

**THE EFFECT OF INVENTORYMANAGEMENT ON ORGANISATIONAL
PERFORMANCE**

CASE STUDY: HWANSUNG INDUSTRIES LIMITED

NTINDA INDUSTRIAL AREA

BY

NVIIRI LAWRENCE

REG.NO. 2013-B021-20071

**A DISSERTATION SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE AWARD OF A BACHELOR'S DEGREE IN BUSINESS ADMINISTRATION
AND MANAGEMENT.**

UGANDA MARTYRS UNIVERSITY

APRIL 2016

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APRIL, 2016

DEDICATION

This research study is dedicated to my Mum Mukamusoni Agnes my sister Mirembe Margaret and Naluyinda Joyce Hope for their tireless motivation throughout the entire Business Administration and management program and especially during this research.

ACKNOWLEDGEMENTS

First, I thank God for giving me the Grace to finish my Bachelor's Degree in Business Administration and management and this dissertation. My special and sincere thanks go to my supervisor Mr. SSegawa Edward for his guidance, support, suggestions, useful comments and constructive critique which were all instrumental to the successful completion of this dissertation. I also wish to appreciate the support and encouragement from my friends Luky Hilary Kansiime Justus and Birike Silvia because without their encouragement this dissertation would not be completed .Lastly I would like to thank my family especially my mum for all her supports he rendered so that this dissertation is completed.

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ABSTRACT

The purpose of the study was to assess the effect of inventory management on organizational performance of Hwansung industries limited. Objectives of the study were to: Determine the effect of distributive resource planning on organizational performance, establish the influence of enterprise resource planning on operational performance and the effect of material resource planning on organizational performance of Hwansung industries limited. the research employed a case study design. The study target population was 60.

Purposive sampling and stratified random sampling techniques were applied to select a sample of 52 respondents for this study. The main data collection instrument was a structured questionnaire designed in both open and close ended. Quantitative data was analyzed using descriptive statistics, and correlation analysis to assess the association between the study variables in the study.

The findings of this study are expected to be beneficial to the management of Hwansung industries limited to improve their performance and also inform policy makers. The study findings will contribute towards academic paradigms and fill the gap between researched work and un researched areas. The outcome in this study is that there was a significant positive correlation relationship between the use of inventory management and organizational performance of Hwansung industries limited.

CHAPTER ONE

INTRODUCTION

1.0 Introduction

The research was intended to study the effect of inventory management on the performance of an organization. The case study was Hwansung group of companies. The focus of the study was on how the different inventory management strategies contribute to the performance of the company therefore making it effectively and competitively to contain a large, enough and manageable market share in the furniture industry. Wisner and long (2011) defined inventory management as the process of efficiently overseeing the constant flow of units into and out of an existing inventory. This process usually involves controlling the transfer of units in order to prevent inventory from becoming too high, or dwindling to levels that could put the operations of a company into jeopardy. Akintoye (2014) found that inventory management led to improved performance of German service firms. Mehra (2014) and Lapide (2010) also concluded that use of technology in inventory management improved efficiency of manufacturing firms and service firms.

In this chapter, the researcher addressed a number of issues which include a background of the study, statement of the problem, purpose of the study, specific objectives of the research, research questions, scope, significance, justification, definition of key terms and conceptual framework.

1.1.1 Background to the study

In a world of intense competition fueled by globalization, increasing consumer awareness, and technological improvement, organizations should be keen towards large scale success at all times.

Inventory constitutes a major portion of current assets especially in manufacturing companies and retail/trading firms. In order to maintain inventory levels of such magnitude, huge financial resources are committed to them (Mittal, 2014). As such, inventory also constitutes a major component of working capital. To a large extent, the success or failure of a business depends upon its inventory management performances. Inventory management, therefore, should strike a balance between too much inventory and too little inventory (Gupta & Gupta, 2012). The efficient management and effective control of inventories help in achieving better operational results and reducing investment in working capital. It has a significant influence on the profitability of a concern thus inventory management should be a part of the overall strategic business plan in every organization (Gupta & Gupta, 2012).

Inventory plays a significant role in the growth and survival of an organization in the sense that ineffective and inefficient management of inventory will mean that the organization loses customers and sales will decline. Prudent management of inventory reduces depreciation, pilferage and wastages while ensuring availability of the materials as at when required (Ogbadu, 2009). Efficient and effective management of inventories also ensures business survival and maximization of profit which is the cardinal aim of every firm. More so, an efficient management of working capital through proper and timely inventory management ensures a balance between profitability and liquidity trade-offs (Aminu, 2012). Specific performance indicators have been proved to depend on the level of inventory management practices (Lwiki et al., 2013).

According to Miller (2010), inventory management involves all activities put in place to ensure that customer have the needed product or service hence it coordinates the purchasing, planning, manufacturing and distribution functions to meet the marketing needs and organizational needs of availing the product to the customers. Inventory management is primarily involved with specifying the size and placement of stocked goods. Inventory management is required at different locations within a facility or within multiple locations of a supply network to protect the regular and planned course of production against the random disturbance of running out of materials. The scope of inventory management also involves managing the replenishment lead time, replenishment of goods, returns and defective goods and demand forecasting, carrying costs of inventory, asset management, physical inventory, available physical space, demand forecasting, inventory valuation, inventory visibility, future inventory price forecasting and quality management. With a balanced of these requirements, it is possible to reach an optimal inventory level, which is an on-going process as the business needs shift and react to the wider environment Ogbo et al, (2014)

Inventory management is recognized as a vital tool in improving asset productivity and inventory turns, targeting customers and positioning products in diverse markets, enhancing intra and inter-organizational networks, enriching technological capabilities to produce quality products thereby imparting effectiveness in inter-firm relationships. Proper inventory management even results in enhancing competitive ability and market share of small manufacturing units (Chalotra, 2013). Well managed inventories can give companies a competitive advantage and result in superior financial performance (Isaksson and Seifert, 2013). Management of inventory is also fundamental to the success and growth of

organization as the entire profitability of an organization is tied to the volume of products sold which has a direct relationship with the quality of the product (AnichebeandAgu, 2013).

Bourne et al, (2005) state that performance measurement is traditionally concentrated on financial measures. In this context organizational performance is a measure of change of operations of a firms or their outcome resulting from use of inventory control systems. According to Department of public works (2006) it is significant that what measured is not only important to the business firm but should also cover all core areas. Organizational performance provides the basis for a firm to assess how well it is progressing towards its predetermined objectives. According to Atrill (2014) there is need to analyze the costs of maintaining certain levels of inventory as there are costs involved in holding too much stock and there are also costs involved in holding too little inventory. In the cost structure of most of the products manufactured the cost of materials exceeds 50% of the total cost (Ramakrishna, 2013). Ramakrishna (2005), argues that inventory control systems provides an opportunity to reduce manufacturing costs and be treated as a profit center, this may affect the performance of a firms.

Organizational performance comprises the actual output or results of an organization as measured against its intended output.

According to Richard et al, (2009), organizational performance encompasses three specific areas of a firm's outcomes: financial performance include profits, return on assets and return on investment; product market performance include sales and market share; and shareholder returns include total shareholder returns and economic value added on organization side; customer satisfaction, customer care and royalty. The biggest challenge to organizational performance is the external environment. All organizations operate within some external

environment. The challenge that may arise from the external environment include political, economic, socio-cultural, environmental and technological (Snider and Rendon, 2001)

However, Mathuva, (2013) points that the direction of the relationship between inventory management and performance of business firms had not been clear. Furthermore studies on the relationship between inventory control systems and sustainability had produced mixed results (Gill, et al, 2010). This acted as the fundamental concept behind the present study.

1.1.2 Background to the case study

Hwansung group of companies is the biggest Korean investor to East Africa, present in Uganda, Kenya and South Sudan. In 1980, the company tried African market by establishing a trading company in Kenya and in 1986 the company started its operations in Uganda. Hwansung group of companies has continued sound growth by entering into construction material industry and expanding geographically through affiliates in Kenya and South Sudan. Today the company is the frontier of developing high quality construction interior and exterior materials. The company deals in insulation sheets, steel sheet, aluminum windows and door production, furniture brand in Uganda.

1.2 Statement of the problem

The manufacturing sector, including both formal and informal, represented 11.29% of GDP in 2015 at current prices therefore the Ugandan manufacturing sector is relatively small, dominated by small to medium scale enterprises that make up around 90% of the sector (Uganda Budget speeches, 2015). Businesses hold inventory to ensure operational activities proceed uninterrupted. According to Atrill (2014) there is need to analyze the costs of maintaining certain levels of inventory as there are costs involved in holding too much stock and there are also costs involved in holding too little inventory. In the cost structure of most

of the products manufactured the cost of materials exceeds 50% of the total cost (Ramakrishna, 2013). However, small businesses face the problems of fluctuating inventories, inaccurate forecasts, low utilization due to inadequate coordination of business operations leading to significant losses and wastage in the supply chain (Kagira, et al, 2012). Too much inventory consumes physical space, creates a financial burden, and increases the possibility of damage, spoilage and loss (Nyabwanga et al, 2012). On the other hand, too little inventory often disrupts business operations (Dimitrios, 2008). Despite the existence of different stock control procedures like inventory accounting and stock requisition approval, companies continue to incur costs due to inconsistencies' in stock levels and observation is that Uganda firms have too much inventory which is destroyed or damaged over time and this has resulted into shrinkages, delays in production, raw material shortages and over spending on materials (Kamukama, 2006). The study therefore intends to suggest possible ways to overcome these challenges and this prompted the researcher to examine inventory management on performance of an organization.

1.3 Objectives of the study

1.3.1 Major objective

The overall objective of the study was to assess the effect of inventory management on the performance of an organization

1.3.2 Specific objectives

- I. To find out the relationship between distribution requirement planning and performance of an organization

- II. To assess the relationship between enterprise resource planning and performance of an organization

III. To examine the relationship between material resource planning and performance of an organization

1.4 Research questions

1. What is the relationship between distribution requirement planning and performance of an organization?
2. What is the relationship between enterprise resource planning and performance of an organization?
3. What is the relationship between material resource planning and performance of an organization?

1.5 Scope of the study

1.5.1 Geographical scope

The study was carried out at Hwansung industries limited located at plot M/243 Ntinda industrial area in Kampala city.

1.5.2 Content scope

The study was interested in trying to understand the techniques of inventory management used in firm, relationship between inventory management practices like material resource planning, distribution resource planning and enterprise requirement planning and performance of organizations in terms of profitability customer care and levels of sale.

1.5.3 Time scope

The study considered information relating to the period of three years that is 2014-2016 in order to capture previous and latest statistics and trends to ensure reliability and validity for the presented findings. This implies that there could be new entrants in the same market therefore there should have been new strategies at Hwan sung to attain and sustain their market for instance the information technology, branch establishments and product diversification.

1.6 Significance of the study

It is hoped that the study findings may be used as basis for further research and investigations in form of literature basing on new data finding the researcher will generate.

The findings may provide information to management of organizations especially on knowing how to compare the firm's performance and inventory management.

The findings may also be beneficial to other upcoming researchers to investigate further about the impact of inventory management and organizational performance of other firms other than Hwan sung Company.

The research benefited new entrepreneurs in small businesses with the essential knowledge of inventory management especially in areas of material resource planning, repetitive manufacturing and vendors managed inventory.

1.7 Justification of the study

Considering the fact that there is need to create and share knowledge and information therefore throughout this research i was able to choose inventory management since most businesses pay no or little attention to it in their operations therefore prompting me to carry out the study.

