

**PROCUREMENT MANAGEMENT PRACTICES AND
ORGANIZATIONAL PERFORMANCE OF CONSTRUCTION
FIRMS IN NAIROBI COUNTY**

**BY
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**A RESEARCH PROJECT SUBMITTED IN PARTIAL
FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD
OF A MASTER OF BUSINESS ADMINISTRATION (MBA),
UNIVERSITY OF NAIROBI**

DECEMBER 2017

DECLARATION

I declare this research project is my original work and has not been submitted to any University for the award of a Degree or any other course.

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ACKNOWLEDGEMENT

I would like to acknowledge my siblings for all the support given to me during this program. My special thanks go to my brothers Dedan and John who have significantly put extensive effort to ensure I get where I am today. Above all, I would like to thank God Almighty for the strength, knowledge, and grace he filled in me all through. My sincere appreciation goes to my supervisor Mr. Ernest Akelo for taking me through the research. His skill for constructive criticism, guidance, patience, enthusiasm, and suggestions supported the efforts to get this project successful.

DEDICATION

I dedicate this project to my siblings most of all my brothers, Dedan and John for their endless support towards my educational needs and their positive words of encouragement.

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ABBREVIATIONS AND ACRONYMS

BORAQS	Board of Registration of Architects and Surveyors
CIPS	Chartered Institute of Purchasing and Supply
EDI	Electronic Data Interchange
ERP	Enterprise Resource Planning
GDP	Gross Domestic Product
HR	Human Resource
KNBS	Kenya National Bureau of Statistics
NEMA	National Environment Management Authority
OHRP	Office for Human Research Protections
SCM	Supply Chain Management
SGR	Standard Gauge Railway
SRM	Supplier Relationship Management

ABSTRACT

Worldwide aggressive nature of competitors for both independent and governmental institutions has catalyzed automation of services to advance competitiveness in the present day. Therefore, it becomes fundamental for firms to ensure that their consumers obtain the best value at a worthwhile sacrifice in order to insure contentment. Endorsing practical approaches in regard to procurement management practices enables firms to escalate firm performance and earn a competitive advantage. Examining the effect of procurement management practices within the construction firms' performance in Nairobi County was the main objective of the study. In organizations, procurement is an expensive but important business activity. This is due to the fact that organizations spend around 70% of their revenue on procuring goods and services. The target population was 836 firms of which a sample of 84 firms was taken. From 84 firms, primary data was collected using questionnaires. The Participants who included the procurement managers returned back 63 questionnaires. The findings revealed that procurement management practices to a moderate extent had an effect on performance in the construction firms in Nairobi. The study recommended that firms that had not implemented procurement management practices should incorporate the practices into the system.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Growing sums of competitors locally and globally represent the modern business domain. Besides the managers having to re-establish their firms to respond promptly to the market changes, generate services and products that are of high quality, minimize garbage, they also must handle their procurement management practices efficiently. Carter and Narasimhan (2006) suggest that SCM and procurement management practices are associated with the organizational performance. According to O'Brien (2011) quick and precise management tools that minimize cycle time and create dependability, therefore, contributing positively to organizational performance are as a result of proper deployed procurement practices in a firm.

This research project focused on the procurement practices in the construction firms in Nairobi County. Procurement describes the overarching function of processes and activities to obtain goods and services Hutt and Speh (2012). Luu et al. (2008) state that procurement entails processes that establish essential demands such as purchasing procedures, market research, supplier appraisal and contract negotiation. In recent past, most construction firms have failed in conducting business. This tendency has significantly grown in developing countries hence causing a huge risk in the business sector (Luu et al., 2008).

A crucial role is played by construction firms in developing and achieving goals of a nation. According to Navon (2005) construction is a large sector that contributes to up

to 10% of the GDP in newly industrializing economies. The complex nature of the construction sector is portrayed by the big number of players in the sector. National economies affect the performance of the construction industry. According to CIPS (1999) ethics defines a body of concepts and values that articulate tolerable manner of conduct. Employees in all construction firms are accountable to the firm's ethical codes and stipulated guidelines. They are expected to realize the quality of works and consider the laid down laws and regulations in administering and dealing with construction contracts. To ensure responsibility all construction firms have complaint codes that all employees adhere to when conducting business. According to Luu et al. (2008) construction firms are advised to measure performance to gauge their position and take appropriate actions to meet their objectives in the business. Marr (2007) stated that although firms must make an endless advancement when it comes to performing, measurement has to be done to rate their improvement.

1.1.1 Procurement Management Practices

Procurement practices mainly entail the strategies followed when making procurement decisions. According to Sollish and Semanik (2012), procurement practice is described as the process of obtaining goods and services for a firm according to the set policies governing the selection of products, suppliers, and methods aiming to utilize sound business methods which maximize the value of the organization.

