OUTSOURCING AND SUPPLY CHAIN PERFORMANCE OF KENYA MEDICAL SUPPLIES AGENCY

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DECLARATION

I hereby declare that this research project is my original work and has not been presented for a degree in any other university.

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D61/79191/2012

The research project has been submitted for examination with my approval as the University Supervisor

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DEDICATION

This research project is dedicated to my wife Winne and my children (Jotham, Mercy, Obadiah and Precious), my father the Late Elisha Chepmwetich Kandagor whom I wish he would have lived to witness this occasion and my mother Emmy Chepmwetich Kandagor.

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ABSTRACT

This study aimed at determining the relationship between outsourcing and supply chain performance in the Kenya Medical Supplies Agency. The task specifically included determining the influence of outsourcing on supply chain performance efficiency at Kenya Medical Supplies Agency; determining the relationship between outsourcing and supply chain performance at Kenya Medical Supplies Agency and establishing the challenges of outsourcing in Kenya Medical Supplies Agency. The study adopted a descriptive survey research design. The study targeted 109 respondents out of all 450 employees of KEMSA. The research employed a structured questionnaire to collect data from the respondents. The findings reveal that outsourcing influences supply chain performance at KEMSA to a large extent. The findings reveal to a great extent that under production costs the organization through outsourcing has: eliminated costly delays, increased the organizations' overall financial performance, experienced reduction of cost and operational expenses and has saved a lot on distribution costs. The findings reveal that to a great extent on quality improvement the organization through outsourcing has: built long term relationship with suppliers to enhance its value addition, eliminated waste through loss of drugs and achieved all time shelf availability. The findings further revealed that to a great extent under strategic supplier partnership practices the organization through outsourcing has: built long term relationship and encouraged mutual planning aimed at improving supply chain performance, built long term relationship with its suppliers to improve its strategic and operational capacity, become more competitive, flexible and efficient in its operations, and been able to exchange information on demand and proper management of inventory levels. The study findings also revealed that to a great extent under collaboration and lean procurement practices the organization through outsourcing has: responded to short term change in demand, reduced lead time and achieved flexibility, achieved faster delivery and flexibility, and increased access to timely information for decision making. The study findings also revealed that to a great extent on core competence and continuous development the organization through outsourcing has: reduced inventory levels and stock out number, been able to reduce customer demand uncertainty and develop efficient customer response, and improved customer service by delivering quality and valid drugs in time. The study findings reveal to a very great extent that; loss of learning opportunities from the outsourced activity, cost implications, confidentiality issues and dilution of organizations culture are challenges of outsourcing. The study concludes that production costs, quality improvement, strategic supplier partnership, collaboration and lean procurement practices, and core competence and continuous development have a significant relationship with supply chain performance in Kenya Medical Supplies Agency. The study recommends that there is need for KEMSA management to address challenges the organization faces during outsourcing.

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LIST OF ACRONYMS AND ABBREVIATIONS

CSCMP	-	Council of Supply Chain Management Professionals
CV	-	Coefficient of Variation
IT	-	Information Technology
KEMSA	-	Kenya Medical Supplies Agency
NEDO	-	National Economic Development Office
RBV	-	Resource Based View
ROE	-	Returns on Equity
SCM	-	Supply Chain Management
SPSS	-	Statistical Package for Social Sciences
TCE	-	Transaction Cost Economics
TCT	-	Transaction Cost Theory
UNIDO	-	United Nations Industrial Development Organization.
WHO	-	World Health Organization

CHAPTER ONE
INTRODUCTION

1.1 Background of the Study

According to Bender (2009), in today's world of ever increasing competition, organizations are forced to look for new ways to generate value. The world has embraced the phenomenon of outsourcing and companies have adopted its principles to help them expand into other markets (Bender, 2009). Strategic management of outsourcing is perhaps the most powerful tool in management, and outsourcing of innovation is its frontier (Quinn, 2010). Frayer *et al*. (2010) view outsourcing as the strategic use of outside resources to perform activities that are usually handled by internal staff and resources. By using a well-managed outsourcing agreement, companies can gain in markets that would otherwise be uneconomical.

Presence of the need to improve quality and reduce cost to customers, globalization as core drivers and the need for efficiency has attracted companies to outsource supply chain operations for decades to glean more efficient labour-based processes and improved asset leverage/utilization while simultaneously focusing their internal operations on core competencies (Bacon, 2011). As the need for competitiveness is as urgent as ever in today's economy, companies are continuing to explore this alternative (Greer, Youngblood & Gary, 2012).

As companies pursue this assessment and possible migration of operations from in-house to a third-party outsourcer, companies need to be aware of the full spectrum of benefits afforded through supply chain outsourcing and the uniqueness of supply chain outsourcing with respect to business functions and geographies served. They must also evaluate the unique cost drivers of their specific operation, the nature of the supply chain outsourcing marketplace, and the actions that will help drive a successful business partnership (Carney, 2007). Let's walk through these issues, as well as discuss key steps for driving an appropriately scoped and well-structured supply chain outsourcing agreement for improved performance.

1.1.1 Outsourcing

Outsourcing is a management strategy by which an organization delegates major, non-core functions to specialized and efficient service providers (Corbett, 1999). Sinderman (2005) defines outsourcing as the contracting of one or more of a company's business processes to an outside service provider to help increase shareholder value, by primarily reducing operating cost and focusing on core competencies. For Kotabe (2008), outsourcing is an arrangement in which one company provides services for another company that could also be or usually have been provided in- house.

Pien (2010) asserts that outsourcing is nothing less than the wholesale restructuring the corporation around our core competencies and outside relationships. In Bacon, (2011) opinion, the traditional outsourcing emphasis on tactical benefits like cost reduction (for example, cheaper labor cost in low-cost countries), have more recently been replaced by productivity, flexibility, speed and innovation in developing business applications, and access to new technologies and skills.

Operationalization of outsourcing in an organization starts by organizing all its requirements and items. This is evaluated with the view to compare cost for in-house making of the product visa vie the cost of the decision to outsource to a third party. Other factors such as company concentration in core production issues, need to reduce cost, improve efficiency, confidentiality and security issues, quality issues among others feature in this process to operationalize outsourcing in the organization (Greer, Youngblood & Gary, 2012).

Other researchers have identified several outsourcing issues, trends and strategies that companies take in establishing and effectively managing their outsourcing activities (Sinderman, 2005; Carney, 2007). The trend is for outsourcing relationships to function more as partnerships. Outsourcing providers are taking increasing responsibility in realms that have traditionally remained in-house, such as corporate strategy, information management, business investment, and internal quality initiatives (Sinderman, 2005; Carney, 2007).

A number of researchers have focused on outsourcing strategy effectiveness and its impact on organizational characteristics (Frayer, Scannell & Thomas, 2010; Klaas, McGlendon & Gainey, 2001). Frayer *et al*. (2001) suggest that in order for an out-sourcing strategy to work effectively, companies must proactively manage their outsourcing strategies by establishing top management commitment, global sourcing structures and processes, and global sourcing business capabilities. In addition, they suggest that companies that have not raised their sourcing approach to global, strategic level may already be behind in terms of quality, cost, delivery, technology, performance, and customer service. Klaas *et al*. (2001), suggest that the influence of organizational characteristics is highly contingent, suggesting that organizational characteristics have different effects on various types of outsourcing activities outsourced.

As such, it appears that many factors such as pay level, promotional opportunities and demand uncertainty should be considered when deciding to outsource functions or activities. From a different perspective, obstacles such as poor choices of sourcing partners, inadequate planning and training/skills needed to manage outsourcing activities and poor organizational communication have also been identified as impacting the success of outsourcing projects (Lau & Hurley, 2007; Guterl, 2006; Foster, 2009; Laabs, 2008). Water tight built contract and communication among cross-functional areas of the buyers firm and the outsourced third party reduces the negative effects in outsourcing activities (Klaas *et al*., 2001). Other factors identified among the top priorities in successful firms include adequate performance feedback, emphasis on both short and long-term benefits, anticipation of change for both good and bad times and accommodation of cycles of demand that require an adjustment in services (Kotabe, 2008).

1.1.2 Supply Chain Performance

As Frayer *et al*. (2001) opine, positive measurement of well managed supply chain network is determined and assessed by the ability of the organization to eliminate market risks and fraud, reduce costs, improve efficiency and functional performance of the organization, and add value to purchases on products and services acquired among others. However, poor indicators could be determined by increased cost of purchasing, poor supplier relationship, legal contractual issues, disjointed supply chain network and so on (Casale, 2006; Sinderman, 2005). It is therefore imperative that innovative and strategic management of supply chain network becomes part of the organization core objectives.

A simple definition of good supply chain performance is to get the right product to the right place at the right time at the lowest cost. Those suppliers that develop the processes and systems to support that performance goal will be more highly valued and be treated as a premium partner in the network. From this position, small companies can get better visibility from customers to serve them more effectively.

1.1.3 Performance Measurements in Supply Chain

Performance measurement can be defined as the process of qualifying the efficiency and effectiveness of action. A performance measure can be defined as a metric used to quantify the efficiency and/or effectiveness of an action. According to Gunasekaran, (2001) the following metrics and measures are used to measure performance of supply chain activities: plan, source, make/assemble, and delivery/customer. Under plan we have the following measures; level of customer perceived value of product, variances against budget, order lead time, information processing cost, net profit vs productivity ratio, total cycle time, total cash flow time, product development cycle time. Under source we have the following measures; supplier delivery performance, supplier lead-time against industry norm, supplier pricing against market, efficiency of purchase order cycle time, efficiency of cash flow method, supplier booking in procedures. Under make/assemble percentage of defects, cost per operation hour, capacity utilization, and utilization of economic order quantity. Under delivery/customer flexibility of service system to meet customer needs, effectiveness of enterprise distribution planning schedule, effectiveness of delivery invoice methods, percentage of finished goods in transit, delivery reliability performance.

1.1.4 Outsourcing and Supply Chain Performance

Pien (2010) link the successful supply chain and outsourcing relationship as deals that allow customers to realize multiple beneficial business outcomes, including: Faster introduction of new products and accelerated innovation of existing products due to redirection of resources to focus on product innovation, research and development, sales and marketing, and customer service, access to technologies that can eliminate manual processes (e.g. data analytics and reporting) and provide real-time information that enable optimized business capabilities, such as improved inventory management, demand planning and manufacturing efficiencies, decreased direct cost of goods sold driven by the outsourced manufacturer's capability and expertise to aggregate raw, packaging and incidental material requirements across its other customers that use similar materials; Improved asset utilization derived from higher throughput rates and by leveraging the service provider's assets across multiple clients for reduced overhead allocation on a per-unit basis and improved productivity for up- and down-stream supply chain stakeholders based on having the right product(s), in the right place, at the right time.

However, outsourcing does generate some problems in the supply chain if not well managed. Outsourcing usually reduces a companies control over how certain services are delivered, which in turn may raise the companies liability exposure. Companies that outsource should continue to monitor the contractors' activities and establish constant communication (Guterl, 2006).