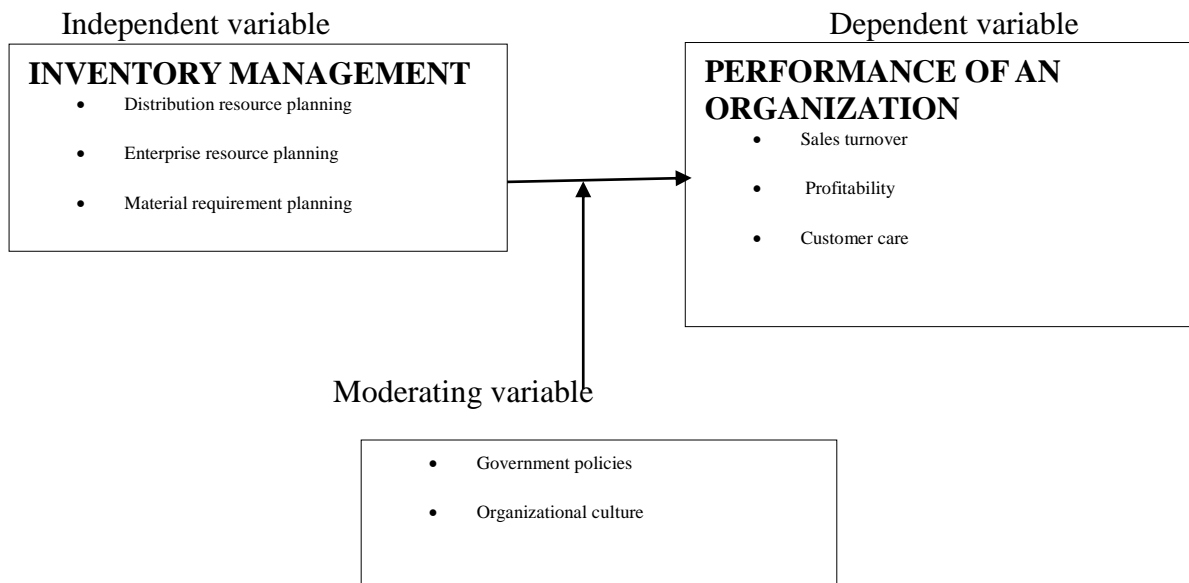
For students of a related course, it formed a basis of knowledge which enlightened them on how inventory management practices like material resource planning, repetitive manufacturing and vendors managed inventory influence performance of an organization..

Finally the result of the findings benefited both the owner and management of business on how best to improve their performance through inventory management.

1.9 Conceptual framework

Miller (2010), inventory management involves all activities put in place to ensure that customer have the needed product or service hence it coordinates the purchasing, planning, manufacturing and distribution functions to meet the marketing needs and organizational needs of availing the product to the customers. Richard et al, (2009), organizational performance encompasses three specific areas of a firm's outcomes: financial performance include profits, return on assets and return on investment; product market performance include sales and market share; and shareholder returns include total shareholder returns and economic value added on organization side; customer satisfaction, customer care and royalty. Based on the above, the conceptual framework is given in figure 1 below.

Fig 1.0 relationship between variables



Developed: source(Miller, 2010;Richard et al, 2009)

To determine performance of organization, inventory management practices like material requirement planning, distribution resource planning and enterprise resource planning have to be well administered and this affect the dependent variable that is performance in terms of profitability, sales turnover and customer care. The researcher explains the relationship and how that relationship is affected by intervening variables that is government policies and organizational culture.

1.9 Definition of key terms

Inventory: - is the amount of goods, materials or parts carried out in stock or store house for example, work in progress, raw materials, financial goods resale maintenance, repair and operations (MRO) items.

Inventory management: involves the planning, ordering and scheduling of the materials used in the manufacturing process. It exercises control over three types of inventories i.e. raw materials, work in progress, and finished goods

Material resource planning: is standard system for calculating the quantities of components, sub-assemblies and materials required to carry out a production program for complex products

Sales turnover: the company's total revenue, both the invoice, cash payments and other revenues.

Enterprise Resource Planning; an automation and integration of a company's core business to help them focus on effectiveness and simplified success.

Distribution Resource Planning: is a system for forecasting/projecting requirements for finished products at the point of demand

Profitability: The state or condition of yielding a financial profit or gain. It is often measured by price to earnings ratio.

Customer care: provision of services to customers before, during and after a purchase

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

The actual review objective by objective and this chapter discusses a review of the literature of the topic and objectives as mentioned in chapter one. It depicts the theoretical and concepts for different authors and what they say about the relationship between inventory management and business performance of business organizations. This chapter also shows the relationship between the dependent variable and the independent variable as illustrated by the conceptual framework. This chapter presents the introduction, the theoretical framework conclusion.

2.1 Theoretical Review on Inventory Control Systems

Different theories have been employed to help bring clarity to the study of the effects of inventory management on sustainability of Hardware firms. The study borrowed from the contingency theory and lean theory to build the critical concerns on effects of inventory management on sustainability small businesses.

2.2.1 Transaction Cost Analysis (TCA)

The study of inventory management calls for an organization to ensure all costs are kept at a minimum hence the need to apply the theory of (TCA). According to Halldorsson et al (2007),

(TCA) is a theory that ensures that costs across the supply chain are kept at a minimal. Transaction cost approach has been widely used in different areas, especially in economics and organizational studies. In the early 1970s, the mathematical economist, Williamson, incorporated TCA into the general equilibrium model and set up his transaction cost

economics in the new theory of the firm. Williamson (1975, 1981) suggests that organizations can reduce their transaction costs by vertical integration and increasing the level of trust at the same time. This kind of integration can reduce the costs of inventory management while increasing the service level of both internal and external customers while releasing capital to be used in other areas of the organization. Organizational supply chain can however reduce transaction not only through vertical integration and increasing the level of trust among supply chain participants, but also through horizontal integration and economy of scale gained from the aggregation of supply and/or demand. TCA has some criticisms and one of the criticisms focuses mainly on dependent and independent economic factors and fails to include personal and social relations. Another criticism suggested by (Skjoett-Larsen (1999).

2.2 Overview of inventory management

For many companies the root cause of underproduction stoppages and high production cost could be easily traced to unscientific method of arriving at a general inventory policies and crucial inventory decisions. Moreover, the bulk of raw material inventory and the finish goods inventory used by companies have to be imported which raises higher the cost of procurement and higher uncertainty in the availability of such basic raw materials. Ogbo (2011) opined that inventories are the goods or materials that are waiting to be used or dispatched for sale. A day-to-day practice in all fields of human endeavour, households, manufacturing firms, servicing firms, among others is inventory control.

Inventories provide a significant link between production and sales of product, and constitute a large percentage of the cost of production. It is one of the most expensive and important assets of many manufacturing companies representing a considerable percentage of the total invested capital (Inyama, 2006). At any level of a firm, inventory is among the largest

investment made and therefore logically deserves to be treated as a major policy variable, highly responsive to the plans and style of top management. However, to date in most organization, both analysts and managers have been relatively unsuccessful in convincing top management to give this area the due consideration that it logically deserves (Ogbo, 2011).

Inventories are basically stocks of resources held for the purpose of future production and/or sales. Inventories may be viewed as an idle resource which has an economic value. Better management of inventories would release capital for use elsewhere productively, (Ghosh and Kumar, 2003). Hence Inventory control implies the coordination of materials accessibility, controlling, utilization and procuring of material. The direction of activity with the purpose of getting the right inventory in the right place at the right time and in the right quantity is inventory control and it is directly linked to production function of any organization. This implies that profitability of any organization directly and indirectly is affected by the inventory management system operated (Miller, 2010). Inventory of goods has many reasons why organization should maintain it. It is economically unsound and physical impossible to have goods arrive in a system exactly when demands for them occur. Without stock at hand customers would have to wait for long period before their orders are fulfilled. Inventory management is the control of materials used and stored in a company with the objective of providing exactly what is required where and when it is required employing a minimum of residual stock and thus incurring the least possible cost (Agha,2010).

2.2.1 Distribution resource planning

Distribution Requirements Planning (DRP) is a time-phased replenishment approach in which inventory status is reviewed and new stock plans are generated periodically. The concepts and logic used are similar to those used in Material Requirements Planning (MRP). However, the approach is applied toward the distribution of goods separated geographically rather than

the flow of parts within one manufacturing facility. The demand at the stage most closely linked to the end user is treated as independent demand, while demand at upstream stages is treated as dependent demand (Enns and Pattitta, 2012).

Forecasting is used to anticipate requirements at the independent demand level (or echelon), while time-phased logic is used to anticipate requirements for upstream inventory echelons. According to Quesada et al, (2012) accurate demand and sales forecasts help a firm out of stock-out situations and allow a business firm provides high level of customer service. The control system is fronted as to facilitate accurate prediction of customer demand and hence timely response to their requirements. DRP provides the basis for integrating the manufacturing planning and control system from the firm to the field (Farrington and Lysons, 2006).

DRP allows an organization to manage the distribution of products and services between facilities and therefore it complements the user's ability to ensure that the warehouses are kept within a defined structure, bill of distribution, are being replenished with the right product at the right time in the right quantities. Due to complexity of some distribution structure, it's important to have DRP to review the optimal material supply flow on regular basis.

2.2.2 Enterprise resource planning

ERP is an industry acronym for Enterprise Resource Planning. Broadly speaking, ERP refers to automation and integration of a company's core business to help them focus on effectiveness and simplified success. An ERP System automates and integrates core business processes such as taking customer orders, scheduling operations, and keeping inventory records and financial data. Enterprise systems (ES) represent an important technology

investment option for operational managers, and have been acclaimed in the practitioner and academic literature for their potential to improve business performance Akkermans et al. (1999), Davenport (1998).

Enterprise Resource Planning (ERP), Firms have invested heavily in resource planning systems. And inventory management research with estimates that investment in such systems amounted to more than \$38 billion in 2001 Krause and O'Brian (2002). Forecasters predict continued high growth in the level of investments in Enterprise systems Research (2004), regarding the significant level of investments as relevant issue is whether investments in systems affect corporate business performance. Most empirical evaluations of the benefits of enterprise resource planning assume that a successful implementation of the planning strategy will have a positive impact on operational performance metrics, which in turn will improve financial performance. However we are aware of only two such studies that have analysed investments in ERP systems

2.2.3 Material requirement planning

MRP system is defined as product oriented computerized technology aimed at minimizing inventory and maintaining delivery schedules. It relates the dependent requirements for materials and components comprising an end product to time periods over planned horizon on the basis of forecasts provided by marketing and sales and other input information (Lysons and Gillingham, 2003).Minty, (1998) explains that MRP represents an effort to expand the scope of planning process such as marketing, accounting, finance and purchasing and all these functional area have input to the master production schedule therefore MRP is used to generate material requirements and help the production manager plan capacity.Malcom, (2005) states that buffer or safety stocks exist as a result of uncertainties in demand or supply, raw materials, purchased parts or material requirement operations (MRO) buffer stocks give

some protections against the uncertainty of supplier performance due to shut down, strikes, led time variations, late deliveries to and from suppliers, poor quality units that cannot be accepted and so on.

Manufacture assemblies such as the automobile companies' make a number of components purchase others and assemble them into end products (Hellen, 1993). Assemblers, such as electronic companies, buy components and assemble them into finished products. Each type of firm can use MRP profitably but the greatest benefits usually accrue to the middle group because of the greatest complexity of its operations. The goals of MRP are to minimize inventory, to maintain a high service coverage and to co-ordinate delivery schedules for manufacturing and purchasing activities. These aims often conflict in other systems but under MRP are achievable simultaneously. The feature and ability of modern MRP systems to allow rapid re-planning and searching and in response to the changes of a dynamic environment are responsible for attractiveness of MRP.