Implementing procurement best practices improves the effectiveness of procurement decision-making. Procurement practices cut across all departments of firms as it

involves the putting into practice the knowledge of sound management. It requires good governance of relations as well as personal initiatives to comply with given rules and regulations. Christopher (1992) efficient procurement practices contribute highly to the competitive advantage of the organization by operating at a lower cost, hence maintaining profitability and improved performance.

Best procurement management practices include; Ensuring compliance with procurement laws and regulations, Cooperative supplier relations, Inventory Management, Information Sharing, Ensure adequate expertise in SCM, Effective communication, and customer relations, Maintaining confidentiality, Continuously improving performance and innovation, Adopting Information technology, Using standard documents in the procurement process, Contract Management, Building a socially responsible and sustainable procurement practice, Obtaining competitive bids and Separation of duties (Githaiga, 2014).

1.1.2 Organizational Performance

When the expected results of a firm are measured with respect to the goals and objectives the overall organizational performance is achieved and attributed to quality management and governance. Parasuraman (2002) proposed that firms providing services should enlarge their evaluation of production from a general company-oriented aspect to customer-oriented aspect. Conflicts and synergies between quality and production can be solved through an enlarged approach. Performance management is a critical factor for efficient management. Failure to measure something makes it very difficult to improve it hence it is critical to pinpoint and

measure the impact to improve where necessary. A firm's performance can be determined by economic objectives or employee fulfillment. Objective attainment is used to measure performance by estimating the efficiency and effectiveness (Ho, 2008).

Performance measures are intended for use in the strategic planning process and decision-making. Therefore they should inform planners and managers as to problems that require attention, and should allow them to monitor progress toward goals. Poister (2010) indicates that performance measurement is a way of proving achievement of objectives. Organizational performance in this study is weighed by profitability, growth (market share), customer satisfaction and efficiency regarding reduced costs.

1.1.3 Construction Firms in Nairobi County.

Currently, construction business is inherently risky and highly competitive in Nairobi County. Contractors in Nairobi have to compete with their peers within the firms to secure projects. In order to submit competitive bids, construction firms in Nairobi have to reduce their profits substantially. The nature of the construction firms is such that there are no certainties concerning future projects. Construction firms are not able to create demand for their products and services, unlike other sectors. Most of the projects in the firms are by derived demand. Thus, contractors only compete for available projects in the market. According to Mbiti (2008), the construction firms in Nairobi employ more than 10,000 people who are expected to

deliver the constructed facilities to the clients within budget, on time, and meeting specified standards of quality. The construction firms in Nairobi are growing as indicated by the information acquired from the completed private construction works and the industry growth rate as well as the escalation of the cost of building materials.

Construction firms are subdivided into seven categories according to the contract value. The first class is classified according to unlimited contract value; the second class has a contract value of 500 million shillings; third class has a contract value of up to 300 million shillings; the fourth class operates a contract value of up to 200 million shillings; fifth class is limited to a contract value of 100 million shillings; the sixth class has a contract limit of 50 million shillings, and the seventh class has a limit of 20 million shillings. The Kenyan construction industry has four categories of stakeholders which include: Investors, Contractors, Suppliers, and Consultants. The construction firms are regulated among others by the BORAQS, the PPDA Act 2015, the Physical Planners Act (CAP 286), NEMA and NCA. The quality control and supervisory levels of the construction firms involve Architects and quantity surveyors under BORAQS, Engineers under ERB, and Environmental Audit Experts under NEMA among many others.

1.2 Research Problem

The present-day business environment is getting more challenging. In order to stay competitive, firms have to expand their business operations and improve their performance. Therefore, managers need to embrace all those practices that will

enhance their performance. Implementation of effective and efficient procurement practices is the most critical aspect of enhancing business operations. According to Markus *et al.* (2013) procurement management practices touch implementation of core aspects of firms operations and is vital to the survival and performance. Studies conducted in the past examined the productivity of the construction procurement section. The studies mainly fixated on a variation of procurement activities, such as the consumption of money in a construction firm and the productivity of the procurement division.

Construction firms in Nairobi suffer from various complications related to performance. According to Strenman (2012) construction of 10 residential houses in Nairobi County suffers from low performance due to delay for months. There are many rational reasons such as delayed funds release, modification of sketches and design and closures. Furthermore, Performance of construction projects in Nairobi is affected by various factors for instance poor management and poor leadership organization; poor procurement management practices; poor alliances and coordination; lack of motivation, discipline, and quality systems for decision-making; political problems; cultural challenges and fiscal circumstances. In Nairobi, construction firms are experiencing problems as a result of incomplete projects. Inadequate funds, like of time, inefficiency, and poor procurement practices, lead to failure of construction in Nairobi (Kenya Urban Road Authority, 2013).