1.1.5 Kenya Medical Supplies Agency

Kenya Medical Supplies Agency (KEMSA) , was established in 2000 as a government agency for procurement, warehousing and distribution of healthcare commodities (KEMSA 2010). It serves up to 80% of health care institutions in Kenya, comprising: 1369 dispensaries, 657 health centres, 96 sub- district hospitals, 70 district hospitals, 7 county hospitals and 2 referral hospitals (KEMSA Taskforce, 2008).

According to UNIDO Vienna, (2010) report KEMSA's procurement process demonstrates a significant degree of efficiency and effectiveness. The process is open and transparent as demonstrated by its open tendering system. The value of its procurement rose from 1.3 billion Kenya shillings in financial year 2005/2006 to 3.27 billion Kenya shillings in financial year 2007/2008. No costing metrics exist for the procurement function. Supplier lead time ranges from one to eleven months and procurement lead times ranges from six to fifteen months.

As at July 2008, KEMSA had a distribution network consisting of eleven warehouses, which include centralized and regional warehouses, spread across nine towns with an estimated storage space of 292,810 square feet. There are three centralized warehouses in Nairobi which carry out the following functions: receiving bulk commodities, quality checks of incoming goods, packing of customized kits , order capture from facilities, order picking, order checking and collation, dispatch of goods, inventory management and reserve storage of both fast and slow moving commodities. The regional warehouses carry out the following functions: reserve storage of slow moving goods, storage of parallel program goods, trans-shipment points and dispatch of bulk and slow moving goods. Previous assessments have established that KEMSA warehouses do not meet good distribution practices recommended by World Health Organization (WHO).

While many public organizations have been faced with many challenges including achieving expected level of performance to their customers, Kenya medical supplies agency is not exceptional to this as its customers anticipate for exceptional customer satisfaction in terms of efficiency and service quality. Due to this the Kenya Medical Supplies Agency has adopted the concept of outsourcing in its business service to enhance efficiency and service quality to achieve overall organizational performance.

1.2 Statement of the Problem

In a study to determine the outsourcing to organization supply chain, Klaas *et al*., (2001) found (85) percent positive relationship between outsourcing and supply chain (15) percent negative relationship between outsourcing and organization supply chain. Bender (2009) survey realized (71) percent positive relationship between outsourcing and organization supply chain and (31) percent negative relationship between outsourcing and organization supply chain.

Successful implementation of an outsourcing strategy has been credited with helping supply chain to cut cost (Bowersox *et al*., 2010), increase capacity, improve capacity, improve quality (Lau & Hurley, 2007; Kotabe, Murray & Javalugi 2008), increase profitability and productivity (Casale, 2006; Sinderman, 2005), improve financial performance (Crane 1999), lower innovation costs and risks (Quinn, 2010), and improve organizational competitiveness (Lever, 2007; Steensma & Corley 2010; Sharpe 2007).

Outsourcing has emerged as one of the popular and widely adopted business strategies of this globalized era (Willcocks, 2010). To be able to survive and be profitable in current globalization era, companies tend to use outsourcing to a larger extent (Brannemo, 2006). In today's business environment, organizations consider outsourcing to empower business focus, mitigate risks, build sustainable competitive advantage, extend technical capabilities and free resources for core business purposes (Bartell,1998). The link between outsourcing and performance is less well developed empirically (Gilley, 2004). Recent normative literature (Quinn, 1999) and managerial practice, where outsourcing has been one of the discussions (Porter, 1997) suggest that outsourcing is one of the key sources for increasing a firm's performance.

In Kenya research on outsourcing include; Kinyua (2000) who concluded that companies need to conduct careful analysis before engaging in outsourcing to minimize risks. Besides, Kirui (2001) concludes in his study that outsourcing of non-core logistics activities is triggered by the need to eliminate duplication of roles, efforts, and the dysfunction existing within the organization. In addition, Chanzu (2002) concluded that outsourcing is most prevalent in departments like human resource, finance, and information technology. Studies have also been done on outsourcing of services in sectors such as banking (Serem, 2001), Public service (Komen, 2004) and manufacturing sector (Kamau, 1999). All these studies have focused their studies on challenges and strategies and not on supply chain performance, which creates a research gap to be filled. The aim of this study was to establish whether there is effect of outsourcing on performance in the Kenya Medical Supplies Agency. The study sought to answer the following research question, "what is the relationship between outsourcing and supply chain performance in Kenya Medical Supplies Agency?"

1.3 Objectives of the Study

The specific objectives of the study were;

(i) To determine the influence of outsourcing on supply chain performance efficiency at Kenya Medical Supplies Agency.

(ii) To determine the relationship between outsourcing and supply chain performance at Kenya Medical Supplies Agency.

(iii) To establish the challenges of outsourcing in Kenya Medical Supplies Agency.

1.4 Importance of the Study

This study will be significant to the folowing;

Kenya Medical Supplies Agency: This study will examine effect of outsourcing in its supply chain performance and provide recommendations that could improve the situation.

The Government of Kenya: This study seeks to provide findings that could help the government to streamline outosurcing operations in Kenya.

The study will be important to academicians and researchers: who will want to study and fill the knowledge gaps based on the findings of this study.

CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

This chapter presents a review of literature pertinent to the study as presented by various researchers, scholars' analysts and authors. The section will delve into the concept of outsourcing. The chapter also discusses the theories of outsourcing practices in organizations. It covers theoretical reviews and the empirical review as well as research gaps.

2.2 The Concept of Outsourcing

Sinderman (2005) defined outsourcing as the contracting of one or more of a company's business processes to an outside service provider to help increase shareholder value, by primarily reducing operating cost and focusing on core competencies. According to Kotabe (2008), outsourcing is an arrangement in which one company provides services for another company that could also be or usually have been provided in- house. Corbett (1999) further define outsourcing as a management strategy whereby an organization delegates major, non-core functions to specialized and efficient service providers.

Krishna (2001) contend that in an era of rapid technological change and short product life cycles, companies were trying to reduce cost and maintain quality at the same time which implied that companies would need to specialize in what they did best and de-emphasize management attention from business processes that did not directly impact the business. Outsourcing was a means to partner with service providers so they could handle specific business processes better, faster and at a lower operating cost (Krishna, 2001). It was defined as the transferring one or more internal functions of an organization to an external service providers. Outsourcing has helped to increase efficiency, improve service quality, accountability, values, decreased headcounts and cash infusion and gain access to world class capability and sharing risk (Bacon, 2011; Pien, 2010; and The Outsourcing Institute, 2006).

There are three major categories of motivations for outsourcing: cost, strategy, and politics. The first two commonly drive outsourcing by private industry. Political agendas often drive outsourcing by public organizations (Kakabadse and Kakabadse, 2000).

2.2.1 Cost driven outsourcing

Much of the literature identifies the desire to save costs as an explanation for why outsourcing occurs (Arnold, 2000; Fan, 2000; Kriss, 1996; Laarhoven et al., 2000; and Vining and Globerman, 1999). Harler (2000) states that, outsourcing for cost reasons can occur when suppliers' costs are low enough that even with added overhead, profit, and transaction costs suppliers can still deliver a service for a lower price. One may wonder how an organization can achieve enough savings to cover an additional layer of overhead and still meet profit requirements yet perform a function for less than another organization already doing the function. Specialization and economies of scale are mechanisms used to achieve this level of efficiency (Klainguti, 2000; Kakabadse and Kakabadse, 2000; and Roberts, 2001). In fact, cost savings due to outsourcing can be quite significant.

In a survey of 7500 public organizations in Australia, the outsourcing of cleaning services saved an average of 46 percent over in-house performance of the service (Domberger and Fernandez, 1999). A desire to save indirect costs may also drive outsourcing. Having fewer employees requires less infrastructure and support systems (Fontes, 2000; Hubbard, 1993) which may result in a more nimble and efficient organization. Some organizations outsource to achieve better cost control while others try to shift fixed costs into variable costs. Although organizations may outsource for cost related reasons, there are no guarantees that expected savings will be realized. There is increasing evidence that cost savings have been overestimated and costs are sometimes higher after outsourcing (Kakabadse and Kakabadse, 2000).

2.2.2 Strategy-driven outsourcing

According to Roberts (2001), more recently the main drivers for outsourcing appear to be shifting from cost to strategic issues such as core competence and flexibility. Literature supports outsourcing as a strategy, which may offer improved business performance on numerous dimensions (Dekkers, 2000; Klopack, 2000; McIvor, 2000; Quinn, 1999). Quinn (1999) asserts that the most often cited strategic reason for outsourcing is to allow the organization to better focus on its core competencies.
Because of intense competition, organizations are forced to reassess and redirect scarce resources (Quinn, 1999). Resources are typically redirected to where they make the greatest positive impact, namely the organization's core functions.

In addition to refocusing resources onto core competencies, other strategy issues which encourage the consideration of outsourcing are restructuring, rapid organizational growth, changing technology, and the need for greater flexibility to manage demand swings (Kakabadse and Kakabadse, 2000; Lankford and Parsa, 1999; Large, 1999; and Pinnington and Woolcock, 1995). Flexibility is an important driver not just from a scale perspective but also regarding the scope of product or service (Kakabadse and Kakabadse, 2000). Organizations need to react quicker to customer requirements and outsourcing is seen as a vehicle to accomplish this. Outsourcing may also be perceived as a way to reduce the organization's risk by sharing it with suppliers and at the same time acquire the positive attributes of those suppliers. The partnerships that result from outsourcing may enable an organization to be a world-class performer for a whole suite of products and services where it could only be an average performer by itself. This strategy results in a so-called "virtual organization" where functions are outsourced to multiple vendors under one agreement. Together the suppliers perform an integrated set of services (Quinn, 1999).

2.2.3 Politically-driven outsourcing

There are several reasons why a public organization may behave differently than a private firm and therefore may have different outsourcing motivators. For example, Avery (2000) argues that the performance of a service by the public laboratory is not based on market demand or profitability. The issues may be more social than economic. Avery (2000) uses the example of the public organization detecting a virus or health hazard, whereas the private organization would be in the business of treating the infected for a fee. Even when the services appear to be identical, the products may be very different. Industry performs a service to make money whereas the public organization attempts to ensure general well being; a different goal and mission. So while cost and strategy may drive private firms, the desire for the general well being of citizens may drive outsourcing by public organizations. Other factors that may be drive outsourcing by public organizations include the agendas of elected officials, public opinion, and current national or international trends (Avery, 2000).

Because public organizations are sometimes perceived as inefficient and bureaucratic, political candidates may promote outsourcing ideas, particularly at election time, to demonstrate their willingness to make positive changes in the district. Once laws are enacted, the public organization has no choice but comply. In such situations the outsourcing drivers are the governing laws and executive orders; another recognized reason for outsourcing by public organizations (Kakabadse and Kakabadse, 2000). Another reason for public sector outsourcing may be better accountability. Deakin and Walsh (1996) find that managers in public organizations generally realize an accountability improvement in the particular function being outsourced. However, the managers also believe that there is a simultaneous decline in accountability to the public. The explanation is that a supplier works for the government and performs the functions to satisfy the government representative whereas a government employee works for the public and keeps their interests primary (Avery, 2000; and Kakabadse and Kakabadse, 2000).

