000) and Amber et al (2004)a firm can match the inventory item sold with a specific purchase. In these cases the actual cost of the inventory item can be identified and the cost of goods sold accurately reflects the cost of sales.

Knight (2000) found that cost flow assumption generates current inventory costs on the balance sheet and outdated inventory costs on the income statement is FIFO (first in, first

out) . Adopting FIFO assumes that the first inventory purchased is also the first inventory that leaves the store when units are sold. In practice it is very likely that FIFO is more representative of actual physical inventory flow than the other cost flow assumptions. Thus, regardless of whether prices are rising or falling the balance sheet inventory number reflects the inventory purchased or produced last. The income statement cost of goods sold reflects the inventory purchased or produced first. The cost flow assumption that generates current costs for cost of goods sold and outdated costs for inventory on the balance sheet is LIFO (last in, first out). Bardan (2004) affirms that cash flow management can never be possible without book keeping. There is no business can stand the test of time without effective cash flow management. Inventory can help evaluate the performance of business to know if your business is stagnant, depreciating or growing. When the firms know the performance level of their business, they may re-strategize and make certain adjustments.

Kingkaew & Limpaphayom (2001) in a study in Thailand found that most SMEs frequently lack access to institutional credit due to poor record-keeping . Poor record keeping and inefficient use of accounting information are a major cause of SME staggering . According to , Walton 2000, the inefficient use of the accounting information to support their financial decision-making of SMEs in Thailand. Are part of the problems of the failures Brigham, Gapenski & Ehrhardt (1999) and Pinson et al, (1993). Mention that from properly kept books a person can at any time ascertain: what property he possesses, what amounts he owes and to whom, what profit he has made or what loss he has sustained for any given period and the manner in which the profit and loss has risen,

and the amount of his capital or deficiency. If no records are kept, it will be difficult to find accurate net profit.

.Peacock (1985) in his investigation of the effects and causes of 1,000 proprietary company failures in South Australia during ten years found that 4.6 percent of failures had inadequate or no accounting records. He concluded that there was a minimal effect of accounting records on the success or failure of businesses of the proprietary companies and recommended for further research on causes of business failures. In another study of company failures in South Australia, peacock (1987) reviewed the bankruptcy reports of 418 unincorporated businesses for four years (from 1981 to 1985) and found that 50.5 percent of this used single entry system of bookkeeping, 32.8 percent used bank and taxation records whereas only 2.1 percent utilized double entry systems. He recommended further research to be done on double entry systems of recording in companies. Peacock (1988) found a significant element in the failure of many of the businesses was inefficient or absence of accounting records. More than half of the businesses failed were found to have no records or only bank and taxation records. Peacock's (1985, 1987 and 1988) findings are very important as examining the impact of bookkeeping system practices on profitability of SMEs.

Williams (1986) in his evaluation of the adequacy of accounting records for 10,570 failed and surviving small enterprises operating throughout Australia found that a significant proportion of owner-managers kept inadequate accounting records later

Michael (2009) found that poor record keeping was affecting financial performance of many SMEs.

2.5 Summary of Literature Review

The literature reviewed and discussed reveal that inventory management has positive ingredients for financial performance of companies. Hendricks and Singhal (2005) show that inventory parameters maintain market value while Narayana(2004) affirms that appropriating purchases make the firm valuable while record keeping allows auditing and accountability checking fraud and stock safety. However, other authors show best practices that improve financial performance but not necessarily referring to them as inventory management elements say; Comin and Mulani (2004) thus creating some knowledge gaps. In addition, the scholars pursued their studies in a different environment and time setting using varying methodologies thus creating some information gaps which this study will analytically and critically bridge up.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

The study investigated the relationship between inventory management and financial performance of SMEs using Ferdsult Engineering Services Ltd as a case study. This chapter presents the research design, the study population, sample size and selection. It also gives the sampling techniques and procedure, data collection methods and instruments, validity and reliability of the instruments. It further elaborates the procedure of data collection, data analysis and measurement of variables.

3.2 Research Design

The study used a case study design with both qualitative and quantitative approaches. A case study design was used because it enabled a comprehensive and thorough investigation of the phenomenon Yin (1994) and Amin (2005).

3.3 Study Population

The study population consisted of 70 staff of Ferdsult Engineering Services Ltd and 8 top level management Officials. It is from this population that the study participants were drawn.

3.4 Sample Size and Selection

The sample size was 67 and was determined using statistical tables of Krejcie & Morgan (1970) cited in Amin (2005). The parent population and corresponding sample size is summarized in Table 1 with the sampling technique for each category of population.

Table 1 Summary Table showing Sample Size

Category	Parent population	Sample size	Sampling technique
Top management	8	5	Purposive sampling
Staff	70	62	Systematic random sampling method
Total	78	67	

Source: Population adopted from Ferdsult Engineering Services Human Services Department (2012)

3.5 Sampling techniques and procedure

Purposive and systematic random sampling techniques were used to select the study participants. Systematic random sampling was used to select the staff. The number was divided by the sample size to obtain the sampling interval. The numbers obtained for each sampling interval were written on pieces of paper folded and by rotary method one was picked out. The number picked implied that for every sampling interval the person bearing that number participated in the study. purposive sampling was used to elements within the Top management team. This was because some members within that category had more relevant information than others by virtue of their positions. .

3.6 Data Collection Methods

The study used a questionnaire survey, interviews and documentary review. These data collection methods elicited information on the relationship between inventory management and financial performance of SMEs in Kampala Capital City Authority using Ferdsult Engineering Services Ltd.

3.6.1 Questionnaire Survey

A structured questionnaire was used to collect the data (see appendix i). This was administered by the researcher herself. A Questionnaire survey is deemed appropriate because they are familiar to most people and they generally do not make people apprehensive and reduces (Clough & Nutbrown, 2002).

3.6.2 Key informant Interviews

The researcher conducted oral interviews with the Key informants who were top managers (see appendix ii). The interviews complimented and triangulated the information gathered from respondents and the available documents (Patton 2001). This will be intended to elicit wide view on the subject. The interviews, according to Van Dalen (1979), are conducted in a private setting with one person at a time so that the subject feels free to express him/herself fully and truthfully. These types of interviews involve a meeting between one researcher and one informant (Denscombe 2007).

3.6.3 Documentary Review

Information was gathered from documents to ascertain inventory management practices (see appendix iii). The documents were to give the vivid picture of the situation under investigation as this helps to cross check information and data in a more realistic manner thus enlisting data triangulation (Mathison 1988).

3.7 Data Collection Instruments

3.7.1 Questionnaire

A structured questionnaire containing sections as per study variables to attain the general objective and research goal was designed to collect information on the subject. It was administered to Ferdsult Engineering Services Ltd staff. A Questionnaire was deemed suitable because it has the advantage of enabling respondents to give opinions objectively without prejudice. Emotional effects such as shyness are minimized. Each variable had a range of 4-5 items to keep it short so as to enlist a higher response rate because as a general rule, short questionnaires get more response rate than long questionnaires (Barrett et al (1999)). They also have the advantage of collecting data from a big population over a short time. The questionnaire had a five point Likert scale with response choices such as, (5) strongly Agree, (4) Agree, (3) Not sure, (2) Disagree, (1) Strongly Disagree. The Likert format gives the respondents a variety of responses for choice and the format also makes it easy to tabulate the data obtained during data analysis process due to pre-coding. The "not sure " option allows some respondents who have no opinion or have not thought about a particular issue (Drever,1995& Cohen et al 2000).

