SUPPLY CHAIN MANAGEMENT PRACTICES AND PERFORMANCE OF PRIVATE HOSPITALS IN NAIROBI KENYA

BY

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DECLARATION

I declare that this is my original work and has not been submitted to any university either for examination or essay, or as a management research project.

Signature……. Date……

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D61/82809/2015

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

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DEDICATION

I dedicate this research project to my parents, Mr and Mrs. Okello, brothers' sisters, uncle Dindi, Paty, Were, among others aunts and cousins you have been my rock and motivation as I pursed this course. To my friends especially Phillip, who has been my rock and motivation as I supported me all through .I would have not made it without your moral as well as financial support, understanding and perseverance.

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ACRONYMS AND ABBREVIATIONS

EDI	Electronic data interchange
ERP	Enterprise Resource Planning
GDP	Gross domestic income
GSM	Green Supply Chain Management
ICT	Information communication technology
IT	Information Technology
NHIF	National Health Insurance Fund
SC	Supply chain
SCM	Supply Chain Management
SCMP	Supply chain management practices

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ABSTRACT

Private hospitals in Kenya have had a record of outstanding performance as compared to their counterparts in terms of provision of quality services, high flexibility, timeliness in service delivery and high reliability. The study was aimed at establishing supply chain management practices and performance of private hospitals in Nairobi. It was specifically aimed to establish how, customer relationship management, lean management; information sharing, information communication technology strategic partnerships and outsourcing practices affect performance of private hospitals in Nairobi. The study used descriptive research design since it focused on the effects of supply chain management practices on operational performance of private hospitals in Nairobi. The study was guided by Resource based view Theory and Social influence theories. The study used a descriptive statistic in its methodology on supply chain management practices and performance of private hospitals in Nairobi. This study used primary data. Data collection was effected by use of structured questionnaires. Procurement managers and the equivalent were the targeted population from the 53 private hospitals in Nairobi. These questionnaires were issued through drop and pick method, coded, keyed and analyzed using both descriptive and regression analysis. The regression model used had four variables. Customer relationship management, lean management, information sharing, information communication technology strategic partnerships and outsourcing were the dependent variables while residential tax compliance was the independent variable. The study findings indicated that customer relationship management, lean management, information sharing, information communication technology strategic partnerships and outsourcing have a positive impact on performance of private hospitals in Nairobi. The major limitation of the study is that it was based of private hospitals based in Nairobi only. Other future academicians should research on supply chain management practices in private hospitals a different town rather than Nairobi or carry out a cross sectional study in Kenya on both the private and public hospitals. Key words: Supply chain management, supply chain management practices, performance, private hospitals

CHAPTER ONE: INTRODUCTION

1.1 Background

The last three decades has seen an increasing need to shift from Lean, cost, efficiency driven supply chains to agile, fast, and service driven supply chains. Both in theory and practice, numerous scholars concur that firms' leaders have gained knowledge on the fact that to be productive, firms need to compete in isolation of their suppliers and other entities in the supply chain (Gimeze & Ventura, 2005) .Due to the challenge to efficiently and effectively execute their daily business activities, the demand for a more elaborate and comprehensive supply chain practices has arose. This came because the demand for goods and services delivery to the right destination and time increased. Most businesses have since taken keen interest on how to have efficient practices to execute their daily operations. It's now a prerequisite for any organization deemed competitive and enhancing profitability. To meet these demands organizations are increasingly implementing supply chain management practices into their day to day operations (Harps, 2000; Stonebraker & Afifi, 2004).

Supply chain management recently has been a very common practice across industries because (Ralston, 2013). The major focus is to facilitate meeting of customers' needs for the various products that it produces (Preuss, 2005). In recent years, supply chain management has emerged as one of the most critical features in any business in need to gain in a very competitive and dynamic business environment. The global market is becoming more complex and competition is becoming fiercer, this therefore has demanded for business restructuring and re-establishment in the operations department in-order to produce and provide more competitive goods and services to the consumers/users through an effective and efficient management of supply chain practices (Stock &Boyer, 2009).

1.1.1 Supply Chain management Practices

SC emphasizes on integration of supply chain operations and any information flow that is aimed at achieving a competitive edge of reliability and continuity (Zuckerman, 2004). It is a network of facilities which create raw materials, adds value to them into intermediate goods and then final products, and deliver the products to customers through a distribution system is what is termed as Supply chain management. Besides it also entails monitoring and coordination of duties carried out by various players who are engaged in production processes from different industries and companies. The entire supply chain must be understood well if there is need for effective management of the SC.

Supply chain management practices are various actions taken by management of any firm to better the workability of the integrated supply chain .They are a collection of things undertaken in a firm to enhance good management of its SC, (Lambert et al., 1998). As many organizations are fighting to be global leaders, much has to be done in their supply chain practices, by the words of Ngugi (2007), being a global leader and innovative venture quality supply chain practices and customer management through distinguished services need to be implemented. According to this study, supply chain management practices have been identified as: information sharing, strategic supplier partnerships, customer relationship, lean practices, and top management support.

1.1.2 Operational Performance

Operational performance is a relative measure that explains how a firm utilizes its available resources such as assets both tangible and intangible in generating revenue. Performance measurement is systematic process of quantifying ideas and actions in firms

(Neely et al., 1997). Measurement of performance facilitates integration among the supply chain partners. Two broad categories of objectives of any firm are short-term objectives e.g. to facilitate productivity, reduce wastes, reduce costs related to inventory and reduce waiting time and long term objectives e.g. Strategic partnerships, increase market share, which form basis of performance measurement in a firm (Li et al., 2006; Lyons et al., 2004).

The extent to which supply chain's activities meet end customer need is what is termed as Supply chain performance. Kwai et al (2004). Supply chain performance is measured using various performance metrics. A supply chain operations reference (SCOR) model is which has five major attributes was used in this research: supply chain delivery reliability, flexibility, timeliness, cost and responsiveness.

Performance is a management problem that needs to be understood fully. Strategic and operational goals can only be achieved if the management understands the performance targets. The measures evaluate the keenness and appropriateness of the asset utilization in generating accounting profits. It measures the efficiency and effectiveness of the management in resource allocation and growth (Chan 2005).The specific performance measures to be used in this study in relation to private hospitals are: flexibility, cost, reliability, responsiveness, timeliness and customer satisfaction

1.1.3 Private Hospitals in Nairobi

Private hospitals have been clearly distinguished from the public hospitals by their ability to admit and take care of the inpatients. A treating facility owned by a for-profit or a not-for-profit organization and is privately funded through payment for medical or healthcare

services by patients themselves, by insurers, or by foreign embassies is what is termed as a private hospital. The Private healthcare hospitals have grown by wide margin for the past years due to absence of quality health care systems in the public health sector and introduction of user fees in 1989 (Kimani et al., 2004).

According to (Oduwo et al., 2001) the law clearly stipulates on which health care facilities should be called hospitals, nursing home among others based on the features and the equipments available plus the years of operation. This has helped in curbing the challenge of many health facilities identifying themselves as hospitals when others with same facilities refer to themselves as clinics .The challenge of classification has arisen due to the fact that most clinics change their names to nursing homes to be awarded a higher amount of the National Hospital Insurance Fund (NHIF).

According to (Kimani et al., 2004) a private healthcare sectors make high contribution to delivery of healthcare services in Kenya. Ability to improve efficiency and quality of care through promotion of competiveness and complementing the public sector has facilitated the ability of private hospitals in the filling of the resource gasps in existence. Lowering down of prices and quality in the health care has been facilitated by presence of many suppliers in the market place.. Government has limited capacity to monitor and enforce quality standards. Inspection of facilities and issuance of operating license is carried out by The Pharmacy and Poisons Control Board (PPB) which has a large mandate for carrying out that task.