Internationally, several studies have been done with respect to procurement practice employment in manufacturing organizations. In the United Kingdom, Goodier et al. (2006) studied the procurement future in construction organizations in the UK with respect to the changing service providers. The researchers found that over the next 20 years the UK would experience modernization in construction industries including new forms of procurement. Sandberg and Abrahamson (2010) researched the importance of procurement practices and found out that large retailer organizations have established the importance of procurement practices in New York. McFalls (2016) researched the influence of procurement practices in the electronics industry in Geneva. His findings indicated that the overall incentives for procurement practices share more of the gains or at minimum mitigate the harm to workers in an inadequate manner.

Locally, (Wesley 2012) run a survey in demonstration of the effect of procurement management practices in the construction firms with a case study of H Young Co with a need to enhance efficiency and effectiveness in the organization and management of public procurement. He concluded that the industry was characterized by stigmatization and poor procurement practices. Shale and Hussein (2014) conducted Unilever Kenya Limited case study to predicate the significance concerning sustainable procurement management practices on firm performance in the manufacturing sector. Their study showed that firm ethical practices augment sustainable procurement in the firm. Makabira and Waiganjo (2014) did a case study under the National Police Service of Kenya to cross-examine the significance in relation to performance of service industry as contributed by procurement practices.

They found out that the organization has gained from adopting and employing procurement control practices in various ways such as gaining the value for money, inventory management, enhanced provision of service, enhanced allocation of resources, quality supplies, and improved level of efficiency.

Despite various studies focusing on procurement practices, none has focused on procurement practices in Nairobi County under the construction firms. The intent of this study, therefore, is to solve the question: To what extent do procurement practices influence the performance of the construction firms in the County of Nairobi?

1.3 Objectives of the study

- i) To establish procurement management practices in the construction firms in Nairobi.
- ii) To determine the effect of procurement practices on the performance of construction firms in Nairobi.
- iii) To identify the challenges faced by construction firms in employing procurement management practices.

1.4 Value of the Study

Supplier relationship is an imperative aspect to construction firms, therefore, this study will help construction firms to manage supplier relationship as well as enable them to compare their performance with other firms thereby pinpointing their strengths and weaknesses to ensure improvement

Through this study, other firms will adopt proper procurement practices so as to reduce costs associated with procurement activities. It will also help upcoming firms to evaluate the market and understand strategies to employ in order to be successful.

To the government, the study will assist in understanding the procurement management practices performance and how it influences construction works so as to eliminate delays and improve performance in the acquisition cost control and fund release.

To the academicians and researchers, the study will assist in background knowledge gaps and benefit them in carrying out a similar exercise by using it as a reference point.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The sector looks at information provided from various topics and publications with respect to the research problem. It weighs what other authors and scholars determined about procurement management practices and also looks at the theories associated with this study.

2.2 Theoretical Review

Planning theory and the selection theory guided the study. Theories were debated according to what they say and their relevance to this study.

2.2.1 Planning Theory

What is does not necessarily lead to what should be was attributed by Wenz (2013). What is may limit what can be, our human capacity to contemplate on the likelihood and make decisions means values link what is and what should. The linkage remains whether it is known or not. Where utilization of values is not clearly portrayed, they are implicit in underlying cultural conditioning. Palmer (2012) stated that we could not live without such acoustics, most human beings are not aware of the values upon which they have founded their framework of meaning. Realising this evaluative linkage is essential for planning. The future orientation of planning influences what will/can be? In a civil society, it must consequently raise the concern by acknowledging the role of values of what should be .

Consequently, a plan is related to value as a link. Therefore, it has a normative aspect. The policy consideration must be incorporated into planning for both theories and practical levels. Without proper planning procurement practices if implemented would fail in the entire process thus there is a need to ensure proper planning. This theory is related to procurement management practices since a plan must be set up before implementing procurement practices into an organization.

2.2.2 Selection Theory

According to Saffu and Mamman (2000) literature concerning the selection of partners is insufficient and focuses on the method of choosing a partner unlike the partner selection process. The researchers stated that most publications speculate that the selection of partners is on a straight line basis since they assume the decision-making process is rational. A relevant precedent choice is refined, often making it a priority the features of concern. Personal ties between the main decision makers result to business alliances in some of the cases (Barringer and Harrison, 2000).

In enhancing procurement practice, it is important to select suppliers and maintain a good supplier relationship to ensure that information runs smoothly from both parties. Supplier selection and management boost credit reliability and ensure supply of quality products to the organization hence the success of the overall performance. This theory will be important in studying supplier relationship management.

2.3 Procurement Practices

Procurement practices refer to the strategies of procuring or acquiring goods and services McFalls (2016). The managerial actions taken to enhance the performance of the unified supply chain is as a result of procurement practices. Supplier Relationship Management entails the selection of vendors and the integration of businesses to obtain proper complementary skills in order to solve important concerns. According to Petcavage and Pinkerton (2010) supplier and client relationships have unfolded from transactional nature to an alliance based collaborative in nature. Conforming to Fawcett et al. (2007) and Melnyk et al. (2011) strategic sourcing principles act as the indicator to an appropriate relationship. Strategic sourcing consists of strategic outsourcing and supplier capability analysis.