3.7.2 Interview Guide

The interview topical guide was designed to collect information for the study. This guide was to maintain consistency. The interviews are preferred to give the top management who are an informed category by virtue of their offices wide latitude to talk about the subject at length without limit. The interview guide was designed in line with study objectives. Barrett et al (1999) confirms that the interview guide aids to enlist rich

information to uncover and flow naturally during the interview discussion. The interviewer only needs to be conversant with prompts and thus obtain triangulated data on the subject.

3.7.3 Documentary Review Check List

A documentary review check list was designed to extract the necessary information from the documents. These included inventory records, purchase policy, and other documents that were found relevant for the study. The documents were to give the vivid picture of the situation under investigation. This helps to triangulate and corroborate information in order to obtain a wide view on the subject of investigation (De Vos et al, 1988).

3.8 Validity and Reliability

3.8.1 Validity of Research Instruments

The researcher discussed the instruments with the research supervisor, academic staff and other colleagues. Further, instruments were piloted. The pilot test, according to McMillan and Schumacher (2006), provides a means of assessing the length of the interview and give some researchers some ideas as to how data should be summarized. Piloting therefore assist researchers to come to grip with some of the practical aspects of establishing access, making contact and conducting the interview, as well as becoming alert of their own level of skills of collecting information (De Vos, Strydom, Fourche & Delpont 2005).

After the pilot test, validity was established by computing the content validity index whose formula is;

$$CVI = K/N$$

Where by'

CVI= Content Validity Index

K =Number of items considered relevant/suitable

N = Number of items considered in the instruments

Four experts were requested to rate the instruments. The results from rating were used to compute the content validity index value. The CVI method is preferred because it is the most suitable validity measure for the studies using instruments like questionnaires. The researcher attained .86 (See appendix IV) and therefore went ahead to administer the instruments because of a high reliability ratio greater than .7 (Amin 2005).

3.8.2 Reliability of research instruments

Amin (2005) defined reliability as the dependability or trustworthiness in context of a measuring the instrument. It is the degree to which the instrument consistently measures what it is measuring.

The reliability of the instrument was assessed using the CRONBACH formula.

$$\alpha = \frac{k}{k-1} \left[1 - \frac{\sum SD^2 i}{SD^2 t} \right]$$

Where : α =Alpha is Reliability co-efficient. K =Number of items included.

$\sum SD^2 i$ =Sum of variance of individual items. $SD^2 t$ =variance of all items.

The instruments were pilot tested and results from the pilot test were scored and the results used to compute Alpha coefficient reliability. The researcher attained 0.88 (See appendix V) α which is greater than .7 and therefore went ahead to administer the

instruments because of a high Alpha is Reliability co-efficient greater than 0.7 (Amin 2005)

3.9 Procedure of Data Collection

An introduction letter was obtained from UMI to help the researcher access the participants. The researcher personally and physically carried out the exercise of data collection with out employing research assistants. No questionnaire was left behind to avoid consultation and thus biased responses. The top management were interviewed first followed by the staff.

3.10 Data Analysis

Data analysis concerns the ‘breaking up’ of data in logical and manageable themes, categories, patterns, trends and relationships for reporting purposes (Creswell, 2009). The data was analyzed basing on whether it is qualitative or quantitative.

3.10.1 Quantitative Analysis

Data was coded by assigning numerals to responses (Denscombe 2007). The study employed SPSS and data was entered using SPSS. It was edited by double entry. It was ensured that the first entry is the same as the second entry. This generated frequency counts for various responses. This was used for descriptive analysis where measures of central tendency and dispersion like mean and standard deviation were computed. The inferential statistics were used where Pearson correlation were run to test the hypothesis to establish the relationship between the independent variable and dependent variable. Coefficient of determination was calculated to determine the extent of relationship.

3.10.2 Qualitative Analysis

Data from interviews was edited, coded and analyzed by categorization under the research themes studied Denscombe (2007) affirms that this method is suitable for qualitative information ascertain the opinions of informants on variables. Qualitative data helps to substantiate, elaborate at lengths the reason of occurrences and trends of the phenomenon (Lutz 2004). Content analysis approaches were used to reduce data for reporting purposes. Direct quotations from the key informants were reported verbatim under the variable/themes studied (Mouton 2001). This facilitates reporting the real expressions and feelings of the study participants.

3.11 Measurements of Variables

According to Mugenda and Mugenda (2003) measurement of Variables gives the research information regarding the extent of individual difference on a given variable. Its on this basis therefore that appropriate measurements were used to measure and data were categorized in an orderly form using the five point likert scale on the questionnaire as indicated below.

Table 2: The Five Point Likert Scale

5	4	3	2	1
Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree

A nominal scale was used where numbers were assigned to the different variables to serve as its name and create sameness or difference. This enabled the researcher to know the difference between variables.

CHAPTER FOUR

PRESENTATION, ANALYSIS AND INTERPRETATION OF RESULTS

4.1 Introduction

This chapter presents, analyses and interprets the study findings. The purpose of the study was to assess the relationship between inventory management on the financial performance of small and medium scale enterprises in Kampala Capital City Authority using Ferdsult Engineering services as a case. The chapter further presents the relationship between inventory management and financial performance of small and medium scale enterprises. The chapter has three sections. Sections one and two give the response rate and the demographic characteristics of the respondents respectively. The third section presents, analyses and interprets data on research questions and hypothesis which were obtained from questionnaires and interviews in line with study objectives. The hypotheses are tested using Pearson correlation coefficient to establish the existence of the relationship between variables.

4.2 Response Rate

The response rate for the study participants was computed to ascertain the extent to which the findings are representative. This is presented in Table 3.

Table 3: Response Rate to the Research Instruments

Category	Sample Size	Respondents	Response Rate (%)
Managers	5	5	100
Ferdsult staff	62	56	93.5
Total	67	61	96.1

Source: Primary Data

According to Table 3, the response rate was 96.1% for all the participant categories selected for the study. These were Ferdsult managers and staff. This was an excellent response rate basing on Amin (2004) who recommends 70% response rate for such studies using questionnaires and interviews. The interpretation from this findings is that the responses in this study representative in regard to the study population

4.3 Demographic Characteristics of Respondents

A total of 61 participants gave their views on inventory management and financial performance of small and medium enterprises in Kampala Capital City Authority using a case of Ferdsult Engineering Services Ltd. Various demographic characteristics of these respondents were obtained and are detailed in the following tables. These included gender, age, education and working experience.

4.3.1 Gender

Gender was an attribute that was considered among the demographic characteristics. The distribution of the respondents by gender is presented in Table 4.

Table 4: Distribution of Study Participants by Gender

Category	Female (f)	Percentage (%)	Male (f)	Percentage (%)
Top management	2	40	3	60
Ferdsult staff	15	29.4	36	70.6
Total	17	33.3	39	76.5

Source: Primary Data

According to Table 4 above, male participants constituted the majority with 76.5%, while the females were 33.32%. Males are more than females because of the African traditional

attitude towards girl child education and therefore one would expect fewer females than men in employment circles and more especially the engineering services.