A study by Kenya National Bureau of Statistics conducted in 2012 revealed that for every 100,000 people in Kenya, there are 19 Doctors, 2 dentists, 8 pharmacists, 3 Bachelor of Science nurses and 83 a total of registered nurses. Most of these health care personnel are

based in major cities, mainly Nairobi and Mombasa with virtually no staff in the remote areas. (Kenya Facts & figures 2012)

In Kenya, there are three major categories of hospitals i.e. category A,B and C as per the NHIF classification where category A are the government hospitals, category B are the private and mission hospitals while category C are the private hospitals . Besides NHIF further classifies this hospitals into those that provide inpatient and outpatient services to patients. There are 53 private hospitals within Nairobi, as per the classification by NHIF. This study was based on all private hospitals which provide both inpatient and outpatient services. The private sector contributes more that 40% of health services in the country, which is a significant proportion, providing mainly curative health services (Kenya Facts & figures 2012)

1.2 Research problem

A substantial number of firms have realized the strategic role played by supply chain management in the achievement of the organization's performance within the industry of operation. Organizations in both private and public sector are therefore compelled to upgrade their standards of performance with a view to creating value for money in the production of goods and services (Andrew, 2015). (Burgress Singh &Koroglu 2006) highlighted the importance of SCM but noted there is little research done on supply chain practices. Any challenge experienced by any of the SC member's results on negative effect on performance of the whole chain due to the high costs incurred in the long run. Timely exchange of information in the SCM helps to perfect pace of the whole supply chain by lowering the rates of variations and shifts in inventory and customer demands (Chopra & Meindi 2010).

Despite the fact that many hospitals have taken into account the advantages of implementing supply chain practices, since best practices, methods, and techniques were initially implemented in the industrial settings, implementation of these practices in the health care organizations is problematic. Even firms with adequate internal processes have failed to facilitate international supply chain management. This factor results to minimized partnering and collaboration among supply chain partners. Some players resort to traditional methods of operation which are expensive, time consuming and rigid (Muturi, 2010). Due to the high number of the biggest private hospitals in Kenya being based in Nairobi city and the high number of people they offer specialized services, there exists a research gap on SCMP adopted by them.

Globally (Boddy et al., 2000 & Bordonaba &Cambra 2009) carried out a study on effect of supply chain partnering on performance. They found out that supply chain partnering is very vital in proving that organizational performance is enhanced by strategic collaboration in the whole supply chain .Other than that, strategic relationships between supplies chain partners and coordination facilitates performance in the organization. (Govindaraju & Ibrahim 2011) carried out a case study on supply chain practices and performance in Malaysian electronics industry and concluded that, there are six basic practices which have strong positive relationship with performance. (Green, Zelbst, Meacham & Bhandari 2012) carried out a research on the effect of green supply chain management practices on performance. The researchers found out that adoption of these practices in manufacturing firms can lead to impact to the environment positively thus resulting in improved operational performance. (Ashok ,Kamble&Raut 2015) in their investigation of the correlation between supply chain practices and performance of the

Indian retail industry. The findings asserted that a strong correlation amidst supply chain management practices and performance. (Sundram, Baerber, Radwan, Kumar, Garza-Reyes and Abdi 2016) studied the impact of SCMP and performance of manufacturing firms where they concluded that there is positive relationship between supply chain practices and performance dimensions which were both statistical and non-statistical.

Locally, Orukoh (2007) as per his case study on the SCM practices in Numerical Machining Complex Ltd-a manufacturing company, found out that lack of a strategic relationship with suppliers has adverse effect on performance. Ngari (2008) in his case study on SCM practices at the University of Nairobi asserted that the supply chain practices were not fully implemented by the University. Hassan (2012) in his study on supply chain practices in the humanitarian sector asserted that these practices are very key in facilitating performance in this sector since its performance is based on the speed at which aid is delivered at areas where there is disaster. The researcher recommended on further research to be done in order to find out on the challenges affecting the adoption of these supply chain practices by the university. Yala (2016) studied on the lean supply chain management practices and operational performance of the manufacturing firms in Kenya. Most firms have adopted this lean SCM .In addition the results indicate that there exists an absolute correlation between lean SCM and operational performance of manufacturing firms in Kenya.

All the previous studies above indicate that a knowledge gap exists based on the fact that no single research has been carried out on the SCM practices and performance of private hospitals in Nairobi. What are the supply chain management practices adopted by private hospitals in Nairobi Kenya? What are the effects of supply chain practices on performance

of private hospitals in Nairobi Kenya? are the various questions that this research seeks to answer.

1.3 Objectives of the study

i. To ascertain the supply chain management practices implemented by private hospitals in Nairobi Kenya.
ii. To ascertain effects of supply chain management practices on performance of private hospitals in Nairobi Kenya.

1.4 Value of the Study

This study will provide adequate information to the private hospitals in Nairobi, Kenya so that they can know and implement these practices in order to improve performance .Thus supply chain professionals will find this research useful for knowledge and operation implementation. Other hospitals will also benefit from these studies since these firms will streamline their supply chain management which will contribute to the GDP of the country.

Academicians and scholars will use the findings of the research as reference for their research based on the literature review. Besides they will use find out the research gaps in this study as a basis for further research.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter focuses on the various reviews of literature for the purpose of the study to ensure on the relevance to the research problem. Theoretical literature review supply chain practices, empirical literature review and ends with conceptual framework is what makes up this chapter.

2.2 Theoretical Literature Review

Various theories developed by various scholars and how they are related to the topic of study are what make up this section.

2.2.1. Resource-Dependence Theory

The theory was developed by Pfeffer and Salancik in 1978 and asserts that environments affect and constrains firms and hence firms act in order to control dependencies on resources by setting various forms of inter-organizational arrangements**.** This theory explains the behavior of the firm is affected by external resources of organizations. The sourcing of external resources is an important aspect for not only the strategic management but also the tactical management of any firm Sanderson, Lonsdale and Mannion (2015).

This theory is important as it explains the course of actions implemented by firms, like forming alliances, mergers and acquisitions etc. in all attempts to overcome dependencies and improve an organizational performance. Most organizations are not self-sufficient hence the need to come up with proper supply chain management practices in order to

facilitate good performance such as forming strategic partnership and outsourcing to meet the market demand and hence customer satisfaction (Halldorson, Kotzab, Mikkola& Larsen 2007).

2.2.2. Strategic Choice Theory

This theory explains the relationship in-between a firm's actions and events (De Rond & Thietart ,2007). This theory is beneficial for strategic management through emphasizing on cross-sectional cooperation in organizations (Jemison, 1981). It shows the relationships between management choices and performance and the overall interaction with the surroundings. The theory looks at firms to as being affected by surroundings and choices made by top management (Miles et al., 1978). The decision to make or buy should balance on dependence against value to meet the goals of the organization .In regard to outsourcing decision, it advices to minimization of dependences. The decision whether to collaborate with suppliers depends on the value attached to the collaboration (Nollet et al., 2005).

In this study, some of the strategic choices include strategic partnership, Outsourcing, and information sharing with relevant suppliers. The decision depends on the top management and is a critical decision to make and need strategic thinking to choose on the best investment practices to make in order to better the performance of the organization and be competitive than other players in the market.

2.3. Supply Chain Management Practices

There are many SCMP but for private hospitals, the most relevant are: customer relationship management, information communication technology, information sharing, strategic partnerships, lean management and outsourcing and are discussed below:

Customer relationship management entails a collection of all practices which are implemented in order to manage all customer needs and complaints and ensure creation of long term relationships with an aim of customer satisfaction (Noble & Tan et al 2014). Long term relationships created out of trust create barriers to competition and result to lasting competitiveness. Relationships with customers are important for corporate survival due to the high growth in mass customization and personalized service .Successful implementation of SCM programs requires good correlations with supply chain members. Differentiation of a firm's products is facilitated by close customer relationship Tan (2014).

Information communication technology (ICT) facilitates communication between supply chain partners, both within and outside the firm in a fast and a cost efficient manner. New technologies like enterprise resource planning (ERP) among others facilitates real-time inventory access, seamless exchange of operational information and collection of key performance data. Adoption of information technologies such as Electronic Data Interchange (EDI), have led to numerous impacts on the performance of organizations (Chong & Ooi, 2008). Applications such Enterprise Resource Planning (ERP) provides competitive advantage for the business by improving decision making process, planning and control operations (Mabert, 2001).Technology increases efficiency and reduces cost of operations. It helps in integration of backed practices to have a seamless supply chain

processes. Lack of ICT in supply chain management has led to ineffective execution of supply chain functions hence weak communication in the supply chain.

Strategic Partnership is a collaborative coalition between two or more businesses for the purposes of information interchange in research, product development, marketing, distribution, and sales. The main purpose is to cut on all costs related to goods and services and all activities done to them in a firm (Maheshwari, 2006).Partnership helps in increasing market base, access to market information, product diversification, risk diversification, economies of scale, and access to new technology (Tan, 2000). Through partnerships, organizations are able to share risks and rewards in order to gain supply chain benefits such as reducing cost of distribution (Ellan & Cooper, 1998). Supply chain partnerships have proven to be beneficial to many businesses as it grows revenue and improves general performance of the organization (Abdul, 2001). The practice helps businesses to pull resources, reduce transaction costs, rapid response to market demands and helps in concentrating in the core competences of the company.