2.3 Overview of Organizational performance

Organizational performance is a combination of management and analytic processes that allows managers of an organization to achieve pre-determined goals. Business performance management has three main activities: selection of goals, consolidation of measurement information relevant to the organization's achievement of these goals, and interventions made by managers in light of this information (Bourne 2011).

Martinez and Meer, (2012) assert that organizational performance looks at the organization in a holistic way that goes beyond each division and areas that this business possesses. In this way, this method is able to align the strategic and operational objectives of a company, which helps this company to better reach the pre-selected goals. Graham, (2008), emphasizes on

performance metric which determines an organization's behavior, activities and performance therefore should support a range of stakeholder needs from customers, shareholders to employees, While traditionally many metrics are finance based, inwardly focusing on the performance of the organization, metrics may also focus on the performance against customer requirements and value.

In project management, performance metrics are used to assess the health of the project and consist of the measuring of seven criteria: safety, time, cost, resources, scope, quality, and actions. In call centers, performance metrics help capture internal performance and can include productivity measurements and the quality of service provided by the customer service advisor. These metrics can include: Calls Answered, Calls Abandoned, Average Handle Time and Average Wait Time (Neville, 2008)

2.3.1 Sales turnover

Sales turnover is one of the largest and most value-relevant items in firms' financial statements and considered a key value driver of shareholder value (Srivastava, 2014). Prior research documents that the stock market reaction on the earnings announcement date is significantly related to contemporaneous and past revenue surprises (Jegadeesh and Livnat, 2006) and the market awards a distinct equity premium to firms meeting revenue forecasts (Rees and Sivaramakrishan 2007).

Due to its importance, managers often voluntarily disclose projected revenue performance along with earnings guidance (Wasley and Wu 2006). The frequency of issuing analysts sales turnover forecasts has also increased dramatically over time (Ertimur et al, 2011). In some cases investors even place a higher valuation weight on sales than on earnings. For instance, Rees and Sivaramakrishan (2007) find that the equity premium to firms meeting earnings

forecasts disappears when revenue forecasts are not met. For Internet firms with losses or negative cash flows, the market views revenues and revenue growth as highly important and analysts tend to follow the price-to-sales ratio (Callen et al. 2008).

2.3.2 Profitability

There are two important concepts that figure in an organizations decision that is economic profits and accounting profits (Heilman and Kennedy-Phillips, 2011). In accounting sense profitability is the surplus of revenue over and above all point out costs including both manufacturing and overhead expenses. On the other hand, profitability accounting to economists takes into account the implicit or imputed cost; the implicit cost is the opportunity cost.

Opportunity cost is defined as the payment that would be necessary to draw forth the factors of production from their most remunerative alternative employment. That is opportunity cost is income foregone which a businessman could expect from the second best alternative use of his resources. Profitability is stated as the ability to provide a reasonable and adequate return on capital employed in existing business, new areas and internal control operations so as to fulfill the objectives of the organization (Shiva and Suar, 2010). Primary objectives of every business are solvency and profitability (Muthiah and Huang 2006).

2.3.3 Customer care

Customer service is an important means for organizations to gain a Competitive advantage in today's service economy, in addition to customers who are satisfied tend to return for future business and sometimes assist in marketing service organization through word-of-mouth (Areni, 2003). Previous research has demonstrated that customer retention is increasingly profitable year after year in many Industries. According (Haupt, 2002)

Customer service can be measured in many dimensions such as: service empathy, access time and courtesy of staff but this study will consider the main dimension of service quality, service speed and responsiveness (after sale service and technical support). Although service quality is understood as the ability to get the desired services from the chosen provider at the right price. Because desire is considered the ultimate for a customer, it is proposed that the consumer ultimately wants: lower prices; improved choice of services; better value for money; acceptable quality; availability; redress. He further explains that service quality refers to the relationships between customers and the organization; and between expectations for excellent services and perceptions of service delivers (Lacobucci, 1995).

2.4 Actual review of literature by objectives

2.4.1 Distributive requirement planning

Distribution Requirements Planning (DRP) is a time-phased replenishment approach in which inventory status is reviewed and new stock plans are generated periodically. The concepts and logic used are similar to those used in Material Requirements Planning (MRP). However, the approach is applied toward the distribution of goods separated geographically rather than the flow of parts within one manufacturing facility. The demand at the stage most closely linked to the end user is treated as independent demand, while demand at upstream stages is treated as dependent demand (Enns and Pattitta, 2012). Forecasting is used to anticipate requirements at the independent demand level (or echelon), while time-phased logic is used to anticipate requirements for upstream inventory echelons.

According to Quesada et al, (2012) accurate demand and sales forecasts help a firm out of stock-out situations and allow a business firm provides high level of customer service. The control system is fronted as to facilitate accurate prediction of customer demand and hence

timely response to their requirements. DRP provides the basis for integrating the manufacturing planning and control system from the firm to the field (Farrington and sons, 2006). DRP allows an organization to manage the distribution of products and services between facilities and therefore it complements the user's ability to ensure that the warehouses are kept within a defined structure, bill of distribution, are being replenished with the right product at the right time ion the right quantities. Due to complexity of some distribution structure, it's important to have DRP to review the optimal material supply flow on regular basis.

DRP system take forecast demand and reflect this through the distribution system on a time-phased requirements basis (Rushton et al, 2011). The competency of a firm can be measured by how well it is able to adapt to unpredictable situations. Accurate forecasting may have an effect on a firm's inventory level. Chang & Lin (2010) state that bullwhip effect is an example of predictive inaccuracy. The capacity of operational activities of the firm will be such that its output just matches demand. They say that excess capacity is wasteful and costly; too little capacity means dissatisfied customers and lost revenue implying that having the right capacity requires having accurate forecasts of the demand and the ability to translate forecasts into capacity requirements. When demand and product availability are immediate, the producer can perform the exchange and delivery functions itself. However as the number of producers grow and the geographical dispersion of the customer base expands, the need for both internal and external intermediaries who can facilitate the flow of products, services and information via a distribution process increases overall channel complexity through sorting and assisting in daily routine.DRP are designed to take forecast demand and reflect it through the distribution system on a time-phased requirement basis (Baily et al, 2008). From these projections, aggregated, time phased requirements schedules for each echelon in the distribution system can be derived. Distribution resource planning function by pulling the

product through the distribution system once demand has been identified (Baily et al, 2008). Rushton et al, (2011) adds that the system works to the elimination of inventory. The central focus of distribution is to increase the efficiency of time, place and utility time.

DRP serves a central role in coordinating the flow of goods inside the factory with the system modules that place the goods in the hands of the customer (Farrington and Lysons, 2006). Predictability of future demands, resource requirements and consumer needs may contribute to flexible operational performance. According to Hansen and Mowen (2007) lowering inventory level would give organization a competitive advantage due to production of quality products at lowering prices and it will respond faster to customer needs. Businesses seek ways to reduce the time to bring products and services to market place to gain competitive edge. It enables physical resources requirements to be planned together with production and purchasing control. It controls the entire logistics system (Baily et al, 2008).

Inventory status and planned lead times are therefore used to time order releases so inventory is minimized while still preventing excessive shortages. Since inventory is planned throughout the supply chain, based on anticipated demand, DRP systems are considered to be proactive. Advantages of DRP include inventory reduction, better customer service, and compatibility with other systems within the supply chain. However, DRP also has disadvantages. Data throughout the supply chain must be accessible implementation costs are relatively high, and system nervousness can result in highly uncertain environments (Weiler, 2000). DRP has been proven to work well where supply chain integration is feasible, especially when compared to traditional Order Point systems.

2.4.2 Effect of Enterprise resource planning on performance

Enterprise Resource Planning is an enterprise-wide information system that facilitates the flow of information and coordinates all resources and activities within the business organization. Enterprise resource planning (ERP) is the generic term used for management software that include modules such as production, finance, marketing and human resources and that allow companies to plan their goods and services (Stevenson, 2007). According to Hossein (2004), Enterprise resource planning (ERP) systems integrate internal and external management information across an entire organization, embracing finance/accounting, manufacturing, sales and service, customer relationship management, etc. ERP systems automate this activity with an integrated software application. The purpose of ERP is to facilitate the flow of information between all business functions inside the boundaries of the organization and manage the connections to outside stakeholders. This software, used by many enterprises, particularly by multinational corporations, has a critical role in ensuring increased efficiency. Zhao and Fan (2007) suggested that new generation ERP systems should be developed based on the principles of low cost, high quality and efficiency.

According to Loudon (2009), ERP is a packaged business software system that lets an organization automate and integrate the majority of its business processes, share common data and practices across the enterprise and produce and access information in a real-time environment. The various functions typically supported by the system include manufacturing, inventory, shipping, logistics, distribution, invoicing, and accounting. Some solutions now embed customer relationship management functionality. A wide variety of business activities that includes sales, marketing, billing, production, inventory management, human resource management, and quality control depend on these systems. The ERP system assists in managing the connections to outside stakeholders as well as enhancing performance

management. It uses a centralized database and usually relies on a common computing platform. It provides the user with a unified, consistent, and uniform environment.

According Michael (2009), ERP enables companies to break down traditional organization's silos, replacing them with a tightly integrated horizontal structure in which strategy, organizational structure, process and technology are closely aligned. ERP solutions evolved from applications focused on materials requirements and resource planning and computer integrated manufacturing. The Enterprise Resource Planning term came about when software developers were searching for a name that would more aptly describe these broader systems (Gartner group, 1990). These new solutions provided functionality that encompassed other applications in addition to manufacturing. In the year 1990, the Garter Group employed the acronym ERP, as an extension of materials requirements planning, which later changed to manufacturing resource planning and computer integrated manufacturing. ERP came to represent a larger whole, reflecting the evolution of application integration beyond manufacturing.

Implementing an ERP system often constitutes a company's largest IS investment and in many cases the largest corporate project (summer, 2000). This is more so in firm of developing countries where many of the operational, control and managerial systems have yet to be automated and where legacy systems are not as entrenched as in the businesses in the developed countries. It is then for this reason that many researchers have concluded by stating that, in developing countries, ERP systems are often implemented not to replace legacy systems but as part of an organization's effort to modernize and differentiate itself (Reimers, 2003). It is therefore for many organizations to justify the enormous investments in ERP, they need to constantly ask whether such systems can provide them with the desired modernization and other sustainable advantages. As such, ERP as a strategic implementation

clearly focuses the attention on strategic issues. One of the primary benefits of deploying a Full-Function ERP solution is the consolidation of often-dispersed data.

The consolidation of data resulting from ERP use creates many organizational benefits that include: No need to synchronize changes between systems; Consolidates applications and brings more control to cross-functional processes for manufacturing, finance, human resources, marketing, and sales; Provides a real-time, enterprise-wide view of the business for faster and more effective decision-making; Shortens production lead times and delivery times; Helps build a common vision throughout the enterprise; Consolidates multiple permissions and security procedures into a single framework, which reduces the risk of losing or exposing sensitive data. An ERP System automates and integrates core business processes such as taking customer orders, scheduling operations, and keeping inventory records and financial data. Enterprise systems (ES) represent an important technology investment option for operational managers, and have been acclaimed in the practitioner and academic literature for their potential to improve business performance Akkermans et al. (1999), Davenport (1998).