4.3.2 Age

The age of the respondents was another demographic element obtained from the study participants. The distribution of the age of the study participants is presented in Table 5.

Table 5: Distribution of Study Participants by Age

Category	20-30	31-40	41-50	Above 50
Top management	1(20%)	1(20%)	3(60%)	0(0%)
Ferdsult staff	7(13.7%)	29(56.9%)	9(17.6%)	11(11.8%)
Total	8(14.2)	30(53.5%)	12(21.4%)	7 (12.5%)

Source: Primary Data

Table 5 shows, that majority of the study participants (53.5 %) were aged between 31 - 40 years. The least age bracket of the study participants were 12.5% in the age bracket of 50 years and above. There are more study participants between the 31-40 years age bracket because of the recruitment policy. These findings indicate that the study participants were mature and cut across the active age brackets in the service. This implies that the study participants were in position to give reliable information.

4.3.3 Education

Education was yet another demographic characteristic considered from the study participants. The distribution of the study participants by education level is presented in Table 6

Table 6: Distribution of Study Participants by Highest Level of Education

Category	Certificate/Senior Six	Diploma	Degree	Masters
Top management	0(0%)	1(0%)	3(100%)	1(0%)
Ferdsult staff	17(33.3%)	15(29.4%)	17(33.3%)	07(12%)
Total	17(30.3%)	16(28.5%)	20(35.7%)	8(5.4%)

Source: Primary data

Table 6 shows that majority of the study participants (35.7%) had the education level of bachelors while the least were those who had Masters of education with 5.4%. Fewer participants had master of education because it presents over qualification for engineering field services especially field services. The majority had bachelors because it is the basic qualification and there are many institutions in Uganda offering degrees. These findings indicate that the study participants had reasonably high level of education and thus able to contribute informed and reliable data to the study. Education has a bearing in interpreting financial performance of organizations.

Table 7 : Distribution of Respondents by Working Experience

Category	Less1yr	1-5yrs	6-10yrs	11yrs above
Top management	0(%)	1(20%)	2(40%)	2(40%)
Ferdsult staff	1(2%)	24(37.3%)	28(54.9%)	3(5.9%)
Total	(1.9%)	21(35.7%)	30(53.5%)	5(8.9%)

Table 7 shows that majority of the study participants 53.5% had a working experience of 6-10yrs while the least represented working experience was that of less than 1 year had 1.9% The distribution of working experience. Working experience has varying

connotation on interpretation of financial performance. This implies that the findings in the study are premised and informed by a wealth of varying experience.

4.4 Purchase Plan and Financial Performance of Ferdsult Engineering Services Ltd

The purpose of this objective was to establish the influence and relationship of purchase plan and financial performance of Ferdsult Engineering Services Ltd. The dimensions of purchase plan assessed included; ordering procedure and storage space. The findings are presented in the following tables.

Descriptive Statistics Data

This is presented using frequency counts, percentages, means and standard deviation. The findings are presented in table 8.

Table 8: Descriptive statistics of responses from Ferdsult Staff on Purchase Plan and Financial Performance

Items	Frequencies and percentage responses (%)						
	Mn	Std.	SA	A	NS	D	SD
Ordering procedure							
Inventory ordering policies enhance stability of firm material status	3.88	1.15	26(46.4%)	18(22.6%)	4(7.1%)	4(7.1%)	4(7.1%)
The amount of goods purchased determines firms performance status	3.74	1.61	26(46.4%)	22(39.3%)	0 (0%)	6(10.7%)	2(3.6%)
Appropriating time for goods ordering improves firms performance	3.7	1.22	30(53.6%)	11(19.6%)	3(5.4%)	0(0%)	12(21.4%)
The system of delivering goods influences the final costs/price of firms product	3.79	1.32	24(42.9%)	12(24.1%)	0 (0%)	16(28.6%)	4(7.1%)
The method of requisition for purchase of goods influences availability of firms materials	4.43	1.81	40(71.4%)	16(28.6%)	0 (0%)	0 (0%)	0 (0%)
Storage space							
Damalgage influences performance of firm	3.66	1.27	22(41.1%)	13(23.2%)	3(5.6%)	9(16.1%)	9(16.1%)
Storage management costs influence firm service delivery	3.89	1.33	24(42.9%)	15(25.8%)	3(5.4%)	8(14.3%)	6(10.7%)
Space taken up by long staying goods affects firm expenditure	3.61	.933	21(37.5%)	17(30.6%)	3(5.4%)	7(12.5%)	8(14.3%)
Long stocked goods holds back capital	3.89	1.33	26(46.4%)	16(28.6%)	4(7.1%)	4(7.1%)	6(10.7%)
Over stocked goods run obsolescent	4.05	1.60	44(78.6%)	12(21.4%)	0 (0%)	0 (0%)	0 (0%)

Source: Primary Data N=56, A =Agree, NS= Not Sure, D=Disagree, f=frequency, ob=Observed,

Table 8 shows that majority of the Ferdsult staff felt that inventory ordering policies enhance stability of firm material status. This was affirmed by 26(46.4%) who strongly agreed and 14(22.6%) who agreed. However, 4(7.1%) were not sure while 4(7.1%) disagreed and strongly disagreed with the view respectively. In addition, 26(46.4%)

strongly agreed and 22(39.3%) agreed that the amount of goods purchased determines firms performance status while none were not sure, 6(10.7%) disagreed and 2(3.6%) strongly disagreed. About whether appropriating time for goods ordering improves firms performance, 30(53.8%) and 12(21.4%) strongly agreed and agreed respectively while none disagreed and 11(19.6%) strongly disagreed while 3(5.4%) were not sure. Furthermore, majority of the Ferdsult staff 24(42.9%) and 12(24.1%) strongly agreed and agreed respectively that the system of delivering goods influences the final costs/price of firms product while only 16(28.6%) disagreed and 4(7.1%) strongly disagreed. More still, all the Ferdsult staff 40(71.4%) strongly agreed and agreed respectively that the method of requisition for purchase of goods influences availability of firms materials. The interpretation from these findings is that purchase plan of an institution influences financial performance through availability of goods and services.

Looking at storage space dimension, 22(41.1%) and 13(23.2%) strongly agreed and agreed respectively that damage influences performance of firm while 3(5.6%) were not sure 9(16.1%) disagreed and 9 (16.1%) strongly disagreed. On whether storage management costs influence firm service delivery, 24(42.9%) strongly agreed, 15(25.8%) agreed 3(5.4%) were not sure, 8(14.3%) disagreed while 6(10.7%) strongly disagreed. About whether space taken up by long staying goods affects firm expenditure 21(37.5%) strongly agreed, 17(30.6%) agreed while 3(5.4%) were not sure, 7(12.5%) disagreed and 8(14.3%) strongly disagreed. Further, about whether long stocked goods holds back capital, 26(46.4%) strongly agreed, 16(28.6%) agreed while 4(7.1%) were not sure and 4(7.1%) disagreed and 8(12.9%) strongly disagreed. All the Ferdsult staff agreed that

there was a over stocked goods run obsolescent. The interpretation from this finding is that appropriating a firms storage space has a bearing on financial performance of Ferdsult.

In addition, the results show that the means were close to the maximum and above average. This implies that participants were in agreement that inventory management influences financial performance of SMEs and Ferdsult in particular. The standard deviation shows low variations from the mean. This implies that the respondents did not vary much on the influence of inventory management on financial performance of SMEs.