Executives and many business entrepreneurs are beginning to realize that successful strategic supplier partnerships result in benefits such higher returns on investment, as access to new technology and knowledge, and better market penetration than those of competitors who do not have such alliances. The adversarial relationship is one of the aspects that SRM tries to overcome. Information sharing and communication provides better outcomes for both parties. According to Bailey et al. (2005) mutual buyer and supplier relationships provide gains with the aim of acquiring beneficial outcomes in various aspects.

According to Wisner Tan Leong (2012) inventory management refers to a planned method of procuring and storing the material to prevent stock out. Applying Just in Time (JIT) is one of the methods which ensures reduced inventory levels by ensuring

the supplies are delivered when needed. According to Mistry (2006) just in time frees up the warehouse space and minimizes the overall costs associated with inventory. According to Eroglu and Hofer (2011) leanness reduces waste and affects the profit margins. The researchers studied the US manufacturing firms and argued that inventory leanness is the best inventory management tool and that a firm's performance is affected by the inventory levels. Inventory management minimizes the unproductive time contributed by shortage of stock and unavailability of inventory. According to Thompson, Scott, and Lundgren (2011) firms regularly place orders when a minimum level is reached or when the stock of a certain product is exhausted. Inventory levels are kept on records in order to prevent organizations from incurring excess procurement and holding costs and stockout costs.

Information sharing refers to communication of non-public information along the supply chain. Importance of sharing information along the supply chain has been researched in various studies. Simulation approaches can be used to quantify the benefits of exchange information. Sharing of promotional information between manufacturers and retailers can increase trust levels as well as increase revenue. Hamister and Suresh (2008) assert that when demand is auto correlated, the importance of sharing information is high. Fisher and Raman (1996) indicate that auto correlated demand is connected to the seasonal product which has rational significance at the beginning of a selling season. Sharing information upstream places the manufacturer better to enhance retailer while avoiding costs related to stock. The structure of the firm relationship is associated to the variety information exchanged.

Adopting information technology refers to the application of computers in the

business enterprises. For modern businesses to stay competitive in a rapidly changing business environment, efficient and effective information technology, products and services are critical. Understanding of the technology, legal frameworks, and commercial environment is facilitated by information sharing. Despite the fact that technology has been essential to procurement for decades, its importance continues to grow at an astounding rate. Modern technology can streamline processes, drive efficiencies, and enable visibility; this enables organizations to scale and makes tasks more manageable. It also ensures quality service, fewer costly errors, faster decisions, and minimal costs associated with procurement. Sanchez and Peres (2003) maintain that firms with electronic data interchange (EDI) adapter perceive more operational yields while electronic resource planning (ERP) delivers higher returns and understanding, and less organizational difficulties than adopter failure of systems.

According to Bailey (2008) contract management includes the activities of a purchaser in the period of contract to insure that the liable parties meet their respective obligation. According to PPDA (2006) procurement departments are tasked with ensuring they oversee the management of contract by various sectors in regards to the terms and stipulated conditions. Reports are done in case of parties' failure to meet the stipulated terms. Thus the person in charge of the procurement department ensures monitoring and evaluation of the existing projects. According to Bidanda and Cleland (2009) in an eminently joined and aggressive globe most project operate through the management of relationships which arise from contract management.

Organizations, therefore, must understand the types of contracts awarded to ensure the best management.

2.4 Procurement Practices and Organizational Performance

A good procurement system is vital to an effective company's supply chain system. The forerunner to system performance in meeting its intended goals in governmental and independent sector is characterized by adequate management of the procurement function. Best procurement practices improve efficiency and effectiveness of an organization which translates to an improvement of its overall performance. Overall procurement practices such as supplier relationship management, ethical procurement, information sharing, adoption of technology and adopting green supply chain management ensure that organizational performance is enhanced by supporting procurement functions in construction firms.

Turban et al. (2000) indicate that firm's procurement function is subdivided into operational processes, and strategic processes and considering priorities and activities in these two areas are entirely different most roles are assigned to strategic procurement department. Centralization and decentralization of procurement procedures are enabled by e-procurement. Also, e-procurement helps to minimize administrative hours, stimulate the flow of critical information between the purchaser and supplier, stabilize purchasing practices, increase response rate and improves the competitive advantage (Eng, 2004).

