

INFLUENCE OF INVENTORY MANAGEMENT PRACTICES ON ORGANIZATIONAL PERFORMANCE IN RETAIL SECTOR IN KENYA: A SURVEY OF LARGE RETAIL STORES IN KISII TOWN

Emily Nyanchama Nyang¹, Professor Willy Muturi²

¹Masters Student, Jomo Kenyatta University of Agriculture and Technology, Nairobi, Kenya.

²Lecturer, Jomo Kenyatta University of Agriculture and Technology, Nairobi, Kenya

Abstract: The primary purpose of this study was to find out the extent to which inventory management practices influence organizational performance in the Kenyan retail sector, specifically targeting the large retail stores in the county of Kisii. The specific objectives of this research project research are to determine the influence of inventory auditing, inventory demand forecasting, automation, and inventory turnover on organization performance in the retail stores of Kisii County. The study took place in large retail stores in Kisii town. The survey design methodology was adopted for the study with a target population of 810 large retail stores drawn from different segments of the retail sector. Sample selection used stratified random sampling based on the size of the retail stores. The findings thereafter indicated that 97% of the respondents were in agreement that stock taking procedures have disclosed the possibility of fraud pilferage theft and loss thus leading to savings. 94% agreed that stock taking facilitates comparison of physical stocks with stock records. 92% of the respondents were in agreement that records have helped in preparation of financial statements which show the performance of their business overtime. 69 % of the respondents agreed that at some predetermined time they count inventory by use of periodic cycle counting. The findings further indicated that 39% of the respondents were in agreement that they have advanced forecasting tools that enable improvement in cost reduction, 48% agreed that they have put in place correct forecasting methods thus reduction in stock outs, 77% of the respondents were in agreement that by conducting social media surveys they have known their customers preferences and changes leading to customer satisfaction. 57 % of the respondents agreed that regular forecasting accuracies leads to increased profits findings reveal that 56% of the respondents agreed that they use automated tools and techniques for order processing to enhance timely delivery of inventory to the organization. 49% agreed that their computers systems are linked with the suppliers in a real time environment. 56% of the respondents agreed that they have put in place electronic point of sale systems and closed-circuit televisions to monitor merchandise loss. 53 % of the respondents agreed that their systems are effective to deter merchandise loss from the retail stores, and 56% of the respondents agreed that their systems facilitate accurate information on the current inventory on stock. The researcher recommended that the retailers in Kisii town should incorporate quantitative inventory demand forecasting tools and market research methods in inventory demand forecasting this is because this will form an essential component since it is the driver for supply chain decisions, demand forecasting will also help in optimization of inventory levels, it will also serve as a vital information for inventory levels this will reduce the bullwhip effect leading to optimization of inventory levels and reduction of stock outs and overstocking. The researcher further recommends that the retailers should take advantage of automation in areal time environment to enhance timely delivery to their premises, the systems should be well maintained to deter merchandise loss and theft from the retail outlets, automation should be able to create fewer layers; each employee to be responsible for a more diverse set of responsibilities, real time data in the retail sector will empower fast decision making as when the need arises. The use of Point of sales (EPOS) should always show which product categories are most profitable, the products that are popular so that procurement officers will purchase strategically so that at the end will determine what will be in stock. The researcher further recommends that the pick and pack processes in Kisii retail outlets should be able to keep customers happy and improve accuracy, the retailers should consider automation, most of the retailers

spent 60% of their time walking and moving product around they should instead embrace conveyer technology to reduce their extensive travel time. The attendants should walk less to reduce fatigue, they can make mistakes while tired this will lead to inventory loss and errors.

Keywords: stock taking, forecasting inventory demands, automation, pick and pack, organizationa performance.

I. INTRODUCTION

1.1 Background of the Study

An increasing number of retail firms in Kenya and the world at large are greatly embracing inventory management practices. This is because better inventory management practices in a company will add value to the company as the inventory is controlled, maintained and made lean. The inventory will always be falling within the required limits. There are several inventory practices that a company can use and when these practices are used effectively, they lead to increased profits, customer satisfaction and growth. It is evident that in Kenya; retailers have embraced the use of best inventory practices key among them being, categorization of the inventory, planning of the inventory, automation of the inventory handling processes and modelling of the inventory processes (Otieno, 2018).

As (Kotler,2000,) puts it, inventory management points to the sum of processes and activities making up the development and management of the inventory levels at all levels of the product or service cycle. This process is aimed at ensuring optimum levels of supplies are met and the costs of deficiencies or excesses are minimized. Inventory management processes have direct and major influence on performance of operations and company finances. An efficient and working inventory management system comprises a system to track the inventory at hand and in the pipeline in the form of orders. Reliable forecasting of demand that covers possible forecasting errors is also key in this system. Lead times knowledge and variability should also be accounted for in the system and reasonable estimations of the holding costs of the inventory given. Lastly, costs of ordering and a mechanism for classifying the inventory items should be provided for in the system (Olivera and Rodriguez,2008).

Inventory management provides the internal management and potential clients with the optimum operating quantity and order rate fill service levels. It also covers the present and future projected requirements thus avoiding overstocking, inventory handling bottlenecks, and understocking. Costs incurred in inventory handling are also minimized (Harsh, 2009). Traditionally, managers designed complex operation schedules for every activity and process in inventory management (Waters,2006). Its worrying that many organizations still use the traditional methods of inventory management. Inventory management aims establishing inventory KPIs, inventory reduction, accurate forecasts and maintaining safety stock. In the retail industry, efficient inventory management practices can give greatly improves a firm's overall performance. Retailing entails the selling of consumer goods or services to clients using multiple distribution channels with the aim of earning a profit (Gaur et. al, 2005).

The roles of inventory management are clearly analysed by linking the firm's goals and objectives to the inventory requirements. (Pirtilla & virolainen,2012) argued that inventory management transforms broadened and generalised business objectives into operational day to day actions. This transformation aims at striking a balance between investment in the inventory and provision of customer service (Heizer & Render,2014). This is because high inventory volumes lead to substantial inventory costs. These costs include holding, transportation and management costs (Waller et. al,2006). Thus, financial commitments require careful controlling. The objective of the inventory is also to aid in quick inventory handling without loss of sales (Gitman and Zutter,2012).

In a bid to meet these goals, organisations should understand the needs of the customers, vendor partnerships, existing technology, data integrity and performance indicators measurements. With over one million of the working capital tied up in the inventory, many retail businesses therefore struggle with inventory management. Under optimized inventory management are rampant in existence. Over one quarter of retailers agree that warehouses inventory is the most helpful backend function that improves their efficiencies. Michael Bergerac, the former CEO of Revlon, noted that every management mistake ended up in inventory management. It is now a general notion that high inventory levels are wasteful (Tayur et.al., 2012). In China, managers have improved information systems in the recent years enabling real time feedback on the inventory.

Several operating systems for monitoring inventory levels and requesting fresh orders exist. Most firms use enterprise resources planning (ERP) systems to efficiently manage inventory levels. The application of ERP systems gives inventory level that can be measured in terms of an inventory turnover ratio. This ratio is given by annual sales compared to the

average inventory as shown by (Ballou ,2011). A lot of companies' costs are attributed to the inventory investment and associated costs. Effective inventory management is, therefore, critical to SME's profitability.

In a globalized economy, efficient management of the inventory is a key strategy to keep a firm profitable (Parlina & Veronika, 2013). Inventory management therefore becomes an active strategy rather than a passive (Spillin et.al, 2013). Costs cuts from improving the inventory management system go a long way to ensure the firm is profitable.

Many companies in Kenya both manufacturing and retailing are working to improve their inventory management practices. Today customer prefer products improvements and shorter and precise delivery times that are cheap (Srinivasan,2012). Firms, therefore, need more efficiency in cost cutting, quality improvement, delivery times and process flexibility (Olhager,2013). Performance gets measured against value. This measurement is based on meeting the needs of the customer. Assessing the impact of inventory management on organizational performance, the key area it impacts are supply chain process. This affects both cost and service delivery. Supply Chain Inventory Management (SCIM) is an integrates the planning and controlling of the inventory. This is done throughout the lifecycle of the inventory. That is, from raw material sourcing to the final processed product end user. SCIM aims at improving customer satisfaction, increases product variation and reduces associated costs. All these methods are tailored to satisfy the customer (Chris, 2003).

Some consultants have put in place best business inventory management practices that firms should adhere to in order to maximize profits, grow their market share and satisfy their customers. All organizations practicing business are obliged to adhere to this inventory practices. (Lyons, 2006), asserts that the control of the inventory improves the profits by reducing material handling and storage costs. Materials and processed goods are availed when required in their optimum quality and quantity. The shortage economy, costs of ordering, purchase price and working capital are critically analysed. Retail stores enhance their market share and penetration thus becoming the preferred shopping outlets in towns across the country.

1.2 Statement of the Problem

According to Kenya's Vision 2030 medium term plan 2013 – 2017, the retail sector is among the six priority sectors projected to make up the largest contribution to Kenya's (GDP) creating about 50% of the total formal employment (Kimotho, 2017). The rate of stock out products has shown little improvements despite implementation of inventory management investments and supply chain systems (Mena,2012). Corsten and Gruen show that the average retail business loses 4% in potential revenue due to high stock out levels. 31% of customers will prefer to buy products from another store on finding out that a particular store s stocked out. Applying inventory management best practices will eliminate such practices and improve performance. (Guimares, & Maia, 2013). Closely looking at the Kenya retail sector, mixed fortunes are revealed. Whereas the sector reports considerable growth, there are also indications that the sector is underperforming (kremer et.al.,2013). The sector has consistently recorded dismal performance and low yields compared to retail stores in developed countries. According to the economic survey 2016 and 2017 the sector performance declined from 8.3% in 2013 to 3.8% in 2016. Supplies management literature has widely asserted that the long-term success of the retail sector is partly pegged on effective inventory management practices (Tan & Karabati, 2013; Agrawal & smith, 2013; Hicks et al., 2014). Therefore, adequate knowledge on inventory management practices in the Kenyan retail sector and its relationship with the retail performance will enhance the sector's growth.