According to Ahmed and Ayman, (2011) enterprise resource planning is adopted in many firms in attempts of improving business performance. Federici, (2009), outlined reasons for firms acquiring enterprise resource planning systems as providing better operational and management of information. There is feedback from vendors, the production shop, and store when a problem arises in implementing the production plan, which enables adjustments to be made to overcome these problems immediately (Baily et al, 2008). MRPII is used for simulation purposes (Emmett & Granville, 2007). The system will simulate the consequences for order releases, current order schedules, inventories, work in progress, finished product,

labour costs and cash flow. If this is not a viable proposition then an alternative can be tested, and once this found the necessary adjustments can be made throughout the system

ERP systems can drive huge improvements in the effectiveness of any organization by; assisting you in defining your business processes and ensuring they are complied with throughout the supply chain, protecting your critical business data through well-defined roles and security access, enabling you to plan your work load based on existing orders and forecasts, providing you with the tools to give a high level of service to your customers and translating your data into decision making information, Powell T.C., Dent-Micallef A,(1997). Enterprise Resource Planning (ERP), Firms have invested heavily in resource planning systems. And inventory management research with estimates that investment in such systems amounted to more than \$38 billion in 2001 Krause and O'Brian (2002). Forecasters predict continued high growth in the level of investments in Enterprise systems Research (2004), regarding the significant level of investments as relevant issue is whether investments in systems affect corporate business performance.

Most empirical evaluations of the benefits of enterprise resource planning assume that a successful implementation of the planning strategy will have a positive impact on operational performance metrics, which in turn will improve financial performance. However we are aware of only two such studies that have analyzed investments in ERP systems Hitt et al. (2002) performance measures, Ranganathan and Samarah (2003). Information integration is a key benefit of inventory planning strategies thus the ability to replace functionally oriented and often poorly connected legacy software, result in savings infrastructure support costs, improvements in operational integration enabled by the systems can affect the entire organization and therefore can positively impact firm performance.

Vollmann et al. (2005) stressed that ERP systems provide benefits in the area of transaction automation thus providing more sophisticated planning capabilities for the entire organization. Scott and Vessey (2000), adds that ERP systems replaced complex and sometimes manual interfaces between different systems with standardized, cross-functional transaction automation. Order cycle times, the time from when an order is placed until the product or service is delivered can be reduced, resulting in improved throughput, customer response times and delivery speeds (Cotteleer 2002). Similarly, automated financial transactions can reduce cash-to-cash cycle times and the time needed to reconcile financial data at the end of the quarter or year Mabert et al. (2000, 2003), McAfee (1999), Stratman (2001) and all results in reduction in operating capital and the headcount of the financial area. Under ERP systems all enterprise data is collected once during the initial transaction, stored centrally, and updated in real time. This ensures that all levels of planning are based on the same data and that the resulting plans realistically reflect the prevailing Operating conditions of the firm. For instance, a single, centrally developed forecast ensures that operational processes remain synchronized and allows the firm to provide consistent order information to customers Bancroft et al. (1998).

2.4.3 Effect of material requirement planning on business performance

Material requirement planning systems are product- oriented computerized technology aimed at minimizing inventory and maintaining delivery schedules therefore relates the dependent requirements for materials and components comprising an end product to time periods over planned horizon on the basis of forecasts provided by marketing and sales and other input information within the organization operations (Lysons and Gillingham, 2003). According to Minty, 1998) explains that material requirement planning systems represent an effort to expand the scope of planning process such as marketing, accounting, finance, production and

purchasing and all these functional areas have input to the master production schedule therefore material requirement planning is important since it helps to generate material requirements and help the production manager plan capacity for the business.

Material requirements planning systems help manufacturers determine precisely when and how much material to purchase and process based on a time-phased analysis of sales orders, production orders, current inventory and forecasts (Farrington and Lysons, 2006). Firms ensure that that they always have sufficient inventory to meet production demands, but not more than necessary at any given period in time. The inventory management system may be critical to maintaining an appropriate stock level of all products to avoid shortages or oversupply. This may have an effect on supply reliability of the business firm. Su and Zhong (2009), argue that consistent product availability stimulates consumer demand. Kotler and Keller (2006) stressed further that inventories are a significant portion of the current assets of any business and therefore business firms hold inventory to ensure uninterrupted business operations. Inventory need proper control as it is one of the largest assets of a business. Material requirement planning system uses a master production schedule as a bill of materials (Jacobs et al, 2011).

Malcom, (2005), buffer or safety stocks exist as a result of uncertainties in demand or supply, raw materials, purchased parts or material requirement operations (MRO) buffer stocks give some protections against the uncertainty of supplier performance due to shut down, strikes, led time variations, late deliveries to and from suppliers, poor quality units that cannot be accepted and so on. Therefore the demand for these items is dependent on the assembly schedule for finished goods. Similarly, many material requirement operations, MRO items depend on maintenance schedule.

Material requirements planning system may play a critical role in speeding up production scheduling execution. Scheduling entails generation of a plan with reference to the sequence of time allocated for the completion of an item (Cousens et al, 2009). Production planning involves the acquisition and allocation of limited resources to meet customers' demand over a given time horizon (Quesada et al, 2012). The system may regulate the rate at which inventory flow and hence affecting the speed of firm's operations. MRP will even schedule purchase orders and production orders for just-in-time receipt (Rushton, Phil, & Baker, 2011). Sticking to scheduling policy can lead to reduced lead times and higher production rates (Quesada et al, 2012).

According to (Silva, 2013) scheduling preserves systems capacity utilization and directly affects the speed of response to customer demand and this has an implications on effectiveness of scheduling and scheduling effectiveness has impact on speed of customer service delivery. Additionally, Malcom (2005) emphasize that buffer or safety stocks exist as a result of uncertainties in demand or supply, raw materials, purchased parts or material requirement operations (MRO) buffer stocks give some protections against the uncertainty of supplier performance due to shut down, strikes, led time variations, late deliveries to and from suppliers, poor quality units that cannot be accepted and so on (Mogere, 2013). Therefore the demand for these items is dependent on the assembly schedule for finished goods. Similarly, many material requirement operations, MRO items depend on maintenance schedule. However, Ketchen et al, (2007) state that supply chain predictability should be sought, but not at expense of creating inflexibility in general sustainability of a business firm.

The materials requirements planning systems (MRP) with the emerging stream of studies postulate that the characteristics of a firm's demand and marketing environments also play an important role in determination of optimal corporate inventories, notwithstanding the

theoretical and practical shortcomings inherent in these concepts and techniques, their application in real business life should have an effect on firm's performance (Kohn et al, 2007). Computers can assist stock control in calculating the optimum amount of stocks to hold and dispatch in order to satisfy the users requirements these computers can do this by comparing inventory variables such as stock levels, demand and delivery dates which all attribute to the efficiency handling in operations and management of the required materials for the different market in the given industry (Leon and Mary, 2009).

MRP as a tool determines requirements based upon master production schedule (MPS) a module that offer ways related to inventory more relevant and current (Rushton et al, 2011). For instance, production orders may be scheduled based upon current customer orders or inventory levels, thus accommodating both make to order and make to stock procedures. The MPS may include product forecasts, which can be calculated automatically using data from sales or production history (Rushton et al, 2011). Despite its simplicity, MRP systems hold great potential for making significant contributions in the quest for productivity that would allow small firms to compete in an international marketplace. However, in their zeal to quickly correct several decades of poor manufacturing and storage practices, many small companies rushed to introduce MRP which they viewed to be magical and simplistic method of doing business (Farrington and Lysons, 2006).

An improved extension of MRP is manufacturing resource planning which points out that it is computer based planning and scheduling designed to improve management's control of manufacturing and its support functions. Manufacturing resource planning provides priority planning in that rush jobs can be brought forward in time and others put back in time and necessary adjustments be made to material delivery schedules and therefore it provides integration of related functions into the system (in particular capacity planning, inventory

management and shop floor control) allows feedback from them, making sure that the production plan is constantly kept up to date (Bail et al, 2008). He argues that manufacturing resource planning is termed as enterprise resource planning (ERP) which represents a group of software programs designed to tie together disparate company functions to create more efficient operations in the firms. Enterprise resource planning system is a complete enterprise business solution to problems of inventory control.

2.5 Organizational Performance

Today's organizations face unprecedented challenges assessing their performance. Globalization, requirement for social responsibility, innovative technology and new strategic thinking are just a few of the aspects required in nowadays competitive economy. Daft (2010), defined organizational performance as the ability of an organization to utilize its resources to achieve organizational goals in effective and efficient way. Subsequently, Flapper, Germain et al (2008), stated that performance can be defined as the way the organization carries its objectives into effect. To date, in order to measure organizational performance, it can be seen from two perspectives, either financial or non-financial performance (Andrews, 2012).

In term of financial performance, previous studies have measured various dimensions ranging from profitability, market value and also growth of organization. Satisfaction of customer, employee satisfaction, innovation, quality and reputation are some aspects to measure non-financial performance (Santos and Brito, 2012). Another perspective to measure organizational performance is the so-called objective measurement, which is based on financial measures, and subjective measurement, which based on self-reported measures (Haber and Reichel, 2005).

A high performance organization maintains consistent strategies that closely bind with organization's philosophy and believes. Such organizations implement strong customer oriented policies (American Management Association, 2007). Customer information is the main factor for developing new products and services, they strive for a long term relation between customer and organization, which means that social responsibility, quality of the production and post-purchase service must have high standards.

Usually high performance organizations have strong upper management and human recourse standards that are set in place. Because of high organizational expectations, right people are hired to fulfill the positions. Employees are well aware of the performance measures and the importance to achieve the excellence in their duties. Due to a high level of employee involvement in the organizational processes, the entity is awarded with staff commitment which reduces rotation level and the cost associated with the hiring and training processes (Demartini, 2011). Employees that are devoted to the organization are well aware of necessary knowledge, skills and experience to create unique solution for customers (Richard, 2009).

Organizational assessment is a usual practice in high performance organizations. Because of their high standards they must continuously strive for better results, which can be achieved by constant benchmarking and self-evaluation. Today's organizational assessment has been taken to a higher level. In order to sustain a high performance organization, managers are no longer implementing traditional valuation indicators, even if they successfully have been used for years. Khademfar and Amiri (2013) suggest a model of high performance organization, which maintains five major approaches: Strategic, Customer, Leadership, Processes and Structure and, Values and Beliefs. Strategic approach takes the organization to a higher plane of maturity with a clear vision where the entity is going. Customer approach strives for

clientele loyalty, whether Leadership approach is associated with management knowledge to transfer the strategy to employee level, which will have a direct impact on their behaviour and believes. The fourth block is associated with organization's processes and structure.

High performance organization should strive for implementing innovative policies to support the strategy. The last component of the model is Value and Believes which translates into organizations ability to implement the strategy. All pieces are linked to each other, since change to one provides changes in the others. According to 2013 -2014 Baltrige Performance Excellence Program, it is crucial for organizations to self - assess their performance, since it can help the organization to achieve the excellence in their operations. Achieving high levels of organizational performance is a multidimensional process. Knowledge, associated with self-assessment is not enough to assure high performance of the organization. The challenge that most managers are facing in today's rapidly changing economy is to address right tools to evaluate their own performance against rival results (Villegas and Valldares, 2005).

Performance measures are important to the effectiveness of an organization. Companies can no longer focus on optimizing their own operations to the exclusion of their suppliers' and customers' operations. Organization Performance Measures serve as an indicator of how well the organization is functioning. Measuring organization performance can facilitate a greater understanding of the organization and improve its overall performance (Gunasekaran et al. 2001).