2.3 Theoretical Review

The outsourcing process is a complex structure consisting of numerous activities and sub-activities, carrying many managerial dilemmas. Many theories have been utilized to help the academics to understand the nature of those activities, and to help practitioners successfully manage the process. Outsourcing has been approached by different theories. This creates confusion among the researchers of the outsourcing phenomenon. Various authors identified significant number of theories that could explain the outsourcing phenomenon (Gotttschalk and Solli-Sæther, 2005; McIvor, 2005). There are various theoretical justifications for outsourcing. The most popular ones are Transaction Cost Theory (TCT) (Ang and Straub, 1998; Williamson, 1985), Agency theory (Bahli & Rivert, 2003) and resource-based theory (Barney and Hesterly, 1996).

Out of the many theories of organizational behavior, one aligns itself well with the human capital view of people within an organization. This theory, called the Resource Based View (RBV), suggests that the method in which resources are applied within a firm can create a competitive advantage (Barney, 2006). The resource based view of firms is based on two main assumptions: resource diversity and resource immobility (Barney, 2006; Mata et al., 2005). According to Mata et al. (2005), these assumptions are defined as: Resource diversity and Resource immobility these two assumptions can be used to determine whether an organization is able to create a sustainable competitive advantage by providing a framework for determining whether a process or technology provides a real advantage over the marketplace.

2.3.1 The Resource Based View of the Firm

The resource based view of the firm suggests that an organization's human capital management practices can contribute significantly to sustaining competitive advantage by creating specific knowledge, skills and culture within the firm that are difficult to imitate (Afiouni, 2007). In other words, by creating resource diversity (increasing knowledge and skills) and/or resource immobility (a culture that people want to work in), sustainable competitive advantage can be created and maintained.

In order to create human capital resource diversity and immobility, an organization must have adequate human capital management practices, organizational processes, knowledge management practices and systems, educational opportunity (both formal and informal) and social interaction (community building) practices in place (Afiouni, 2007; Barney, 2006; Schafer, 2004).

The core premise of the resource-based view is that resources and capabilities can vary significantly across firms, and that these differences can be stable (Barney and

Hesterly, 2006). If resources and capabilities of a firm are mixed and deployed in a proper way they can create competitive advantage for the firm. The resource-based view in outsourcing builds from a proposition that an organisation that lacks valuable, rare, inimitable and organized resources and capabilities, shall seek for an external provider in order to overcome that weakness. Therefore the most prominent use of the theory is in the Preparation phase of the outsourcing process for defining the decision making framework and in the vendor selection phase for selecting an appropriate vendor. The theory has been also used to explain some of the key issues of the Managing relationship and Reconsideration phases.

2.3.2 Transaction Cost Economics (TCE)

Transaction cost economics (TCE) has been the most utilized theory of outsourcing. TCE is perceived to provide the best decision making tools to help organizations to decide to outsource and to prepare themselves for forthcoming outsourcing arrangements. The governance features of the theory influenced that it has been applied in studying the Managing relationship phase, whilst the concept of switching costs made the theory applicable in the reconsideration phase. Arnold,(2000). Another useful issue for outsourcing provided by TCE is explanation of contractual complexity. Though TCE has not been utilized explicitly for studying the Vendor selection phase, its sub-theory (if we may say so), the theory of incomplete contracting, has been applied in studying the structure and contents of outsourcing contracts, and related preparation and contract management activities.

According to the logic of TCE, when activities based on specific resources are outsourced, the firm's performance can be negatively affected, since the risk of opportunist behavior increases, and the parties have incentives to appropriate the rents by using post-contractual power or the threat of terminating the contract (Klein *et al*. 2008). Thus, the transaction costs originating in the different stages, such as negotiation, control and the necessary protection in the contract to ensure compliance, are very high, and so the firm opts not to outsource. However, from the RBV, outsourcing decisions depend on the extent to which the activities permit the exploitation of different knowledge, capabilities and routines within the organization.

The greater the access to a set of valuable routines and processes and specific skills, the lower the cost of their development (Poppo & Zenger, 2008) and the greater the likelihood of influencing competitive advantage will be (Ray *et al.*, 2004) when the firm decides not to outsource.

2.3.3 Agency Theory

Agency theory is not specific to using the market, Ricketts (2002), regards an agent as any person who is employed to undertake some activity on behalf of someone else. The premise is that the contracting parties have divergent goals and will act through self-interest, giving rise to the challenge of forming a contract that incentivizes the agent in ways that benefit the principal. As rational actors, both parties wish to avoid risk in dealing with each other, giving rise to either outcome or behavioural contracts (Eisenhardt, 1989) depending on relative bargaining power. The focus of the agency theory originally was on the relationship between managers and stakeholders (Jensen and Meckling, 1976), but had spread over the time on explaining the relationship between two inter-firm subjects. In that context we associate the agency theory to understanding the relationship between outsourcer and vendor.

Sources of the agency problem, moral hazards and adverse selection (Arrow, 1985) are should be resolved by monitoring and bonding (Barney & Hesterly, 1996). Consequently, the application of the theory in the outsourcing process research was in the Preparation Phase (when screening for vendors and defining its own attitude towards the type of the relationship. Naturally, the Managing relationship phase has been also explored, and to a very small extent the Reconsideration phase.

The concept of outsourcing can be broadly classified into five areas: The cost reductions; the productivity growth; the profitability increase; the firm's value improvement and Risk control.

2.3.4 Cost Reductions

Cost efficiency remains the primary explanation for the development of outsourcing. Firms evaluate outsourcing to determine if current operation costs can be reduced and if saved resources can be reinvested in more competitive processes. Some researchers contend that an important source of cost reductions is the outsourcing firm's access to economies of scale and the unique expertise that a large outsourcing vendor can deliver (Anderson & Weitz, 2008; Roodhooft & Warlop, 2009). Since these outsourcing contract receivers are typically servicing many clients, they often achieve lower unit costs than can any single company. Specialist outsourcing vendors can also afford to invest more in new technologies and innovative practices than can many outsourcing contract-granting firms (Alexander & Young, 2006). Specialists in payroll processing, for example, would typically handle this task for a number of companies, thus spreading fixed costs and achieving economies of scale.

2.3.5 Firm's value

After a firm enters outsourcing agreements, fresh value may come from an outsourcing contract if it provides for good complementarities between the outsourcing contract-granting firm's and the contract-receiving firm's capabilities; if it allows the contract-granting a firm to stay abreast of fast-changing technologies; and if it allows the contract-granting firm's to draw on the results of capabilities it could not develop itself (Bryce & Useem, 2008).

2.3.6 Risk control

The very reasons a firm wants to outsource certain tasks – because they are complex, expensive, low efficient and difficult to make them hard for the outsourcing vendor too. If the outsourcing process is not preceded by careful strategic planning and thorough risk assessment it may result in considerable financial loss, decreased shareholder value, damaged company reputations, the dismissal of senior management, and in some cases the destruction of the business itself. The awareness of the possible risks incurred when outsourcing will enable decision makers and stake holders to make informed decisions and draw contingency and mitigation strategies. Management needs to assess and evaluate the risks and their impact at strategic, tactical and operational levels in a consistent way (Ward & Griffiths, 2001).

2.3.7 Productivity

Nohria and William (2003) find that to be a steady winner; a company must increase its productivity by about twice the industry's average. During their research period, the mean productivity growth across all industries was about 3 percent per year; the winners in their study increased productivity by 6 to 7 percent every year. There are a number of studies that focus on explaining the relationship between productivity growth and outsourcing. Abraham and Taylor (2006) find that firms “contract out” services with the objectives of smoothing production cycles and benefiting from specialization. Ten Raa and Wolff (2001) find a positive association between the rate of outsourcing and productivity growth

2.3.8 Profitability

Traditionally, when business is booming, the temptation is to hire more staff, build a new factory or warehouse, and bring more of the business “in-house,” where firms hope to better control costs. In many cases, however, firms should be doing exactly the opposite to traditional ways. Today’s knowledge and service-based economy offers innumerable opportunities for well-run companies to increase profits through outsourcing (Quinn, 2009). When used properly, outsourcing can boost profitability in many ways.

2.4 Challenges of Outsourcing

There are three major categories of challenges for outsourcing: cost, strategy, and politics. The first two commonly drive outsourcing by private industry. Political agendas often drive outsourcing by public organizations (Kakabadse & Kakabadse 2006)). While there may be three categories, outsourcing activities are likely to be initiated for more than one reason and in fact, may be driven by elements from all three categories. For example, the outsourcing of taxing and health services for the British government was driven by elements from both the cost and political categories (Will & Currie, 1997)

Much of the literature identifies the desire to save costs as an explanation for why outsourcing occurs (Arnold, 2000). In theory, outsourcing for cost reasons can occur when suppliers’ costs are low enough that even with added overhead, profit, and transaction costs suppliers can still deliver a service for a lower price (Bers, 1992; Harler, 2000). In fact, cost savings due to outsourcing can be quite significant. In a survey of 7500 public organizations in Australia, the outsourcing of cleaning services saved an average of 46 percent over in-house performance of the service (Domberger & Fernandez, 1999).

More recently the main drivers for outsourcing appear to be shifting from cost to strategic issues such as core competence and flexibility (Elmuti & Kathawala, 2000). In general, the literature supports outsourcing as a strategy, which may offer improved business performance on numerous dimensions (Prahalad & Hamel, 1990; Quinn et al., 1990a, b). Perhaps the most often cited strategic reason for outsourcing is to allow the organization to better focus on its core competencies. Because of intense competition, organizations are forced to reassess and redirect scarce resources (Quinn, 1999; Razzaque & Chen, 1998).

Resources are typically redirected to where they make the greatest positive impact, namely the organization's core functions. In addition to refocusing resources onto core competencies, other strategy issues which encourage the consideration of outsourcing are restructuring, rapid organizational growth, changing technology, and the need for greater flexibility to manage demand swings (Kakabadse & Kakabadse, 2006). Flexibility appears to be an important driver not just from a scale perspective but also regarding the scope of product or service. Organizations need to react quicker to customer requirements and outsourcing is seen as a vehicle to accomplish this.

There are several reasons why a public organization may behave differently than a private firm and therefore may have different outsourcing motivators. For example, Avery (2000) argues that the performance of a service by the public laboratory is not based on market demand or profitability. The issues may be more social than economic. He uses the example of the public organization detecting a virus or health hazard, whereas the private organization would be in the business of treating the infected for a fee. Even when the services appear to be identical, the products may be very different. Industry performs a service to make money whereas the public organization attempts to ensure general well being; a different goal and mission. So while cost and strategy may drive private firms, the desire for the general well being of citizens may drive outsourcing by public organizations. Other factors that may be drive outsourcing by public organizations include the agendas of elected officials, public opinion, and current national or international trends (Avery, 2000).