The extent to which crucial information is communicated to one's SC partner is what is termed as Level (quantity aspect) of information sharing (Monczka, 1998). Information shared can either be strategic or tactical.(A seamless SC requires availing undistorted and up to date data in the supply chain .Timely sharing of available data with other supply chain members, facilitates information acting as a source of competitive advantage. Ability to understand market trends and respond to customer needs quickly is facilitated by timely exchange of information by supply chain partner. Moreover, the key competitive and distinguishing factor in any firm is the ability to focus on effectiveness in the use of information by all functional elements in the supply chain Mentzer et al., 2000).

Lean management is defined as the elimination of any non -value adding activities in the supply chain's products and services. These activities may be looked in aspects to do with inventory, set up time, material flow among others. Lean management involves reduction of all types of wastes in the production of goods and services and management of supply chain as a whole. Lean management facilitates timelines, flexibility, cutting on costs and competitive advantage of a firm which improves the performance of a firm as a whole Towill (1996) & Randall et al.,(2003).Lean emphasizes on pointing out and removal of waste in a product's entire value stream, in both the firm and the entire supply chain network (Boyle & Scherrer,2009)

Sub hiring of activities, services, or product parts that are non-core to the company's activities aimed at reducing cost, improving quality or delivery of specialized products and services is what is termed as outsourcing (Fynes & Foss, 2005). Outsourcing comes in as a management strategy by which organizations outsource non-core functions to specialized personnel in order to better the performance of the business (Lysons & Gillingham, 2003).The main purpose of this practice is to allow the organization to focus on the activities that have distinctive advantage. This has been evident in most financial institutions outsourcing transport services, warehousing and inventory control .Firms that have used outsourcing in the past have realized a significant transformation in their performance (Susan, 2011). Outsourcing is a major component in any business strategy aiming to expand its operations and grow its revenue. However, failure to incorporate all the many assumed extreme costs may turn out to be a nightmare for many organizations trying outsourcing. It should be understood that outsourcing solely depends on the trust both the partners have towards each other.

2.5 Empirical Literature review

(Sahay & Mogan 2003) studied on the supply chain practices in Indian industry. The study used a sample size of 156 firms in carrying out research. Establishing the status of supply chain in Indian industry with the focus of four dimensions: supply chain strategy, SC integration, inventory management and information technology was the aim, of the study. The researchers used survey questionnaires in data collection. There is need for aligning of SCM strategy with business strategy to deliver customer satisfaction, minimize costs by use of Information technology. In addition the findings indicate a strong correlation between SCMP and performance. The weakness of the study is that it only focused on the Indian industry as a case study.

Kim (2006) carried out a study on impact of SCMP integration and competition capability on performance. The aim of the research was to disclose the existence of interrelationships between SCM integration, SC level integration and competition capability. Questionnaires were used in data collection using a sample of 244 Koreans firms and a total of 379 Japan's professional members. The findings indicate that SC integration have more impact on performance in small scale firms compared to large firms. Besides tighter relationship between SCM and competition capability has greater impact on performance in large scale firms. In addition interrelationship between SC practices and competition capability have higher impact on performance.

Demibarg (2007) studied on SCMP on performance of SMEs in Turkey. The aim of the study was to establish relationships between the SCM, operational performance and SC related organizational performance specifically in the SMEs of Turkey .The researchers

used a sample of 203 firms in their study. Outsourcing, supplier relationships and e-supply chain have a positive effect to performance. The major limitation of the study was the narrow focus of the SMEs in Turkey.

Hamister (2011) carried out study on SCMP in small retailers. The study used a survey type of study where the sample size was 79 .The objectives of the study were to find out the supply chain practices in the small retailers sector, to find out if the supply chain practices contribute to performance in the small retailers and to what extend these practices have been implemented in the small retailers. The results indicate that there is a positive correlation between SCMP and category performance. The study had a narrow focus on the small retailers which could not be used to generate conclusions on other industries.

(Huy et al., 2015) carried out a research on supply chain management practices and operational performance. The study sought to provide evidence of the existence of a relationship between SCM and firms' operational performance. The study used validation methodology of conceptual model as the research methodology. The study used 456 respondents in data collection. Findings indicate that SCM are major indicators of operational performance. The limitation of the research is that study it did not clearly point out the SCMP.

Locally, Mwilu (2013) conducted a research on SCMP and performance among public research institutions in Kenya. The aims of the study were to establish the extend of implementation of SCM in public research institutions in Kenya, to find out the effect of these practices on performance and finally establish challenges sought in the

implementation of these practices in these institutions. Questionnaires were used in data collection. A sample size of 36 firms was used and descriptive statics was used in data analysis .Logistics, outsourcing, leanness and information technology replicated strong relationship to performance as compared to other practices. Besides to a great extent, most of these firms have adopted SCM. The major limitation of this research is that it is limited to public research institutions in Kenya.

Owiti (2014) studied on the SCMP of small and medium-sized office supplies firms in Nairobi Kenya. Aim of the study was to find out the SCM adopted by office supplies firms in Nairobi, to sought out benefits got in adoption of the SCM by these firms and to find out the challenges faced by these firms in implementation of these practices .Descriptive survey design was used where self-administered questionnaires were used in data collection from a sample size of 125 firms. SPSS was used in data analysis. The findings indicate that most SMEs have implemented these practices. High interest rate was seen to be the major challenge in the implementation of SCMP in the SMEs. Limitation of the study was that the study relied upon by only office equipment and supplies listed in the Nairobi online business directory which is a methodological weakness.

Mahulo (2015) conducted a study on the SCMP and performance of cement manufacturing companies in Kenya. The objective of the research was to expound on the correlation between SCM and performance. The study used a sample size of six cement manufacturing companies. Semi structured questionnaires were used in data collection. Descriptive analysis was used in analyzing the data collected. Cost driven outsourcing, use of inventory management practices like VMI among other practices have direct positive impact on operational performance of cement manufacturing firms. Besides more than

eighty percent of these firms have adopted SCM .The major limitation of the study was the narrow scope the study i.e. cement manufacturing firms.

Yala (2016) studied on the lean SCMP and operational performance of the manufacturing firms in Kenya. The aim of the study was to find out of which lean SCM are used in the manufacturing companies, to determine effect of lean SCM on operational performance of manufacturing companies in Kenya and to establish challenges in the implementation of these practices. The study used a sample size of 137 firms. Primary and secondary data was used as data types. From the findings, most firms have adopted lean SCM .In addition the results indicate that there exists a positive relationship between lean SCM and operational performance of manufacturing firms in Kenya .Data collection was the greatest challenge experienced plus low scope of study as a limitation.

2.6 Conceptual framework

The supply chain practices which are information communication technology, outsourcing, information sharing, customer relationship management, supplier relationship management, lean management and strategic partnerships were the independent variables while the dependent variable is operational performance.