2.5.1 Sales turnover

Sales turnover is one of the largest and most value-relevant items in firms' financial statements and considered a key value driver of shareholder value (Srivastava, 2014). Prior research documents that the stock market reaction on the earnings announcement date is significantly related to contemporaneous and past revenue surprises (Jegadeesh and Livnat, 2006) and the market awards a distinct equity premium to firms meeting revenue forecasts (Rees and Sivaramakrishan 2007). Due to its importance, managers often voluntarily disclose projected revenue performance along with earnings guidance (Wasley and Wu 2006).

The frequency of issuing analysts sales turnover forecasts has also increased dramatically over time (Ertimur et al, 2011). In some cases investors even place a higher valuation weight on sales than on earnings. For instance, Rees and Sivaramakrishan (2007) find that the equity premium to firms meeting earnings forecasts disappears when revenue forecasts are not met. For Internet firms with losses or negative cash flows, the market views revenues and revenue growth as highly important and analysts tend to follow the price-to-sales ratio (Callen et al. 2008). Furthermore, Srivastava (2014) documents that for software companies the value-relevant information contained in earnings have declined while the value relevance of sales turnover has increased post implementation.

Using a broader sample of firms, Chandra and Ro (2008) document a similar decline in the value-relevance of earnings over time but no diminishment in the value-relevance of revenue. This latter finding is attributed to revenue's greater persistence relative to earnings and the greater difficulty in managing revenues than expenses (Ghosh et al. 2005). Prior research documents that sales revenue plays a significant role in equity pricing (Srivastava 2014), particularly when accounting earnings is less informative about firm value. For example,

Ertimur et al. (2003) found that investors react more strongly to revenue surprises when firms are in their early growth stages.

Chandra and Ro (2008) document that the market places greater valuation weight on the sales revenue of technology and loss firms. The ability of revenue to substitute for accounting earnings as a measure of firm performance appears to be a function of its relatively greater persistence (Armstrong et al, 2011), greater difficulty in managing revenues than costs (Ghosh et al, 2005), and the view that revenue is more readily understood by financial statement users than accounting earnings (Wagenhofer 2014).

2.5.2 Profitability

There are two important concepts that figure in an organizations decision that is economic profits and accounting profits (Heilman and Kennedy-Phillips, 2011). In accounting sense profitability is the surplus of revenue over and above all point out costs including both manufacturing and overhead expenses. On the other hand, profitability accounting to economists takes into account the implicit or imputed cost; the implicit cost is the opportunity cost. Opportunity cost is defined as the payment that would be necessary to draw forth the factors of production from their most remunerative alternative employment.

That is opportunity cost is income foregone which a businessman could expect from the second best alternative use of his resources. Profitability is stated as the ability to provide a reasonable and adequate return on capital employed in existing business, new areas and internal control operations so as to fulfil the objectives of the organization (Shiva and Suar , 2010). Primary objectives of every business are solvency and profitability (Muthiah and Huang 2006).

Solvency is the ability to pay debts as they become due while profitability is the ability to generate income. Unless a business can produce satisfactory income and pay its debts as they come due, other objectives that an organization may have will never be realized, simply because the business will not survive. Profitability of a firm both to shareholders and managers is summarized in the valuation of that firm (Katrina, 2012). In deed the basic objective of measurement of profitability is to provide valuation of the firm which will be a critical assessment of its worth as investment. In effect, the value of a firm may be stated as being the present value of its future income.

2.5.3 Customer care

Customer service is an important means for organizations to gain a Competitive advantage in today's service economy, in addition to customers who are satisfied tend to return for future business and sometimes assist in marketing service organization through word-of-mouth (Areni, 2003). Further, exerting efforts to retain current customers is significantly less costly than gaining new customer. Because service effectiveness is increasingly becoming a critical organizational objective, it is important to examine how the delivery of service differs from more traditional manufacturing and delivery of goods.

According to (Haupt, 2002) Customer service can be measured in many dimensions such as: service empathy, access time and courtesy of staff but this study will consider the main dimension of service quality, service speed and responsiveness (after sale service and technical support). Al though service quality is understood as the ability to get the desired services from the chosen provider at the right price. Because desire is considered the ultimate for a customer, it is proposed that the consumer ultimately wants: lower prices; improved choice of services; better value for money; acceptable quality; availability.

Service quality has gained a great deal of attention from researchers, managers, and Practitioners during the past few decades. Many scholars have studied the effect of service quality on customer retention Service has many dimensions, definitions, and techniques which may affect its way of Production and delivery (Oliver, 1980). Although delivering superior service quality can generate numerous benefits to Service providers, such as time saving, cost reducing, increased market share and Profits consistently delivering good service quality is difficult even when companies can benefit from high quality services .In a competitive environment, service companies have to focus on providing high quality service to maintain customer satisfaction and retain profitable customers. Although satisfying customers is the main challenge to an enterprise, delighting them with unexpected quality.

Conclusion

In this chapter the researcher reviewed literature and established that inventory management practices are a vital element for an organizations and therefore should be taken with great consideration since they are a central element to their performance especially in as far as turnover, customer care and profitability are concerned in their operations.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

In this chapter, the researcher discussed the methodology of the study which Ochieng (2009) defines as an analysis of and rationale for, the particular method (s) used in a given study. This chapter described the research designs, sample procedure, size and sampling technique, data instrument and collection tools as well as data management and analysis, population of the research, ethical considerations and the difficulties/limitations encountered during the research.

3.1 Research design

The study adopted a case study design. This study design was considered appropriate in areas of measurement especially social research. This was because the case design helps to give a detailed examination of one setting, or a single subject or one particular event (Amin, 2005). The researcher used qualitative and quantitative research approach for data collection. A study is classified as qualitative if the purpose of the study is primarily to describe a situation, phenomenon, problem or event and on the other hand, the study is classified quantitative if you want to quantify the variation in a phenomenon, situation or problem and here analysis is geared to establish the magnitude of the variation (Kumar, 2005). The quantitative approach yields numbers, graphs and tables which are convincing.

3.2 Area of study

The study was conducted at Hwansung industry limited at Ntinda industrial area in Kampala city. The choice for this firm is due to it being in business for a long time and doing better in terms of products and service offered to customers. The research covered material resource planning, repetitive manufacturing and vendors managed inventory and their relationship on organizational performance.

3.3 Study population

According to Abel and Olive (2003) population refers to an entire group of individuals, events or objects having a common observable characteristic. This section of the research portrayed the particular group of respondents that the researcher was interested in the field of the study. The target population of the study were managers, accountants, store keepers and employees of Hwansung industry limited. The target population of this study comprised of 60 respondents from which information was to be obtained. This comprised of the production, sales and supply control and monitoring departments and depended on the number of employees in each of the above mentioned departments hence homogeneous population was entailed in the study because of **the fact that there was relatively less amount of variations.**

3.4 Sampling procedures.

Sampling is a procedure of selecting a part of population on which research can be conducted, which ensures that conclusions from the study can be generalized to the entire population. Researchers have developed a number of techniques where only a small portion of the total population is sampled, and attempts to generalize the results and conclusion for the entire population. This research used Krejcie and Morgan table (1970)

3.4.1 Sample size

For ease of sampling in this study, the population size was 60, the sample size was 52 basing on Krejcie and Morgan table (1970) which was used and the sample was selected from the study area being Hwansung industries limited as follows managers, accountants, store keepers and employees were chosen since they are involved in a day to day running of the activities

Formula for determining sample size

$$S = \frac{X^2 NP(1-P)}{d^2(N-1) + X^2 P(1-P)}$$

S=required sample size

X^2 =the table value of chi-square for 1 degree of freedom at the desired confidence level (3.841)

N=the population size

P=the population proportion (assumed to be 50 since this would provide the maximum sample size)

d=the degree of accuracy expressed as a proportion (05)

Source krejcie and Morgan (1970)

3.4.2 Sampling technique

The researcher used probability sampling technique under which he employed simple random method to select from among the study population the respondents. Here, the researcher selected respondents randomly without considering any characteristic or features and it

enabled every sampling unit to have a chance of being chosen. The researcher also applied purposive sampling technique majorly in selecting staff because there was need to specifically get information from those members of staff who are involved in training and development and could therefore provide the required information for purposes of data integrity and management.

3.5 Data Sources

The researcher acquired data from both primary and secondary sources, here under primary sources the researcher directly reached out to the respondents through various data collection instruments such as interview for the study purposes and questioners. Under secondary sources, document review related to the study, newspapers, online journals such that the researcher was well equipped with required data to facilitate the study.

Library research, the researcher used for the relevant books and other literature as regards to the topic to obtain information needed; it is the best way to get secondary data unlike the primary data.

3.6 Data collection methods and instruments

The researcher used two methods of data collection namely; questionnaire, and interview guide for this study.

3.6.1 Questionnaire

According to Kumar, (2005) a questionnaire is a written list of questions, the answers to which are recorded by the respondents. It is a device for gathering information consisting of a list of questions or statements calling for information from the respondents. The questions were open and close ended in format. Self-administered questionnaires covering all the

aspects of the study variables and accompanied with a five-point Likert scale response continuum, that is 5 = strongly agree, 4 = agree, 3 = neutral, 2 = disagree and 1 = strongly disagree, will be used for this study to collect data respondents

3.6.3 Interview guides

The researcher also administered interviews. An interview is a dialogue between an interviewer and interviewee. It is an organized conversation aimed at gathering data about a particular topic. This is a method where the researcher interviewed respondents to obtain information on the issue of interest. In this case, the interviews during this research were structured and were specifically administered to respondents in different relevant positions.

3.7.0. Quality Control Methods

3.7.1 Validity

Validity refers to truthfulness of findings or extent to which the instrument is relevant in measuring what it is supposed to be measured (Amin, 2003). Before the actual study, the instruments were discussed with the supervisor and research experts. The feedback and recommendations from the supervisor and research experts will help in modifying the instruments such that valid are asked and valid information is captured.

3.7.2 Reliability

Reliability is dependability or trustworthiness and in the context of a measuring instrument, it is the degree to which the instrument consistently measures whatever is measuring (Amin, 2003). For qualitative data, reliability of the instruments was ensured through discussing with authorities, colleagues, and participants about the instruments intended to measure and asking them whether the instruments designed would capture the required data.

Table.3.1. Cronbach alpha value for reliability of data variables	ALPHA VALUE
Distributive resource planning	0.652
Enterprise resource planning	0.654
Material requirement	0.661
organization performance	0.396

3.8 Measurement of variables

The independent variable was inventory management and the dependent variable was organizational performance. A structured standard questionnaire was used. The tool was to solicit responses on a five point Likert scale with the following verbal anchors: strongly disagree, disagree, not sure, agree and strongly agree.

Inventory management was measured using dimensions of repetitive manufacturing, enterprise resource planning and material requirement planning. Organizational performance will be measured basing on sales turnover, customer care and profitability.

3.9 Data management and Analysis

The field data was managed, analyzed and presented using both qualitative and quantitative methods.

3.9.1 Quantitative data

Data from questionnaires was summarized, tabulated and analysed. Coded data was then fed into the statistical package for social sciences (SPSS). SPSS was used for analysis since it

offers a more user friendly interface and can easily be linked with Microsoft office utility programs. Descriptive statistics was employed to analyse the data. Descriptive statistics such as mean, standard deviation and correlation analysis were used to analyze the data and the results were presented in tables and graphs.