Outsourcing and off shoring are not without problems. Many companies discover that their cost savings are less than the vendors sometimes promise. Also, companies that sign multiyear contracts may find that their savings drop after a year of two. When propriety technology is an issue, outsourcing raises security concerns. Similarly, companies that are protective of their customer data and relationships may think twice about entrusting functions like customer service to outside sources (Kurtz et al, 2006).

Outsourcing may not always deliver. Managers are poorly prepared for outsourcing. Bain's research shows that 82 percent of large companies in developed markets use outsourcing, but approximately half of these think that outsourcing does not meet their expectations. The cost savings only satisfy 10 percent of these respondents. However, outsourcing causes problems as well as having the potentials to solve those (Gottfredson et al). In some cases, outsourcing and off shoring can reduce a company's ability to respond quickly to the marketplace, or it can slow efforts in bringing new products to the market. Suppliers who fail to bring goods promptly or provide quality

2.5 Empirical Review

Outsourcing is a common practice among both private and public organizations and is a major element in business strategy. Perhaps most organizations now outsource some of the functions they used to perform themselves. Numerous reasons why outsourcing is initiated have been identified by researchers. Organizations may expect to achieve many different benefits through successful outsourcing, although there are significant risks that may be realized if outsourcing is not successful (Kremic & Tukel, 2003).

Quinn and Hilmer (1994), stated that outsourcing provide flexibility in response to changing market conditions and reduced investment in high technology. It decreases executive time in managing peripheral activities and frees top management to focus more on the core functions of the business. According to Price water house coopers

(1999), the top five benefits of outsourcing in order of importance are; achieving cost reductions, focusing on company's core business, improving service quality, maintaining competitive edge and increasing shareholder value. Other benefits include; obtaining outside expertise, meeting changing customer demands, access to advanced technology, making continuous improvements and achieving world-class standards. The rapid growth of outsourcing suggests that both public and private organizations expect benefits from outsourcing. Naturally different organizations in different circumstances will expect different benefits.

In general, employers consider using outsourcing for a number of (overlapping) perceived benefits (Shen, Cooke, & McBride, 2004). First, it allows them to concentrate resources on their "core" business activities where they have expertise and are likely to do best. Second, it enables firms to profit from the rising comparative advantage of specialized service providers who may have expertise in the areas concerned. Third, it provides firms with greater flexibility and productivity by using temporary subcontractor's to cover fluctuating demands for labor (Cooke, 2001). This "justin time" deployment of human resources also brings other advantages of saving direct costs (e.g., reducing headcount and overtime working) and indirect costs (e.g., cutting administration and backup costs, saving recruitment and training costs, saving absenteeism costs, and reduced industrial relations problems).

According to National Economic Development, outsourcing creates opportunities for firms to shift the burden of risk and uncertainty associated with the business to someone else National Economic Development Office (NEDO), 1986; Williamson, 1985). In addition, outsourcing enables firms to keep future costs down by selecting the most competitive tender for renewing the contract (Domberger, 1998). Aundhe and Mathew's (2009) research revealed that there are three broad categories of risks: project specific, relationship specific, and macroeconomic. A case based approach using the principles of grounded theory was used for studying the risks and considered interaction among the categories. Chou and Chou (2009) identified an information systems outsourcing life cycle through three project related periods: pre-contract phase, contract phase, and post-contract phase. Also, various risk factors associated with each phase of the information system outsourcing practice have been identified and examined. Willcocks et al., (2003) categorized these risks: contextual, building to contract and post-contract issues.

Main phases of risk management are context analysis; risk identification; risk analysis; risk evaluation; risk treatment; monitoring and review; and communication and continuous improvement of risk strategy Since at least two companies are involved in an Outsourcing process, the range of risk factors expands and new risks could appear which are yet unknown to client companies. Furthermore, due to an increase in national and international regulations and the risks that companies are facing grow and risk management is explicitly demanded by suppliers, clients and states (Gonzales et al., 2006). Dunn and Bradstreet Barometer of Global Outsourcing (2000) reports that between 20% and 25% of all outsourcing relationships fail in any two-year period and half of the relationships will fail within five years. The reasons cited are similar across all types of relationship. Nearly 70% of the respondents note that the outsourcing supplier "didn't understand what they were supposed to do" and "the cost was too high and they provided poor service".

Strassman (2002) examined returns on shareholder equity (ROE) in the period 1996-2000 for six organizations that had outsourced more than half of their IT resources. He found that the average ROE declined from 18.2% to 2.5% in the period, adding 'such dismal performance is generally considered a reliable indicator of an organization in trouble'. Again, he reported no firms that had dramatically improved their ROE before they divested most of their IT function. Allen and Chandrashekar (2000) concur that successful outsourcing requires a shift in mindset from managing workers to learning how to manage the service provider through contract and negotiation. Unseem and Harder (2000), provides a more comprehensive assessment, arguing that rapid expansion in use of outsourcing requires *'lateral'* leadership, negotiating results outward across boundaries rather than down via a hierarchy.

Serem (2000) in her study reports that the low quality of work done by a vendor is the leading limitation of outsourcing. She identifies others as: Lack of understanding of organization culture on the part of contractor, un-met time frames, inflated costs and difficulty in identifying a competent contractor.

Kirui (2001) in his study found out that the challenges encountered in the outsourcing process include: lack of benchmarks in the Kenyan environment because it is apparently a new phenomenon, the existence of a few vendors to pick from and resistance to change by personnel he reported that whenever outsourcing is implemented, there are human resources issues such as redundancies that arise-although most of the employees who became redundant were absorbed by the new suppliers. As a result of economic down turn, globalization and the fast drive towards information technology, mostly third world countries are carrying out public sector reforms to reduce costs and increase efficiency and productivity. The Korean civil service for instance implemented civil service reforms in 1990 as a result of economic instability it suffered then Kim, (2000). This is bound to cause employees to lose their jobs because of resultant retrenchment/ rightsizing.

Johnson and Scholes (1998) report that a recent research demonstrated that well- run organizations-those that usually perform well in the market-are likely to see effective outsourcing as part of good management practice. But it also makes very plain that the magic of outsourcing is not working for most organizations. Only 5% of the 300 organizations investigated had found outsourcing high on benefits and low on drawbacks, for the rest, the outcome of outsourcing was either mediocre or a total flop. It would appear that the manner in which outsourcing is implemented is key to its success but on the other hand outsourcing has its dangers. Kipsang (2003) in her study of outsourcing IT services by Commercial Banks in Kenya revealed that 76.2% of respondents identified loss of control as a major risk of outsourcing.

2.6 Summary of Literature

In summary, from the review of literature it reveals that the effects of outsourcing on supply chain management in the case of Kenya Medical Supplies Agency has not been studied which creates a gap in knowledge to be filled.

2.7 Conceptual Framework

The conceptual Framework below shows the relationship between outsourcing and supply chain performance. Mugenda and Mugenda (2003), define a conceptual framework as a hypothesized model identifying the concepts under study and their relationships. In this framework, there are certain outsourcing factors that determine supply chain performance at Kenya Medical Supplies Agency. These factors include but are not limited to production costs, quality improvement, strategic supplier partnership, collaboration and lean procurement practices, core competence and continuous development.

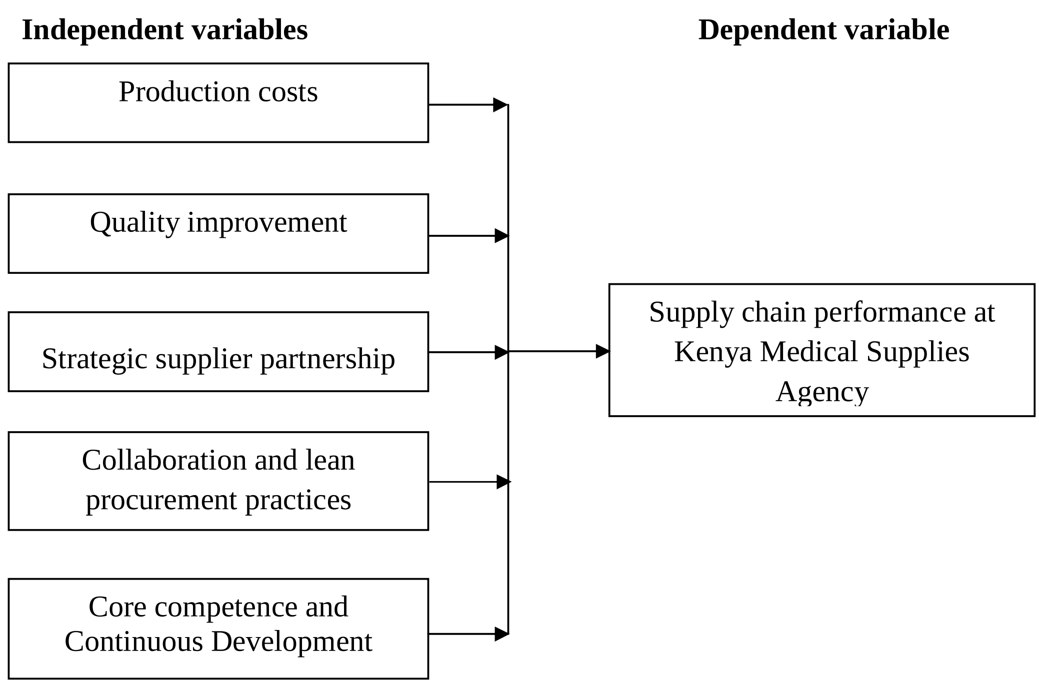


Fig 2.1 Conceptual Framework

Source: Researcher (2014)

CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the methodology that will be used in this study. Section 3.2 presents research design, section 3.3 presents population of the study l and section 3.4 presents data collection method and 3.5 data analysis.

3.2 Research Design

The research design used was descriptive research. Descriptive research is used to obtain information concerning the current status of the phenomena to describe what exists with respect to variables or conditions in a situation. The study aimed at getting detailed information on the stated objectives of study. According to Yin (1994), this design allows an investigation to retain the holistic and meaningful characteristics of real life events. Kothari, (2004) noted that a descriptive study involves a careful and complete observation of social units. It is a method of study in depth rather than breadth, and places emphasis on the full analysis of a limited number of events or conditions and other interrelations.

3.3 Population

The entire Kenya Medical Supplies Agency employees who are made up of a total of 450 employees made up the sample. The respondents comprised of Managers, Procurement, Transport and Distribution and Finance staff of Kenya Medical Supplies Agency. The study was carried out on KEMSA staff in Nairobi which comprises of 150 employees. The Headquarters was selected as the study site as a result of the proximity to the researcher, limited time available for research and financial challenges involving studying a wider area.

Table 3.1 Target Population

Population category	Target population	Percentage (%)
Directorate of Operations	65	43
Directorate of Procurement	25	17
Directorate of Finance and Administration	50	33
Directorate of Legal Services	10	7
Total	150	100

Source: Author (2014)

3.4 Sample Design

The Yamane Taro (1967) formula was used to determine the sample size. The formula explains that the desired sample size is a function of the target population and the maximum acceptable margin of error or sampling error and expressed mathematically below:

$$n=N/1+Ne^2$$

Where:

n =sample size

N = target population

e =margin of error (5%)

Thus in this study, the desired sample size given that there is approximately 150 staff in the KEMSA Headquarters is:

$$n=150/1+150\ (0.05)^2 \quad \text{therefore } n= 109$$

The research uses a 5% margin of error, therefore, 109 respondents were targeted by use of questionnaires.