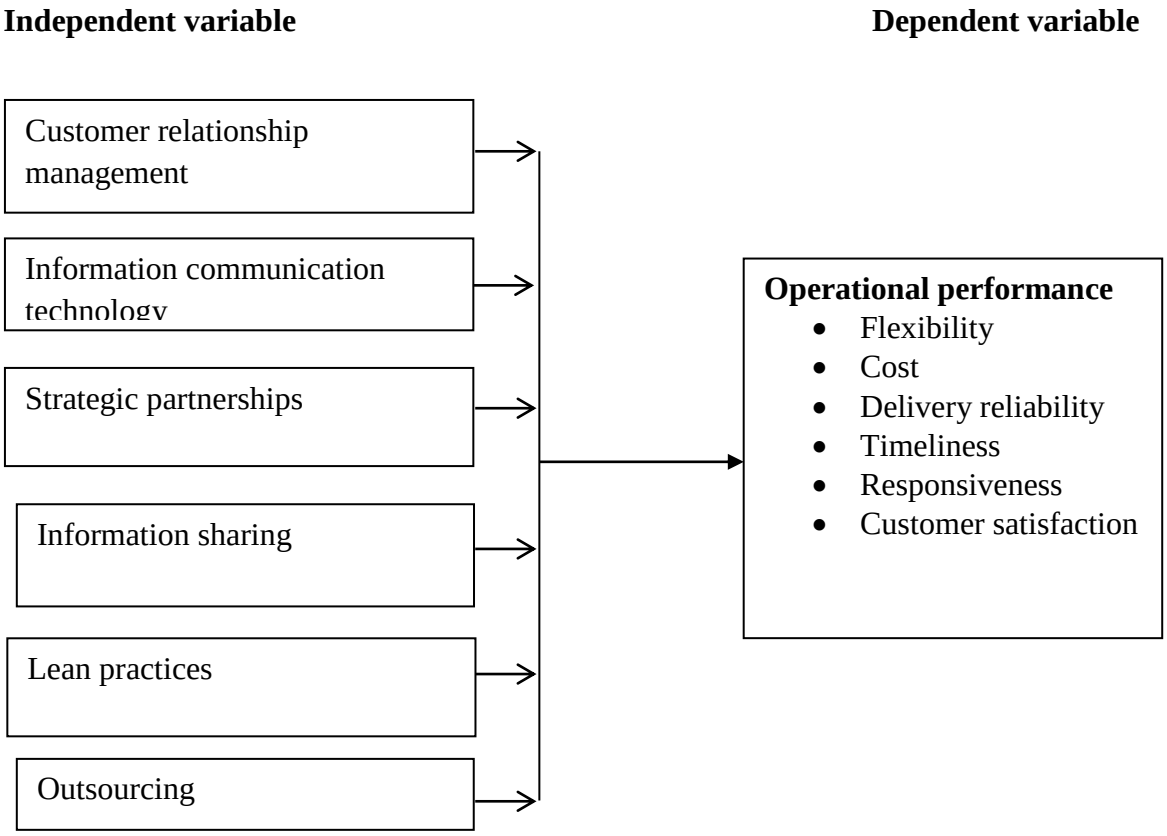

Figure 2.1 Conceptual framework

Source: author (2017)

Null hypothesis, Ho: There is no relationship between supply chain management practices and organizational performance of private hospitals in Nairobi.

2.7 Summary of the Literature review and Research gaps

SCHOLAR (S)	STUDY	OBJECTIVES	MAJOR FINDINGS	KNOWLWDGE GAPS
Mwilu(2013)	SCMP and performance among public research institutions in Kenya	To find out the effects of SCMP on performance To establish challenges faced in the implementation of these practices	Logistics , outsourcing, IT and leanness has more impact on performance compared to other practices Most of these firma\s have adopted SCMP	The study was limited to only public research institutions
Owiti (2014)	SCMP OF small and medium sized office supplies firms in Nairobi	To find out the SCMP adopted by SMEs To establish the benefits sought out by the SMEs	Most SMEs have implemented these practices High interest rates are major challenge in the implementation of SCMP	The study had a narrow focus of the office supplies listed at Nairobi securities exchange
Sahay and Morgan (2003)	SCMP in the Indian Industry	To establish the status of SC in the Indian industry with specific focus on SC strategy, SC integration and IT	SCMP have a positive effect on performance There is need for SC integration with business strategy to gain on performance	The study had a narrow scope: the Indian industry where those studies could not be used in the African countries
Kim (2006)	Effects of SCMP integration and competition capability on performance	To disclose the interrelationships between SCM integration, SC level integration and competition capability	SC integration has more impact on performance in small scale as compared to large firms	the study did not show the relationship between the SCMP and performance
Demiburg (2007)	SCMP and performance of SMEs in Turkey	To establish the relationship between SCM and operational performance	SCMP have a positive effect on performance	The study focused on SMEs in Turkey and this could not be used to generate conclusions to other SMEs in other parts of the world
Huy (2015)	SCMP and operational performance	To provide evidence of existence of a relationship between SCMP and firms' operational performance	SCMP are the major indicators of performance	The study did not clearly bring out the SCMP

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

Methodology that was used to carry out the study is stated in this chapter. It covers the research design, the target population, data collection, and data analysis.

3.2 Research design

This research used descriptive research method. It was preferred because it ensured that the respondents it was also preferred in order to evaluate the supply chain practices adopted by private hospitals, establish the how these practices affect performance in private hospitals within Nairobi, Kenya.

3.3 Population

The population targeted for this study was all private hospitals in Nairobi, Kenya. According to the NHIF classification, there are three categories of hospitals. Category A, B and C. Category C are private hospitals. It further classifies them into those with outpatient and inpatient services. This study covered both the inpatient and outpatient private hospitals in Nairobi County. There are 53 private hospitals in Nairobi .Since the population was relatively small, a census was proposed.

3.4 Data Collection

The study used primary data which was collected using structured and unstructured questionnaire. The questionnaire had four sections as follows; Section A contained the background information, Section B contained the supply chain management practices and finally section C, the effect of supply chain management practices on operational performance of private hospitals in Nairobi. The respondents in the survey were

procurement managers or their equivalent since they had the information sought of various private hospitals.

3.5 Data analysis

Statistical Package for Social Sciences (SPSS) was used in analyzing data collected and edited for completeness. Data collected was based on the objective of finding out the various SCM adopted by private hospitals in Nairobi was analyzed using descriptive analysis. Data from the second objective of evaluating effects of the SCMP on performance of private hospitals in Nairobi was analyzed using multiple regression analysis.

Regression equation $\mathbf{Y = \beta 0 + \beta 1 X_1 + \beta\ 2X_2 + \beta\ 3X_3 + \beta 4\ X_4 + \beta\ 5X_5 + \beta 6\ X_6 + €}$

Y= Operational performance,

X1= customer relationship management

X 2= information communication technology

X3= strategic partnerships

X4= information sharing

X 5=lean management

X6= outsourcing

€=error term

Bij =Regression Constants

This research used linear regression model in order to show impact of SCM on operational performance of private hospitals in Nairobi.

CHAPTER FOUR: DATA ANALYSIS, RESULTS, AND DISCUSSION

4.1 Introduction

Data analysis, findings and interpretation is what makes up this chapter. This section presents the findings on effect of supply chain management practices on performance of private hospitals in Nairobi. The study's purpose was to determine the SCMP implemented in private hospitals in Nairobi, to determine the effect of SCMP on performance of private hospitals in Nairobi .The study target population was the procurement managers and their equivalent in the procurement department. The questionnaires were self-administered by the researcher and follow-ups through phone calls done. The various respondents were explained to what the high importance of the study information obtained and its importance to the researcher. This ensured a good response rate. A response rate of 50% is considered adequate, 60% good and above 70% rated very good (Mugenda & Mugenda, 2003). The response rate for this study, was 69% where out of 53 questionnaires that were distributed, the response rate was 37 firms. Hence this was considered efficient and will give out substantial information that can be used in generalization of the various aspects of the study being sought and hence the researcher proceeded for data analysis.

4.2 Biographic Information

The study intended to have knowledge of the basic background information of the respondents working at the various private hospitals in Nairobi. The study gathered data on various aspects of respondents at various private hospitals in Nairobi in order to evaluate how the supply chain management practices have been implemented in private hospitals in Nairobi and how it affects performance. Background checks were carried out to establish the relationship between the information gathered on their experience,

education level and the knowledge sought. Under the background information the information sought was on the experience in terms of years the respondents have been working at the various private hospitals in Nairobi, their age, and gender and education level.

4.2.1 Gender

The table below represents information on the responses based on age of the respondents. The findings on gender of the respondents indicated that 41.9% of the respondents were male while 59.1 were male. The results indicated that there is equal distribution of staff in terms of gender in private hospitals in Nairobi. The findings of the study are as shown in the table below:

Table 4.1 Gender distribution

Gender	Frequency	Percent
Male	14	41.5
Female	22	59.5
Total	37	100.0

4.2.2 Experience

The table below represents information based on the respondents responses based on their experience. The responses indicated that 5.4% of the respondents had experience less than two years, 21.6% of the respondents had 2-5 working experience while 43.2% of the respondents had experience of between 6-10 years and finally 29.7% of the respondents had an experience of over 10 years. This indicated that all the respondents had adequate experience and had a detailed understanding of the study sought by the researcher. It is as indicated in the table below:

Table 4.2 Experience distribution

Experience	Frequency	Percent
under 2 years	2	5.4
2-5 years	8	21.6
6-10 years	16	43.2
over 10 years	11	29.7
Total	37	100.0

Source, researcher. 2017

4.2.3 Education

The table below represents findings on the responses of the respondents on their education level. The results indicated that 10.8% of the respondents had studied to college level, 70.3% of the respondents to undergraduate level, 13.5% of the respondents to master are level and 5.4 of the respondents to PHD level an indication that all the respondents had adequate knowledge on the study sought on the supply management practices in Nairobi. This is as indicated below:

Table 4.3 Education

Education	Frequency	Percent
College	4	10.8
Undergraduate	26	70.3
Masters	5	13.5
Phd	2	5.4
Total	37	100.0

Source: researcher, 2017

4.2.4 Knowledge in Supply chain management practices

The table below represents information on the responses on the knowledge on supply chain management practices by the researchers. The respondents were asked on whether they had knowledge on supply chain management practices. The findings indicated that all the respondents had adverse knowledge on the supply chain management practices. This was an indication that almost 100% of the respondents had knowledge on effective supply chain management based on these findings. The percentage responses are as indicated in table 4.4 below:

Table 4.4 Knowledge in Supply chain management practices

Knowledge in SCMP	Frequency	Percent
Yes	37	100.0

Source: researcher, 2017

4.3 Implementation of Supply Chain Management Practices

The first objective of the study was to ascertain the various Supply chain management practices adopted by private hospitals in Nairobi. To ascertain this, descriptive statics was carried out of all the data collected on the various Supply chain management practices. The level at which the various Supply chain management practices have been adopted in private hospitals in Nairobi is as discussed below:

4.3.1 Information sharing

The respondents were required to indicate to what extend information sharing had been adopted as supply chain management practice in private hospitals in Nairobi Kenya. From the findings it was ascertained that 45.95 of the respondents indicated that information sharing had been implemented to a moderate extent, 29.7% indicated that it had been

implemented to a moderate extent while 24.3% agreed that it had been implemented to a very large extend. In conclusion these results indicated that information sharing had been implemented in private hospitals as a supply chain management practice to a large extent and this facilitates efficiency in the operations of the hospitals and timely management of customer complaints.

Table 4.5 Information sharing

Information sharing	Frequency	Percent
moderate extend	17	45.9
large extend	11	29.7
very large extend	9	24.3
Total	37	100.0

Source: researcher, 2017

4.3.2 Strategic partnerships

The respondents were asked to indicate to what extent, strategic partnerships have been implemented in the private hospitals in Nairobi. The findings of the study ascertained that 2.7% of the respondent stated that it had been implemented to a moderate extent, 43.2% indicated that strategic partnerships had been implemented to a large extent and 54% of the respondents indicating that it had been implemented to a very large extent. This ascertains that strategic partnerships had been implemented in private hospitals to a great extent. This has facilitated the private hospitals to increase their resource bases, share risks, reduce costs of distribution, and grow their revenues and hence it will result to improved performance of the organization.

Table 4.6 Strategic Partnerships

	Frequency	Valid Percent
moderate extend	1	2.7
large extend	16	43.2
very large extend	20	54.1
Total	37	100.0

Source: research output, 2017

4.3.3 Outsourcing

The respondents were required to indicate to what extent outsourcing had been implemented at various private hospitals in Nairobi. The findings indicated that 27% ascertained that it had been implemented to a moderate extent, 40.5% indicated that it had been implemented in the hospitals to a moderate extent and 32.4 % of the respondents agreed that it had been implemented to a very great extent. This was an indication that outsourcing a supply chain management practice had been implemented in private hospitals. This allows the private hospitals to focus on their core activities and outsource the noncore activities to experts who are able to provide specialized services. This in the long run results in effective services and improved performance. The findings are summarized in the table below:

Table 4.7: Outsourcing

Outsourcing	Frequency	Valid Percent
moderate extend	10	27.0
large extend	15	40.5
very large extend	12	32.4
Total	37	100.0

Source: researcher, 2017

4.3.4 Lean management

The respondents were required to indicate whether there lean management as a supply chain management practice had been implemented in private hospitals in Nairobi. The results of the findings indicated that: 35.1% of the respondents indicated that lean management had been implemented to a moderate extent, 35,22% indicated it had been implemented to a large extent, while 29.7% of the respondents indicated that lean management had been implemented in private hospitals to a moderate extent. This indicated that lean management had been implemented in private hospitals to a great extent. By so doing the hospitals are able to eliminate all types of wastes in their supply chain which may be a cost to them. It facilitates flexibility, cutting on costs, and enhances improved competitive advantage of the hospitals over their competitors . The results of the findings are as summarized in the table below:

Table 4.8: Lean management

Lean management	Frequency	Percent
moderate extend	13	35.1
large extend	13	35.2
very large extend	11	29.7
Total	37	100.0

4.3.5 Information Communication Technology

The respondents were required to indicate to what extent, ICT had been implemented in private hospitals as a supply chain management practice. The findings indicate that 48.6% of the respondents indicated that ICT had been implemented in private hospitals to a large

extent while the rest, 51.4% indicated that ICT had been implemented to very large extent. According to Chong &Ooi, 2008), adoption of ICT in supply chain management facilitates an increase in the efficiency and effectiveness of a firm's operations. ICT facilitates reduction in costs of operations to a great extent. This facilitates improved performance of the firm. The results of the findings are as indicated below:

Table 4.9 Information Communication Technology

Information Communication Technology	frequency	Percent
large extend	41.9	48.6
very large extend	44.2	51.4
Total	86.0	100.0

Source: researcher,2017

4.3.6: Customer Relationship Management

The respondents were asked to indicate to what extent customer relationship management has been implemented in private hospitals in Nairobi. From the findings it was ascertained that 27% of the respondents ascertained that customer relationship management as a supply chain management practice had been implemented to moderate extent in the private hospitals in Nairobi.40.5% of the respondents indicated that customer relationship management had been implemented to large extent and finally 32.4% of the respondents indicated that it had been implemented to a very large extent. This is an indication that customer relationship management as a supply chain management practice had been adopted in private hospitals. This will facilitate customization of and personalized services that results in increased customer loyalty and provision of value to the customers.

Table 4.9 Customer Relationship Management

Customer Relationship Management	Frequency	Percent
moderate extend	10	27.0
large extend	15	40.5
very large extend	12	32.4
Total	37	100.0

Source: research output, 2017

Table4. 10 Summary of Descriptive Statistics

	Mean		Std. Deviation	Variance
	Statistic	Std. Error	Statistic	Statistic
Information technology	4.5135	.08330	.50671	.257
Strategic supplier relationship management	4.2135	.09187	.55885	.312
Customer relationship management	4.0541	.12820	.77981	.608
Outsourcing	3.9459	.13393	.81466	.664
Lean management	3.7838	.13498	.82108	.674
Information sharing	3.8651	.14044	.85424	.730

From the findings indicated in the table above, it as ascertains that all the six supply chain management practices considered under this study were implemented in the private hospitals .This was indicated by a mean value of 4.5135, for information technology practices, 4.2135 for strategic management practices, 4.0541 for customer relationship management, 3.9459 for outsourcing, 3.7838 for lean management and 3.8651. The results indicate that supply chain management practices have been implemented in private hospitals in Nairobi since all the mean values were above 3.0.

4.4 Supply Chain Management Practices and Performance

The second objective of the study was to establish the relationship between supply chain management practices and performance of private hospitals in Nairobi. To accomplish this, linear regression analysis was used where performance was regressed against supply chain management practices implemented in private hospitals in Nairobi. Performance was measured by use of flexibility, timeliness supply chain reliability, supply chain responsiveness and costs. Correlation was carried out to indicate the impact of the various supply chain management practices and performance. The findings are as indicated below.