Findings from Interviews

All the key informants 5/5 (100%) affirmed that Ferdsult had a purchase plan which they followed before ordering for goods and services. They affirmed that this followed a procedure to avoid duplication of purchases and overstocking of items. They revealed that this followed a requisition from the field persons submitted to the store person who ascertains that the requested items are out of stock or below minimum levels and forwards the request to technical people and finally the fiancé department to release the funds for the purchases to the procurement department. Majority of the key informants affirmed that the systems in procurement enlisted cost savings, holding up capital in over shopping and stocking, minimized wastage of resources and finances

Again 3/5 (75%) mentioned that inventory ordering policies enhance stability of firm material status. One of the participant remarked that

you see, the system we have in place save the company to be caught off guard in material status. We hardly run out of stock of items un les the problem/shortage is global wide. This makes our work always to continue as programmed. KI Ferduslt Engineering Services Ldt

Another participant emphatically mentioned that

Ya, the purchase policy here, compare commodity and price. It is thus very difficult to inflate prices of the commodities. The policy has attracted value for money and “air purchase are not possible. There is system of delivering goods here which is crossed by different players. KI Ferduslt Engineering Services Ldt

The key informants affirmed that purchase plan was vital in inventory management. This they attributed that the survival of the firm depends entirely on purchases which are inputs from which the firm will get profits. They mentioned that if a firm errors in the purchase policy, the financial performance may be affected. To supplement this the records indicated systems used in purchase plan for example requisition forms, order forms, invoices and delivery forms were all found in records.

The participants further revealed that purchase plan and policy helps to maintain store space and avoid congestion. One participant mentioned that:

when the purchase plan is haphazard, and you keep on piling goods and services with a streamlined , it becomes difficult to know the goods you have in store, some of them will expire, you continue to purchase same item wasting resources which in store. The congestion once allowed in store leads to breakage and others loose value”. KI Ferduslt Engineering Services Ldt

In addition, the participants mentioned that whenever there is a lot of materials stored either deliberately or by error, it increases on expenditure because they have to hire extra guards. Some of the materials may not fit in the stores and have to keep out side where conditions are not favorable

Testing Hypothesis

The null hypothesis was tested using Pearson correlation coefficient to establish the relationship between inventory management and financial performance. In addition, R was squared to obtain coefficient of determination to ascertain the extent of covariance of the predictor independent variable on the dependent variable. The findings are presented in the following tables.

Table 9: Correlation between purchase plan and financial performance of Ferdisult Engineering Services Ltd

		Purchase plan	Financial performance
Financial Performance	Pearson Correlation	1	.501*
	Sig. (2-tailed)		.501
	N	56	56
Purchase Plan	Pearson Correlation	.00*	1
	Sig. (2-tailed)	.501	
	N	56	56

*. Correlation is significant at the 0.05 level (2-tailed).

The findings in the table 9 show the correlation between purchase plan and financial performance of SMEs in KCCA at Ferdsult engineering services Ltd. The results indicate a moderate R (.501), with statistically significant positive correlation $p \leq 0.05$ (.501). This implies that inventory management is positively related with financial performance. To this end, the null hypothesis that there is no significant relationship between purchase plan and financial performance of Ferdsult Engineering Services Ltd. was rejected. The findings indicate that when inventory management improves, there will be improvement in financial performance Ferdsult engineering services Ltd.

A regression analysis was further conducted to ascertain the percentage of the influence and the results are shown in table 9.

Table 10 : Model Summary of purchase plan and financial performance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.501 ^a	.0251	.24	.482

a. Predictors: (Constant), Purchase Plan

The Model Summary in the table 10 reveals that all the other predictors of Ferdsult financial performance were held constant and the relationship was explained by purchase plan. A correlation coefficient (R), using the predictor purchase plan is .501 and the R^2 is equal to .251. The R square value gives the proportion of variance between the two variables (Amin, 2005). This implies that 25.1% (.251*100%) variations in financial performance of Ferdsult engineering services is explained by purchase plan, while the remaining percentage of variations can be explained by other factors. The interpretation from this finding is that purchase plan contributes reasonably to financial performance given the percentage above.

4. 5: Stock Level Maintenance and Financial Performance

The purpose of the objective was to establish the influence and relationship of stock level maintenance and financial performance of SME. The dimensions of stock level maintenance assessed were customer service and demand forecasting. These were

assessed using descriptive statistics, qualitative data and inferential statistics using Pearson(r). The findings are presented in the following tables.

Descriptive Statistics data presentation

These were presented using frequency counts, percentages, mean and standards deviations. The findings are presented in following tables.

Table 11: Descriptive statistics of responses from Ferdsult staff on Stock Level maintenance and Financial Performance

Items	Frequencies and percentage responses =f (%)						
	Mea	Std	SA	A	NS	D	SD
Customer service							
Safety stock ensures continuity with customers/services	3.9	1.34	33(58.9%)	11(19.6%)	5(8.9%)	4(7.1%)	3(5.4%)
Maintaining necessary stock increases sales	4.9	.32	31(55.4%)	22(39.3%)	1(1.8%)	1(1.8%)	1(1.8%)
Stock level influence customer retention	4.8	.436	24(42.9%)	15(26.8%)	1(1.8%)	9(16.1%)	7(12.5%)
Stock availability influences customer recommendation by word of mouth	3.6	.941	23(41.1%)	19(33.9%)	4(7.1%)	4(7.1%)	6(10.7%)
Demand forecasting							
Inventory stock knowledge influences selective stocking	4.2	1.7	13(23.2%)	33(58.9%)	1(1.8%)	3(5.4%)	6(10.7%)
History of inventory guides over year stock maintenance /shopping	3.8	1.7	32(57.1%)	22(39.3%)	4(7.1%)	0 (0%)	0 (0%)
Evidence forecasts help to meet firm requirements	4.2	.49	35(62.5%)	21(37.5%)	0 (0%)	0 (0%)	0 (0%)
Anticipation places the firm in a better position to meet performance all the time	4.1	.77	56(100%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)

Source primary Data n=56, A= Agree, NS=Not Sure, D=Disagree, f=frequency, ob=observed, Std= Standard Deviation, Mn Mean

Table 11 shows that 33(58.9%) and 11(19.6%) strongly agreed and agreed respectively that safety stock ensures continuity with customers/services, 5(8.9%) were not sure while 4(7.1%) disagreed and 3(5.4%) strongly disagreed. About whether maintaining necessary stock increases sales 31(55.4%) strongly agreed and 22(39.3%) agreed while 1(1.8%) were not sure, disagreed and strongly disagreed. When the Ferdsult staff were asked whether stock level influence customer retention (24.9%) strongly agreed and 15(26.8%) agreed while 1(1.8%) were not sure, 9(16.1%) disagreed and 7(12.5%) strongly disagreed. On whether the stock availability influences customer recommendation by word of mouth 23(41.1%) strongly agreed and 19(33.9%) while 4(7.1%) were not sure, 4(7.1%) disagreed and 6(10.7%) strongly disagreed. the interpretation from these findings is that availability of services through inventory management influences customers and consequently financial performance.