Several research studies have been undertaken concerning inventory management practices. (James ,2018), researched about the influence of inventory management practices on performance of retail outlets in Nairobi city council. (Muiruri ,2016), researched on influence of inventory management on performance of energy sector in Kenya; a case of Kenya power limited. (Kitheka ,2013), researched on inventory management automation and the performance of supermarkets in Western Kenya. From their research studies, it is evident that none of the studies focused on the influence of inventory management practices on organization performance in retail sector in Kenya, being a survey of large retail outlets in Kisii County.

1.3 Objectives of the Study

1.3.1 General Objective of the Study

The general objective of this research study was to find out the influence of inventory management practices on organizational performance in retail sector in Kenya A case study of large retail stores in Kisii town.

1.3.2 Specific Objectives of the Study

- 1.To find out influence of stock taking on organization performance in the Kenyan retail sector.
2. To assess influence of forecasting inventory demands on organization performance in the Kenyan retail sector.
- 3.To determine influence of automation of inventory processes on organization performance in the Kenyan retail sector.
4. To find out influence of optimization of pick and pack processes on organization performance in the Kenyan retail sector.

1.4 Research Questions of the Study

1. How does stock-taking influence organization performance in the Kenyan retail sector?
2. How does forecasting inventory demands influence organization performance in the Kenyan retail sector?
- 3.How does automation of inventory processes influence organization performance in the Kenyan retail sector?
- 4.How does the optimization of pick and pack processes influence organization performance in the Kenyan retail sector?

2. LITERATURE REVIEW

2.1 Therortical Review

2.1.1 Systems theory

After finding its initial application in the fields of science and engineering, the systems theory finally found its way to management in the late 1950s. The theory was first developed by Gestalt and Kurt Lewin. Their “field theory” of group dynamics showcased that the sum of its parts make up the whole hence the whole becoming greater (Miwaya, 2005). This theory views an organization as a group of parts which are highly intertwined. Systems oriented managers make decisions based on the wholesome mission of the organization. The major objectives of the total system in the organization is thus considered. An organization’s individual parts, therefore, add value to its overall performance. This type of management requires the inventory department managers to carry out activities that go beyond traditional inventory control processes. These improvements include obtaining the vital information of the external business environment and the customers. This information is then transmitted to the appropriate channels for action to be taken (Miwaya, 2005).

In an organization, inputs are received from the external environment. These inputs are then transformed into the finished product or service. The transformation will entail processes known as throughputs. This explanation shows the relevance of the systems theory in this study. Inventory is therefore, required by an organization to provide its outputs. The inputs can be materials, technology or even the human resource. The systems approach becomes very useful in decision making involving inventory management. By the organization requiring inputs and subsequently giving out outputs, retail inventory managers are better placed to ensure that inventory management practices get thoroughly followed. This regulation results in a highly profitable inventory management system that serves the organization and its customers thus leading to high performance.

2.1.2Theory of Constraints

This theory is a management philosophy theory seeking to increase system performance. It is measured by sales numbers based on the identification of the processes constraining the retail sector (Flick, 2010). (Kazim,2008), asserts that this theory bases on the principle that a chain can only become as strong as its weakest link. This weakest link is the constraint. Managing and mitigating the constraint is vital. This theory has a number of limitations. The lead times may become very long. There may also crop up a large number of unfulfilled orders. Some orders might also require extra efforts to execute hence the incurring of expensive overtimes. Unnecessary inventory items are also a limitation. Wrong material order or a large number of urgent orders that cannot be fulfilled on time are also constraints to optimal inventory performance. High devolution levels and poor customer engagement or lack thereof are also constraints that can hinder the moving of inventory. Frequent changes of inventory management practices or absence of control related to priority orders can lead to schedule conflicts (Flick, 2010). The above discussed issues are the constraints retail stores face. The constraints warrant the application of inventory management to enhance the operations in order to meet the projected performance. Maximizing the output of every management practice in an organization is not better than ensuring the optimization of flow of materials. The value created in organizational performance is greater. The theory of constraints focuses on the effective management of the capacity and capability of constraints to improve the organizational performance.

2.1.3 Contingency Theory

According to (Graham,2009) contingency theory involves firms adapting to changes in their environment. This adaptation is achieved through modifying their approaches to competition. This will therefore maintain and enhances their performance. The adaptability of an organization has been shown as an important factor affecting organization strategy and performance. Contingency theory addresses the flexibility strategies that are in an organization's strategic response plans. This plan is addressed to emerging threats. It is argued that organizations utilize their resources prudently to achieve their specified objectives. These achievements are met within a specific competitive environment under specific conditions (Porter, 2010). (Graham, 2009) asserts that contingency theories mean that demand forecasting is used. This application then links to increased organizational performance. Forecasting inventory demand conceptualizes the strategic planning and relates it to different existing organizational and environmental traits. The forecasting integrates, coordinates, and makes consistent the long-term plan. This function facilitates the ability for long-term adaptation and flexibility by an organization. Changes in the external environment are seamlessly handled and there is a reduction in the inventory turnover. The organization is thus protected from turbulent business environmental conditions. This theory helps retailers in developing plans to address turbulence through early intervention mechanisms, improved visibility and communication channels. Unforeseen demand fluctuations can, therefore, be adequately handled. The aim of the contingency theory in retail firms is to minimize potential loss by safeguarding business assets that need protection. The organization, therefore, saves valuable resources in disruption or disaster events.

2.1.4 EOQ model

This is a model developed by Ford Wilson Harris in the year1913 after critically analysing the model in detail (Harris, 1990). The model has shown increase in some costs and subsequent reduction of some other costs. Harris 1990 defined the model as order quantities being modelled to minimize the balances between inventories holding and reorder costs. It is required that for every stocked item, the point of reorder needs to be determined and its most cost-effective order quantity (Holmbon & segerstedt, 2014). In modelling EOQ, it is assumed that the ordering cost is constant. The rate of demand is also constant, the lead times fixed, the purchase price constant, and no discounts is given. EOQ is the item quantity to order so that ordering costs plus carrying costs are minimized.This model is important to retailers in that they will be able to determine how many times an item is used so that they cannot overstock or understock so as to minimize costs associated with inventory. Retailers would also be compelled to adopt the model in case of fluctuations in demand

2.2 Conceptual Framework

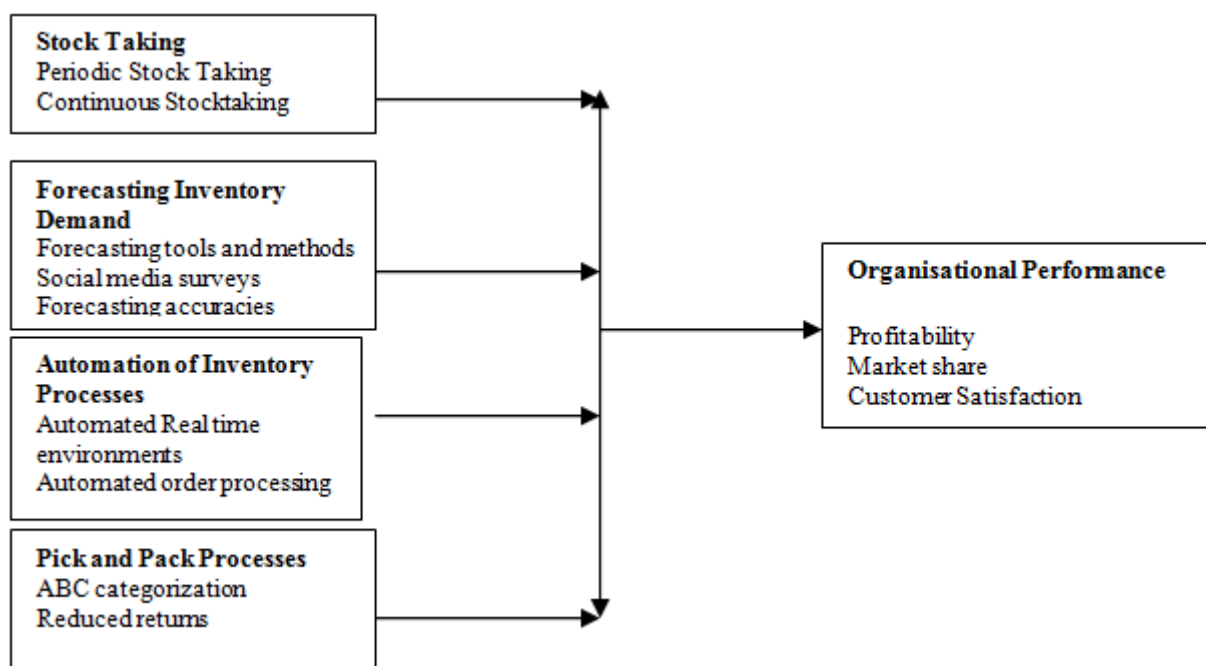


Figure 1

2.3 Review of Variables

2.3.1 Stock Taking

Stock taking involves the physical counting of all existing stock. The existing stock is then matched to the and any discrepancies analysed. The frequency of stock taking varies between organizations. Some organizations prefer once or twice a year while others prefer monthly or quarterly stock taking counts. Discrepancies between the manual stock and the electronic records are analysed and measures put in place to ensure better results. This leads to increased profits in the future (Morrison ,1986).