Simple random sampling was adopted for this study by use of random numbers generated by a computer program. To enable the researcher generalize findings to the whole population, a total of 109 staff were used. Statistically, in order for generalization to take place, a sample of at least 30 must exist (Wiersma, 2005).

3.5 Data Collection

This study used primary data which was collected through the use of self- administer questionnaire, drop and pick later method was used. The questionnaire comprised of three sections one on effects of outsourcing on supply chain performance, second customer perception on service quality and challenges of outsourcing. The questionnaires were given to different categories of respondents with different backgrounds of positions and work experience.

3.6 Data Analysis

Data from questionnaires was summarized, edited, coded, tabulated and analyzed. Descriptive statistics were used. Data was analyzed using a statistical package for social sciences (SPSS). The objectives were analysed by descriptive statistics such as mean, standard deviation ratio, percentile and correlation. For this study, the data analysis techniques included both descriptive and inferential statistics. Descriptive statistics measures location (mean) and dispersion/variability (standard deviation). These measures were used to describe the characteristics of the collected data.

3.6.1 Analytical Model

The data to be collected was regressed hence a linear regression model was most suitable for estimating the function. The estimating function is specified below.

$$Y = \beta 0+ \beta 1X1 + \beta 2X2 + \beta 3X3+ \beta 4X4+ \beta 5X5$$

Where:

Y = Supply chain performance of Kenya Medical Supplies Agency.

β_0 = Constant Term

$\beta_{1,2,3,4,5,6}$= Beta coefficients

X_1= Production Costs

X_2= Quality Improvement

X_3= Strategic Supplier Partnership

X_4= Collaboration and Lean Procurement Practices

$X_{5=}$ Core Competence and Continuous Development

CHAPTER FOUR

DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

This chapter is presented in three sections that is part A, part B and part C. Part A is the background information. The second section part b looks at outsourcing influence on supply chain performance on the organization; while part c looks at challenges of outsourcing. The data has been presented in tables and bar graphs. The responses were analyzed using descriptive statistics. Out of 109 questionnaires which had been administered to the interviewees, 100 of them were returned for data analysis. This translates to 91.7 percent return rate of the respondents. Overall, the response rate can be considered to have been very high.

4.2 Demographic information

The study sought to find out the distribution of the respondents by gender to know which gender is the majority Kenya Medical Supplies Agency employees. The findings are presented in the Table 4.1:

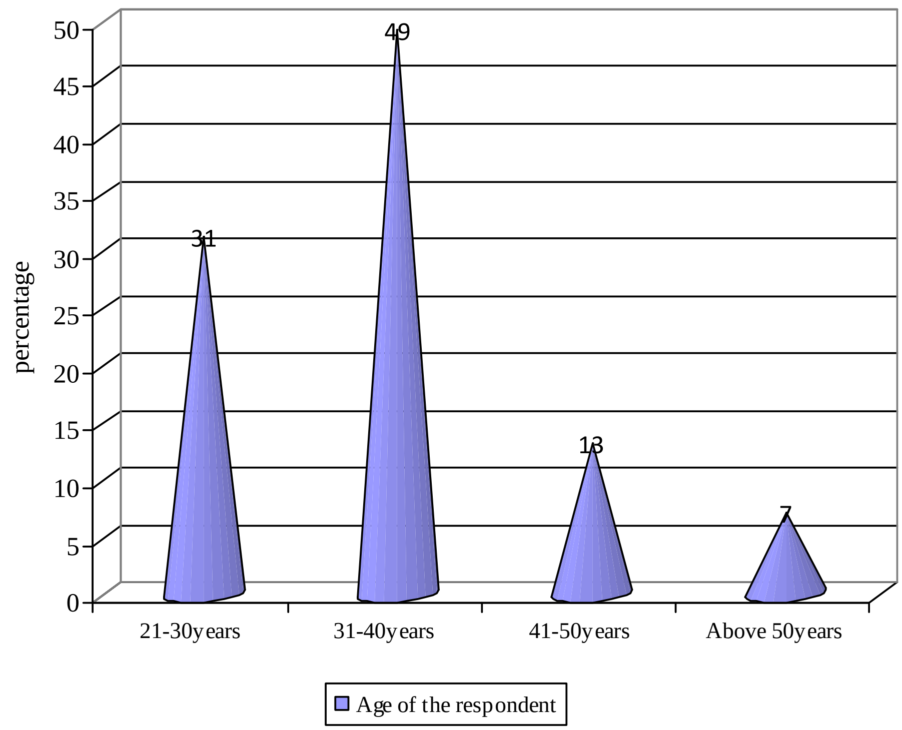
Table 4.1: Distribution of respondents by Gender

Gender	Frequency	Percent
Male	59	59.0
Female	41	41.0
Total	**100**	**100.0**

Source: Researcher (2014)

From Table 4.1, it is evident that majority of the respondents who participated in the study were males represented by 59.0% and followed by females 41.0%. This could imply that Kenya Medical Supplies Agency is largely dominated by males.

The study sought to find out the age of the respondent. The findings are presented in the figure below:

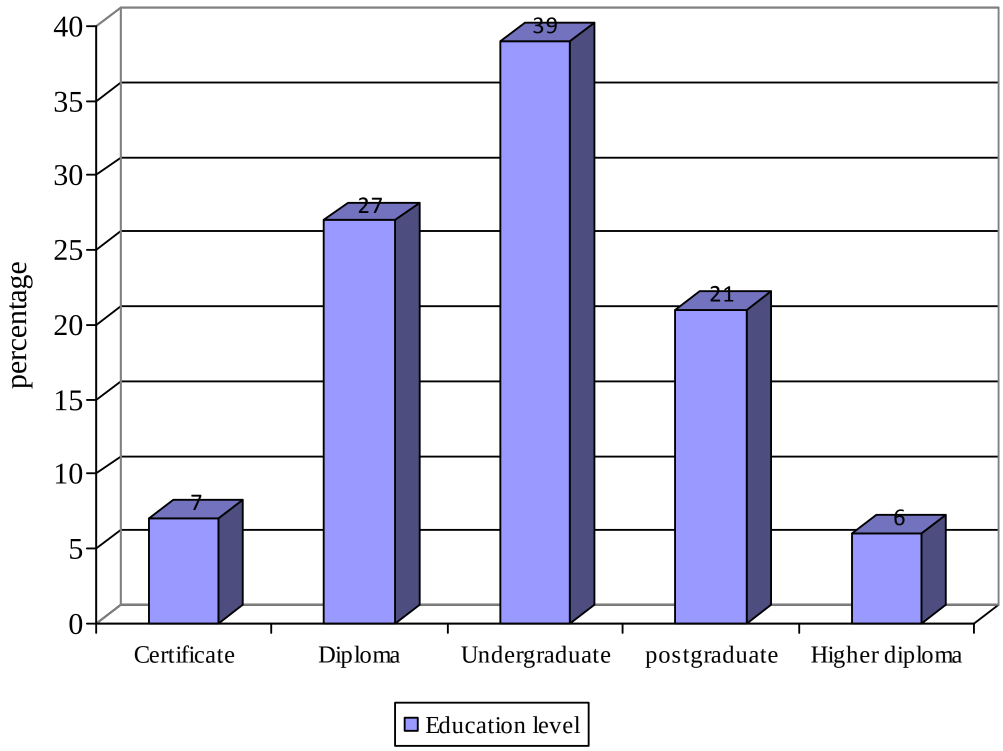


Source: Researcher (2014)

Figure 4.1: Distribution of the respondents by age

Figure 4.1 reveals that majority of the respondents (49.0%) are aged between 31-40 years. The figure further reveals that 31.0% are aged 21-30 years, 13.0% are aged 41-50 years and 7.0% are aged above 50 years. The findings reveal that majority of Kenya Medical Supplies Agency employees are aged in between 31-40 years old. This is a productive age and embraced research. This is general information and not a direct objective of this research.

The study sought to find out the education level of the respondent. The findings are presented in the figure below:



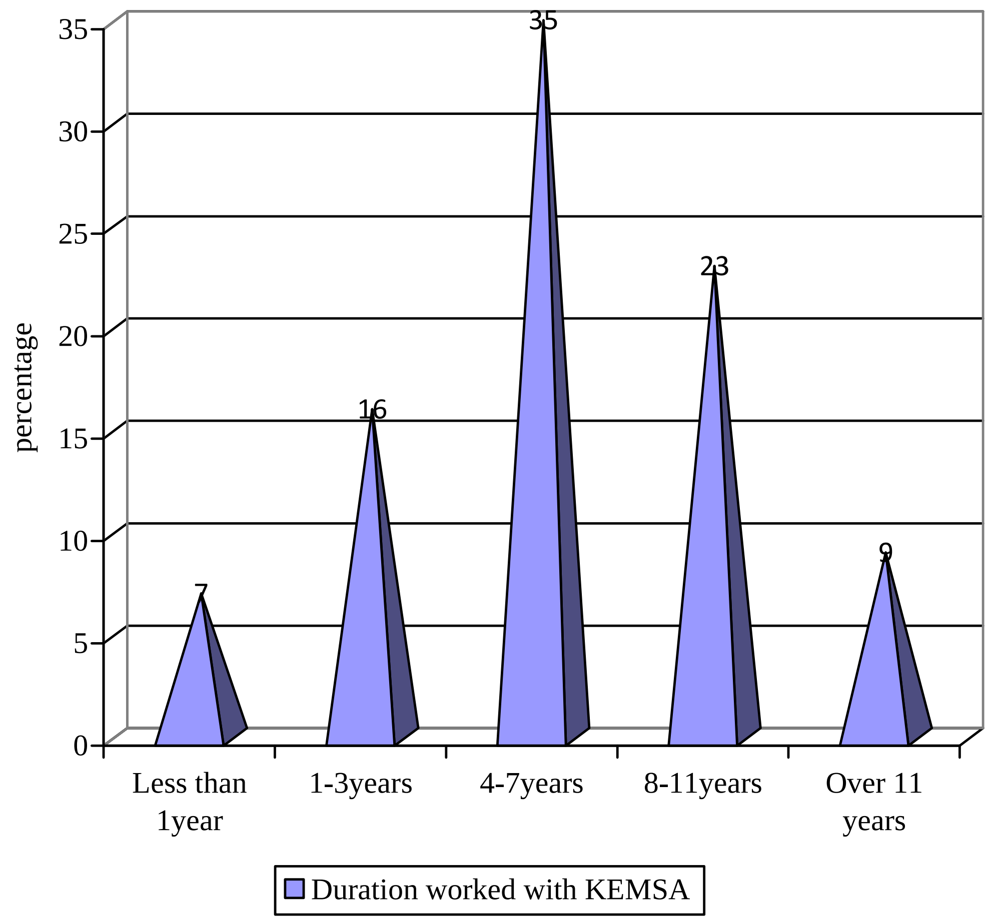
Source: Researcher (2014)

Figure 4.2: Distribution of the respondents by Education level

Figure 4.2 reveals that majority of the respondents (39.0%) have attained undergraduate level of education, 27.0% have attained diploma level of education, 21.0% have attained post graduate level of education, 7.0% have attained certificate level of education and 6.0% have attained higher diploma level of education. The findings reveal that majority of Kenya Medical Supplies Agency employees have attained tertiary level of education believed to be sufficient for the nature of work they are involved in.