Table 4.11 Correlation matrix

		Performance	CRM	ICT	Strategic partnerships	Lean management	outsourcing	Information sharing
Performance	Pearson Correlation	1						
	Sig. (2-tailed)							
CRM	Pearson Correlation	.730**	1					
	Sig. (2-tailed)	.000						
ICT	Pearson Correlation	.616	.392*	1				
	Sig. (2-tailed)	.004	.016					
Strategic partnerships	Pearson Correlation	.715	-.133	-.177	1			
	Sig. (2-tailed)	.062	.433	.295				
Lean management	Pearson Correlation	.246	-.193	-.187	.065	1		
	Sig. (2-tailed)	.142	.252	.267	.702			
Outsourcing	Pearson Correlation	.465**	.809**	.355*	-.120	-.115	1	
	Sig. (2-tailed)	.004	.000	.031	.478	.500		
Information sharing	Pearson Correlation	.135	.279	-.065	.092	.062	.317	1
	Sig. (2-tailed)	.425	.094	.701	.587	.715	.056	

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

From the findings indicated above, customer relationship and performance indicated a correlation value of (r=0.730, p= 0.000) an indication that Customer relationship management has a positive effect on performance indicated by a positive correlation value. The 0.000 p-value is an indication that customer relationship management is statistically significant at 95% confidence level .Information communication technology has a

correlation value of (r=0.66,p= 0.004) an indication that an increase in the levels at which ICT is implemented in the private hospitals results in a related increase in the levels of performance of the supply chain. A correlation value of (r=0.715, p= 0.065) were attained for the correlation between strategic partnerships and performance of private hospitals in Nairobi. This indicated that there exists a positive relationship between it and performance in private hospitals in Nairobi Kenya. The p-value of 0.065 indicates that strategic partnerships as a practice are not statically significant at 95% confidence level. A correlation value of (r=0.246, p= .142) were attained for the correlation between lean management and performance. The findings indicated that there exists weak positive relationship between performance and lean management practice. A correlation value of (0.465, p =0.004) were attained for the correlation between outsourcing and performance in private hospitals in Nairobi. This is an indication that outsourcing affects performance in private hospitals in Nairobi and besides a p-value of 0.004 indicted that outsourcing is statically significant at 95% confidence level given that its value is below the critical value of 0.05.

4.5 Regression analysis

Regression analysis was carried out between supply chain management practices and performance of private hospitals in Nairobi and the findings are as indicated below:

Table 4.12 Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(performance)	7.055	.714		9.882	.000
Lean management	.104	.049	.148	1.653	.081
ICT	.341	.058	.515	5.554	.000
Strategic partnerships	.150	.073	.254	2.053	.049
CRM	.291	.060	.326	3.661	.001
outsourcing	.331	.060	.527	5.554	.000
Information sharing	.145	.077	.081	2.673	.036

a. Dependent Variable: Performance

b. Predictors: (Constant), Lean management, outsourcing, information sharing, information communication technology, customer relationship management ,lean management and information sharing

The results show that Information technology and supply chain performance positively and significantly related (r=0.341,p=0.000) .This indicates that an increase in the level of adoption of technology by one unit, results to related increase in the level of performance by 0.341.Besides information technology had 0.000 t test value an indication that information technology is statically significant at 0.05 critical value since it is less than 0.05.In addition ICT indicated a z value of 5.554 which is greater than the z critical value of 1.96 and hence it is statically significant. Outsourcing had performance are positively

and significantly related (r= 0.331,p=0.001) which is an indication that an increase in the outsourcing by one unit, results in a related increase in performance by 0.331 all other factors held constant. Besides, the t test value attained was 0.001 .p-value of 0.001 is lower than 0.05 and hence outsourcing is statically significant indicator of performance in private hospitals in Nairobi. In addition the Z value was 5.541 which is greater than the z critical value of 1.96 hence it is statically significant.

Customer relationship management and performance are positively related, (r=0.291,r=0.001) which indicates that implementation of CRM leads to an increase in performance of private hospitals in Nairobi by 0.291.The p-value associated with customer relationship management practices was 0.001 which is an indication that customer relationship management practice is statically significant to performance since it is below the critical p value of 0.05 at 95% confidence level. Besides it has a Z value of 3.661 which is greater than 1.96 hence statistically significant. Information sharing practices and performance are positively significantly related, (r=0.145,0.36) results in a related increase in performance by 0.145, and the related p-value is 0.36.This indicates that information sharing is statically significant indicator of performance in private hospitals in Nairobi given that the p-value of 0.36 is lower than the critical value of 0.05 at 95% confidence level. Besides the Z value of 0.2673 indicates that it is statically significant being greater than Z critical value of 1.96.

Strategic partnerships and performance are positively related,(r= 0.150,p= 0.049) an indication that a unit increase in the; level of strategic partnerships as a supply chain management practice results in an increase in the level of performance by 0.150.In addition, the p-value was 0.049 an indication that it is statically significant given the p-

value is less than 0.05 as the critical value. A unit increase in lean management results in an increase in the level of performance by 0.104.It has a p-value of 0.08 an indication that lean management is not statically significant at 95% confidence level since the p-value of 0.139 is higher than the critical value of 0.05.In addition it has a Z value of 1.653 which is less than z critical value of 1.96 hence it is not statically signifanct.

Based on the results of these study indicated in the table above,

$Y = \beta 0 + \beta 1X1 + \beta 2X2 + \beta 3X3 + \beta 4X4 + \beta 5X5 + \beta 6X6$ becomes;

$Y = 2.157 + 0.104X1 + 0.341X2 + 0.150X3 + 0.291X4 + 0.331X5 + 0.145X6$ $X_{1=}$lean management

X2 =Information communication technology

X3=strategic partnerships

X4=customer relationship management

X5=outsourcing

X6=information sharing.

Table 4.13 Model summary

Model	R	R square	Adjusted R	R std. Error of estimate
1	.800[a]	.640	,568	.33218

Dependent variable: performance

The findings indicated a correlation coefficient value of 0.8000 and R value of 64% .From this we can conclude that supply chain management practices are a representative of 64% of variations in performance in private hospitals in Nairobi, from these as per the fitness test, we can conclude that this is a good model since the value is above 50%. Besides the significance level is at 0.00 which is less that the critical value of 0.05 hence this model

was statically significant at 95% confidence level. Hence we can conclude that supply chain management practices have positive impact on performance in private hospitals in Nairobi.

Table 4.14 ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	5.879	6	.980	8.880	.000[b]
	Residual	3.310	30	.110		
	Total	9.189	36			

a. Dependent Variable: Performance

b. Predictors: (Constant), Lean management, outsourcing, information sharing, information communication technology, customer relationship management, strategic partnerships

From the findings in the anova table the results indicate a significance level of 0.000 which is an indication that supply chain management practices which include: information sharing, information technology, lean management and strategic partnerships, outsourcing and customer relationship management are significant contributors to performance since the p-value of 0.000 is lower than the critical value of 0.005 at 95% confidence level.

4.6 Discussion

This study's main purpose was to establish the extent of adoption of supply chain management practices in private hospitals firms in Nairobi and its effect on performance. The findings of the study as indicated above ascertained that to a large extent, private hospitals firms in Nairobi have adopted supply chain management practices in their

operations. This was indicated as per the results whereby descriptive analysis carried out on each and every variable, indicated that all the six supply chain management practices had a positive mean value an indication that they had been implemented in the private hospitals firms in Nairobi.

From the findings, information technology indicated a mean value of 4.5135, information sharing indicated a mean value of 3.8651, strategic practices indicated a mean value of 4.2135, customer relationship management indicated a mean value of 4.0541 and outsourcing indicated a mean value of 3.9459 and lean management indicated a mean value of 3.7838. From these findings it was an indication that the supply chain management practices had been implemented in the private hospitals firms in Nairobi Kenya. Due to the positive values of the mean results that was attained from the descriptive statistics.

The second objective of the study was to establish the effect of supply chain management on performance of private hospitals in Nairobi. To get this the study used correlation to indicate the effect of the various supply chain management practices and performance in private hospitals in Nairobi. From the results of correlation analysis carried out on the supply chain management practices against performance. The results indicated a positive relationship between the supply chain management practices and performance of private hospitals firms in Nairobi. Performance in this study was measured by use of timeliness, flexibility, costs and supply chain reliability.

From the findings it was ascertained that supply chain management practices have a positive impact on performance whereby: customer relationship management had a

correlation of 0.730, lean management had a correlation of 0.246, information sharing had a correlation of 0.135 information technology had a correlation of 0.850, outsourcing had a correlation of 0.465 and strategic partnerships had a correlation value of 0.715, hence all the supply chain management practices in their study affect performance in the private hospitals firms in Nairobi.

The findings on the extent to which the various supply chain management practices had been implemented in private hospitals firms in Nairobi indicated that most of the respondents indicated that to a large extent, most of the hospitals had implemented all the supply chain management practices. Information communication technology had been implemented to a very large extent indicated by 51.4% of the responses ascertained it had been implemented to a very large extent. Besides information sharing was adopted to these hospitals as indicated by the results where 24.3% of the responses indicated that it had been implemented to a very large extent as a supply chain management practice. Lean management had been implemented to a large extent indicated by a frequency of 27% of the responds indicating that it had been implemented to a great extent. Supplier relationship management had been implemented to a great extent. Outsourcing as per the results had been implemented to 40.5% of the respondents indicated that it had been implemented to a great extent.