According to (Jessop,1994), businesses should compute regular stock takes to uncover theft. Additional shrinkage issues are also discovered ensuring that the business meets its set profit targets. Product performance is also monitored through this process thus improving stock ordering. Theft is a reality in the retail sector and it affects the stock taking numbers causing discrepancies. In most cases, it is unfortunate that staff are also to blame for these thefts. Shoplifting is also a cancer that ails the retail sector and it cannot be completely eradicated. stocktakes highlight whether there is a major loss issue on your hands. If major losses are found, a security review or crackdown is done to alleviate the dire situation. Regular stocktakes alone are key in discouraging employees from stealing.

(Cater ,1985) states that theft alone is not the only cause of stock loss. Regular stocktakes also highlight issues with damaged stock. Orders that are not processed or missing in tandem with poor stock control practices are also highlighted. This is taken as an improvement opportunity in these key areas. For example, if a pallet of stock gets damaged from an existing store leak, the leak repair is undertaken thus preventing further losses. Stock taking also gives the products that are performing well and those ones that are not performing well. A product that has been on the shelves for long is deemed to be poor performing. Prices of such a product can be slashed to make sure it sells.

There are few practical pointers concerning the formulation of the physical inventory. It is prudent to consider cycle counts. Cycle involves partial counts of merchandise on a continuous basis. This is aimed at monitoring the stock levels without store hours interruptions. The use of inventory scanners or other types of stock counting technologies is also employed. Lastly, the process of choosing the counters wisely is carried out.

According to Strategies Inc., inventory record accuracy measures how close official inventory records and the physical inventory match. This accuracy gets measured as a physical quantity and is then compared to the records calculated by the computer. It includes knowing what is on hand and where it is stored. Inventory accuracy to the customer means the timely delivery and good positioning of a good in the store. To the distributors, inventory accuracy means error free and profitable operations for efficiency. Without accurate inventory records, it is very difficult to know what inventory is available and how much money is invested on it. Inaccuracy refers to less-than-inventory accuracy level set by an organization. Some organization set an accepted bare minimum acceptable level for the inventory accuracy. For example, an inventory accuracy level of 95%.This figure means that for every one hundred balance of records in the inventory, ninety-five are ensured to be in perfect form.

The periodic inventory or counting is often used to track accuracy levels. The company's inventory value in its financial statements is also validated. Some of organizations do not track this accuracy daily. Instead, this is done periodically. These periods are usually annual. Inaccurate data in the ERP system may not only lead to errors in planning but it is costly. (Quality Journal 1998), reported that data error rates of 1-5% are typical. These errors are based on estimated immediate cost of about 10% of the revenue. Every party in the distribution channel gets negatively affected by inaccurate data. The effects may include non-order fulfilment, inaccurate billings and other inconveniences.

(Kauzen ,2006), in his study on stocktaking recommended that the storehouse operation should be closed while stocktaking is taking place. He also recommended that the movement of stock should be stopped while stocktaking exercise is in force. Therefore it is a task of the overall coordinator of stocktaking exercise to make sure that specific instructions are given to each team, including stock takers and also to the other staff such as the sales department members and administration members so that they may inform their customers about the dates of stocktaking for the needful actions.(Kaguo,2005), in his research on ineffectiveness of stocktaking established that there is a problem of identifying stock in storehouse which may cause stock discrepancies. The study also found out that there is always a problem of mixing up materials from Consumables to non-consumables which always make it a difficult exercise in comparing the company's physical stock and book balance.

2.3.2 Forecasting inventory demands

Companies have tried for years to optimize production levels and the corresponding inventory deployment decisions. This optimization has been tried through effectively forecasting retailer and consumer demands (Caffrey ,2014).

Demand forecasting is important in both the manufacturing and retailing sectors. Many existing decisions making procedures accuracy in forecasts. This accuracy is aimed at choosing the proper actions in organizations processes. These processes include, but are not limited to production, planning, sales budgeting, new product launches, promotion planning. Practitioners and academics have, therefore, given attention to the effects of forecasting leading to improved forecasting accuracy (Wright et.,al 1986 Jan et al,1986). Forecasting management is complex. It includes making decisions regarding the gathering of information. Persons to be responsible for the gathered information are also defined with rules governing the use of the information set up. Improving forecasting accuracy is necessary because large forecast errors negatively affect the performance of an organization (Ritzman,1995). Improving the forecasting process therefore has a positive indirect effect on the performance of an organization. According to the survey carried out by (Obeke, 2009) on how small medium enterprises value demand forecasting in Nigeria asserts on importance of knowing your business environment and its own activities. An effective demand forecasting helps in overcoming the fluctuations in demand. The survey clearly suggests that firms should always plan adequately for any upcoming activities in order to efficiently transform their inputs into outputs. It provides customer higher value and effective distribution of information needed for products and stock keeping units (SKU).

This way, the firm is able to gain better profits since demand forecasting offers a chance to lower costs in a firm however the study suggests more research should be undertaken in order to address issues that was not addressed by the study in order to improve SMEs performance. In his study, "The impact of demand forecasting on inventory control in fast moving consumer goods in Kenya," (Ochieng ,2011) argues that effective demand forecasting minimizes the physical inventory loss and replaces it with reduction of waste. He further asserts that the cardinal objective of demand forecasting is attainment of optimum inventory levels which is necessary to support the production system all through at minimized cost. Hence, it entails making decisions while keeping the determination of appropriate order quantities in mind. The decision is also made on when order placement should take place and the inventory to get carried per a time frame. The study concludes that, decisions will dictate the behaviour of the inventory system in an organization. Inventory ordering systems makes part of the availed strategies in order for an organization to meet its set inventory management objectives.

2.3.3 Automation of inventory processes

Vijay ,2004 explains automation as a technological application of mechatronics and computers in goods and services production. fixed assets are a significant investment in any organization. The world is globalized and grows more digital by each passing day. The challenges and opportunities in tracking organization asset also grows daily hence the need to employ automation in this process. The benefits accrued from this process includes saving time, saving money, improving accountability and maintaining consistency (Cliff,2010). According to (Maskowitz,1995) inventory control can be manual but it can be done better and by automation. The four inventory aspects of control, recording, locating inventory items, and frequently updating the inventory are made more accurate by automation. Studies carried out by Kithika Samson on inventory management automation and performance of supermarkets to determine the effect of automation on performance found out that inventory management automation positively affects the performance of supermarkets. He further concluded that supermarkets enjoyed lower operational costs and higher levels of customer service due to improved inventory management.

In the study by (Mbuvi ,2016) on factors affecting automation of inventory management in micro and medium enterprises in Kitui County, the researcher recommended that SMEs should effectively practice inventory management. This practice is aimed at cutting operation costs and keeping optimum inventory levels. The application of inventory automation has not been widely adopted resulting in stock shortage problems. Various researches have, therefore, carried out research studies pertaining inventory management control systems. (Godwin ,2003) did a study on the impact of telecommunication in inventory management. He established that telecommunication technology and systems employed in inventory control are directly related. For instance, the just-in-time method improves the lead time as orders get timely processed. The method also ensures just-in-time delivery, therefore, helping in improving production scheduling and planning in organizations employing the strategy. Every organization has a holding stock. Manufacturer and healthcare institutions for instance place stock in subsidiary positions as compared to a central position.

Automated inventory management requires huge information processing capabilities. This requirement finds application internally and externally. The transformation, storage and exchange of this vital business information on the inventory is a highly complex endeavour. The inventory management automation has seen an increase in customer requirements. A need for a highly networked organizations therefore arises. This subsequently creates a need for a networked inventory management. The inventory managers deal with stock management data from other organizations. The Networked Inventory Management Information Systems (NIMIS) comes in handy in such situations (Martin et. al. 1996).

2.3.4 Optimization of pick and pack processes

Pick involves the process of getting processed inventory from the warehouse or store. The inventory is then marked as being delivered on the customer's order. Packing involves the gathering and packaging of goods that ultimately make up the inventory. Pick and pack processes are therefore tools that an organization uses to satisfy the market demand (Origo,2016).

(Veego ,2015) states that pick and pack processes are categorized into a few distinct types. There is discrete order picking which is the most preferred by most small businesses. This type involves a retailer processing a pick and pack process for only one order at a time. It is employed by small businesses because they have smaller product catalogues and order volumes. The small business retailers aim is to reduce order processing mistakes as much as possible. The other type is batch picking. Batch picking involves gathering one batch of SKUs at a given time. The third type is wave picking which involves a blend between discrete and batch picking. Groupings of same type orders get fulfilled during scheduled time frames referred to as waves. Zone picking which is the fourth type consists of different employees who are assigned to different zones within a warehouse. These employees only pick items located in their specific zones. This type of pick and pack process is ideal for large organizations which have a high inventory turnover rate.

Ways to use order picking systems in order to improve performance include assigning every SKU their own bin location. This is achieved by division of the warehouse into clear demarcated zones, rows, shelves and sub locations. This division gives the team an easier time while doing item location. Mixing SKUs will waste time and cause massive confusion, next is minimizing walking time. 60% of available time is spent by pickers in between picks while item locating at the warehouse. Reduction of this lost time can have huge payoffs. Large retailers' investment in conveyer systems severely reduces the amount of walking time needed. Next the warehouse is optimally arranged for efficiency. 20% of product catalogue generate 60% of sales for most retailers. This statistic means that certain products give the largest contribution to the business orders. These key products, therefore, need picking more often than the rest. It, therefore, makes sense to facilitate the easier picking of these products by locating them close enough to the packing desk (Veego ,2016).