Looking at demand forecasting of stock level maintenance, 13(23.2%) strongly agreed and 33(58.9%) agreed that inventory stock knowledge influences selective stocking while 1(1.8%) were not sure, 3(5.4%) disagreed and 6(10.7%) strongly disagreed. About whether history of inventory guides over year stock maintenance /shopping 32(57.1%) and 22(39.3%) strongly agreed and agreed respectively, while 4(7.1%) were not sure and none disagreed and strongly disagreed respectively with the view. About whether evidence forecasts help to meet firm requirements 35(62.5%) and 21(37.5%) strongly agreed and agreed respectively with the view. About whether anticipation places the firm in a better position to meet performance all the staff 56(100%) strongly agreed.

The general interpretation on the dimension is that understanding the demand of goods and services over time influences financial performance. The general interpretation on the objective is maintaining an appropriate stock is crucial for financial performance.

The findings further show that all the means are high and above the average implying that the respondents agreed that stock level maintenance influences financial performance of SMEs in KCCA. Again the standard deviations don't show paramount deviations. This indicates that the respondent's views don't vary between stock level maintenance and financial performance.

Data from Interviews

In order to obtain extensive data on the objective, the Key Informants were interviewed to give their views on the subject. All the Key Informants 8/8(100%) mentioned that stock level maintenance was critical in the performance of the company. They mentioned that this minimized production interruptions and allowed continuity with customers. They further realized that this had enable the company to meet contract schedule appropriately which improved the financial returns and performance.

Again the key informants mentioned that retaining appropriate stock in inventory had made the company more reputable and this made it win various contracts. This was attributed to ability to handle and meets contract needs at any give time. They mentioned that safety stock was a corner stone and master key for Ferdsult Engineering services Ltd. They mentioned that is that made a difference between Ferdsult and other companies. One participant categorically asserted that:

some companies have to wait to be paid in order to make purchases or have to wait to win a contract and then begin to look around for the possible items to service the contract. For Ferdsult it is ever ready for any impending contract and this has enabled it to grow” KI participant Ferdsult

In addition, the participants mentioned that maintaining an appropriate stock was the reason for inventory management. They mentioned that overstocking would lead to damage and proliferate. While not stocking would lead to crisis, they mentioned that keeping in some stock help against inflation, general shortages in the market and delays in the purchases in case there are urgent contracts to be undertaken.

Testing of Research Hypothesis

The hypothesis was tested using Pearson correlation coefficient. Coefficient of determination (r^2) was calculated to determine the extent of the relationship. The findings are presented in table 12.

Table12: Showing Correlation between stock level Maintenance and financial performance of Ferdsult Engineering Services Ltd

		Stock level maintenance	Financial Performance
Stock level maintenance	Pearson Correlation	1	.533*
	Sig. (2-tailed)		.020
	N	56	56
Financial Performance	Pearson Correlation	.533*	1
	Sig. (2-tailed)	.020	
	N	56	56

*. Correlation is significant at the 0.05 level (2-tailed).

The findings in the table 12 show the correlation between stock level maintenance and financial performance of SMEs in KCCA at Ferdsult. Stock level maintenance indicate a moderate R (.533), with statistically significant positive correlation $p \leq 0.05$ (.533) with financial performance of Ferdsult engineering services . This implies that stock level maintenance is positively related with financial performance of Ferdsult engineering services. Therefore the null hypothesis that stated that there is no significant relationship between maintaining stock levels and financial performance of Ferdsult Engineering Services Ltd. was rejected. The interpretation from this finding is that when stock level maintenance improves, there will also be improvement in financial performance of Ferdsult Engineering Services.

A regression analysis was further conducted to ascertain the percentage of the influence and the results are shown in table 13.

Table13 Model Summary of stock level maintenance and financial performance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.533 ^a	.284	.273	.392

a. Predictors: (Constant), stock level maintenance

The Model Summary table 13 reveals that all the other predictors of financial performance at Ferdsult engineering services were held constant and the relationship was explained by stock level maintenance . A correlation coefficient (R), using the predictor; stock level maintenance, is .533 and the R^2 is equal to .284. The R square value gives the proportion of variance between the two variables (Amin, 2005). This implies that 28.4% (.284*100%) variations in financial performance of Ferdsult engineering services is

explained by stock level maintenance while the remaining percentage of variations can be explained by other factors. The interpretation from this finding is that when stock level maintenance contributes a reasonable proportion to financial of Ferdsult engineering services

4.6 Stock record keeping and financial performance

The purpose of the objective was to establish the relationship and influence stock record keeping and financial performance of SME. The dimensions of stock record keeping assessed were safety control and accountability . These were assessed using descriptive statistics, qualitative data and inferential statistics using Pearson(r). The findings are presented in the following tables.

Descriptive Statistics data presentation

These were presented using frequency counts, percentages, mean and standards deviations. The findings are presented in table that follow.

Table 14: Descriptive statistics of responses from Ferdisult staff on Stock record keeping and financial performance

Items			Frequencies and percentage responses =f (%)				
	mean	Std.	SA	A	NS	D	SD
Stock Record Keeping							
Safety control							
Inventory record minimizes leakage	4.15	1.13	29(51.8%)	22(41.1%)	5(8.9%)	0 (0%)	0 (0%)
Inventory management reduces duplication of purchases	4.01	1.28	32(57.1%)	11(18.6)	5(8.9%)	5(8.9%)	2(3.6%)
Recording inventory minimizes inflating prices	4.58	.946	18(32.1%)	24(42.9)	4(7.1%)	7(12.5%)	3(5.4%)
Inventory records tracks flow of goods and services to service points	4.11	1.21	31(55.4%)	23(41.1%)	5(8.9%)	5(8.9%)	2(3.6%)
Material record informs management on quality materials	4.82	.69	28(50%)	19(33.9%)	3(5.4%)	0(0%)	6(10.7%)
Accountability							
Records facilitate reconciliation of transactions	4.42	1.33	15(26.8%)	29(51.8%)	3(5.4%)	4(7.1%)	3(5.4%)
Records give basis for price comparison	4.82	.69	28(50%)	19(33.9%)	3(5.4%)	0(0%)	6(10.7%)
Inventory records give evidence for stock performance	3.76	1.48	56(100%)	0 (0%)	00 (0%)	0 (0%)	0 (0%)
Inventory records help in expenditure management	4.62	.48	24(42.9%)	14(25%)	3(5.4%)	7(12.5%)	8(14.3%)

Table 14 shows that 29(51.8%) and 22(41.1%) strongly agreed and agreed respectively that Inventory record minimizes leakage, 5(8.9%) were not sure. About whether Inventory management reduces duplication of purchases 32(57.1%) strongly agreed and 11(18.6) agree while 5(8.9%) were not sure and disagreed and strongly disagreed respectively. On whether recording inventory minimizes inflating prices 18(32.1%) and

24(42.9) strongly agreed and agreed while 31(55.4%) and 23(41.1%) strongly agreed and agreed respectively that teachers were paid for invigilating examinations. All the Ferdsult staff agreed that inventory records tracks flow of goods and services to service points. Finally 28(50%) strongly agreed, 19(33.9%) agreed that Material record informs management on quality materials. On the other hand 3(5.4%) were not sure, none disagreed and 6(10.7%) strongly disagreed that Material record informs management on quality materials. The interpretation from this finding is that record keeping is recognized as instrumental in inventory management

Looking at accountability dimension, 15(26.8%) and 29(51.8%)strongly agreed and agreed that Records facilitate reconciliation of transactions while 3(5.4%) were not sure, 4(7.1%)disagreed and 3(5.4%)strongly disagreed. About whether records give basis for price comparison, 28(50%)and 19(33.9%)strongly agreed and agreed respectively with view while 3(5.4%) were not sure, none disagreed and 6(10.7%)strongly disagreed. When the Ferdsult staff were asked whether inventory records give evidence for stock performance ,allpross 56(100%) strongly agreed About whether inventory records help in expenditure management

24(42.9%) and 14(25%) strongly agreed and agreed respectively while 3(5.4%) were not sure 7(12.5%)disagreed and 8(14.3%)strongly disagreed. The interpretation from this finding is that recording keeping facilitates accountability at Ferdsult engineering services.