3.9.2 Qualitative data

The researcher used the interview guide to gain an understanding of underlying reasons, opinions, and motivations. It provides insights into the current phenomenon. The data was analyzed using content analysis and theme analysis whereby responses would be grouped into themes, interpreted and presented together with descriptive statistics of quantitative data

3.10 Ethical issues.

The researcher requested for permission from the Administration to carry out this research hence present a letter to the management where the research conducted prior to the date when the data collection was carried out.

The researcher also ensured that responses from recipient especially personal or sensitive matters were kept confidential and well protected by making sure that information on respondent's attitude, feelings or personal life is not disclosed.

The researcher ensured that participation of participants was voluntary not to have forced them; the researcher also briefed the recipients before the data was collected from them.

The researcher cited all the sources used in the study either in the literature or appendices and also accessed data through official channels

3.11 Limitations of the study.

The issue of finances also limited the research in that the researcher does not have enough funds to facilitate various activities like printing, transportation for various trips to the study area and this was minimized by the use of soft copies

Again the outcomes are based on the information solicited from the respondents and therefore subjected to human errors, omissions and possible misstatements. However, in spite of the above, the researcher ensured that the research meets all the relevant requirements for a scientific research and thereby reducing errors to the minimum if not to eradicate it completely.

The study was also limited by scope due to the fact that it was carried out in a single organization and this did not permit a comparison of information with two or more organizations.

3.12 Conclusion

This chapter gave the researcher an understanding on how data was to be collected and analysed during the study. This included understanding the population and the sample size which was sampled during the research. Therefore through these methods, the researcher believed that the information to be presented was a required result that is valid and reliable.

CHAPTER FOUR

PRESENTATION OF RESULTS AND DISCUSSION OF FINDINGS

4.0 Introduction

The chapter presents analysis results and discussion which were on distributive requirement planning, enterprise resource planning and material requirement planning on organizational performance. The study focused on the dimensions such as distributive requirement planning, enterprise resource planning, material requirement planning, and how they affect the organizational performance. Data was collected using questionnaires which was analyzed using SPSS version 16.0 where descriptive statistics are analyzed inform of frequencies and descriptive data which is presented in tables to measure the variations from which conclusions and recommendations are to be drawn in accordance with the objectives of the study.

4.1 Response rate

In this study, response was obtained from Hwan sung industries limited in accordance with the sample characteristics and a total number of 52 respondents were expected to participate in this study and 52 respondents' participated representing 100% response rate.

4.2 Background information

The background was analyzed basing on the socio-demographic characteristics of the respondents namely; gender, education qualification and duration level.

4.2.1 Gender characteristics of respondents

In this study, gender characteristics were analyzed from Hwansung industries limited and details are presented in table 4.1 below.

Table 4.1: Showing gender of respondents

Sex	Frequency	Percent
Male	39	75.0
Female	13	25.0
Total	52	100.0

Source: *Primary data, (2016)*

The results of the study as presented in Table 4.2.1 shows that 75.0% of respondents are males and 25% are females. This therefore implies that during the research most of the employees were men since most of the work done here requires more physical man power to maximize the work within the Hwansung industries limited.

4.2.2 Education level of respondents

The researcher had interest in knowing the academic qualification of the people employed so that he could establish whether the people operating and managing Hwansung industries limited are technically skilled and also whether they have acquired formal education.

Table 4. 2: Showing education level of respondents

Education	Frequency	Percent
Certificate	5	9.6
Diploma	16	30.8
Degree	24	46.2
masters a and above	7	13.5
Total	52	100.0

Source: *Primary data, (2016)*

Results from table 4.2 above indicate that majority of the respondents (46.2%) had attained degrees, (30.8%) had attained diplomas, 13.5% have masters and above and finally 9.6% had certificates. This implies that the majorities of the employees in Hwan sung industries limited had knowledge about distributive requirement planning, enterprise resource planning and material requirement planning

4.2.3 Duration in the organization

Table 4. 3: showing duration in the organization

Duration	Frequency	Percent
0-5 year	31	59.6
6-10 years	18	34.6
10 years and above	3	5.8
Total	52	100.0

Source: *Primary data, (2016)*

Results from table 4.4 above indicate that majority of the respondents (59.6%) had worked for zero –five years (34.6) had workedfor six -ten years and then the least with (5.8) had

worked for 10 years and above and this means that most of the respondents who had responded had worked here were also good enough to fully understand the concept of distributive requirement planning, enterprise resource planning and material requirement planning on organizational performance.

4.3 Presentation according to study objectives

Data analysis and correlation analysis also based on study objectives and results were presented on the following objective questions. Questionnaire used to generate data was designed in Likert scale with different levels of agreement for each statement that is, 1-Strongly disagree, 2-Disagree, 3-Not sure, 4-Agree and 5-Strongly agree. Therefore the mean level of agreement was computed as $5+4+3+2+1/5= 3.0$. This therefore implies that all responses averaging 3.0 and above amounted for an agreement whereas all responses averaging below 3.0 accounted for disagreement.

4.3.1 Distributive requirement requirements planning

The analysis was based on descriptive statistics (mean and standard deviation) details of which are presented in table 4.4 below.

Table 4.4: showing Descriptive statistics on distributive requirement planning

Details	N	Min	Max	Mea n	Std. Deviation
Accurate demand and sales forecasts help a firm out of stock-out situations and allow a business firm provide high level of customer service	52	1	5	4.08	.904
DRP provides the basis for integrating manufacturing planning and control system from the firm to the field	52	1	33	4.67	4.134
DRP system helps to determine demand forecast on a time – phased requirements basis	52	1	5	4.08	.967
DRP systems helps to distribute products and services in places where demand has identified	52	1	5	3.35	1.467
DRP serves to help in coordinating the flow of goods inside the factory and goods to customers	52	1	5	3.90	1.034
Valid N (listwise)	52				

Source: *Primary data, (2016)*

4.3.1.1 Accurate demand and sales forecasts help a firm out of stock-out situations and allow a business firm provides high level of customer service

According to the table 4.4 above, respondents were in agreement that Accurate demand and sales forecasts help a firm out of stock-out situations and allow a business firm provide high level of customer service and this was represented by the mean of 4.08. Though basing on the results, there was a variation in the respondents’ feedback with a standard deviation of 0.904 since people have different opinions. The results attained concur with Quesada et al, (2012) who says that accurate demand and sales forecasts help a firm out of stock-out

situations and allow a business firm provides high level of customer service. The control system is fronted as to facilitate accurate prediction of customer demand and hence timely response to their requirements.

4.3.1.2 DRP provides the basis for integrating manufacturing planning and control system from the firm to the field

Basing on the results in table 4.4 above, majority of the respondents agreed that DRP provides the basis for integrating manufacturing planning and control system from the firm to the field with a mean of 4.67. . Although a few respondents were in disagreement with the above statement since there was a variation in the respondents' feedback with a standard deviation of 4.134 and this was minimal. The results are in line with field Farrington & Lysons, (2006)who stressed that DRP provides the basis for integrating the manufacturing planning and control system from the firm to the field

4.3.1.3 DRP system helps to determine demand forecast on a time – phased requirements basis

Basing on the results in table 4.4 above, majority of the respondents agreed DRP system helps to determine demand forecast on a time–phased requirements basis with a mean of 4.08. Although a few respondents were in disagreement with the above statement since there was a variation in the respondents' feedback with a standard deviation of 0.967. The results are in line with Rushton et al, (2011) who stressed that DRP system take forecast demand and reflect this through the distribution system on a time-phased requirements basis.

4.3.1.4 DRP systems help to distribute products and services in places where demand has been identified

Basing on the results in table 4.4 above, majority of the respondents were neutral that DRP systems helps to distribute products and services in places where demand has identified with a mean of 3.35. Although a few respondents were in disagreement with the above statement with a standard deviation of 1.467. The results are in line with Baily et al, (2008) who affirmed that since inventory is planned throughout the supply chain, based on anticipated demand, DRP systems are considered to be proactive

4.3.1.5 DRP serves to help in coordinating the flow of goods inside the factory and goods to customers

Basing on the results in table 4.4 above, majority of the respondents were neutral that DRP serves to help in coordinating the flow of goods inside the factory and goods to customers with a mean of 3.90. Although some respondents were in disagreement with the above statement with a standard deviation of 1.034. The results are in line with Farrington and Lysons, (2006) who elaborated that DRP serves a central role in coordinating the flow of goods inside the factory with the system modules that place the goods in the hands of the customer .

4.3.2 Descriptive Statistics on enterprise planning

The analysis was based on descriptive statistics that is mean and standard deviation details of which are presented in table 4.5 below.

Table 4.5: Descriptive Statistics on enterprise planning

Details	N	Min	Max	Mea n	Std. Deviation
ERP provides a better operational and management of information	52	1	5	3.90	1.034
ERP systems let an organization automate and integrate its business processes, share common data and produce and access information in a short time	52	1	5	4.00	1.010
An ERP system is developed based on low cost ,high quality and efficiency	52	1	5	3.88	.963
ERP enables a change in organizations structure, and strategy, processes and technology	52	1	6	3.96	.969
ERP systems are important as an effort for an organization to modernize and differentiate itself	52	1	5	3.90	.934
Valid N (listwise)	52				

Source: Primary data, (2016)

4.3.2.1 ERP provides a better operational and management of information

The results show that majority of the respondents were neutral that ERP provides a better operational and management of information, this is represented by the mean of 3.90. Despite the fact that majority of the respondents were neutral with the statement in question, there was a variance of 1.034 which represented those ones who strongly disagreed. These results are supported by Federici, (2009) who outlined reasons for firms acquiring enterprise resource planning systems as providing better operational and management of information.

4.3.2.2 ERP systems let an origination automate and integrate its business processes, share common data and produce and access information in a short time

According to the research results from table 4.5, majority of the respondents were in support that ERP systems let an origination automate and integrate its business processes, share common data and produce and access information in a short time with the mean of 4.00. Though there was some deviation of 1.010 in the respondents' feedback who disagreed since they expressed different ideas about the statement in question. These results concur with a suggestion by Loundon (2009), who outlined that ERP is a packaged business software system that lets an organization automate and integrate the majority of its business processes, share common data and practices across the enterprise and produce and access information in a real-time.

4.3.2.3 An ERP system is developed based on low cost, high quality and efficiency

According to the research results from table 4.5, majority of the respondents were neutral that an ERP system is developed based on low cost, high quality and efficiency with mean of 3.88. Though there were some deviations of .963 in the response given was minimal. These results concur with Zhao and Fan (2007) who suggested that new generation ERP systems should be developed based on the principles of low cost, high quality and efficiency.

4.3.2.4 ERP enables a change in organizations structure, and strategy, processes and technology

According to the research results from table 4.5, majority of the respondents were neutral that ERP enables a change in organizations structure, and strategy, processes and technology with mean of 3.96. Though there were some deviations of 0.969. This is in line with Michael (2009), who emphasize that ERP enables companies to break down traditional organization's

silos, replacing them with a tightly integrated horizontal structure in which strategy, organizational structure, process and technology are closely aligned.

4.3.2.5 ERP systems are important as an effort for an organization to modernize and differentiate itself

According to the research results from table 4.5, majority of the respondents were neutral ERP systems are important as an effort for an organization to modernize and differentiate itself with mean of 3.90. Though there were some deviations of 0.934 This is in line with (Reimers, 2003)., who emphasize that. ERP systems are often implemented not to replace legacy systems but as part of an organization's effort to modernize and differentiate itself.

4.3.3 Descriptive Statistics on Material requirement planning

The analysis was based on descriptive statistics mean and standard deviation details of which are presented in table 4.6 below.