Order picking requires the largest chunk of the total available labour in a warehouse (Drury, 1988). This demand has been found to account up to 60% of the total available labour. Subsequently, order picking accounts for up to 55% of the total costs of operation (Tompkins et al. 2003). Majority of this warehouses labour is carried out by humans. The movement of human and products classifies order picking as picker-to-parts systems, parts-to-picker systems, and put systems. The picker-to-parts system is the most commonly employed system (De Koster, 2008). Order pickers walk or drive alongside aisles to pick items. There are two types of picker-to-parts systems. There is the low-level and the high-level (man-on-board) picking systems. In low level system, the products get stored in bins on shelves. Storage drawers in cabinets or cartons on flow racks also get used.

The storage system height is customized by the average height of humans. Requested items are picked from storage racks or bins (bin-shelving storage). This activity is done while the order pickers travels along the storage aisles. Low-level order picking systems, on the other hand, get widely adopted in warehouses. This wide adoption is because they have a low initial cost. They are also easily installed, easily configured, and have a low cost of maintenance. High storage racks get employed in high level storage systems. Shelves or storage cabinets get stacked high. Floor loading, weigh capacity, throughput requirements, and/or ceiling heights are the considered factors in this system. Order pickers carry out their activities while on board a truck or crane. The machine automatically or manually stops in front of the pick location and the order picker performs the pick.

Order picking entails the selection of goods from the stock in required quantities and time frames. This process is aimed at meeting the customers' orders. Picking involves break bulk operations. These operations mean that goods are received from suppliers in bulk, but are ordered by customers in unit quantities. Accuracy in the order picking processes is

important towards achieving high customer service levels. Taking a high proportion of the total warehouse manpower, the process is therefore expensive. It is therefore vital that good design and management of picking systems and operations is implemented to achieve effective and efficient warehouse performance (Croucher et.al 2006).

2.3.5 Inventory management practices and organization performance

Inventory management is crucial for organizations to improve their performance and attain high customer satisfaction levels. (Oswani ,2014), asserts that inventory material makes up most of the existing organization assets. This fact means that huge investments lies in inventory materials. It is, therefore, important for the organization to have a good inventory management system. Poor inventory management negatively affects the profits of the organization. This outcome has devastating effects on organization performance. Organization performance can be best analysed through the reduction of operating costs and the increase of customer service delivery levels. Organizations struggle for the global markets, get competition from low cost commodities and faltering home economies. Costs and waste reduction are, therefore, vital for the performance of any organization. Implementing and understanding the best cost reduction strategies and identifying the main cost drivers informs operations in modern organizations (Scott,1996). As the supply chain represents roughly 75% of the operating budget expense, cutting its costs will greatly impact the profitability (Paveich ,1999).

Efficiency, responsiveness and effectiveness are three common factors used as performance indicators (Chase et.al 2001). Organizations performance depends on many other variables. These factors include sales, marketing, good human resource, and production cost reduction ability. Effective inventory management is also a crucial part of an organization because mismanagement of inventory threatens a firm's viability. Excess inventory consumes a lot of physical space creating a financial burden. Loss risks due to damage and spoilage are also increased. Organizations must have the ability to create the highest profit at the lowest cost for optimal performance.

The firm's operational performance is calculated in opposition to standard or prescribed effectiveness indicators. Efficiency and environmental responsibility such as cycle times are also considered. Productivity, waste reduction, and regulatory compliance also get measured as indicated by Salami and (Adayami,2010). In order to improve operational efficiency an organization has to measure both the input and the output of the inventory management (Maksoud & Nakagawa, 2008). The major goal of organizations is to reduce the costs associated with the inventory management. This reduction positively impacts the overall performance of an organization.

2.4 Empirical Review

2.4.1 Stock taking

A study by Ronald (2011) on impact of stock management on the success of an organisation case of Rwenzori beverages, he concludes that stock taking is important almost to every organisation, however this practice needs to be aligned with company objectives in order to get the intended results. Organisations should also embrace computerised rather than manual stock taking.

(Kagu,2005), in his research on ineffectiveness of stocktaking established that there is a problem of identifying stock in storehouse which may cause stock discrepancies. The study also found out that there is always a problem of mixing up materials from Consumables to non-consumables which always make it a difficult exercise in comparing the company's physical stock and book balance. A study by Fanice on stock control practice as a determinant on organisational performance in Kisiimart supermarket concludes that stock taking is essential in operation of any business, stock taking ensures there is no mismatch on physical versus recorded stock and overtime improves performance of a firm.

2.4.2 Forecasting Inventory Demands

A study on effects of inventory management techniques on the performance of county government of Laikipa the study concludes that demand forecasting is central to the ability of the county to render services through shortages would be less experienced as would over ordering and thus overstocking of certain items. A study by Richard in Nigerian manufacturing firms in 2019 concludes that effort should be made at the organisation to ensure accuracy of forecasts as possible since inaccurate forecast can lead to misleading results, planning in the organisation should be based on the analysis of forecast outcome. And all causal factors and subjects relating to the forecast's efforts should be considered in the computation.

According to the survey carried out by (Obeke,2009) on how small medium enterprises value demand forecasting in Nigeria asserts on importance of knowing your business environment and its own activities. An effective demand

forecasting helps in overcoming the fluctuations in demand. The survey clearly suggests that firms should always plan adequately for any upcoming activities in order to efficiently transform their inputs into outputs. It provides customer higher value and effective distribution of information needed for products and stock keeping units (SKU).

2.4.3 Automation of Inventory Management process

A study by (James,2016) on influence of inventory management practices on performance of retail sector in Nairobi city council, the study concluded that inventory processes automation influences performance of retail outlets in Nairobi city council, he found out that the retailers use EDI, and bar coding in transactions.

A study by (Ondiek,2015) on automation of inventory management in Supermarkets in Western Kenya he recommends that retail supermarkets should automate their inventory management systems so as to improve customer service delivery levels and reduce operational costs, A study also done by (Kitheka,2012) on inventory management automation and the performance of supermarkets in western Kenya reveals that the retail supermarkets should automate their inventory management systems so as to improve their customer delivery levels, the retail supermarkets should also use the automation to reduce their operation costs, retail sector should also invest in technology that best suits them than to invest in technology that they will never use.

2.4.4 Optimization of pick and Pack Processes

Research by (Habazin,2016) on order picking process in warehouse case study of daily industry in Croatia concludes that optimizing order picking includes predefining warehouse management systems and reorganisation of dedicated storage locations directly influencing the time consuming order picking which is presented with proposed change in warehouse layout.

Good inventory management and right pick and pack software will help organisations ship orders with maximum speed and accuracy, the pick and pack methods that work well for a business will depend on the size of the products, an organisation can change pick and pack methods as the business grows. The movement of human and products classifies order picking as picker-to-parts systems, parts-to-picker systems, and put systems. The picker-to-parts system is the most commonly employed system (De Koster 2008). Order pickers walk or drive alongside aisles to pick items. There are two types of picker-to-parts systems. There is the low-level and the high-level (man-on-board) picking systems.

Order picking entails the selection of goods from the stock in required quantities and time frames. This process is aimed at meeting the customers' orders. Picking involves break bulk operations. These operations mean that goods are received from suppliers in bulk, but are ordered by customers in unit quantities

2.5. Critique of existing data

A study by (Brown,2018) on the influence of inventory management practices on performance of retail outlets in Nairobi county concluded that inventory automation influence organization performance. He further recommends that retail outlets should invest in the most useful applicable technologies, so as to avoid wasting a lot of capital on obsolete or unnecessary technologies. He further recommends that a further study should be done to identify recent developments in inventory management. The study was carried in Nairobi County

A study by Kitheka on inventory management automation and the performance of supermarkets in western Kenya, the researcher recommends that further study should be done to determine how information technology can be employed to increase forecasting accuracy levels in retail sector. Such a study will help businesses to accurately forecast customer demands. Thus, more research should be done on inventory demand forecasting. In the study by (Oballah,2015) on effect of inventory management practices on organizational performance of public health institutions in Kenya a case study of Kenyatta national hospital, the researcher concluded that inventory management practices influence organization performance.

A study by (Muiruri,2018) on influence of inventory management on performance of energy sector in Kenya a case of Kenya power limited the researcher concluded that demand forecasting and inventory tracking affecting organization performance but did not have quantifiable data on this. He also dealt on inventory strategies but not practices. In the study by James Brown on influence of inventory management practices on performance of retail outlets in Nairobi city, the researcher looks critically on how inventory practices influence performance of retail sector but from his study he

recommended for further research in the area to know if there are new advancements. The study focus was in Nairobi but for this case the study will be conducted in Kisii county.

2.6 Research gaps

In the study by (Oballah,2015) on effect of inventory management practices on organizational performance of public health institutions in Kenya, a case study of Kenyatta national hospital, the researcher looked into inventory shrinkage, inventory investment, inventory turnover, and inventory records accuracy. The researcher did not research on how inventory audits will improve records accuracy. Her study was on the health sector. A study by Muiruri on influence of inventory management on organization performance in energy sector in Kenya he focused more on inventory strategies not inventory management practices. In the study by (Brown,2018) on influence of inventory management practices on performance of retail in Nairobi City County, he concluded that process automation, process categorization, and inventory planning influence organization performance. The researcher did not look at how demand forecasting, stock taking and optimization of pick and pack processes influence organization performance. It from these evident gaps that the researcher will conduct a study on influence of inventory management practices on organizational performance in retail sector in Kenya being a survey of large retail stores in Kisii county.