According to Delaney et al. (2006) organizational performance is measured by quality service, customer satisfaction, market performance, and employee

satisfaction. In their study, Hoque et al. (2000) stated that organizational performance could be evaluated by the customer satisfaction, average return, sales revenue, utilization of space, and quality of final product. Greene et al. (2007) classified the sales, market growth, and profitability as critical factors that are measured by organizational performance. Procurement practices have a positive relationship or affect the level of organizational performance in all these factors.

Chong and Ooi (2008) maintain that reduction of inventories, better customer service, and diminishing costs are as a result of a good organized and executed procurement plan. Carr and Smeltzer (1999) examined how organizations with strategic sourcing can harbor durable relationships. Green procurement practices will ensure high-quality products which are environmental friendly hence considering customer satisfaction. Ethical procurement enhances accountability, consistency and competitive supply all which influence the indicators of procurement performance in a positive way.

2.5 Empirical Literature Review

In a global and local perspective, several studies have been done with respect to procurement management practice and their impact on organizational performance. Internationally, Ricarda (2016) surveyed the influence of procurement practices in the electronic sector in Geneva. His purpose was to examine the repercussion of procurement practices on the global supply chain of electronics. He found out that it is important to enhance procurement practices to have a smooth and efficient supply chain not only globally but regionally and locally.

Aleman and Guererro (2016) researched procurement practices and SMEs in global supply chains in Switzerland. Their main objective was to examine which SMEs employed procurement practices. Through their research, they concluded that most procurement practices center around delivering fair prices. They also found out that most SMEs in the second tier were excluded from benefits of good procurement practices. From the research, there was no solid evidence that lead firms have developed procurement practices with the principal aim of supporting SME development. The research showed that there was still a gap in the literature on systematic evidence from monitoring and evaluation of pro-SME procurement practices and their impacts on both economic and social upgrading of the intended SMEs.

Caritas, Julius and Zenon (2016) researched the impact of procurement practices on performance of Rwandan governmental construction project. Their main intention of the study was to examine the influence of practices of procurement on the performance of public procurement management in Rwanda. They found out that procurement devising strengthens the performance of the construction of Bugesera District office. They indicated that through procurement planning and practices a positive performance in the construction firms is achieved.

In a local perspective, Makabira and Waiganjo (2014) researched the significance of procurement practices on the achievement of corporate firms in Kenya. Their goal

was to ratify the importance of planning in procurement, controls and procurement practices on the performance of KNPS. The findings were that Kenya National Police employed procurement practices in its operations and that the organization has benefited from employing procurement control practices. The organization gained from incorporating controls practices in various ways; like the prevention of unnecessary stocking of items, proper use of funds, enhanced provision of services, quality materials, and improved allocation of resources.

Karanja and Kiarie (2015) conducted research on Guaranty Trust Bank to indicate the impact of procurement practices on organizational performance in private scope. Their purpose was to demonstrate the effect of procurement practices on an organization performance in the private scope in Kenya. The study concluded that procurement practices had a great influence on the performance of the organizations in private sector and help in saving money that would have been lost. Hence it is not a waste of time for the private sector. The study also noted that procurement planning was a major contributor to organizational performance.

Mokogi, Mairura, and Ombui (2015) surveyed the state-owned businesses in Nairobi to demonstrate the impact of procurement practices on performance. Their main objective was to ascertain the significance of procurement practices on the government-owned enterprises performance in Nairobi. They concluded that various enterprises employed procurement practices. The study confirmed that procurement practices are very significant in enhancing the performance of profitable enterprises in Nairobi County. Therefore those practices enhanced the performance of these

enterprises. The study showed that there was a substantial liaison between procurement practices and the overall performance in the organizations.

2.6 Challenges faced in Implementation of Procurement Practices

Cuts in government capital expenditure in developing countries have led to decreased levels of demand in relation to construction works. The main challenge is the fact that construction industries are expected to perform better despite the constraints in its operating environment. Foreign firms are active on China's project market despite China having several international contractors (Ofori, 2000).

The construction sector was trailing behind other industries in responding to the rapid changes in the environment. Serious problems will be faced by the construction industries in the evolving nations due to the shortages of materials needed for construction (Ofori, 1998). In Nigeria, the performance of the construction firms regarding time was poor according to Ajanlekoko (2000). In Nepal Manavazhia and Adhikarib (2002) carried out a research to explore the procurement setbacks in the construction of highways. They noted that the effect was as a result of government interference, logistics problems, and weaknesses associated with firms.