The findings further show that all the means are high and above the average implying that the respondents agreed that stock record keeping influences financial performance at

Ferdsult engineering services. Again the standard deviations don't show paramount deviations. This indicates that the respondent's views don't vary between stock record keeping and financial performance of Ferdsult engineering services.

Data from Interviews

In order to obtain extensive data on the objective for purposes of triangulation, the Key Informants were interviewed to give their views on the subject. All the Key Informants emphatically affirmed that it was record keeping that made the company.. they categorically revealed that record keeping was the master card in firm inventory and it is the same that showed the position of the company over time.

Again all the Key Informants 8/8(100%) mentioned that record keeping tremendously checked leakage and safety of the company materials. One participant mentioned that"

It is generally difficult for workers to steal company property once in inventory. Even one manages to do so, it will at one time be discovered when reconciling inventory at the end of inventory period. At least some people like the store person has to account for the missing items. So this is a serious check that even intentioned thieves would take caution. KI Ferdsult .

The Key Informants also mentioned that inventory management reduces duplication of services as it is able to track flow of goods and services in service chain. They bluntly affirmed that records facilitate reconciliation of transactions in the service chain at all points. On participant mentioned that item performance can easily be singled out". Another one added that recoding helps the firm to calculate profit and loss account". Yet another one added that record keeping helps the company to evaluate itself as regards progress over any period of interest". The interpretation of the findings from KI on record keeping

indicate that Ferdsult Engineering Services Ltd kept inventory records and that the KI are fully aware of the importance of inventory recording in facilitating firm performance.

The records indicated that there was book keeping at Ferdsult. The goods that enter inventory are recorded and those that move out and destination and who signs are evident. The interpretation from this finding is that at the end of the day all the stock that entered inventory can easily be accounted for.

Tests of Research Hypothesis

The hypothesis was tested using Pearson correlation coefficient. Coefficient of determination (r^2) was calculated to determine the extent of the relationship. The findings are presented in table 15.

Table15: Showing Correlation between stock level Maintenance and financial performance of SME

		Stock record keeping	Financial Performance
Stock record keeping	Pearson Correlation	1	.522*
	Sig. (2-tailed)		.000
	N	56	56
Financial Performance	Pearson Correlation	.522*	1
	Sig. (2-tailed)	.020	
	N	56	522

*. Correlation is significant at the 0.05 level (2-tailed).

The findings in the table 15 show the correlations between Stock record keeping and financial performance of Ferdsult engineering services. Stock record keeping indicate a moderate R (.522), with statistically significant positive correlation $p \leq 0.05$ (.522) with financial performance at Ferdsult engineering services. This implies that stock record

keeping is positively related with financial performance. Therefore the null hypothesis that stated that there no significance relationship between stock record keeping and financial performance at Ferdsult engineering services was rejected. The interpretation from this finding is that when stock record improves, there will also be improvement in financial performance.

A regression analysis was further conducted to ascertain the percentage of the influence and the results are shown in table 16.

Table 16: Model Summary of stock record keeping and financial performance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.522 ^a	.272	.262	.392

a. Predictors: (Constant), stock level maintenance

The Model Summary table 16 reveals that all the other predictors of financial performance at Ferdsult were held constant and the relationship was explained by stock record keeping . A correlation coefficient (R), using the predictor; stock record keeping, is .522 and the R^2 is equal to .272. The R square value gives the proportion of variance between the two variables (Amin, 2005). This implies that 27.24% (.272*100%) variations in financial performance at Ferdsult engineering services is explained by stock record keeping while the remaining percentage of variations can be explained by other factors. The interpretation from this finding is that stock record keeping plays reasonably a substantial role in financial performance. The general interpretation on the entire objective is that record keeping as regarded as an important element of inventory at

Ferdsult Engineering services Ltd and contributes enormously to financial performance through the systems it ushers in place.

CHAPTER FIVE

SUMMARY, DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The study investigated the relationship between inventory management and financial performance of SMEs using Ferdsult Engineering Services Ltd as a case study. This chapter presents the summary and discussion of the study findings, draws conclusions and recommendations. The chapter is presented according to the study objectives.. Areas for further research are suggested at the end.

5.2 Summary

5.2.1 Purchase Plan and Financial Performance

The study findings showed that there was a positive, significant and moderate relationship between purchase plan and financial performance of Ferdsult Engineering Services Ltd . The findings showed that inventory ordering policies enhance stability of firm material status, that the amount of goods purchased determines firms continuity performance status and that appropriating time for goods ordering improves availability firms products and performance. The findings further showed that the system of delivering goods influences the final costs/price of firms product and that the method of requisition for purchase of goods influences availability of firms materials,

The study results revealed that damalage influences performance of the firm, that storage management costs influence firm service delivery and that space taken up by long staying

goods affects the firm expenditure. In addition, the results indicated that long stocked goods holds back capital and that stocked goods run obsolescent.

5.2.2 Stock Level Maintenance and financial performance

The study findings showed that there was a positive, significant and moderate relationship between stock level maintenance and financial performance at Ferdsult engineering services Ltd. The findings showed that safety stock ensures continuity with customers/services while maintaining necessary stock increases sales and that stock level influence customer retention. In addition, findings revealed that stock availability influences customer recommendation by word of mouth.

It was established from the field that inventory stock knowledge influences selective stocking while history of inventory guides over year stock maintenance /shopping and that evidence based forecasts help to meet firm requirements. The findings further showed that anticipation places the firm in a better position to meet performance all the time.

5.2.3 Stock Record Keeping and financial performance

The study findings showed that there was a positive, significant and moderate relationship between stock record keeping and financial performance at Ferdsult engineering services.

The study results showed that inventory record minimizes leakage, that recording inventory minimizes inflating prices and that inventory records tracks flow of goods and services to service points. Finally, the findings showed that material record informs management on quality materials required by the firm.

The field survey findings indicated that records facilitate reconciliation of transactions, that records give basis for price comparison and that inventory records give evidence for stock performance. It was also ascertained that inventory records help in expenditure management.

Discussion

5.3.1 Purchase Plan and Financial Performance

The study findings showed that there was a positive, significant and moderate relationship between stock level maintenance and financial performance. The purchase plan informs the company and gives it a systems of when to order and how much to order. These findings are in agreement with Volinger (2007) who mentions that purchase plan enhances profitability of a company as it into account ordering procedure and storage costs. The findings further agree with Wiersema, (2007) who reports that the purchase plan spells out when, how and the volume of goods and services to purchase. This makes the company to deploy its resources optimally and profitable.