3. RESEARCH METHODOLOGY

3.1 Research Design

This study used a descriptive case study and correlational research design to justify the relationship between the independent variables and dependent variables. The main aim for the choice of these two research designs is to allow the study to determine the strength and direction of a relationship so that later studies can narrow the findings down and, if possible, determine causation experimentally.

3.2 Target Population

The target population is all the members of a population to which the researcher generalizes the research results (Mugenda & Mugenda, 2003). Kisii county office has a trade directory that has listed all retail stores, The target population was on this retail stores, the retail stores comprised large retail stores that sell, food and beverages, electrical and electronics, building and construction materials, footwear and clothing.

Table 3.1: Target Population

Retail Segment	Large retail stores	Percentage of the Total Population (%)	Sample Size
Food and Beverages	280	10%	28
Electrical and electronics	165	10%	16
Building and construction	160	10%	16
Footwear and clothing	205	10 %	21
Total	810	10%	81

Source: KCTD, 2016

3.3 Sampling Frame

(Mugenda & Mugenda ,2003) asserts that the sampling frame is the list of all units of a population from which the sample is selected. For this case according to data obtained from Kisii county trade directory the total number of large retail stores was 810

3.4 Sample and Sampling Technique

The sample was selected using stratified random sampling basing on the size of retail stores. Stratified random sampling was found as the most suitable sampling technique for this study. This conclusion was because it ensured all groups were adequately sampled to obtain a suitable sample. Due to the constraints of time and resources, the sample was calculated using 10% rule. (Mugenda & Mugenda 2003) indicated that a sample size of 10% or 50% is always sufficient for a study. The study took 10% of the population to select a sample size of 81 of the study population.

$$\text{Sample Size} = \frac{10\% * \text{Total Target Population}}{100\%}$$

$$10/100 \times 810 = 81$$

The adoption of the above formula generated a sample size of 81 from a population of 810 large retail stores under this study.

3.5 Research Instruments

(Kothari,2004) asserts that a questionnaire is a research instrument consisting of a number of questions. Other prompts are also included. These questions and prompts have a sole purpose of gathering information from the research respondents. Questionnaire are a primary data means of collecting data. It has questions which assured significance, thorough response and accuracy and a tally table was adopted to analyse the findings. Open ended questions were used because it was able to give insight into their background and feelings. This instrument was efficient in terms of time for the owners and managers concerned to adequately fill the questionnaire form.

3.6 Data Collection Procedure

Data collection procedure entails the process of gathering and measuring information on targeted variables in an established systematic fashion. This gathering enables the researcher to answer relevant research questions. The researcher is then able to evaluate outcomes (Kothari, 2004). The researcher first sought for authorization from the management of the respective retail stores through an official written letter. The researcher used drop and pick method. This method means that questionnaires are hand delivered and due to time constrains they were be collected as agreed.

3.7 Pilot Test

(Kothari,2004) describes a pilot study as a small-scale preliminary study. This study is carried out in order to evaluate feasibility, time, cost, adverse events, and size. The variables of the real study can, therefore, get predicted from the pilot study. An appropriate sample size is then chosen prior to performance of a full-scale research project. According to (Kothari ,2004) reliability is given a range of 0.7-1.0 as the one that indicates that a tool is consistent. During the pilot study, the researcher only administered questionnaires to the retail owners and managers of fifty (50) retail stores respondents. This administration was aimed at confirming the validity and reliability of the research instrument.

3.7.1 Reliability

Reliability of a research measures the degree to which a research instrument's data yields consistent results after a number of repeated trials (Mugenda and Mugenda, 2003). In order to test the reliability of the research instrument's data, a pilot study was undertaken. It investigated the extent to which the returned the same responses on multiple usage.

3.7.2 Validity

Validity of a research describes the accuracy and meaningfulness of inferences based on the results of the research (Mugenda and Mugenda, 2003). It is through a pilot study that the content validity of the research instruments was determined. The focused responses were tested against the objectives of the research.

3.8 Data Processing and Analysis

According to (Kothari ,2004), data processing entails the collection and manipulation of data items to produce meaningful research information. Data analysis entails gathering, modelling and transforming data with the sole goal of highlighting useful information, conclusions formulations and supporting decision making.

4. RESEARCH FINDINGS AND DISCUSSION

4.1 Response rate

81 questionnaires administered to potential respondents, 61 were returned. The overall response was, therefore, 76%. This response rate is high compared to the expected response rate range of 50-75% for hand delivered questionnaires. It was, therefore, sufficient to proceed with the resulting data analysis (Mugenda & Mugenda, 2012).

Table 4.1: Response rate

Category	Frequency	Percentage
Responded	61	75
Did not Respond	20	25
Total	81	100

4.2 Pilot Test Results

4.2.1 Reliability Analysis

The variables, stock taking, forecasting inventory demands, automation of inventory processes, optimization of pick and pack processes and organizational performance scale reliability was determined through computing the overall Cronbach's alpha reliability coefficient. This computing was done for the items contained in each variable. Results presented in table 4.7 indicated that all analysed variables reached the acceptable and recommended levels alpha levels of 0.904 (the overall Cronbach's alpha statistic on stock taking, forecasting inventory demands, automation of inventory processes, optimization of pick and pack processes and organization performance were 0.904, 0.844, 0.746, 0.856 and 0.813 respectively). The reliability of the instrument stands at approximately 87.21%.

Table 4.2: Study Variables reliability

Variables	Cronbach's Alpha	Number of items	conclusion
Stock Taking	0.904	4	reliable
Inventory Demand Forecasting	0.844	4	reliable
Automation of Inventory Processes	0.746	4	reliable
Optimization pick and process	0.856	5	reliable
Organization Performance	0.813	5	reliable
Overall	0.904	5	reliable

4.2.2 KMO and Bartlett's Test

Kaiser-Meyer-Olkin measures of sampling adequacy (KMO) and Bartlett's test of sphericity were applied to test whether the correlation between the study variables exist. The Kaiser-Meyer-Olkin measures of sampling adequacy show the value of test statistic as 0.840 and p-value <0.05. Bartlett's test of sphericity had a chi-square value of 115.969 p-value of 0.000. Since the p value is less than 0.05 then it implies that there exist a relationship among the study variables therefore providing a ground for further statistical analysis to be conducted.

Table 4.3: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.840
Approx. Chi-Square		115.969
Bartlett's Test of Sphericity	Df	10
	Sig.	.000

4.3 Descriptive Analysis of Study Variables

Table 4.4: Stock Taking

	SD (%)	D (%)	N (%)	A (%)	S A (%)
Procedures have disclosed the possibility of fraud pilferage, theft& loss thus leading to savings.	0	1.6	1.6	49.2	47.5
Facilitates comparison of physical stocks with stock records.	0	0	3.3	47.5	49.2
Records have helped in preparation of financial statements which show the performance of business over time.	0	0	8.2	39.3	52.5
At some predetermined time, we count inventory by use of periodic and cycle counting methods of stock taking.	0	8.2	23.0	39.3	29.5

The study sought to find how stock taking influence organization, performance in retail sector in Kenya. The findings are as shown in table 4.4. The findings show that 97% of the respondents were in agreement that stock taking procedures have disclosed the possibility of fraud pilferage theft and loss thus leading to savings. 94% agreed that stock taking facilitates comparison of physical stocks with stock records. 92% of the respondents agreed that records have helped in preparation of financial statements which show the performance of their business overtime, 69 % of the respondents agreed that at some predetermined time they count inventory by use of periodic cycle counting.

These findings go in tandem with strategies of the study concluding that inventory record accuracy is measured as a physical quantity. Compared to the computer record, it includes knowing what is in hand and what is stored. It was concluded that without accurate inventory records it is very difficult to know what inventory is available and how much money is invested on it. The findings are also in agreement with (Kaguo ,2005), in his research on ineffectiveness of stocktaking he established that there is a problem of identifying stock house which may cause stock discrepancies.

Table 4.5: Inventory Demand Forecasting.

	S D (%)	D (%)	N (%)	A (%)	SA (%)
We have advanced forecasting tools that enable improvement in cost reduction.	1.6	18.0	41.0	24.6	14.8
We have put in place correct forecasting methods thus reduction in stock outs.	0	21.3	31.1	34.4	13.1
By conducting social media surveys, we have known our customer preferences & changes leading to customer satisfaction.	0	3.3	19.7	45.9	31.1
Regular Forecasting accuracies leads to increased profits.	0	1.6	41.0	34.4	23.0

The study sought to find how inventory demand forecasting influence organization, performance in retail sector in Kenya. The findings are as shown in table 4.5. The findings show that 39% of the respondents were in agreement that they have advanced forecasting tools that enable improvement in cost reduction, 48% agreed that they have put in place correct forecasting methods thus reduction in stock outs, 77% of the respondents agreed that by conducting social media surveys they have known their customers preferences and changes leading to customer satisfaction. 57 % of the respondents agreed that regular forecasting accuracies leads to increased profits. The findings go in tandem with (Ritzman,1995) who found out that forecasting management is a complicated process that includes making critical decisions on information gathering methodologies. For example, what information to collect, how to collect it, and who should be in charge for it. This will have effect on firm's overall performance.

The findings were also in line with (Ochieng ,2011) who in his study on impact of demand forecasting on inventory control in fast moving consumer goods sector in Kenya. Ochieng concluded that effective demand forecasting will minimize physical inventory loss and replace it with reduction in waste.

Table 4.6: Automation of Inventory Process.