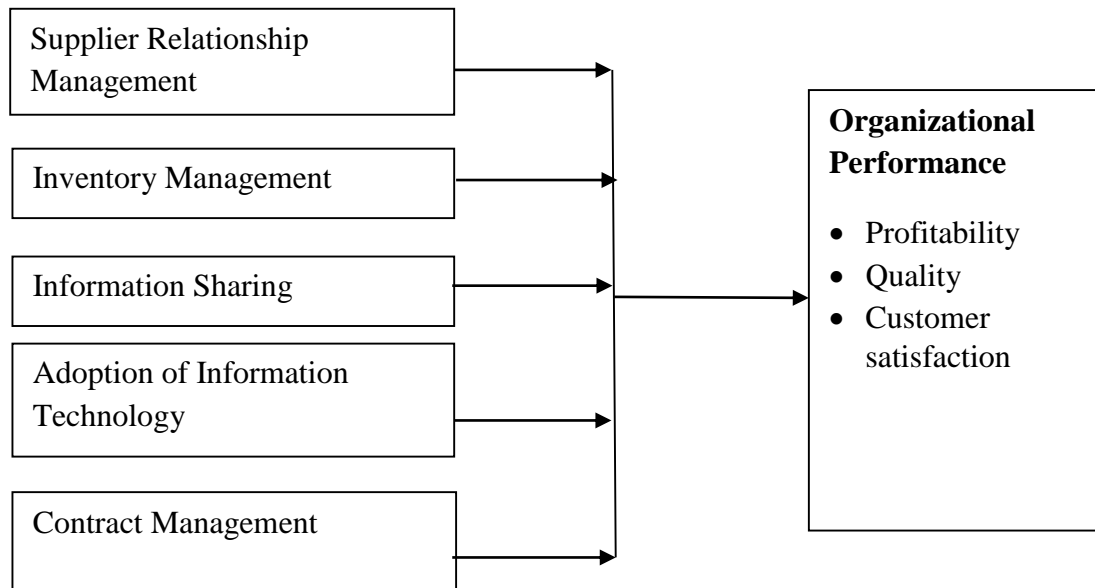
2.7 Conceptual Framework

Supplier relationship management, ethical procurement, information sharing, adoption of information technology and green procurement are variables that are independent in this study while organizational performance is the dependent.

INDEPENDENT VARIABLES

DEPENDENT VARIABLES

Procurement Management Practices



Source: Author (2017)

Figure 2.1 Conceptual Frame work

Research Hypothesis: There is a considerable relationship between procurement management practices and organizational performance.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The section outlines research design and the procedure employed in this study. This includes the design, study population, sample design, collection of data and data summary approach.

3.2 Research Design

Descriptive survey design study was engaged as research design. Since study was concerned about univariate questions such as the presence of procurement practices of performance of firms, the research design that was descriptive was best to answer questions. Salaria (2012) stated that collecting information regarding prevailing situations with an aim to describe and interpret would be best done using a research design that is descriptive in nature. According to Mugenda and Mugenda (2003) a research design is descriptive when it ascertains then portrays existing conditions in an exact manner.

3.3 Population of the study

The population composed all registered construction companies in Nairobi County. A total of 836 construction firms were registered and operating according to Ministry of Public Works 2016 (Appendix 111).

3.4 Sampling Design

Stratified random sampling method as described by Schindler and Cooper (2006) was used to extract a sample size. According to Schindler and Cooper (2006) 10% of the total population is used to advocate for a sample size. Thus, 10% of 836 construction firms gives a sample size of 84 firms.

3.5 Data Collection

Primary data was used to meet objective of study. Primary data was collected using questionnaires. The questionnaires had four parts; Part A covered the respondent's general information, Part B covered the extent to which procurement practices had been employed, Part C examined the significance of the procurement practices on organizational performance and part D determined the challenges faced in the implementation of procurement practices in construction firms in Kenya. When close-ended questions are used, the responses given are considered to be more consistent; open-ended questions ensures that Participants feel free when answering questions and assists the researcher to establish the respondent's feelings since one can use their own words (Field, 2005). The Participants were procurement managers from each firm.

3.6 Data Analysis

Analysis of data in part A, C, and D was done using descriptive statistics while regression analysis was employed in Part B. Dependent variable of study was organizational performance while supplier relationship management, inventory

management practices, information sharing, and adoption of information technology and contract management were the independent variables.

The regression equation assumes the following form: Organizational Performance = $f(x_1, x_2, \dots)$ More specifically, the regression formula being; $Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \alpha$

Where Y = Organizational performance

β_0 = Constant

X1 = Supplier Relationship Management

X2 = Inventory Management

X3 = Information Sharing

X4 = Adoption of Information Technology

X5 = Contract Management

CHAPTER FOUR

DATA ANALYSIS, FINDINGS AND DISCUSSION

4.1 Introduction

This section contains various findings with respect to the goals of the study. This section portrayed the findings on effect of procurement management practices on construction firms' performance in Nairobi. The study purpose was to determine the procurement management practices in construction firms in Nairobi, to determine the effect of procurement management practices on performance of construction firms in Nairobi and to identify the challenges faced by construction firms in implementing procurement management practices. The study target population was the managers in the procurement and supply chain department. The questionnaires were hand delivered and follow-ups through phone calls done. An explanation was given to the Participants regarding the importance of research. By so doing, it ensured a 100% response rate a response of 50% is considered acceptable, 60% okay and 70% and above rated quite well (Mugenda and Mugenda, 2003). The response rate for this study, was 76% where out of 84 questionnaires that were distributed, the response rate was 63 firms. Hence this was considered very well and hence the researcher proceeded for data analysis.