This reveals that there is a pool of knowledge at KEMSA who are well informed about outsourcing

The study sought to find out the duration the respondent has worked with KEMSA. The findings are presented in the figure below:



Source: Researcher (2014)

Figure 4.3: Duration worked with KEMSA

Figure 4.3 reveals that majority of the respondents represented by 35.0% have been in the company for 4-7years. The figure further reveals that 23.0% have worked with KEMSA for 8-11 years, 16.0% for 1-3 years, 9.0% for over 11 years and 7.0% for less than 1 year. The findings depict that majority of KEMSA employees have been with the company for a sizeable period of time.

The findings could give an implication that KEMSA retains its employees and is most likely a good employer.

The study sought to find out the respondents career line. The findings are presented in the Table 4.2:

Table 4.2: Distribution of the respondents by career line

Respondents Career	Frequency	Percent
Accounts	15	15.0
Marketing	22	22.0
Pharmacist	7	7.0
Supply chain	31	31.0
Doctor	11	11.0
Quality Assurance	5	5.0
Customer service	2	2.0
Procurement	4	4.0
Operations	3	3.0
Total	**100**	**100.0**

Source: Researcher (2014)

From table 4.1, it is evident that majority of the respondents' career choice is supply chain (31.0%), marketing (22.0%), accounts (15.0%), doctors (11.0%), pharmacists (7.0%), quality assurance (5.0%), procurement (4.0%), operations (3.0%), and customer service (2.0%).

The study sought to find out the distribution of the respondents by departments. The findings are presented in the figure below:

Table 4.3: Distribution of the respondents by department

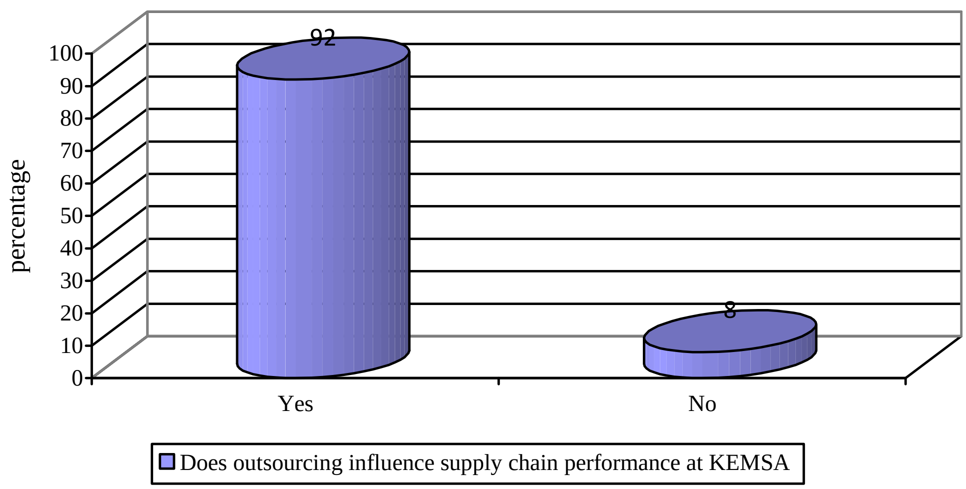
Respondents Department	Frequency	Percent
Finance	15	15.0
Marketing	20	20.0
Pharmacy	7	7.0
Supply chain	29	29.0
Doctor	10	10.0
Administration	5	5.0
Customer service	2	2.0
ICT	4	4.0
Operations	3	3.0
Quality Assurance	5	5.0
Total	**100**	**100.0**

Source: Researcher (2014)

Table 4.3 reveals that majority of the respondents are in supply chain (29.0%), marketing (20.0%), accounts (15.0%), doctors (10.0%), pharmacists (7.0%), administration (5.0%), quality assurance (5.0%), procurement (4.0%), operations (3.0%), and customer service (2.0%) departments.

4.3 Outsourcing influence on supply chain performance on the organization

The study sought to find out if outsourcing influences supply chain performance at KEMSA. The responses are shown on the figure below:

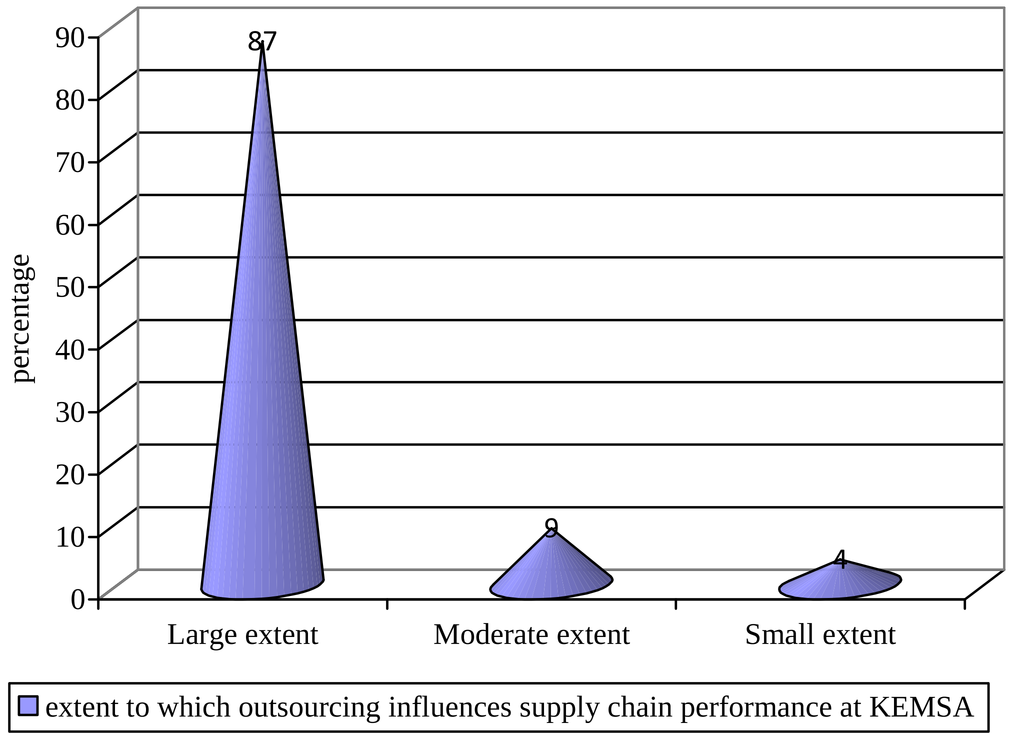


Source: Researcher (2014)

Figure 4.4: Influence of outsourcing on supply chain performance at KEMSA

Figure 4.4 reveals that majority of the respondents (92.0%) indicated that outsourcing influences supply chain performance at KEMSA while 8.0% indicated it doesn't.

The study sought to find out the extent to which outsourcing influences supply chain performance at KEMSA. The findings are presented in the figure below:



Source: Researcher (2014)

Figure 4.5: Extent to which outsourcing influences supply chain performance at KEMSA

Figure 4.5 reveals that almost all the respondents represented by 87.0% indicated that outsourcing influences supply chain performance at KEMSA to a large extent. The figure further reveals that 9.0% indicated that outsourcing influences supply chain performance at KEMSA to a moderate extent while 4.0% indicated that outsourcing influences supply chain performance at KEMSA to a small extent.

The results shows a strong agreement between respondents that outsourcing in supply chain influence the performance at KEMSA.

The study sought to find out the extent to which the respondent agrees with the following statements regarding the influence of outsourcing and supply chain performance. The findings are shown in the table below:

4.3.1 Production Costs

Table 4.4: Extent of agreement with the following statements concerning Production Costs

	Very great extent (%)	Great extent (%)	Moderate extent (%)	Small extent (%)	Very small extent (%)	Mean	SD	Rank
The organization has saved a lot on distribution costs	44.0	56.0	0.0	0.0	0.0	1.59	0.49	3
Through outsourcing the organization has experienced reduction of cost and operational expenses	41.0	59.0	0.0	0.0	0.0	1.55	0.50	4
Outsourcing has increased the organizations' overall financial performance	39.0	61.0	0.0	0.0	0.0	1.59	0.49	2
The organization has eliminated costly delays	21.0	79.0	0.0	0.0	0.0	1.61	0.49	1

Source: Researcher (2014)

The findings on Table 4.4 regarding production costs reveal that majority of the respondents to a great extent agreed that the organization has eliminated costly delays (79.0%), increased the organizations' overall financial performance (61.0%), experienced reduction of cost and operational expenses (59.0%), and saved a lot on distribution costs (56.0%). However a large proportion of the respondents agreed to a very great extent that the organization has saved a lot on distribution costs (44.0%), through outsourcing experienced reduction of cost and operational expenses (41.0%), and increased the organizations' overall financial performance (39.0%). From the above ranking, outsourcing has helped KEMSA to eliminate cost delays, improve overall financial performance, saving in distribution cost and reduction in operational costs.

4.3.2 Quality Improvement

Table 4.5: Extent of agreement with the following statements concerning Quality Improvement

	Very great extent (%)	Great extent (%)	Moderate extent (%)	Small extent (%)	Very small extent (%)	Mean	SD	Rank
The organization has improved quality of drugs	85.0	15.0	0.0	0.0	0.0	1.49	0.55	2
The organization has achieved all time shelf availability	50.0	47.0	3.0	0.0	0.0	1.14	0.35	4
Through outsourcing the organization has built long term relationship with suppliers to enhance its value addition	8.0	92.0	0.0	0.0	0.0	1.92	0.28	1
The organization has eliminated waste through loss of drugs	51.0	49.0	0.0	0.0	0.0	1.47	0.50	3

Source: Researcher (2014)

The findings on Table 4.5 regarding quality improvement confirm that majority of the respondents to a great extent agreed that the organization has: through outsourcing built long term relationship with suppliers to enhance its value addition (92.0%), eliminated waste through loss of drugs (49.0%), and achieved all time shelf availability (41.0%). However a large proportion of the respondents agreed to a very great extent that the organization has: improved quality of drugs (85.0%), eliminated waste through loss of drugs (51.0%), and achieved all time shelf availability (50.0%).

From the above ranking there is a clear indication that KEMSA have developed long term relationships with their suppliers which has enhanced value addition in their operations, improve quality of drugs and eliminate waste through loss of drugs.