Table 4.6: showing Descriptive statistics on Material requirement planning

	N	Min	Max	Mean	Std. Deviation
MRP systems help manufacturers determine when and how much material to purchase and process based on analysis of sales orders, production orders, current inventory and forecasts	52	1	5	4.00	1.010
MRP involves the acquisition and allocation of limited resources to meet customers' demand over a given time frame	52	1	6	3.98	1.038
MRP enable schedule of purchase orders and production orders for just-in-time receipt	52	1	5	4.19	.971
MRP is used to generate material requirements and help the production manager plan capacity of production	52	1	5	4.08	.882
MRP leads to acquisition and allocation of limited resources to meet customer demand	52	1	5	3.96	.928
Valid N (listwise)	52				

Source: *Primary data, (2016)*

4.3.3.1 MRP systems help manufacturers determine when and how much material to purchase and process based on analysis of sales orders, production orders, current inventory and forecasts

Table 4.6 shows that MRP systems help manufacturers determine when and how much material to purchase and process based on analysis of sales orders, production orders, current inventory and forecasts with majority respondents represented by a mean of 4.00 . However, there was some deviation Of 1.010 in the response given by the respondents because of the different ideas they have about the concept. This is in agreement with support of Farrington and Lysons, (2006) who points that Material requirements planning systems help

manufacturers determine precisely when and how much material to purchase and process based on a time-phased analysis of sales orders, production orders, current inventory and forecasts.

4.3.3.2 MRP involves the acquisition and allocation of limited resources to meet customers' demand over a given time frame

From table 4.6 above, majority of the respondents were neutral with the statement that MRP involves the acquisition and allocation of limited resources to meet customers' demand over a given time frame this is shown by the mean of 3.98. However some respondents argued against the subject which brought a standard deviation of 1.038. The results in this study concur with the research of Quesada et al, (2012) who asserted that production planning involves the acquisition and allocation of limited resources to meet customers' demand over a given time horizon.

4.3.3.3 MRP enable schedule of purchase orders and production orders for just-in-time receipt

Majority of the respondents agreed that MRP enable schedule of purchase orders and production orders for just-in-time receipt thus constituting a mean of 4.19. However, a standard deviation of 0.971 was realized. The research results were in line with Rushton et al, (2011) who noted that. MRP will even schedule purchase orders and production orders for just-in-time receipt.

4.3.3.4 MRP is used to generate material requirements and help the production manager plan capacity of production.

From table 4.6 above, Majority of the respondents agreed that MRP is used to generate material requirements and help the production manager plan capacity of production

constituting a mean of 4.08 which is above average. However, a standard deviation of 0.882 was realized thus showing that there was a variance in the respondents' feedback though minimal. The research results were in line with Minty, (1998) who affirmed that MRT helps to generate material requirements and help the production manager plan capacity for the business.

4.3.3.5 MRP leads to acquisition and allocation of limited resources to meet customer demand

Table 4.6 shows that the majority of the respondents were neutral that MRP leads to acquisition and allocation of limited resources to meet customer demand represented by a mean of 3.96. However, there was some deviation of 0.928 in the response given by the respondents because of the different ideas they have about the concept. This is in agreement as supported by Quesada et al, (2012) who stated that Production planning involves the acquisition and allocation of limited resources to meet customers' demand over a given time horizon.

4.3.4 Descriptive Statistics on Material requirement planning

The analysis was based on descriptive statistics mean and standard deviation details of which are presented in table 4.7 below

Table 4.7: showing Descriptive statistics on Material requirement planning

Details	N	Minimum	Maximum	Mean	Std. Deviation
sales turnover forecasts over time determine quantity to be sold	52	1	5	3.85	1.052
Sales turnover is considered a key value driver of shareholder value in terms of sales volume	52	1	5	3.96	1.031
The market places greater valuation on the sales revenue and loss in line with sales performance	52	1	5	3.94	1.019
The organization has a surplus of revenue over costs in terms of profits	52	1	6	3.84	1.060
The organization produces a reasonable and adequate return on capital employed to fulfill its objectives	52	1	5	4.00	.968
Business produces enough satisfactory income and pay its debts as they come due	52	1	5	4.02	1.041
Customer care is important for organizations to gain a Competitive advantage in today's economy	52	1	5	3.90	.928
Customers care effectiveness is critical for organizations to achieve their objectives	52	1	5	4.04	.922
Customer care determines staff empathy, access time, courtesy, service quality, service speed and responsiveness towards customers	52	1	5	3.71	1.031
Valid N (listwise)	52				

Source: Primary data, (2016)

4.3.4.1 Sales turnover forecasts over time determine quantity to be sold

The results show that majority of the respondents were neutral that sales turnover forecasts over time determine quantity to be sold this is represented by the mean of 3.85 though, there

was a variance of 1.052 which indicates those who strongly disagree. These results concur with a suggestion by Sivaramakrishan (2007) who outlined the market awards a distinct equity premium to firms meeting revenue forecasts

4.3.4.2 Sales turnover is considered a key value driver of shareholder value in terms of sales volume

According to the research results from table 4.5, majority of the respondents were neutral that Sales turnover is considered a key value driver of shareholder value in terms of sales volume with the mean of 3.96. Though there was some deviation of 1.031 in the respondents' feedback since they expressed different ideas about the statement in question. . These results concur with a suggestion by Srivastava, (2014).who outlined Sales turnover as one of the largest and most value-relevant items in firms' financial statements and considered a key value driver of shareholder value

4.3.4.3 The market places greater valuation on the sales revenue and loss in line with sales performance

According to the research results from table 4.5, majority of the respondents were neutral that the market places greater valuation on the sales revenue and loss in line with sales with mean of 3.94. . Though there were some deviations of 1.019 in the response given was minimal. These results concur Sivaramakrishan (2007) who suggested that in some cases investors even place a higher valuation weight on sales than on earnings and equity premium to firms meeting earnings forecasts disappears when revenue forecasts are not met.

4.3.4.4 The organization has a surplus of revenue over costs in terms of profits

According to the research results from table 4.5, majority of the respondents were neutral that the organization has a surplus of revenue over costs in terms of profits with mean of 3.84.

Though there were some deviations of 1.060. 041 This is in line with Heilman and Kennedy-Phillips, (2011) who emphasize that in accounting sense profitability is the surplus of revenue over and above all point out costs including both manufacturing and overhead expenses

4.3.4.5 The organization produces a reasonable and adequate return on capital employed to fulfill its objectives

According to the research results from table 4.5, majority of the respondents agreed that the organization produces a reasonable and adequate return on capital employed to fulfill its objectives with mean of 4.00. Though there were some deviations of 0 .968 .This is in line with Shiva and Suar, (2010) who emphasize that Profitability is stated as the ability to provide a reasonable and adequate return on capital employed in existing business, new areas and internal control operations so as to fulfill the objectives of the organization Shiva and Suar, (2010)

4.3.4.6 Business produces enough satisfactory income and pay its debts as they come due

According to the research results from table 4.5, majority of the respondents agreed that Business produces enough satisfactory income and pay its debts as they come due with mean of 4.02. Though there were some deviations of 1.041.This is in line with Muthiah and Huang (2006) who emphasize that Solvency is the ability to pay debts as they become due while profitability is the ability to generate income

4.3.4.7 Customer care is an important for organizations to gain a Competitive advantage in today's economy

According to the research results from table 4.5, majority of the respondent's neutral that Customer care is an important for organizations to gain a Competitive advantage in today's

economy with mean of 3.90. Though there were some deviations of 1.041. This is in line with. Areni., (2003) who emphasize that Customer care is an important means for organizations to gain a Competitive advantage in today's service economy, in addition to customers who are satisfied tend to return for future business and sometimes assist in marketing service organization through word-of-mouth

4.3.4.8 Customers care effectiveness is a critical for organizations to achieve their objective

According to the research results from table 4.5, majority of the respondents were in support that Customers care effectiveness is a critical for organizations to achieve their objective with the mean of 4.04 though there was some deviation of 0.922 in the respondents' feedback since they expressed different ideas about the statement in question. These results concur with a suggestion by Samson and little, (1993) who outlined Customer care effectiveness is increasingly becoming a critical organizational objective, because it enhances manufacturing and delivery of quality goods to customers

4.3.4.9 Customer care determines staff empathy, access time, courtesy, service quality, service speed and responsiveness towards customers

According to the research results from table 4.5, majority of the respondents were neutral that Customer care determines staff empathy, access time, courtesy, service quality, service speed and responsiveness towards customers with the mean of 3.71. Though there was some deviation of 1.031 in the respondents' feedback since they expressed different ideas about the statement in question. These results concur with a suggestion by Haupt, (2002)who outlined that Customer care is measured in terms of; empathy, access time, courtesy, service quality, service speed and responsiveness towards customer

4.3 Correlation analysis

In order to determine the relationship between distributive requirement planning, enterprise resource planning and material requirement planning on organization performance, the researcher conducted correlation analysis and the following were the results;

4.3.1 Correlation analysis between Distributive requirement planning and organizational performance

Table 4.8 Correlation results of Distributive requirement planning and organizational performance

		Distributive requirement planning	Organisation performance
Distributive requirement planning	Pearson Correlation	1	.742**
	Sig. (2-tailed)		.005
	N	52	52
Organisational performance	Pearson Correlation	.742**	1
	Sig. (2-tailed)	.005	
	N	52	52

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

Source: primary data (2016)

The study sought to determine the effect of distributive requirement planning on organisational performance. This was done by computing Pearson correlation co-efficiency determinant. From the table 4.8 above, correlation value ($r = 0.742^{**}$ $p < 0.01$) revealed that there is a higher positive and a significant relationship between distributive requirement planning on distributive requirement planning and organisational performance. This meant

that distributive resource planning leads to an increase in organisational performance by 0.742 which is above the Pearson correlation determinant of 0.01. This meant that distributive requirement planning do have increasing effect on organisational performance which is in line with Farrington and Lysons, (2006) who assert that DRP provides the basis for integrating the manufacturing planning and control system from the firm to the field. DRP allows an organization to manage the distribution of products and services between facilities and therefore it complements the user's ability to ensure that the warehouses are kept within a defined structure, bill of distribution, are being replenished with the right product at the right time ion the right quantities

4.3.2 Correlation analysis between enterprise resource planning and organizational Performance

Table 4. 9: Correlation results of enterprise resource planning and organizational Performance

		Enterprise resource planning	organizational Performance
Enterprise resource planning	Pearson Correlation	1	.757**
	Sig. (2-tailed)		.000
	N	52	52
Organizational performance	Pearson Correlation	.767**	1
	Sig. (2-tailed)	.000	
	N	52	52

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

Source: Primary data (2016)

The study sought to determine the relationship between enterprise resource planning and organizational Performance. This was done with the support of the Pearson correlation

product moment technique. From the table 4.9 above, correlation value ($r = 0.757^{**}$ $p < 0.01$) revealed that there is a significant positive relationship between enterprise resource planning and organizational Performance. This meant that enterprise resource planning leads to progressive improvement in organizational performance. The value of 0.757 meant that enterprise resource planning is greater 0.01 of Pearson co-efficient determinant which implies that when enterprise resource planning is given a priority, it will have an increasing effect on their organizational performance which is in line with Hossein (2004), who stressed that Enterprise resource planning (ERP) systems integrate internal and external management information across an entire organization, embracing finance/accounting, manufacturing, sales and service, customer relationship management, etc. ERP systems automate this activity with an integrated software application. The purpose of ERP is to facilitate the flow of information between all business functions inside the boundaries of the organization and manage the connections to outside stakeholders

4.3.3 Correlation analysis between MRP and organizational Performance

Table 4.10: Correlation results of MRP and organizational Performance

		Material requirement planning	Organizational Performance
Material requirement planning	Pearson Correlation	1	.672**
	Sig. (2-tailed)		.000
	N	52	52
Organizational performance	Pearson Correlation	.672**	1
	Sig. (2-tailed)	.000	
	N	52	52

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

Source: Primary data (2016)

The study sought to determine the relationship between material requirement planning and organizational performance. This was done with the support of the Pearson correlation product moment technique. From the table 4.10 above, correlation value ($r = .672^{**}$ $p < 0.01$) revealed that there is a positive and a significant relationship between material requirement planning and organizational performance. This meant that material requirement planning leads to an improvement in organizational performance by a value of 0.672 which meant that material requirement planning have a stronger increasing effect on organizational performance since the correlation co-efficiency determinant was above 0.01 which is in line with Farrington and Lysons, (2006) who explained that Material requirements planning

systems help manufacturers determine precisely when and how much material to purchase and process based on a time-phased analysis of sales orders, production orders, current inventory and forecasts. Firms ensure that that they always have sufficient inventory to meet production demands, but not more than necessary at any given period in time. The inventory management system may be critical to maintaining an appropriate stock level of all products to avoid shortages or oversupply. This may have an effect on supply reliability of the business firm.