4.2 Demographic Information

The study intended to have knowledge of the basic background information of the Participants working at the various construction firms in Nairobi. The study gathered data on various aspects of Participants at various construction firms in Nairobi in order to evaluate how the procurement management practices have been implemented

in construction firms 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 Participants have been working at the various construction firms in Nairobi, their age, and gender and education level. The findings of the study are as discussed below:

4.2.1 Gender of Participants

The table below indicates the responses to do with the gender of the Participants.

Table 4.1 Gender Representation

Gender	Frequency	Percentage
Male	35	55.6
Female	28	44.4
Total	63	100

Source: Research Data

Participants were asked to mark their gender on the questionnaires. From the findings, 55.6% of the Participants were male while 44.4% of the Participants were female. This is an indication that various staff in the various construction firms in Nairobi are well distributed, and the difference between the two is minimal hence an indication of equal distribution of staff in the construction firms in Nairobi and the specific departments that the research was based.

4.2.2 Work experience of the Participants

The table below presents the responses based on respondent work experience.

Table 4.2: Work Experience Representation

No. of Years	Frequency	Percentage
5-10 years	34	54.0
0-5	20	31.7
Above 10	9	14.3

Source: Research Data

Participants were asked to mark their working experience. Findings of the study indicated that 31.7% of the Participants had experience of 0-5 years, 14.3% of the Participants had an experience between 5-19 years while 54% of the Participants had above 10 years' experience. From these results, it was a good indication for the study to be articulated since more than fifty percent of the Participants had adverse experience in the field and had adequate knowledge on the data sought on procurement management practices and performance in construction firms in Nairobi.

4.2.3: Education of the Participants

The table below represents the frequencies on the responses on the education levels of the participants.

Table 4.3: Education Level Representation

Education Level	Frequency	Percent
Undergraduate	35	55.6
Masters	18	28.6
College	10	15.9
Total	63	100.0

Source: Research Data

Participants were asked to mark their education level. From the finding it was ascertained that 15.9% of the Participants had college education, 55.6% of the Participants had degree level education and 28.6% of the Participants had master's education level. No respondent had secondary level education an indication that the Participants had adverse knowledge on the data sought on procurement management practices in construction firms in Nairobi based on their education levels.

4.3 Procurement management practices

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

4.3.1 Supplier relationship management

The table below represents the finding on the extent of adoption of supplier relationship management in construction firms in Nairobi.

Table 4.4 Supplier Relationship management Adoption

Supplier Relationship Management	Mean	Std. Deviation
Information flow between organization and suppliers	4.6508	.51302
Including suppliers in continuous improvement programs	3.9048	.66513
Monitoring materials and suppliers	3.8571	.59180
Key suppliers included in planning and goal setting activities	3.8413	.62750

Source: Research Data

The Participants were asked to mark the extent, supplier relationship management had been adopted in construction firms in Kenya. From the findings, it was established that supplier relationship management had been adopted to a moderate extent by the various construction firms in Nairobi. This was indicated by a positive mean value whereby all the responses under supplier relationship management agreed by the Participants to a moderate to a large extent as indicated above, where the mean values are: 3.85, 4.65, 3.9 and 3.841.

4.3.2 Supplier Relationship management Frequencies

The table below represents the responses on adoption of SRM in construction firms in Nairobi. From these findings, it is ascertained that supplier relationship management had been implemented in the construction firms to a great extent.

Table 4.5 Supplier Relationship management Frequencies

Scale	Frequency	Percent
Very Large Extent	33	52.4
Large Extent	18	28.6
Moderate	9	14.3
Small Extent	3	4.8
Total	63	100.0

Source: Research Data

The findings indicated that 4.5% of the Participants indicated that supplier relationship management had been adopted in construction firms in Nairobi to small extent, 13.3% indicated that it had been adapted to a moderate extent, 28.6% indicated that it had been implemented to large extent and 52.4% indicated that it had been implemented to a very large extent.

4.3.3: Inventory management practices Adoption

The table below represents the finding on the extent of adoption of inventory management in construction firms in Nairobi.

Table 4.6 Inventory management Practices Adoption

Inventory Management Practices	Mean	Std. Deviation
Practicing just in time	4.5556	.50090
Minimizing stock to save on costs	4.2381	.66513
Marinating inventory only for long lead time	4.1429	.64401

Source: Research Data

4.3.4 Inventory Management Practices Frequencies

The table below represents the responses on adoption of inventory management in construction firms in Nairobi.