	SD (%)	D (%)	N (%)	A (%)	SA (%)
Use of automated tools and techniques for order processing to enhance timely delivery of inventory to the organization.	0	24.6	18.0	52.5	4.9
Computers real time linked with those of suppliers.	1.6	26.2	23.0	47.5	1.6
Business has put in place electronic point of sale systems& CCTVs to monitor merchandise loss.	3.3	18.0	21.3	45.9	11.5
Systems. are effective to deter merchandise loss from the retail stores	3.3	11.5	32.8	37.7	14.8
Our systems facilitate accurate information on the current inventory on stock	1.6	16.4	26.2	45.9	9.8

The study sought to establish how automation of inventory processes influence organization performance in retail sector in Kenya. The findings are as shown in table 4.6. The findings show that 56% of the respondents were in agreement that they use automated tools and techniques for order processing to enhance timely delivery of inventory to the organization. 49% agreed that their computers are real time linked with those of suppliers. 56% of the respondents agreed that they have put in place electronic point of sale systems and CCTVs to monitor merchandise loss. 53 % of the respondents agreed that their systems are effective to deter merchandise loss from the retail stores, and lastly 56% of the respondents agreed that their systems facilitate accurate information on the current inventory on stock.

The findings go in tandem with a research study done by (Mbuvi ,2015) on factors affecting automation of inventory management in micro and medium enterprises in Kitui county who admits that automation of inventory processors had little application that resulted to problems. These problems came as a result of shortages of stock. He also admitted that the driving forces of automated inventory management increased customer requirements which require a networked inventory management.

Table 4.7: Optimization of Pick and Pack Processes.

	SD (%)	D (%)	N (%)	A (%)	SA (%)
Increasing the rate of pick and pack processes accuracy has led to reduction of costs.	19.7	42.6	24.6	42.6	19.7
Through our pick & pack processes we have been able to reduce returns by customers thus increasing customer satisfaction good will.	1.6	8.2	21.3	47.5	21.3
Use of ABC analysis system to categorize inventory by sales frequency and then arrange them in order has led to fast access and less time spent to process an order.	1.6	9.8	18.0	55.7	14.8
Use of barcoded automated technology in pack & pick processes facilitates accurate information on the inventory in stock.	11.5	26.2	21.3	32.8	11.5

The study sought to establish how optimization of pick and pack processes influence organisation, performance in retail sector in Kenya. The findings are as shown in table 4.7. The findings show that 62% of the respondents were in agreement that increasing the rate of pick and pack processes has led to reduction of costs. 69% agreed that through their pick and pack processes they have been able to reduce returns by customers thus increasing customer satisfaction. 71% of the respondents agreed that by use of ABC analysis to categorizes inventory by sales frequency has led to fast access and less time spent to process an order. 44 % of the respondents were in agreement that use of barcoded automated technology in pack and pack processes facilitates accurate information on inventory in stock.

Table 4.8: Organization Performance.

	SD (%)	D (%)	N (%)	A (%)	SA (%)
Through demand forecasting the organization has ensured that there is no obsolete and excessive inventory to reduce operational costs.	0	9.8	42.6	37.7	9.8
Our customer satisfaction levels have increased through the use of inventory management technologies that offer fast and prompt services to our customers.	0	6.6	18.0	54.1	21.3
Business profits have increased through increase in innovation & creativity in inventory management processes.	0	4.9	19.7	55.7	19.7
Organization performance increase growth & development in retail sector in Kenya.	0	4.9	9.8	65.6	19.7
We have ensured that our stock taking process monitors any irregularities of theft & loss therefore leading to business profitability.	3.3	4.9	36.1	27.9	27.9

The study sought to establish how inventory management influence organization performance influence in retail sector in Kenya. The findings are as shown in table 4.8. The findings show that 47% of the respondents were in agreement that through demand forecasting the organization has ensured that there is no obsolete and excessive inventory to reduce operational cost, 75% of the respondents agreed that their customers satisfaction levels have increased through the use of inventory management technologies that offer fast and prompt services to customers, 75% of the respondents agreed that business profits have increased through increase in innovation and creativity in inventory management processes,85 % of the respondents agreed that organization performance increase growth and development in retail sector in Kenya and lastly 55 % of the respondents agreed that they have ensured that their stock taking process monitors any irregularities of theft and loss therefore leading to business profitability.

The findings are in agreement with (Baker ,2006) who concluded that accuracy in order pickling is important as it achieves higher levels of customer satisfaction. It also took a large proportion of the total warehousing staff to complement this task. Therefore, the process was found to be expensive. He also concluded that good implementation of picking system operations is vital to effective and efficient performance of the organization.

Inferential Statistics

4.4 Correlation Analysis

The study sought to establish the strength of the influence of inventory management practices (Stock Taking , Forecasting inventory demand, automation of inventory, optimization of pick & pack processes)on organizational performance in retail sector in Kenya. To achieve this, Pearson's correlation was carried out since both independent and dependent variables are in ratio scale. According to Kothari (2004), product moment correlation should be carried out if and only if both dependent and independent variables are in either ratio or interval scale. If the correlation coefficient is -1 then there is an inverse relationship and an increase in dependent variable is associated with a decrease in independent variable and +1 there is a perfect positive significant relationship and an increase in dependent variable is associated with an increase in independent variable (Kothari, 2011; Oso & Onen, 2009).

The study findings depicted in Table 4.20 indicated that there was a significant positive influence of inventory management practices (Stock Taking) on organizational performance in retail sector in Kenya ($\rho=0.455$, p -value <0.05). This implies that a unit change in Stock Taking practices increases organizational performance by 45.5%. Secondly there was a positive and significant influence of inventory management practices (Forecasting inventory demand) on organizational performance in retail sector in Kenya ($\rho =0.506$, P value <0.05). This implies that a unit change in Forecasting inventory demand increases organizational performance by 50.6%. Thirdly, there was a positive and significant influence of inventory management practices (automation of inventory) on organizational performance in retail sector in Kenya ($\rho = 0.429$, p value <0.05). This implies that a unit change in automation of inventory increases organizational performance in retail sector in Kenya by 42.9%. Finally, there was a positive and significant influence of inventory management practices (optimization of pick & pack processes) on organizational performance in retail sector in Kenya ($\rho = 0.605$, p value <0.05). This implies that a unit change in optimization of pick & pack processes increases organizational performance in retail sector in Kenya by 60.5%.

Correlations						
		Organization Performance	Stock Taking	Forecasting inventory demand	Automation of Inventory	Optimization of pick & pack processes
Organization Performance	Pearson Correlation	1	.455**	.506**	.429**	.605**
	Sig. (2-tailed)		.000	.000	.001	.000
	N	61	61	61	61	61
Stock Taking	Pearson Correlation	.455**	1	.498**	.496**	.652**
	Sig. (2-tailed)	.000		.000	.000	.000
	N	61	61	61	61	61
Forecasting inventory demand	Pearson Correlation	.506**	.498**	1	.400**	.570**
	Sig. (2-tailed)	.000	.000		.001	.000
	N	61	61	61	61	61
Automation of Inventory	Pearson Correlation	.429**	.496**	.400**	1	.615**
	Sig. (2-tailed)	.001	.000	.001		.000
	N	61	61	61	61	61
Optimization of pick & pack processes	Pearson Correlation	.605**	.652**	.570**	.615**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	61	61	61	61	61

** . Correlation is significant at the 0.01 level (2-tailed).

Regression Analysis Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.455 ^a	.207	.194	.63618

a. Predictors: (Constant), Organizational Performance

ANOVA ^a						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	12.310	4	3.078	9.680	.000 ^b
	Residual	17.804	56	.318		
	Total	30.114	60			
a. Dependent Variable: Inventory Management Practices						
b. Predictors: (Constant), stock taking, forecasting inventory demands, automation of inventory processes and optimization of pick and pack processes.						

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.241	.577		2.150	.005
	Stock taking	.055	.171	.045	.320	.000
	Forecasting inventory	.235	.133	.226	1.765	.003
	Automation of inventory processes	.062	.121	.067	.510	.002
	Optimization of pick and pack process	.355	.140	.406	2.540	.004
a. Dependent Variable: Organizational Performance						

$$y = B_0 + B_1X_1 + B_2X_2 + B_3X_3 + B_4X_4 + E$$

$$Y=1.241+0.055X_1+0.235X_2+0.062X_3+0.355X_4$$

The analysis of variance (ANOVA) as a model of regression on organizational performance using the identified inventory management practices variables. These variables include stock taking, forecasting inventory demands, automation of inventory processes and optimization of pick and pack processes. This is based on the relatively large F-value of 9.680 that is significant. It therefore shows that the model has a significant prediction on organizational performance. On the regression between the identified factors and organizational performance, the first investigated objective was to establish the influence of stock taking on organizational performance. The study findings established that stock taking has a positive significant effect ($\beta = 0.055$, $p = 0.005$) on organizational performance. This implies that when all factors are held constant, a unit increase in stock taking leads to a significant increase in organizational performance.

The second investigated objective was to find the influence of forecasting inventory demands on organizational performance. Regression results established that forecasting inventory demands had positive and significant influence ($\beta = 0.235$, $p = 0.000$). This implies that increasing forecasting inventory demands by a unit results in an increase in organizational performance when all factors are held constant.