4.3.3 Strategic supplier partnership practices

Table 4.6: Extent of agreement with the following statements concerning Strategic supplier partnership practices

	Very great extent (%)	Great extent (%)	Moderate extent (%)	Small extent (%)	Very small extent (%)	Mean	SD	Rank
The organization has built long term relationship with its suppliers to improve its strategic and operational capacity	41.0	59.0	0.0	0.0	0.0	1.59	0.49	2
The organization has been able to exchange information on demand and proper management of inventory levels	54.0	46.0	0.0	0.0	0.0	1.49	0.50	3
The organization has become more competitive, flexible and efficient in its operations	50.0	50.0	0.0	0.0	0.0	1.49	0.50	4
The organization has built long term relationship and encouraged mutual planning aimed at improving supply chain performance	38.0	62.0	0.0	0.0	0.0	1.61	0.49	1

Source: Researcher (2014)

The findings on Table 4.6 regarding strategic supplier partnership practices reveal that majority of the respondents to a great extent agreed that the organization has: built long term relationship and encouraged mutual planning aimed at improving supply chain performance (62.0%), built long term relationship with its suppliers to improve its strategic and operational capacity (59.0%), become more competitive, flexible and efficient in its operations (50.0%), and been able to exchange information on demand and proper management of inventory levels (50.0%). However a large proportion of the respondents agreed to a very great extent that the organization has: been able to exchange information on demand and proper management of inventory levels (54.0%), become more competitive, flexible and efficient in its operations (50.0%), built long term relationship with its suppliers to improve its strategic and operational capacity (41.0%), built long term relationship and encouraged mutual planning aimed at improving supply chain performance (38.0%).

4.3.4 Collaboration and lean procurement practices

Table 4.7: Extent of agreement with the following statements concerning Collaboration and lean procurement practices

	Very great extent (%)	Great extent (%)	Moderate extent (%)	Small extent (%)	Very small extent (%)	Mean	SD	Rank
The organization has reduced lead time and achieved flexibility	54.0	46.0	0.0	0.0	0.0	1.49	0.50	2
The organization has increased access to timely information for decision making	51.0	49.0	0.0	0.0	0.0	1.79	0.67	1
The organization has achieved faster delivery and flexibility	54.0	46.0	0.0	0.0	0.0	1.46	0.40	3
The organization has responded to short term change in demand	86.0	14.0	0.0	0.0	0.0	1.13	0.34	4

Source: Researcher (2014)

The findings on Table 4.7 regarding collaboration and lean procurement practices confirm that majority of the respondents to a very great extent agreed that the organization has: responded to short term change in demand (86.0%), reduced lead time and achieved flexibility (54.0%), achieved faster delivery and flexibility (54.0%), and increased access to timely information for decision making (51.0%). However a large proportion of the respondents under collaboration and lean procurement practices agreed to a great extent that the organization has: increased access to timely information for decision making (49.0%), reduced lead time and achieved flexibility (46.0%), and achieved faster delivery and flexibility (46.0%).

From the findings, KEMSA has increased access to timely information for decision making, reduced lead time and achieved flexibility, faster delivery and they are able to respond to demand on short notice.

4.3.5 Core competence and Continuous development

Table 4.8: Extent of agreement with the following statements concerning Core competence and Continuous development

	Very great extent (%)	Great extent (%)	Moderate extent (%)	Small extent (%)	Very small extent (%)	Mean	SD	Rank
Outsourcing has enabled our organization improve focus i.e. attention on core activities	27.0	83.0	0.0	0.0	0.0	1.71	0.60	1
The organization has been able to reduce customer demand uncertainty and develop efficient customer response	49.0	51.0	0.0	0.0	0.0	1.65	0.51	2
The organization has reduced inventory levels and stock out number	88.0	12.0	0.0	0.0	0.0	1.12	0.33	4
The organization has improved customer service by delivering quality and valid drugs in time	45.0	55.0	0.0	0.0	0.0	1.54	0.50	3

Source: Researcher (2014)

The findings on Table 4.8 regarding core competence and continuous development reveal that majority of the respondents to a very great extent agreed that the organization has reduced inventory levels and stock out number (88.0%), been able to reduce customer demand uncertainty and develop efficient customer response (49.0%), has improved customer service by delivering quality and valid drugs in time (45.0%). However a large proportion of the respondents regarding core competence and continuous development agreed to a very great extent that the organization has: outsourcing has enabled our organization improve focus i.e. attention on core activities (83.0%), improved customer service by delivering quality and valid drugs in time (55.0%), been able to reduce customer demand uncertainty and develop efficient customer response (51.0%), and reduced inventory levels and stock out number (12.0%).

From the findings, there is a clear indication that KEMSA have sufficient time to concentrate on core activities and enough time to respond to customers.

4.4 Challenges of outsourcing

The study sought to find out the challenges faced by the organization when outsourcing and the extent to which the challenges affect the organization. The findings are shown in the table below:

Table 4.9: The challenges faced when outsourcing

	Very great extent (%)	Great extent (%)	Moderate extent (%)	Small extent (%)	Very small extent (%)	Mean	SD	Rank
Confidentiality issues	73.0	27.0	0.0	0.0	0.0	1.91	0.60	1
Exposure to competitors	29.0	71.0	0.0	0.0	0.0	1.57	0.50	3
Poor quality services	31.0	69.0	0.0	0.0	0.0	1.54	0.50	4
Loss of control over outsourced services	45.0	55.0	0.0	0.0	0.0	1.51	0.50	5
Inability to control non-regular employees	47.0	53.0	0.0	0.0	0.0	1.12	0.33	8
Loss of learning opportunities for the from the outsourced activity	96.0	4.0	0.0	0.0	0.0	1.65	0.51	2
Dilution of organizations culture	51.0	49.0	0.0	0.0	0.0	1.48	0.50	7
Cost implications	81.0	19.0	0.0	0.0	0.0	1.51	0.50	6

Source: Researcher (2014)

The findings on Table 4.9 show that majority of the respondents to a very great extent agreed to the following to be challenges of outsourcing faced by KEMSA: loss of learning opportunities for the from the outsourced activity (96.0%), cost implications (81.0%), confidentiality issues (73.0%) and dilution of organizations culture (51.0%). However a large proportion of the respondents agreed to a very great extent to be challenges of outsourcing faced by KEMSA: exposure to competitors (71.0%), poor quality services (69.0%), loss of control over outsourced services (55.0%), inability to control non-regular employees (53.0%), dilution of organizations culture (49.0%), and confidentiality issues (27.0%).

From the ranking above, KEMSA faced the following challenges ranked from the highest to the lowest: confidentiality issues, loss of learning opportunity, exposure to competitors, poor quality services, loss of control over outsourced services, cost implications, dilution of organizations culture and inability to control non-regular employees.

The study sought to find out the suggestions/recommendations towards outsourcing and supply chain performance at KEMSA. The responses given include: There is need for KEMSA to address the challenges that are faced with outsourcing; there are loss of learning opportunities from the outsourced activity, cost implications, confidentiality issues and dilution of organizations culture. however a large proportion of the respondents agreed to a very great extent to the following statement regarding challenges of outsourcing; exposure to competitors, poor quality services, loss of control over outsourced services, inability to control non-regular employees, dilution of organizations culture and confidentiality issues. By addressing these issues KEMSA will improve their outsourcing practices that will in turn enhance the supply chain performance thus improving the overall company's performance and success.

4.5 Regression Analysis

A multiple linear regression model was applied to determine the relationship between outsourcing and supply chain performance in the Kenya Medical Supplies Agency. The regression model was as follows:

$$Y = \beta0+ \beta1X1 + \beta2X2 + \beta3X3+ \beta4X4+ \beta5X5$$

Where:

Y = Supply chain performance of Kenya Medical Supplies Agency.

β_0 = Constant Term

$\beta_{1,2,3,4,5,6}$= Beta coefficients

X_1= Production Costs

X_2= Quality Improvement

X_3= Strategic Supplier Partnership

X_4= Collaboration and Lean Procurement Practices

$X_{5=}$ Core Competence and Continuous Development

Table 4.10: Model Goodness of Fit

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.436[a]	.130	.049	.467

a. Predictors: (Constant), Production Costs, Strategic Supplier Partnership, Collaboration and Lean Procurement Practices, Core Competence and Continuous Development, Quality Improvement

The research utilized Table 4.10 to establish whether outsourcing and supply chain performance in the Kenya Medical Supplies Agency have a linear dependence on the independent variables. The study established a correlation value (R) of 0.436. This depicts a good linear dependence between the two variables. An R-square value of 0.130 was established and adjusted to 0.049. The coefficient of determination reveal that Production Costs, Quality Improvement, Strategic Supplier Partnership, Collaboration and Lean Procurement Practices, and Core Competence and Continuous Development brings about 46.7% variations in supply chain management; 53.3% of variations are brought about by factors not captured in the objectives.

Table 4.11: Analysis of Variance (ANOVA)

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.578	9	.106	1.731	.315[a]
	Residual	7.343	91	.076		
	Total	7.921	100			

a. Predictors: (Constant), Production Costs, Quality Improvement, Strategic Supplier Partnership, Collaboration Procurement, Collaboration and Lean Procurement Practices, Core Competence and Continuous Development

b. Dependent Variable: Does outsourcing influence supply chain performance at KEMSA?

Analysis of Variance (ANOVA) was used to test the significance of the regression model as related to significance in the differences in means of the dependent and independent variables. The ANOVA test produced an f-value of 1.731 which was significant at p=0.315. This depicts that the regression model is not significant at 95% confidence level. That is, it has 31.5% probability of misrepresentation.

Table 4.12: Regression Coefficients

Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.414	.341		3.721	.005
Production Costs	.192	.226	.145	1.039	.333
Quality Improvement	.364	.453	.145	1.011	.356
Strategic Supplier Partnership	.091	.212	.067	.432	.699
Collaboration and Lean Procurement Practices	.245	.266	.211	.612	.589
Core Competence and Continuous Development	.163	.377	.190	1.411	.321

a. Dependent Variable: Does outsourcing influence supply chain performance at KEMSA?

From the data in the above Table 4.12, the established regression equation was:

Y = 1.414+ 0.192X1 + 0.364X2 + 0.091X3 + 0.245X4+ 0.163X5 **p=0.315**

From the above regression model on Table 4.12, when the Production Costs, Quality Improvement, Strategic Supplier Partnership, Collaboration and Lean Procurement Practices and Core Competence and Continuous Development have null value; outsourcing and supply chain performance would be 1.414.

Holding other factors constant, a unit increase in production costs would lead to a positive 0.192 increase in outsourcing and supply chain performance in the Kenya Medical Supplies Agency. A t-significance of 0.333 was established depicting that production costs has a significant relationship with outsourcing and supply chain performance in the Kenya Medical Supplies Agency. A unit increase in quality improvement would lead to a positive 0.364 increase in outsourcing and supply chain performance in the Kenya Medical Supplies Agency. A t-significance of 0.356 was established depicting that quality improvement has a significant relationship with outsourcing and supply chain performance in the Kenya Medical Supplies Agency.