Besides the regression analysis was carried out where the various supply chain management practices were regressed against performance .The regression analysis established that 64% of the performance of private hospitals firms in Nairobi is affected by outsourcing, lean management, information sharing, information communication technology, strategic partnerships and customer relationship management. This indicated

that the supply chain management practices had great impact on the performance. The anova analysis indicated a 0.000 value as the significance level an indication that the model used was significant since the value is less than 0.005 at 95% confidence level an indication that supply chain management practices have impact on performance of private hospitals in Nairobi.

This study is in line with a study carried out by Mwilu (2008) in public research firms, whereby he ascertained that implementation of supply chain management practices had a positive impact on performance. Besides this study is in line with a study by Owiti (2014) studied on the supply chain management practices of small and medium-sized office supplies firms in Nairobi Kenya. The objective of the study was to ascertain the supply chain management practices adopted by the SMEs. The findings indicated that implementation of supply chain management practices has a positive impact on performance of SME's.Owiti (2014) ascertained that adoption of supply chain management practices has positive impact on performance. It complies with the findings of a study carried out by Mabert (2012) who established that adoption of information communication technology facilitates and improves efficiency and long term performance of the organization. In addition this study is agrees with a study carried out by Sahay (2003) who carried a study on supply chain practices and performance in the Indian industry where he established that there is need for supply chain integration and supply chain management strategy to enhance customer satisfaction and minimize costs.

This study however contradicts with Mahulo (2015) who established that implementation of supply chain management practices in manufacturing firms through use of inventory management practices has impact on performance yet this study established that other

supply chain management practices other than outsourcing have positive impact on performance. He only identified implementation of inventory management practices of which under this study has not been considered as a practice.

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

Summary of the study, conclusions established from the study, recommendations are what make up this chapter. This chapter goes further to discuss the various limitations of the study. The study objectives was to ascertain the extent to which the supply chain management practices had been implemented in private hospitals firms in Nairobi, to establish the relationship between supply chain management practices and performance of private hospitals firms in Nairobi, challenges faced by private hospitals firms in Nairobi in the adoption of supply chain management practices.

5.2 Summary

A total of 53 questionnaires were administered to respondents who were the procurement officers and the equivalent in the private hospitals to provide information on supply chain management practices. The biographic information indicated that most of the respondents indicated by 41.9% were male and 59.1% of the respondents were female. An in indication that private hospitals firms in Nairobi had equality in offering employment to their staff in that both male and female are employed in supply chain departments. Besides, the study further established, 70.3% of the respondents were degree holders, 13,5 percent of the respondents had master's education level, 5.4% of the respondents had phd and 10.8% of the respondents had college education. An indication that most of the respondents had adverse education that enabled them to effectively carry out their duties and they had knowledge on the data sought on supply chain management practices in private hospitals in Nairobi. In relation to the experience of the respondents indicated that 5.4% of the respondents had less than two years' experience, 21.6% of the respondents had 2-5 years' experience and 43.2% of the respondents had 6-10 years' experience and 29.7% had over

10 years' experience. These results indicated that the study could be well carried out based on the fact that most of the respondents had adequate experience and hence understood the various supply chain management practices in construction firms in Nairobi.

The main purpose of this study was to establish the extent to which supply chain management practices had been implemented in private hospitals in Nairobi .Besides the other objective was to ascertain the impact of supply chain management practices on service delivery of private hospitals in Nairobi. The findings of the study established that telecommunication firms in Nairobi had adopted supply chain management practices to a large extent which were information technology, information sharing, contract management, inventory man agent practices and supplier relationship management. This was indicated by a positive mean value for supply chain management practices. Besides the results of descriptive results indicated that to a large extent, supply chain management practices had been implemented in private hospitals in Nairobi indicated by positive mean value above 3.0.Besides the results from the respondents indicated that to a large extent, all the supply chain management practices had been implemented in private hospitals in Nairobi to great extent indicated by over 50% of the respondents indicating that it had been implemented to a great extent in these firms.

The second objective of this study was to establish the impact of supply chain management practices on performance of private hospitals in Nairobi. The results ascertained that supply chain management practices had a positive impact on performance. This was indicated by a positive correlation between the supply chain management practices and performance which was measured by timeliness, cost, reliability and flexibility. Besides the regression analysis findings indicated that a substantial; 69.8% of

the independent variable which was performance was well explained by the supply chain management practices implemented in private hospitals in Nairobi which were: information sharing, information communication technology, strategic partnerships, lean management, outsourcing, and customer relationship management practices.

5.3 Conclusion

Effectiveness in operations of a firm is highly attributed to adoption of supply chain practices in their supply chain management processes .Private hospitals in Kenya have become very essential in the day to day life of the Kenyan Population based on the fact that they have specialized services, equipment and are able to offer better and effective treatment services to patients as compared to their counterparts in the public sector. Due to this fact, this aroused interest in ascertaining what is the idea behind this effectiveness in provision of services timely, with high levels of flexibly and enhancing high levels of customer satisfaction by private hospitals in Nairobi, based on the fact that Nairobi is a hub to major big private hospitals in Kenya. This study was driven by these factors. In conclusion, the study was aimed at establishing the extent to which supply chain management had been implemented in the private hospitals in Nairobi, the impact of these practices on performance of private hospitals in Nairobi.

The findings indicated that to a large extent, all the supply chain management practices had been implemented in the private hospitals in Nairobi as per the indicated by positive mean values above 4.0 an indication that all the practices had been implemented to a large extent. In addition the responses indicated that most of the respondent s agreed to a large extent, the various supply chain management practices had been implemented in the

private hospitals by over 50% of the respondents indicated that they had been implemented to a great extent.

The findings from the regression analysis indicated that supply chain management practices to a moderate extent have effect on performance in the private hospitals in Nairobi. The results of the study ascertained a positive correlation between the various supply chain management practices and performance of private hospitals in Nairobi. In addition to that the p-value indicated a 0.000 value which was an indication that the various supply chain management practices implemented at private hospitals in Nairobi are statically significant based on the fact that the value is less than the 0.05 level at 95% confidence level.

5.4 Recommendations to Policy and Practice

From this study findings, it was established that most of the private hospitals in Nairobi had implemented supply chain management practices .However a few have not implemented the various supply chain management practices , there is need for the management to incorporate the practices into their system in order to improve their performance and competiveness. Public hospitals need to incorporate these practices too in their supply chain to improve performance

A substantial number of supply chain management practices have a near perfect positive influence on organizational performance leads to the firms not only in the firms in the construction industry in Nairobi but in all other industries to increase investment in current supply chain management and improvement to build their core competences.

5.5 Limitations of the Study

The aim of this study was to establish the extent of implementation of supply chain management practices in private hospitals in Nairobi .Besides the study was aimed at establishing the relationship between supply chain management practices and performance of private hospitals in Nairobi.

The study period was a little bit narrow for a study of this nature. The researcher experienced great challenges in collecting data from the private hospitals in Nairobi since most of the respondents were operating under strict rules of the management not to issue out information to outsiders on any issue or operations of the hospitals .The study was narrowly focused on the private hospitals in Nairobi and hence the results could not be generalized for a wider population area like for example, the whole Kenyan country. Besides some of the respondents did not accept the questionnaires thus making it a challenge to effectively carry out the study.

5.6 Suggestions for further Research

The aim of this study was to establish the extent to which supply chain management practices had been implemented in private hospitals in Nairobi. Despite the fact the objectives of the study were attained, the study recommends that this was a cross sectional study of private hospitals in Nairobi only. A further research needs to be done on other firms other than private hospitals, a study to be done on private hospitals firms in Kenya in general rather than in Nairobi alone. Further studies need to be carried out on all hospitals mission, public and private hospitals to ascertain the degree to which they affect performance of the different hospitals.