4.4 Conclusion

The analysis of the primary data indicates that the independent variables through the predictor variables; DRP, ERP and MRP all have an effect on organizational performance. The study findings showed that performance greatly depends on the inventory management control policies put in place by management and these policies greatly affect organizations performance.

CHAPTER FIVE

SUMMARY OF THE FINDINGS, CONCLUSION AND RECOMMENDATION

5.0 Introduction

The chapter presents summaries of the research findings, conclusion, recommendations and areas for further study. The summaries relate to the general objectives of the research study which aimed at investigating the effect of inventory management on organizational performance from Hwansung industries limited in terms of sales distributive requirement planning Enterprise resource planning and material requirement planning.

5.1 Summary of the findings

The field findings revealed that majority of the respondents in Hwansung industries were males with a percentage of 75.0%. The researcher discovered that majority of the employees' attained degrees with 45.8% and findings further showed that majority of the employees had worked with the organization with a percentage of (58.3%). The study assessed study objectives and research data was collected using questionnaires and analysed using descriptive analysis

5.1.1 DRP and organizational performance

The study revealed that DRP provides a basis for integrating the manufacturing planning and control system from the firm to the field and in addition, it allows an organization to manage the distribution of products and services between facilities and therefore it complements the user's ability to ensure that the warehouses are kept within a defined structure, bill of distribution, are replenished with the right product at the right time in the right quantities. The

study revealed a correlation value of 0.742 implying that there is a higher positive and a significant relationship that exist between sales promotion and sales performance. This means when emphasis is put on DRP it leads to improvement on organizational performance by 0.742 which above the Pearson correlation co-efficiency of 0.01.

5.1.2 ERP and organizational performance

The study findings reveals that ERP systems integrate internal and external management information across an entire organization, embracing finance/accounting, manufacturing, sales and service, customer relationship management. ERP systems uses automate integrated software application. ERP is to facilitate the flow of information between all business functions inside the boundaries of the organization and manage the connections to outside stakeholders. Thus a positive and a significant relationship exist between market intelligence and sales performance with values 0.757. This illustrates that an emphasis on ERP improves performance by 0.757.

5.1.3 MRP and organizational performance

From the research findings it is revealed that emphasized MRP systems help manufacturers determine precisely when and how much material to purchase and process based on a time-phased analysis of sales orders, production orders, current inventory and forecasts. Firms ensure that that they have sufficient inventory to meet production demands. The inventory management system is critical at maintaining an appropriate stock level of all products to avoid shortages or oversupply. This introduces a fact that emphasis on product innovation and development improves and enhances sales performance by 0.672. Thus a positive and a significant relationship exist between MRP and organizational performance

5.2 Study conclusions

The study establish how MRP affects organizational performance and findings indicated that DRP provides a basis for integrating the manufacturing planning and control system from the firm to the field and in addition, it allows an organization to manage the distribution of products and services between facilities and therefore it complements the user's ability to ensure that the warehouses are kept within a defined structure, bill of distribution, are replenished with the right product at the right time in the right quantities which keep a firm with stock since there was a positive relationship between the variables.

The second objective assessed ERP and organizational performance, the researcher found out that there is a positive relationship between ERP and organizational performance. This therefore implies that use of ERP systems helps to integrate internal and external management information across an entire organization, embracing finance/accounting, manufacturing, sales and service, customer relationship management. ERP facilitates the flow of information between all business functions inside the boundaries of the organization and manage the connections to outside

The last objective established whether MRPaffect organizational performance. The finding reveal that MRP systems help manufacturers determine precisely when and how much material to purchase and process based on a time-phased analysis of sales orders, production orders, current inventory and forecasts. Firms ensure that that they have sufficient inventory to meet production demands which is good for a business.

5.3 Recommendations

The researcher established that inventory management practices had a positive influence on the organization performance, but for the practices to effectively make a positive impact on organizational performance, a number of recommendations have been made here;

Since organization cannot relegate the importance of evolving and maintaining effective inventory control system to the background, there is the need for them to adopt a proactive attitudes towards the issue. Being proactive requires maintenance of the right level of inventory at any point in time. Organizations should avoid the dangers that are inherent in keeping too little or too much of stock.

To curb various challenges in the organization should consider implementation of a vendor managed inventory to lower incidences of stock-out situations, increase the levels of customer services and reduce costs due to an increase in inventory turns and a decrease in the levels of safety stock and greater transparency in supply chain management. VMI also helps in the establishment of a long trustworthy relationship between the supplier and customer resulting in more loyal customers and thus secured sales

To achieve the above, it is recommended that organizations adopt the inventory keeping method that best suits their operation. Here, just-in-time method could be considered as an option as it has been proven to be effective in maintaining the right level of inventory and also prevent stock-outs. There is also the need for organizations to train their personnel in the area of inventory control management. What this means is that only trained professional with the requisite skill should be in charge of inventory management.

The reason is obvious as most organizations inventory control programmers failed to achieve the intended objectives due to lack of skilled and trained professionals to manage it. In the present day advancement in technology, inventory control management has been made easier with the use of software. The implication of this is that organizations have wide range of choices of soft-ware that it can adapt to its operations in terms of its inventory control system. In fact, the era of manual control of inventory has phased out. Especially, with increasing volume of inventories in organizations, computer based inventory systems will prove more effective than manual based inventory control system.

5.4 Areas for Future Research Studies

There is need to conduct research on the impact of inventory management on firms profitability.

Another suggestion would be to concentrate only on DRP in relation to product innovation.

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APPENDIX I: QUESTIONNAIRE

Dear respondent,

I AM NVIIRI LAWRENCE a third year student of Uganda Martyrs University pursuing a Bachelor's degree in Business Administration and Management. As part of my academic requirement, I am carrying out research on a topic **“The effect of inventory management on organizational performance** “with a case study being Hwansung industries limited. You have therefore been purposively identified as a resourceful person in providing the required information. The purpose of this research is purely academic and the information you give will be anonymously treated with confidentiality.

SECTION A: Background Information

1. Sex: a) Male b) Female

2. Level of academic qualification

a) Certificate b) Diploma

c) Degree d) Masters and above

3. Duration in the organization

a) 0-5 years b) 6-10 years c) 10 years and above

Tick in the appropriate box basing on this scale.

Scale	1	2	3	4	5
Particulars	Strongly disagree (S.D)	Disagree (D)	Neutral (N)	Agree (A)	Strongly agree (S.A)

SECTION B: Distributive requirement planning

Details	1(S.D)	2(D)	3(N)	4(A)	5(S.A)
Accurate demand and sales forecasts help a firm out of stock-out situations and allow a business firm provide high level of customer service					
DRP provides the basis for integrating manufacturing planning and control system from the firm to the field					
DRP system take demand forecast and reflects this through the distribution system on a time-phased requirements basis.					
DRP function by pulling the product through the distribution system once demand has been identified					
DRP serves a central role in coordinating the flow of goods inside the factory with goods in the hands of the customer					

How has your company benefited from the use of DRP?

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SECTION C: Enterprise resource planning

Details	1(S.D)	2(D)	3(N)	4(A)	5(S.A)
ERP systems integrate internal and external management information across an entire functional areas of the organization					
ERP system lets an organization automate and integrate its business processes, share common data and produce and access information in a short time					
An ERP system is developed based on low cost, high quality and efficiency.					
ERP enables a change in organization's structure, and strategy, process and technology					
ERP systems are implemented as an effort for an organization to modernize and differentiate itself					

How has ERP impacted on your inventory levels?

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SECTION D: Material requirement planning

Details	1(S.D)	2(D)	3(N)	4(A)	5(S.A)
MRP systems help manufacturers determine when and how much material to purchase and process based on analysis of sales orders, production orders, current inventory and forecasts					
MRP involves the acquisition and allocation of limited resources to meet customers' demand over a given time frame					
MRP enable schedule of purchase orders and production orders for just-in-time receipt					
MRP is used to generate material requirements and					

help the production manager plan capacity of production					
MRP leads to acquisition and allocation of limited resources to meet customer demand					

Does MRP help organizations in decision making regarding inventories?

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SECTION E: Organizational performance

	Details	1(S.D)	2(D)	3(N)	4(A)	5(S.A)
S1	Sales turnover forecasts over time determine quality to be sold					
S2	Sales turnover is considered a key value driver of shareholder value in terms of sales performance					
S3	The market places greater valuation on the sales revenue and loss in line with sales performance					
P1	The organization has a surplus of revenue over costs in terms of profits					
P2	The organization produces a reasonable and adequate return on capital employed to fulfill its objectives					
P3	Business produces enough satisfactory income and pay its debts as they come due					
C1	Customer care effectiveness is critical for organizations to achieve their objective					
C2	Customer care determines staff empathy, access time , courtesy ,service quality, service speed and responsiveness towards customers					

C3	Customer care is important for organizations to gain a competitive advantage in today's economy					
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Do you find it is relevant for your organization to establish performance measures between their business operations and inventory management? If yes, explain.

APPENDIX II: KREJCIE & MORGAN TABLE FOR DETERMINING SAMPLE SIZE

N	S	N	S	N	S	N	S	N	S
10	10	100	80	280	162	800	260	2800	338
15	14	110	86	290	165	850	265	3000	341
20	19	120	92	300	169	900	269	3500	246
25	24	130	97	320	175	950	274	4000	351
30	28	140	103	340	181	1000	278	4500	351
35	32	150	108	360	186	1100	285	5000	357
40	36	160	113	380	181	1200	291	6000	361
45	40	180	118	400	196	1300	297	7000	364
50	44	190	123	420	201	1400	302	8000	367
55	48	200	127	440	205	1500	306	9000	368
60	52	210	132	460	210	1600	310	10000	373
65	56	220	136	480	214	1700	313	15000	375
70	59	230	140	500	217	1800	317	20000	377
75	63	240	144	550	225	1900	320	30000	379
80	66	250	148	600	234	2000	322	40000	380
85	70	260	152	650	242	2200	327	50000	381
90	73	270	155	700	248	2400	331	75000	382
95	76	270	159	750	256	2600	335	100000	384

Note: "N" is population size
 "S" is sample size.

From :Krejcie, Robert V., Morgan, Daryle W., "Determining Sample Size for Research Activities", Educational and Psychological Measurement, 1970.