A unit increase in strategic supplier partnership would yield 0.091 increases in outsourcing and supply chain performance in the Kenya Medical Supplies Agency; conversely a t-significance value 0.699 was established depicting that strategic supplier partnership is significantly related with outsourcing and supply chain performance in the Kenya Medical Supplies Agency. A unit increase in collaboration and lean procurement practices would lead to a positive 0.245 increase in outsourcing and supply chain performance in the Kenya Medical Supplies Agency. A t-significance of 0.589 was established depicting that collaboration and lean procurement practices has a significant relationship with outsourcing and supply chain performance in the Kenya Medical Supplies Agency. A unit increase in core competence and continuous development would lead to a 0.163 increase in outsourcing and supply chain performance in the Kenya Medical Supplies Agency. A t-significance of 0.321 was established depicting that core competence and continuous development has a significant relationship with outsourcing and supply chain performance in the Kenya Medical Supplies Agency.

This clearly shows that production costs, quality improvement, strategic supplier partnership, collaboration and lean procurement practices and core competence and continuous development would lead to rise in outsourcing and supply chain performance in the Kenya Medical Supplies Agency.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Summary

This study aimed is determining the relationship between outsourcing and supply chain performance in the Kenya Medical Supplies Agency. The task included determining the influence of outsourcing on supply chain performance efficiency at Kenya Medical Supplies Agency; determining the relationship between outsourcing and supply chain performance at Kenya Medical Supplies Agency and establishing the challenges of outsourcing in Kenya Medical Supplies Agency.

The researcher reviewed previous studies with a view to establish academic gaps which the present study sought to bridge. This was done through library research. The procedure included: reading, evaluating the methodology employed in terms of design choice, target population, sample and sampling procedure data collection instruments (that is suitability, validity and reliability), data collection procedures, data analysis, findings and recommendations. The researcher benefited so much from the literature review for it guided the present study by pointing to areas that need to be investigated.

This study employed quantitative research as the main approach to guide the study. The target population included all employees of KEMSA. The research instrument used in data collection was a questionnaire to collect data from the organizations. To ensure validity of the instruments, expert opinion was sought. Data analysis was started immediately after the field. Data was summarized into frequencies and percentages and presented in graphs and tables.

The study findings revealed that majority of the respondents who participated in the study were males aged 31-40 years and have attained undergraduate level of education. The findings reveal that majority of the respondents have been in the company for 4-7years. The study findings also depict that majority of the respondents career choice is supply chain and they are in the supply department.

The study findings also revealed that majority of the respondents indicated that outsourcing influences supply chain performance at KEMSA to a large extent. The study findings also depict majority of the respondents to a great extent agreed to the following statements concerning production costs; the organization has eliminated costly delays, outsourcing has increased the organizations' overall financial performance, through outsourcing the organization has experienced reduction of cost and operational expenses and the organization has saved a lot on distribution costs. However a large proportion of the respondents agreed to a very great extent to the following statements concerning production costs. The organization has saved a lot on distribution costs, through outsourcing the organization has experienced reduction of cost and operational expenses and outsourcing has increased the organizations' overall financial performance.

The study findings also depict that majority of the respondents to a great extent agreed to the following statements regarding quality improvement; through outsourcing the organization has built long term relationship with suppliers to enhance its value addition, the organization has eliminated waste through loss of drugs and the organization has achieved all time shelf availability. The study also found out that majority of the respondents to a great extent agreed to the following statements regarding strategic supplier partnership practices; the organization has built long term relationship and encouraged mutual planning aimed at improving supply chain performance, the organization has built long term relationship with its suppliers to improve its strategic and operational capacity, the organization has become more competitive, flexible and efficient in its operations and the organization has been able to exchange information on demand and proper management of inventory levels.

The study also found out that majority of the respondents to a very great extent agreed to the following statements regarding collaboration and lean procurement practices; the organization has responded to short term change in demand, the organization has reduced lead time and achieved flexibility, the organization has achieved faster delivery and flexibility, and the organization has increased access to timely information for decision making. The study also found out that majority of the respondents to a very great extent agreed to the following statements regarding core competence and continuous development; the organization has reduced inventory levels and stock out number, the organization has been able to reduce customer demand uncertainty and develop efficient customer response, and the organization has improved customer service by delivering quality and valid drugs in time.

The study also found out that majority of the respondents to a very great extent agreed to the following statements regarding challenges of outsourcing; loss of learning opportunities from the outsourced activity, cost implications, confidentiality issues and dilution of organizations culture. However a large proportion of the respondents agreed to a very great extent to the following statement regarding challenges of outsourcing; exposure to competitors, poor quality services, loss of control over outsourced services, inability to control non-regular employees, dilution of organizations culture and confidentiality issues.

5.2 Conclusions

The study concludes that through outsourcing Kenya Medical Supplies Agency (KEMSA) to a great extent has: eliminated costly delays, increased the organizations' overall financial performance, experienced reduction of cost and operational expenses, saved a lot on distribution costs, built long term relationship with suppliers to enhance its value addition, eliminated waste through loss of drugs, achieved all time shelf availability, built long term relationship and encouraged mutual planning aimed at improving supply chain performance, built long term relationship with its suppliers to improve its strategic and operational capacity, become more competitive, flexible and efficient in its operations, and been able to exchange information on demand and proper management of inventory levels.

The study furthermore concludes that through outsourcing KEMSA to a great extent has: responded to short term change in demand, reduced lead time and achieved flexibility, achieved faster delivery and flexibility, increased access to timely information for decision making, reduced inventory levels and stock out number, been able to reduce customer demand uncertainty and develop efficient customer response, improved customer service by delivering quality and valid drugs in time. The study also concludes that through outsourcing KEMSA has faced: loss of learning opportunities from the outsourced activity, cost implications, confidentiality issues and dilution of organizations culture.

The study ultimately concludes that production costs, quality improvement, strategic supplier partnership, collaboration and lean procurement practices and core competence and continuous development have a significant relationship and would lead to rise in outsourcing and supply chain performance in Kenya Medical Supplies Agency.

5.3 Recommendations

On the basis of the above, conclusions, the following recommendations were made for outsourcing and supply chain performance in the Kenya Medical Supplies Agency. There is need for KEMSA to address the challenges that are faced when outsourcing such as loss of learning opportunities from the outsourced activity, cost implications, confidentiality issues and dilution of organizations culture. By addressing these issues KEMSA will improve their outsourcing practices that will in turn enhance the supply chain performance thus improving the overall company’s performance and success.

5.3.1 Suggestions for further research

This study sought to determine outsourcing and supply chain performance in the Kenya Medical Supplies Agency attempting to bridge the gap in knowledge that existed with major challenges and establishing the relationship between outsourcing and supply chain performance in the Kenya Medical Supplies Agency. Although the study attained these, it mainly focused on one organization, KEMSA. The there is need to conduct a similar study which will attempt to find out the impact of corporate outsourcing on employees’ performance, and benefits of outsourcing on the company’s success.

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APPENDICES

APPENDIX 1: QUESTIONNAIRE

Instructions: kindly complete the following questionnaire using the instructions provided for each set of question. Tick appropriately.
Confidentiality: The responses you provide will be strictly confidential. No reference will be made to any individual(s) or organization in the report of the study.

PART A: BACKGROUND INFORMATION

1. What is your gender?

[ ] Male [ ] Female

2. In which of the following age brackets do you belong?

[ ] Below 20 years [ ] 21-30 years [ ] 31-40 years

[ ] 41-50 years [ ] Above 50 years

3. What is your education level (state the highest level?)

[ ] Certificate [ ] Diploma [ ] Undergraduate

[ ] Post Graduate [ ] Other ______________________

4. How many years have you worked with KEMSA?

[ ] Less than 1 year [ ] 1-3 years [ ] 4-7 years

[ ] 8-11 years [ ] Over 11 years

5. What is your career line?

[ ] Accounts [ ] Marketing [ ] Pharmacist

[ ] Supply chain [ ] Doctor [ ] Other ______________

6. Which department are you in? __________________________

PART B: OUTSOURCING INFLUENCE ON SUPPLY CHAIN PERFORMANCE ON THE ORGANIZATION

7. a) Does outsourcing influence supply chain performance at KEMSA?

[ ] Yes [ ] No

b) If Yes to Q.7 (a) kindly indicate to what extent

[ ] Large extent [ ] Moderate extent [ ] Small extent [ ] No extent at all

8. Kindly indicate the extent to which you agree with the following statements concerning influence of outsourcing and supply chain performance. Indicate your response based on a 5-point scale by using a tick (√) or X to mark the applicable box where (5) = Very great extent (4) = Great extent (3) = Moderate extent (2) = Small extent (1) = Very small extent.

Production Costs	**1**	**2**	**3**	**4**	**5**
The organization has saved a lot on distribution costs					
Through outsourcing the organization has experienced reduction of cost and operational expenses					
Outsourcing has increased the organizations' overall financial performance					
The organization has eliminated costly delays					
Quality Improvement	**1**	**2**	**3**	**4**	**5**
The organization has improved quality of drugs					
The organization has achieved all time shelf availability					
Through outsourcing the organization has built long term relationship with suppliers to enhance its value addition					
The organization has eliminated waste through loss of drugs					

Strategic supplier partnership practices	**1**	**2**	**3**	**4**	**5**
The organization has built long term relationship with its suppliers to improve its strategic and operational capacity					
The organization has been able to exchange information on demand and proper management of inventory levels					
The organization has become more competitive, flexible and efficient in its operations					
The organization has built long term relationship and encouraged mutual planning aimed at improving supply chain performance					
Collaboration and lean procurement practices	**1**	**2**	**3**	**4**	**5**
The organization has reduced lead time and achieved flexibility					
The organization has increased access to timely information for decision making					
The organization has achieved faster delivery and flexibility					
The organization has responded to short term change in demand					
Core competence and Continuous replenishment	**1**	**2**	**3**	**4**	**5**
Outsourcing has enabled our organization improve focus i.e. attention on core activities					
The organization has been able to reduce customer demand uncertainty and develop efficient customer response					
The organization has reduced inventory levels and stock out number					
The organization has improved customer service by delivering quality and valid drugs in time					

9. Kindly indicate the extent to which you agree with the following statements regarding influence outsourcing in your organization. Indicate your response based on a 5-point scale by using a tick (√) or X to mark the applicable box where (5) = Very great extent (4) = Great extent (3) = Moderate extent (2) = Small extent (1) = Very small extent.

PART C: CHALLENGES OF OUTSOURCING

10. Kindly indicate the extent to which you agree with the following to be outsourcing challenges faced by your organization. Indicate your response based on a 5-point scale by using a tick (√) or X to mark the applicable box where (5) = Very great extent (4) = Great extent (3) = Moderate extent (2) = Small extent (1) = Very small extent.

	5	4	3	2	1
Confidentiality issues					
Exposure to competitors					
Poor quality services					
Loss of control over outsourced services					
Inability to control non-regular employees					
Loss of learning opportunities for the from the outsourced activity					
Dilution of organizations culture					
Cost implications					

24. Please give suggestions/recommendations towards outsourcing and supply chain performance at KEMSA

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____

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THANK YOU FOR YOUR TIME AND COOPERATION