The findings showed that inventory ordering policies enhance stability of firm material status. This implies that firm will be ready with required materials need at any one time to utilize. These findings are in agreement with Volinger(2007) and Matheur (2007) who found significant positive relationship between established ordering procedure of goods and financial performance among small scale enterprises. Established ordering procedure inform the company when to make purchases that are related to production which enhances proper utilization of resources and consequently improved financial performance.

The findings showed the amount of goods purchased determines firms performance status. These findings are in agreement with Rabinovich, Martin and Philip (2003). and Ptak & Smith (2011) who found that firms with ordering appropriation were more profitable and stable than firms that had haphazard procedures. This implies that firms with proper order procedures don't fluctuations of materials and are thus assured of continuity in service provision which is consequent to financial performance.

The field study findings showed appropriating time for goods ordering improves firms performance. These findings are in agreement with Narayana (2004) who affirms that appropriating purchase remains important. This is because smaller purchasing lots imply more work in purchasing department. This can give inventory management time to settle other issues in inventory like reconciling the same. The findings further agree with Volinger(2007) and Matheur (2007) who found that small appropriations limit firms to get the benefits of quantity discount. Firms that make bulky purchase enjoy discounts of volume which increases the firms savings.

The survey results showed that the system of delivering goods influences the final costs/price of firms product. These findings are in agreement with Hopp (2004) underscored the importance ordering procedure in manufacturing and service operations citing that if a company purchases insufficient quantities of an item or the wrong item it may be unable to meet contract obligations to supply products on time. The findings further agree with Ptak and Smith (2011) who found that where a company purchases excessive quantities of an item, money is wasted - the excess quantity ties up cash while it remains as stock and may never even be used at all

It was established from the field that the method of requisition for purchase of goods influences availability of firms materials. These findings are in agreement with Wiersema, (2007) who notes that a purchasing professional must understand inventory management principles to remain valuable. It is important to know how much inventory and when to order for such inventory. The system in place detailing order forms, delivery note and receipts form systems that make the inventory cost effective in regard to financial performance.

The field study findings showed that damage influences performance of firm. Long kept goods and services experience wastage and loose value which is consequent to financial loss. These findings are in agreement with Joseph and Chan (2005) found that those businesses that adopted supply chain concept in storage had a shorter production time and lower stock inventory than their competitors by 50% and with time product to market faster than their competitors by 17%.

The field study findings showed that Storage management costs influence firm service delivery. These findings are in agreement with Bokpin, (2008) who found that holding costs affected financial performance of firms. These are carrying costs that result from maintaining the inventory. Inventory in excess of current demand frequently means that its holder must provide a place for its storage when not in use. This could range from a small storage area near the production line to a huge warehouse or distribution center. A storage facility requires personnel to move the inventory when needed and to keep track

of what is stored and where it is stored. If the inventory is heavy or bulky, forklifts may be necessary to move it around.

The field study findings showed that space taken up by long staying goods affects firm expenditure. The capital would otherwise have been invested in other sectors firm for multiplier effect is held up. These findings are in agreement with Bent (2005) who report that the cost of holding inventory was enormous and thus advocates for minimum inventory. The findings further agree with, Charlock (2003) who found that firms that applied Just-in-time (JIT) philosophy that advocates the lowest possible levels of inventory had levels of performance than those that held big inventories. Firms need only keep inventory in the right quantity at the right time with the right quality even to "zero inventory"

The field study findings showed that long stocked goods holds back capital stocked goods for long time run obsolescent and out of fashion. These findings are in agreement with Wingwon and Piriyakul (2010) who reports that in order to generate mutual benefits and strengthen the business alliance of the firm, it needs to focus on raw materials, products, the production distribution plan and the storage data base linkage with the supply chain. This linkage of the storage and supply / service chain helps to eliminate the possibility of stocking products for a long time.

5.3.2 Stock Level Maintenance and Financial Performance

The field survey findings indicated that appropriating stock in inventory was paramount in the financial performance of Ferdsult. These findings are in agreement with Matheur (2007) who mentions that there should minimum stock that an operating firm must

maintain in order to operate sufficiently. This is normally called the safety stock. This facilitates the firm to deliver in time and forecast demand. This also makes the firm able to meet its functional obligations consequently enhancing financial performance.

The field study findings showed that safety stock ensures continuity with customers/services in the market sphere. These findings are in agreement with Eloranta and Raisanen (1988) who argue that one of the reasons for keeping reasonable amount of inventory items has been related to customer service. This is intended to ensure continuity and minimize customer switching off costs. Safety stock implies that work of the company continues and customers can hardly experience scarcity that will drive them to other firms. This makes the firm more profitable as it meets the customers demands all the time.

The field study findings showed that maintaining necessary stock increases sales. This is because the firm is able to make sales all the time and its influence will all the time be felt in the market without unnecessary fluctuations. These findings are in agreement with Baumol and Blinder (2008) who report that intended inventory investment which occurs when a firm expects that sales will be high enough is health for firms performance. This addresses short-term fluctuations in the timing of customer purchases and curbs the risk of temporarily being unable to supply the product when a customer demands it..

The field study findings showed that stock level influence customer retention. When the customers find the goods and services all the time, the chances for them to switch to other products are rather minimal. These findings are in agreement with Comin and Mulani (2004) who inventory levels lead to increased customers and firm-level sales increase

due to higher product variety, shorter product life cycles. Inventory stock establishes stable and firm relationship with customers and this may not easily be broken.

The field study findings showed that inventory stock knowledge influences selective stocking. This informs the management the right products to be stocked which are on demand for the work in progress. These findings are in agreement with Charlock (2003) who found that in order for a firm to stay in business, it must have the products that the customer wants on hand when the customer wants them this can be achieved by selective inventory premised on facts otherwise the firm will find itself overstocking unnecessarily in order to meet this arrangement. The findings further agree with Macbenit (2005) who reports that inventory is used to smooth demand requirements in a market where demand is somewhat erratic. Inventory allows the firm to maintain a steady rate of output thus avoiding the cost of hiring and training new personnel.

The field study findings showed that history of inventory guides over year stock maintenance /shopping these findings are in agreement with Bargal(2008) found that inventory records were a critical score card in anticipating demand using previous inventory history. The history of inventory for example over the year tells the firm management the type and quantity of inventory to have at hand.

The field study findings showed that evidence forecasts help to meet firm requirements these findings are in agreement with Moore (2006) who notes that forecasting is a necessary assumption in all inventory control. Without estimating customer demand, inventory cannot be controlled and shortage costs are practically inevitable. The biggest hurdle faced with forecasting is that forecasting is predominately subjective in nature;

assumptions are drawn, but forecasts rarely involve quantitative fact. It is under this background that Longenecker et al.(2006) found that SMEs are more vulnerable to managerial weakness as a result of a lack of professional staff who can make inventory planning appropriately..

The field study findings showed that anticipation inventory places the firm in a better position to meet performance all the time. These findings are in agreement with Liedholm et al. (1994) and Paul (2001) who indicate that a large number of small enterprises fail because of non-financial reasons such as a lack of forecasting or planning skills. The findings further agree with Cronje et al. (2003) who stipulates that one of the primary causes of failure in a small enterprise is poor management. Management is a critical component in inventory dynamics for a firm to enhance financial profitability.