Regression results concerning the third objective determining the influence of show that automation of inventory processes has a positive significant effect on organizational performance ($\beta = 0.062$, $p = 0.003$). This implies that holding all other factors constant, increasing automation of inventory processes by a unit leads to a significant increase in organizational performance. This study collaborates with (Godwin ,2003). The researcher established that telecommunication technology and inventory control systems are intertwined. The Just-in-Time manufacturing system improves lead-time as orders are processed within their time limits. Deliveries are also just-in-time. This efficiency, therefore, improves the production scheduling and planning of most companies. All organizations hold something in stock. Manufacturers to be precise, healthcare providers and other service providers hold their stock at subsidiary positions as opposed to a central position.

The fourth study objective was finding out the influence of optimization of pick and pack processes on organizational performance. Results of the regression analysis show that automation of inventory processes has a positive significant effect ($\beta = 0.355$, $p = 0.004$) on organizational performance. This implies that holding all other factors constant, increasing optimization of pick and pack processes by a unit results into a significant increase in organizational performance. This study collaborates with a study conducted (Veego,2016) which shows ways to use order picking systems in order to improve performance. This included giving each SKU their own bin locations. This was achieved by dividing the warehouse into clearly marked areas. These areas included rows, shelves and sub locations. This improvement will make the locating of items easier and quicker. Mixing SKUs wastes time and can lead to massive confusion. Next, walking time is minimized. A picker spends about 60% of their time walking around the warehouse in-between picks. Reduction of this lost time can have huge payoffs. Large retailers can invest in conveyers that greatly reduce the walking time. Next is warehouse arrangement optimization. Most retailers generate 60% of sales from just about 20% of product catalogue. This statistic means that there is usually a subset of products is responsible for the bulk of business orders. Therefore, these highly selling products need to be picked much more often than others. It, therefore, prudent to locate these products as close as possible to the packing desk (Veego ,2016).

5. SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Summary of Findings

5.1.1 Influence of stock taking on organizational performance in retail sector in Kenya

From the findings almost all retailers being 97% agreed that by using stock taking they have been able to disclose possibility of fraud pilferage, theft and loss thus leading to savings, majority of the retailers also agreed that by conducting stock taking they have been able to use the stock record in preparation of financial statements that show the performance of their businesses overtime. Majority of the retailers count inventory by use of periodic cycle counting.

5.1.2 Influence of inventory demand forecasting on organization performance in retail sector in Kenya

From the study findings only 39% of the respondents were in agreement that they have advanced forecasting tools that enable improvement in cost reduction. From the study also few retailers agreed that they have put in place correct forecasting methods to reduce stockouts. Majority presented by 77% of the respondents agreed that by conducting social media surveys they have known their customers preferences and changes leading to customer satisfaction.57% of the respondents agreed that regular forecasting accuracies leads to increased profits.

5.1.3 Influence of automation of inventory processes on organization performance in retail sector in Kenya

From the findings the retailers were in agreement that they use automated tools and techniques for order processing to enhance timely delivery of inventory to the organization. Only 49% agreed that their computers are real time linked to those of suppliers.56% of the respondents agreed that they have put in place electronic point of Sale systems and CCTVs to monitor merchandise loss. 53 % of the respondents agreed that their systems are effective to deter merchandise loss from the retail stores, and 56% of the respondents agreed that their systems facilitate accurate information on the current inventory on stock

5.1.4 Influence of pick and pack processes to organization performance in retail sector in Kenya

62% of the respondents were in agreement that increasing the rate of pick and pack processes has led to reduction of costs. 69% agreed that through their pick and pack processes they have been able to reduce returns by customers thus increasing customer satisfaction. 71% of the respondents agreed that by use of ABC analysis to categories inventory by sales frequency has led to fast access and less time spent to process an order. 44 % of the respondents were in agreement that use of barcoded automated technology in pack and pack processes facilitates accurate information on inventory in stock. Results of the fourth objective of the study which was to find out the influence of optimization of pick and pack processes on organizational performance were thus out

5.2 Conclusion

The study concluded that stock taking influences performance of retail outlets in Kenya positively. The study revealed that stock taking facilitates comparison of physical stock with stock records, the stock records have helped the retailers to prepare financial statements which have shown the performance of the sector overtime.

The study concluded that the retailers have put in place tools for inventory demand forecasting which the type of forecasting that is majorly used by retailers is qualitative demand forecasting whereby they use, executive opinions, consumer surveys to predict future demand. The study concludes if better inventory demand forecasting is well incorporated this will ensure that goods are available in the shelves as per the time, they are needed this will reduce stock outs and lead to customer satisfaction. The study concluded that forecasting inventory demands positively influences organisation performance in the retail sector in Kenya.

The study concluded that most of the retailers have not put in place EPOS and CCTVs to monitor merchandise loss, the study also concluded that ABC inventory categorization system and bar code technology is used in pick and pack processes which led to fast access and reduces time that is spent in processing an order. The study concluded that there is need by the retailers to set clear guidelines that will improve inventory management processes, this will lead to reduction of overstocking and understocking costs associated in handling inventory leading to increase in GDP and job creation

5.3 Recommendation

The researcher recommends that the retailers in Kisii town should incorporate quantitative inventory demand forecasting tools and market research methods in inventory demand forecasting this is because this will form an essential component since it is the driver for supply chain decisions, demand forecasting will also help in optimization of inventory levels, it will also serve as a vital information for inventory levels this will reduce the bullwhip effect leading to optimization of inventory levels and reduction of stock outs and overstocking.

The researcher further recommends that the retailers should take advantage of automation in a real time environment to enhance timely delivery to their premises, the systems should be well maintained to deter merchandise loss and theft from the retail outlets, automation should be able to create fewer layers; each employee to be responsible for a more diverse set of responsibilities, real time data in the retail sector will empower fast decision making as when the need arises. The use of Point of sales (EPOS) should always show which product categories are most profitable, the products that are popular so that procurement officers will purchase strategically so that at the end will determine what will be in stock.

The researcher further recommends that the pick and pack processes in Kisii outlets should be able to keep customers happy and improve accuracy, the retailers should consider automation, most of the retailers spent 60% of their time walking and moving product around they should instead embrace conveyer technology to reduce their extensive travel time. The attendants should walk less to reduce fatigue, they can make mistakes while tired this will lead to inventory loss and errors.

The researcher recommends that retail outlets in Kisii should avoid replenishing the trading area with stock from the store until stock takes have been completed, if they should replenish, they should they should not take stock from store room until it has been counted and only replenish areas that have been counted, the researcher also recommends installation of proper systems controls (personnel and technology) to reduce cases of poor stock taking. The retailers should also install software stock take technologies which will reduce time spent and lead to more accurate and reliable results.

In Policy recommendation, the study provides information that enables the Kenyan retailers to come up with policy measures that will foster proper functioning of the Kenyan retailers organisations. Since the study addresses most of the emerging issues affecting Kenyan retailers with a view to improving the implementation of the Kenyan retailers system to achieve optimal service delivery. Researchers and academics working in the fields of Kenyan retailers policy and Kenyan retailers organisations will be the immediate beneficiaries of the research. The research documents good practices and challenges of the Kenyan retailers and performance with reference to Kenyan model that help to inform teaching and research at universities and other research institutions in Kenya and around the world.

5.4 Areas for Further Research

The researcher recommends future research studies be done on the influence of pick and pack processes inventory management practice on organizational performance in retail in another county and sector to have more conclusive data. The researcher further recommends on a study on effect of automation on demand forecasting accuracy. Another study should be done on challenges faced by retail sector in automation of inventory management systems.

REFERENCES

- [1] Ashok, D. (2013). The effect of systemic errors on optimal project buffers, *International Journal of Project Management*, 23, 267-274.
- [2] Alain, M. (2015). *Improving Inventory Record Accuracy*. UK: Taylor & Francis.
- [3] Agrawal, N., & Smith, S. A. (2013). Optimal inventory management for a retail chain with diverse store demands. *European Journal of Operational Research*, 225(3), 393-403.
- [4] Barnes, S. (2001). *Supply Chain Management Practices of SMEs*. From a business growth perspective, *International Journal on Operations and Production Management*.
- [5] Bauer, D. G., Campero, R. J., Rasband, P. B., & Weel, M. D. (2012). *U.S. Patent No. 8,321,302*. Washington, DC: U.S. Patent and Trademark Office.
- [6] Benjamin Nyariki Onchoke, Daniel M. Wanyoike. Influence of Inventory Control Practices on Procurement Performance of Agrochemicals Distributors in Nakuru Central Sub-County, Kenya. *International Journal of Economics, Finance and Management Sciences*. Vol. 4, No. 3, 2016.
- [7] Brown, O. J. (2018). Influence of Inventory Management Practices on Performance of Retail outlets in Nairobi City County. *International Academic Journal of Procurement and Supply Chain Management*, 3(1).
- [8] Christine, B. (2008). *Effects of Stock Management on Organizational Performance*. New York: Prentice Hall.
- [9] Christopher, G. & Lee, P. (2004). *Management and Contingency Planning*. Lisbon: Lisbon Book Limited.
- [10] Chris, T. (2003). "The Performance of Supply Management," *Harvard Business Review*, Vol. 82, No. 12, December 2000, pp. 104–113.
- [11] Chinedu, Z. W. (2010). Factors affecting the success of inventory control in the Stores Division of The eThekweni Municipality, Durban: A Case Study. A Project for Masters of Technology in Cost and Management Accounting in the Faculty of Accounting and Informatics, Durban University of Technology, Durban, South Africa.
- [12] Corsten, D., & Gruen, T. (2003). Desperately seeking shelf availability: An examination of the extent, the causes, and the efforts to address retail out-of- stocks. *International Journal of Retail & Distribution Management*
- [13] Dickson, V. (2014). *Value Chain Management*. England, London: University Press.
- [14] Dobler, E. M. (2006). The Future of Purchasing and Supply Management Research: About Relevance and Rigor. *Journal of Supply Chain Management*, 50(1), 56-72.
- [15] Davis, N. (2010). *Operational definitions of inventory record accuracy*. *Naval Research Logistics Quarterly*, 17 (1), 133–142.
- [16] Ehrental, J., Gruen, T., & Hofstetter, J. (2014). Value attenuation and retail out-of- stocks. *International Journal of Physical Distribution & Logistics Management*
- [17] Ehrental, J. C. F., Honhon, D., & Van Woensel, T. (2014). Demand seasonality in retail inventory management. *European Journal of Operational Research*, 238(2), 527-539.
- [18] Fawcett, B. & Cooper, M. (2006). *Management Function and Concepts Foreman 2nd Edition*. London: University Press.
- [19] Flick, D. (2010). Critical chain: the theory of constraints applied to project management. *International Journal of Project Management*, 173-177.
- [20] Froehlich, N. and Westbrook, B. (2010), Impact of Inventory Management on Performance of Construction Firms in Malaysia. *European Journal of Business and Management*. Vol 4, No.4. Pp. 76-91.
- [21] Graham, A. (2009). *Importance of Contingency Theory*. *Heinemann Education Book Limited*: London, UK.