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Appendix I: Private Hospitals in Nairobi

Hospital	Postal Address	Branch
1. Abrar Health Services Ltd	18501 00100	Buruburu
2. Andalus Nursing Home	57175-0 Nairobi	Eastleigh
3. Avenue Healthcare Ltd	45280 Nairobi	Westlands
4. Care Hospital Limited	46041 Nairobi	Eastleigh
5. Chiromo Lane Medical Centre	73749 Nairobi	Westlands
6. Chiromo Lane Medical Centre	73749 Nairobi	Westlands
7. Coptic Hospital	21570 Nairobi	Nairobi
8. Dorkcare Nursing Home Ltd	33541 Nairobi	Eastleigh
9. Edelvale Trust Jamaa H&M Hospital	17153 Nairobi	Buruburu
10. Emarat Hospital	198-006 Nairobi	Eastleigh
11. Emmaus Innercore Nursing Home	78123 Nairobi	Buruburu
12. Family Health Options	30581 Nairobi	Industrial Area
13. Family Health Options	30581 Nairobi	Industrial Area
14. Gertrudes Garden Childrens Hospital Nbi	42325 Nairobi	Westlands
15. Guru Nanak Ramgarhia Sikh Hospital	33071 Nairobi	Ruaraka
16. H.H. Agakhan Hospital (Nairobi)	30270 Nairobi	Westlands
17. Jacaranda Maternity Hospital	52595-0 Nairobi	Ruaraka
18. Kayole Hospital	67617 Nairobi	Buruburu
19. Kenyatta National Hospital (Amenity Wing	20723 Nairobi	Nairobi

20. Ladnan Hospital Limited	2534 0200 Nairobi	Eastleigh
21. Lions Sight First Eye Hospital	66576 Nairobi	Westlands
22. Madina Hospital Limited	78370 Nairobi	Eastleigh
23. Maria Immaculate Hospital	57216 Nairobi	Westlands
24. Mariakani Cottage Hospital	12535 Nairobi	Industrial Area
25. Mariakani Cottage Hospital, Utawala	12535 00400- Nairobi	Industrial Area
26. Marie Stopes Kenya Limited	59328 Nairobi	Eastleigh
27. Mater Misericordiae Hospital Nairobi	30325 Nairobi	Industrial Area
28. Melchizedek Hospital	20085 Nairobi	Nairobi
29. Menelik Medical Center	55164 Nairobi	Nairobi
30. Metropolitan Hospital	33080 Nairobi	Buruburu
31. Midhill Maternity & Nursing Home	21138 Nairobi	Nairobi
32. Mother & Child Hospital	12658 Nairobi	Eastleigh
33. Nairobi Equator Hospital	44995 Nairobi	Industrial Area
34. Nairobi Hospital Nairobi	30026 Nairobi	Nairobi
35. Nairobi South Medical Centre	74079 Nairobi	Industrial Area
36. Nairobi West Hospital	43375 Nairobi	Industrial Area
37. Nairobi Womens Hospital	10552 Nairobi	Nairobi
38. Neema Hospital	32183-0 Nairobi	Ruaraka
39. Ngumba Center And Laboratory Services	412 Ruaraka	Ruaraka
40. Parkroad Nursing Home (Nairobi)	19850 Nairobi	Ruaraka

41. Radiant Group Of Hospitals	48234 Nairobi	Eastleigh
42. Radiant Group Of Hospitals Umoja	65973 Nairobi	Buruburu
43. RuarakaUhaiNeema Hospital	65122-0 Nairobi	Ruaraka
44. S.S. League M.P Shah Hospital Nairobi	14497 Nairobi	Westlands
45. Samaritan Medical Services	212 Dandora	Ruaraka
46. Seventh Day Adventist Health	-	Nairobi
47. South B Hospital	49255 Nairobi	Industrial Area
48. South C Hospital Limited	9527-00 Nairobi	Industrial Area
49. St. Johns Hospital Ltd	51754 Nairobi	Ruaraka
50. St.Francis Community Hospital	62676 Nairobi	Ruaraka
51. Texas Cancer Centre	13-002 Nairobi	Nairobi
52. Umoja Hospital	76480 Nairobi	Buruburu
53. Wema Maternity And Nursing Home	8328-00	Kangemi

Source: (NHIF, 2017)

Appendix II: Questionnaire

University of Nairobi

School of Business

Department of Management science

Research questionnaire

Dear respondents, this questionnaire is for data collection on the supply chain management practices and operational performance of Private hospitals in Nairobi Kenya. The research is purely for academic purpose and will only be used for that purpose. So, your genuine, frank and timely response is important for the success of this study

General Instructions

You can write your name or choose not to.

The questionnaire has three sections, please try and complete all the sections

Please tick appropriately and write your answer where there is no option as applicable.

Section A (General Information)

1. What is the name of your hospital?

……

2. What is your position in the hospital?

……

3. For how long have you worked in your organization?

Under 2 years ☐ 2–5 years ☐ 6–10 years ☐ over 10 years ☐

4. Do you have knowledge about supply chain management practices? Yes ☐ No ☐

6. Do your colleagues know about supply chain management practices? Yes ☐ No ☐

SECTION B Assessment of Supply Chain Management Practices Adoption

II. To what extent has your company adopted the following supply chain management practices?

Please indicate on a Scale of 1 – 5 where: 1 = No Extent; 2 = Small extent; 3 = Moderate Extent; 4 = Large Extent; 5 = Very Large Extent

NO	**SUPPLY CHAIN MANAGEMENT PRACTICE ASSOCIATED WITH PERFORMANCE**	1	2	3	4	5
1	**Customer relationship management**					
	The hospital manages customer needs and complaints timely					
	The hospital ensures creation of long term relationships with its customers					
	The hospital ensures customer satisfaction through srvice delivery and ensuring that it responds to querries timely					
2	**Information communication technology**					
	The hospital applies current inventory management technologies like, Vendor Managed Inventory (VIM) and Electronic data interchange (EDI					
	The hospital acquires and maintains appropriate resources like; IT, training etc.					

	Advances in on-line information systems.					
	Top management support for research and innovation and investments in current technology.					
	The hospital provides training for employees to utilize information system effectively					
	The hospital has adopted Enterprise Resource Systems (ERP) to improve its decision making process					
3	**Strategic partnerships**					
	The hospital collaborates with other hospitals and stakeholders for information exchanges in various aspects to improve service delivery					
	The hospital works hand in hand with its suppliers to ensure timely deliveries of services					
	The hospital cooperates with its partners in implementing its services					
	The hospital shares their resources with its partners for success					
	The hospital creates and maintains good relationship with their partners such as suppliers, distributors and customers					
4	**Information sharing**					
	The hospital undertakes Information sharing among the members of the supply chain					

	The hospital ensures seamless information flow among it supply chain members					
	The hospital communicates to its customers ontime on any issues					
5	**Lean management**					
	The hospital ensures timely serving of patients					
	The hopital ensures quick responses to customer needs					
	Expenditures keenly monitored to ensure no unnecessary costs incurred					
	The hospital cuts on any unneccesary costs					
	The hospital custs on waiting times by patients awaiting to be served					
	The hospital consistently seeks to eliminate waste while sustaining value for the Customer					
	The hospital is very flexible in terms of operation					
6	**Outsorcing**					
	Focusing on core competencies					
	Cost-driven outsourcing through cost reduction					
	Improvement of service levels					
	Optimal level of outsourcing through cost reduction					

	Improvement of asset utilization					
	increase in operational flexibility					

PART C: SUPPLY CHAIN MANAGEMENT PRACTICES AND OPERATIONAL PERFORMANCE

To what extend does these supply chain management practices affect performance of the stated variables as indicated

Please indicate on a Scale of 1 – 5 where: 1 = No Extent; 2 = Small extent; 3 = Moderate Extent; 4 = Large Extent; 5 = Very Large Extent

SUPPLY CHAIN MANAGEMENT PRACTICE ASSOCIATED WITH PERFORMANCE	**Organisational performance measures**	1	2	3	4	5
1 **Customer relationship management**	Improves Supply chain flexibility					
	Ensures timeliness in customer service					
	Improves Supply chain reliability					
	Improves Supply chain responsiveness					
	Reduces supply chain costs					
2. **Information**	Improves Supply					

communication technology	chain flexibility					
	Ensures timeliness in customer service					
	Improves Supply chain reliability					
	Improves Supply chain responsiveness					
	Reduces supply chain costs					
3.Strategic partnerships	Improves Supply chain flexibility					
	Ensures timeliness in customer service					
	Improves Supply chain reliability					
	Improves Supply chain responsiveness					
	Reduces supply chain costs					
4 information sharing	Improves Supply chain flexibility					
	Ensures timeliness in customer service					
	Improves Supply					

	chain reliability					
	Improves Supply chain responsiveness					
	Reduces supply chain costs					
5.Lean management	Improves Supply chain flexibility					
	Ensures timeliness in customer service					
	Improves Supply chain reliability					
	Improves Supply chain responsiveness					
	Reduces supply chain costs					
6.Outsourcing	Improves Supply chain flexibility					
	Ensures timeliness in customer service					
	Improves Supply chain reliability					
	Improves Supply chain responsiveness					
	Reduces supply chain costs					