5.3.3 Stock Record Keeping and Financial Performance

The field survey findings showed that stock record keeping was crucial in financial performance of Ferdisult Engineering Services limited. These findings are in agreement with Manil (2004) who mentions that stock record keeping can help firms to have grip of inventory status, set projections and goals for the business. Proper record keeping helps to compare present financial status to previous year records. This in turn help to analyze firm growth rate. The record keeping informs the management to check leakage stock and informs basis for accountability of the firm.

The field findings indicated that inventory record minimizes leakage of goods in inventory. These findings are in agreement with Megir (2009) who found that inventory management reduced safety by 70% in companies especially where inventory was computerized and serialized. Once the goods are registered in inventory, the system has to account for them at the end of inventory period. This implies that all goods and services in the inventory have streamlined system which leads to financial performance. The computerized camera system also records all the transactions in the inventory store and therefore any unauthorized transaction may be tracked.

The field findings indicated that recording inventory minimizes inflating prices. This is because inventory allows product and price comparison. These findings are in agreement with Mousa (2003) who mentions that inventory records known cost and a price list is developed for anticipated costs on items in the general category of supplies and services. This gives possible general economic position that can often be comparable. The staff in the inventory and budget execution are therefore accountable for control throughout the fiscal year. The findings further agree with Kelvin (2003) Miskel (2007) and Rabin et al (1996) who categorically reveal that with inventory management, expenditure patterns are easily examined and compared to budget plans. This gives impetus for corrective action, where necessary.

The field findings indicated that Inventory records tracks flow of goods and services to service points these findings are in agreement with Koven (2003) and Bartle et al (2008) who mention that inventory serves as the source documents for transactions where comparison of the revenue and expense can be articulated. The findings further agree

with Uche (2004) and Akinsulire (2006) who find that inventory systems introduce corporate culture in companies there by reducing safety and leakage challenges.

The field findings indicated that Material record informs management on quality materials these findings are in agreement with Moser (2002) affirms that inventory management is the key to limit such leakages. However, Musgrave (1998) mentions that all depends on transparency and integrity

The field findings indicated that inventory records facilitate reconciliation of transactions of the firm. These findings are in agreement with Brigham, Gapenski & Ehrhardt (1999) and Pinson et al, (1993) who mention that from properly kept books, a person can at any time ascertain: what property he possesses, what amounts he owes and to whom, what profit he has made or what loss he has sustained for any given period and the manner in which the profit and loss has risen, and the amount of his capital or deficiency. If no records are kept, it will be difficult to find accurate net profit and performance of the firm.

The field findings indicated that records give basis for price comparison. these findings are in agreement with Jaakkola (2006) and Kim (2006) who report that inventory management allows to able to define or determine the cost of goods sold during the certain period. This is premised on knowledge of beginning inventory, the amount of purchases, and the ending inventory amounts. This is due to availability and use of periodic and perpetual inventory. . the findings further agree with. Knight (2000) and Amber et al (2004) who report that a firm can match the inventory item sold with a

specific purchase. In these cases the actual cost of the inventory item can be identified and the cost of goods sold accurately reflects the cost of sales.

The field findings indicated that inventory records give evidence for stock performance. These findings are in agreement with Knight (2000) who found that cost flow assumption generates current inventory costs on the balance sheet and outdated inventory costs on the income statement. . Adopting FIFO assumes that the first inventory purchased is also the first inventory that leaves the store when units are sold. In practice it is very likely that FIFO is more representative of actual physical inventory flow than the other cost flow assumptions. Thus, regardless of whether prices are rising or falling the balance sheet inventory number reflects the inventory purchased or produced last. The income statement cost of goods sold reflects the inventory purchased or produced first.

The field findings indicated that inventory records help in expenditure management these findings are in agreement with. Peacock (1985) who in his investigation of the effects and causes of 1,000 proprietary company failures in South Australia during ten years found that 4.6 percent of failures had inadequate or no accounting records. He concluded that there was a minimal effect of accounting records on the success or failure of businesses of the proprietary companies and recommended for further research on causes of business failures. Therefore records a play a central role in expenditure management of the firm.

5.4 Conclusions

On the basis of study findings, summary and the discussion, the following conclusions were made in line with the study objectives:

5.4.1 Purchase Plan and Financial Performance

The study concludes that purchase plan is important in the financial performance of Ferdsult Engineering Services Ltd. This is attributed to ordering procedures which enhance stability for continuity which improves availability of the services and that inventory minimizes costs and challenges associated with storage as inventory targets appropriate stock.

5.4.2 Stock Level Maintenance and Financial Performance

The study also concludes that maintaining safety stock makes and helps SMEs and Ferdsult in particular to break even in financial performance. Safety stock increases sales and knowledge of inventory influences selection of quality products that are on demand. In addition, inventory helps the firm to come up with perfect and accurate anticipation inventory and forecast demand which influence positively financial performance.

5.4.3 Stock Record Keeping and Financial Performance

The study further concludes that inventory record keeping is crucial in financial performance of the Ferdsult. It minimizes leakage and fosters for proper accountability. Inventory records fosters for management to easily make a follow up for reconciliation of all the goods that were purchased. This influences optimal and full deployment of the resources for organizational profitability.

5.5 Recommendations

On the basis of the above discussion and conclusions, the following recommendations were made in line with study objectives:

5.5.1 Purchase Plan and Financial Performance

The study recommends that SMEs managers, proprietors and directors should develop and adopt usage of purchase plans in their transactions so as to have coordinated procurement which will eliminate duplication and double purchasing. This can be done by initiating a system that details stock at hand and the quantity requested per the time a purchase has to be done.

5.5.2 Stock Level Maintenance and Financial Performance

The study also recommends that SMEs should establish an informed basis to reach an appropriate safety stock to be kept in inventory at any one given time. This can be arrived at depending on demand and the time it takes to produce a certain quantity of goods over a certain period of time.

5.5.3 Stock Record Keeping and Financial Performance

The study further recommends that SMEs should have a streamlined and clear system of record keeping that facilitate reconciliation of all firm transactions throughout the inventory tenure. This can be achieved by taking and accounting for all the inventory that gets in and out of store, this can be strengthened by computerizing inventory records.

5.6 Areas for further research

Due to limited time to conduct this research, some areas remained un covered. This study therefore suggest further research on causes of failure among SMEs and role of leadership in the financial performance of SMEs .

5.7 Contributions to the body of knowledge

The study has empirically proven that there is a significant, moderate and positive relationship between inventory management and financial performance of SMEs and Ferdult in particular. Basing on the empirical findings presented in chapter four, the conclusions and recommendations, organizations can implement good systems and practices that would help to enlist financial performance. The qualitative and quantitative data can act as a basis for comparison with other studies in other parts of the world and can be used for further analyses. The findings can stimulate further research in other parts of the country and sectors of the economy.

5.8 Limitations of the study

Classified information

Business people treat their profitability information as classified and quite often they are not willing to disclose such information because of business rivalry and avoiding taxes.

This was addressed by promising confidentiality and confirming that information would be treated in aggregate for research purposes.

Concealing information

There is a practice of companies and business firms to conceal information about their business. This was handled by establishing a rapport with company managers.

Busy schedule of staff

Firm staff are often busy handling customers and may not get time to respond to the questionnaires. Others were in the field far away from company headquarters. This will be handled by making appropriate appointments using phone calls and exhibiting maximum patience.

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