- [22] Gruen, T., Corsten, D., & Bharadwaj, S. (2002). Retail out of stocks: A worldwide Examination of extent, causes, and consumer responses. *Grocery Manufacturers*
- [23] Guimaraes, C., de Carvalho, J., & Maia, A. (2013). Vendor managed inventory (VMI): Evidences from lean deployment in healthcare. *Strategic Outsourcing: An International Journal*
- [24] Heizer, M. D. & Render, J. A. (2004). Supply Chain Management Problems at South African Automotive Component Manufacturers. *Southern African Business Review*, 15(1).
- [25] Henry, J. A. (2005). Supply Chain Management Problems at South African Automotive Component Manufacturers. *Southern African Business Review*, 15(1).
- [26] Hirsh, L. (2018). Factors Affecting Growth & Profitability of the Retail Industry. <https://yourbusiness.azcentral.com>
- [27] Hicks, B. J., McWhirter, B. K., McArthur, D., & Williams, B. (2014). *U.S. Patent No. 8,856,033*. Washington, DC: U.S. Patent and Trademark Office
- [28] Hulk, A.I. (2009). Production and Operations Management. Enugu: De-verge Agencies Ltd. *Supply Chain Management: An International Journal 12/4 (2007) 284– 296*.
- [29] Harrison, V. (2013). Fuzzy modelling and analytical hierarchy processing as a means of Quantifying risk levels associated with failure modes in production systems. *Production Planning & Control*, 10 (4), 340-358.
- [30] Jain, H. (2009). *Supply Chain Practices*. New York: University Press.
- [31] James, M. (2010). Drivers of finished-goods inventory in the US automobile industry, *Management Science*, Vol. 56 No.1, pp.202-16.
- [32] Kamau, L. (2008). *Stores and Stock Control 4th Edition*. Oxford University: Oxford Publishers.
- [33] Kimutai, R. (2008). Inventory Control Systems and Firms Performance. *International Journal of Economics, Commerce and Management*.
- [34] Kotler, V. (2000). The Influence of inventory management Practices towards Inventory Management Performance in Malaysian Public Hospitals. *International Academic Research Journal of Business and Technology* 1 (2), 142-148.
- [35] Kazim, R. (2008). *Research Strategies (2nd Ed)*. India, New Delhi Bamco Publishers.
- [36] Keath, T. & Young, P. (2006). The effect of inventory management on firm performance. *International journal of productivity and performance management*, 57.
- [37] Kimani, G. T. and Otieno, J.K. (2007). An Assessment of the Factors Influencing Effectiveness of Inventory Control; Ministry of State for Provincial Administration and Internal Security, Nairobi Kenya. *International Journal of Business and Commerce* Vol. 3, No.1: Pp. 3
- [38] Kimani, S. W., Kagira, E. K., Kendi, L., & Wawire, C. M. (2012). Shopper's perception of retail service quality: supermarkets versus small convenience shops (Dukas) in Kenya. *Journal of management and strategy*, 3(1), 55
- [39] Kothari, R. (2004). *Research Design and Research Strategies (2nd Ed)*. India, New Delhi Bamco Publishers.
- [40] Lewis, P. (2010). *Inventory Management-A Review*. Fayetteville: University of Arkansas.
- [41] Morrison, G. (2003). The Impact of Inventory Control Practices on Supply Chain Management Success in SME, *Log Forum. Scientific Journal of Logistics*, Vol. 9, No. 6, pp. 177-189.
- [42] Marash, H. & Clinton, S. (2007). Inventory Management and Profitability: A Case Study of Roofing's Ltd Uganda. Research Project Masters of Science, Makerere University.
- [43] Miller, B. (2010). Theory of Operations Management, *International Journal of Operations & Production Management*, Vol. 28: 10, pp.991 - 1012

- [44] Mugenda, M.O. & Mugenda, G.A. (2003). *Research Methods*. Qualitative and Quantitative Approaches, Kenya, Nairobi: ACTS Press.
- [45] Munyao, D. & Omulo, S. (2015). Challenges of supply chain management practices on performance Of the Nairobi Securities Exchange"s listed, food manufacturing companies in Nairobi. *International Journal of Social Sciences and Entrepreneurship*, 1 (11), 107-128.
- [46] Mwai, J. (2007) Role of Inventory Management on Customer Satisfaction among the Manufacturing Firms in Kenya: A Case Study of Delmonte Kenya. *European Journal of Business and Management*. Vol.6, No.27, Pp. 209-217.
- [47] Makena J. (2013). Study of Relationship between Supply Chain Management Strategies with Logistics Performance and Organizational Performance. *Interdisciplinary Journal of Contemporary Research in Business*, 4(9).
- [48] Munyao, M. M., & Omulo, C. O. (2015). Role of Inventory Management on Performance of Production Department" A Case of Manufacturing Firms in Kenya. *International Journal of Economics, Commerce and Management*. 3 (5), 1625-1656
- [49] Murakami, P. (2006). *Understanding Behaviours for effective Management and Control (3rd Ed)*. Prentice Hall: London, UK.
- [50] Mbuvi, L. (2016). Factors Affecting Automation of Inventory Management in micro,small and medium enterprises Acase study of Kitui county. *International journal of Academic research in Business & social sciences*, 6(1).
- [51] Muiruri, K. M. (2015). Influence of Inventory management on the performance of the energy sector A case of Kenya power Limited. *International Journal of Logistics and Procurement Management*.
- [52] Sire, D. N. (2017). Influence of inventory lead time on the performance of retail outlets.A survey research on Supermarkets in Kisii town. *III*(1).
- [53] Nzonzi, H. (2012). Partnering Pitfalls and Success Factors. *International Journals of PurchasingandMaterial Management*, 2, 31.
- [54] Ngugi, J. K., Aiyabei, J. K., Maroko, P. M., & Ngugi, D. P. K. (2012). Influence of Vendor inventory management on organizational performance in retail outlets in Kenya: A case of Uchumi supermarkets. *International Journal of Business and Social Research*, 2(7), 62-69.
- [55] Obeke, D. (2006) Impact of Inventory Management on the Profitability of SMES in Tanzania. *IJRCM*, Vol 4, Issue 2.
- [56] Olivares, P. (2015). Inventory management practices and business performance for small-scale Enterprises in Kenya. *Journal of business management*.
- [57] Omondi, P. (2011). Effect of Inventory Management Practices on Organizational performance in Public health institutions in Kenya: A Case of Kenyatta National Hospital. *International Journal of Education and Research*, 3 (3), 703-714.
- [58] Oballah, D. (2015). Effect of Inventory management practices on organisation performance in public health Institutions in Kenya A case study of Kenyatta National Hospital. *International Journal of Education and Research*.
- [59] Ochele, C. A. (2017). Effect of inventory control methods on the performance of procurement function in sugar manufacturing firms in Western Kenya. *International Journal of Social Sciences and information technology Volume 111 issue 11*.
- [60] Ondari, L. M. (2016). Factors affecting efficiency of Inventory management in organisations in Kenya Acase of firms in Kisii town. *International Journal of economics commerce and management*, 4(4).
- [61] Owino, V. (2010). The Impact of Inventory management on Financial Performance of Sugar Manufacturing Firms in Kenya. *International Journal of Business, Humanities and Technology*. 3, (5), 76-85.

- [62] Payne, B. (2007). *Five Strategies for Improving Inventory Management across Complex Supply Chain Networks*. Spain, Barcelona: Vigo Hall Publishers.
- [63] Porter, J. (2010). *Enterprise Resource Planning*. Information Technology, Germany, Berlin: Wingman Publishers.
- [64] Rossetti, S. (2010). An Empirical Investigation into Supply Chain Resilience. *The IUP Journal of Supply Chain Management*, 9 (4), 46-61.
- [65] Reardon, V. (2003). *Logistics and Inventory Management (3rd Ed.)*. Liverpool: University Press.
- [66] Reiner, P (2007). *Inventory Strategies for Systems with Fast Remanufacturing*. Erasmus Research Institute of Management.
- [67] Walter, C. (2005). *Capacity Planning Requirement*. UK, London: West Wing Publishers.
- [68] Wayne, P. (2008). *Recording and Coding Guide for the Structure Inventory and Appraisal of the Nation's Bridges*. USA: US. Department of Transportation-Federation Highway.
- [69] Williamson, K. (2001). *Importance of Theoretical Framework in Research and Development*, England, London: University Press.