Table 4.7 Inventory management Frequencies

Scale	Frequency	Percent
Very Large Extent	34	54.0
Large Extent	18	28.6
Moderate	11	17.5
Total	63	100.0

Source: Research Data

Further findings on what extent inventory management practice has been adopted by construction firms is as indicated in the table above whereby: 17.5% of the Participants marked that inventory management as a procurement management practice, had been implemented to a moderate extent, 28.6 % of the Participants indicated that inventory management as a practice had been implemented to large extent and 54% of the Participants marked that it had been implemented to a very large extent. From this, it was an indication that to a great extent, inventory management had been implemented in construction firms in Nairobi.

4.3.5 Information Sharing Adoption

The table below represents the findings on the responses on the extent of adoption of information sharing in construction firms in Nairobi.

Table 4.8 Information sharing Adoption

Information sharing	Mean	Std. Deviation
Existence of feedback loops	4.6190	.48952
Sharing core objectives within the firm	4.1270	.65972
Informing suppliers in advance about changing needs	3.9365	.82056

Source: Research Data

The Participants were asked to indicate to what extent information sharing as a practice had been adopted in construction firms in Nairobi. From the findings it was indicated that information sharing had been implemented in the construction firms in Nairobi indicated by the mean values which were all positive and above the moderate value of 3 given by a likert scale, where, 1-no extent, 2-small extent, 3-moderate extent, 4-large extent and 5-very large scale as indicated in table above.

4.3.6: Information sharing frequencies

The table below represents the responses further in frequencies from the Participants on the adoption of information sharing as a procurement management practice.

Table 4.9: Information Sharing Frequencies

Scale	Frequency	Percent
Large Extent	31	49.2
Very Large Extent	25	39.7
Moderate	7	11.1
Total	63	100.0

Source: Research Data

The findings indicated that 11.1% of the Participants indicated that information sharing as a procurement management practice, had been implemented in construction

firms in Nairobi, to a moderate extent, 49.2% of the Participants agreed to the fact that it had been implemented to a large extent and 39.7% of the Participants marked that it had been implemented to a very large extent. From these, it can be concluded that information sharing as a procurement management practice is adopted by construction firms in Nairobi.

4.3.7 Information Communication Technology Adoption

The table below represents the findings on the responses on the extent of adoption of ICT in construction firms in Nairobi.

Table 4.10 Information communication technology

Information Communication Technology	Mean	Std. Deviation
Intranet is used in procurement processes	4.7778	.41908
EDI is used to manage procurement practices	4.4762	.53452
IT system is automated within the procurement	4.1429	.66858

Source: Research Data

The Participants were asked to indicate to what extent information communication technology has been implemented in construction firms in Nairobi. The mean results are as indicated in the table above. From the findings it was to a large extent, information technology has been adopted as a procurement management practices in construction firms as indicated by mean values of above 4 given a likert scale, where, 1-no extent, 2-small extent, 3-moderate extent,4-large extent and 5-very large scale.

4.3.8 Information Communication Technology Frequencies

The table below represents the responses further in frequencies from the Participants on the adoption of information sharing as a procurement management practice.

Table 4.11 Information Communication Technology Frequencies

Information Communication Technology	Frequency	Percent
Very Large Extent	34	54.0
Large Extent	25	39.7
Moderate	4	6.3
Total	63	100.0

Source: Research Data

The findings indicated that 6.3% of the Participants agreed that information communication technology as procurement management practice had been implemented in construction firms in Nairobi. 39.7% of the Participants of the Participants marked that information management had been implemented to a great extent and 54% of the Participants indicated that information technology as a procurement management practice had been implemented. From these, it could be concluded that to a great extent, information technology had been implemented in construction firms in Nairobi.

4.3.9: Contract Management Adoption

The table below represents information of the responses on the extent of adoption of contract management as a procurement practice in construction firms in Nairobi.

Table 4.12 Contract Management

Contract Management	Mean	Std. Deviation
Day to day procurement activities follow the sections of the contract	4.7143	.45538
Both parties hold their end of the agreements	3.8889	.74295
Negotiations are conducted to determine the final contract	3.7937	.74398

Source: Research Data

The Participants were asked to indicate to what extent contract management has been adopted as a procurement management practice. The findings indicated that contract management as a procurement management output had been implemented by construction firms in Nairobi. This is indicated by positive mean values for the descriptive statistics as indicated above. The mean values were: 3.79, 3.88, and 4.7. Given the Likert scale, where, 1-no extent, 2-small extent, 3-moderate extent, 4-large extent and 5-very large scale it shows that to a moderate extent, contract management has been implemented as a procurement management practice in construction firms in Nairobi.

4.3.10: Contract Management Practice Frequencies

Contract Management	Frequency	Percent
Large Extent	34	54.0
Very Large Extent	22	34.9
Moderate	7	11.1
Total	63	100.0

Source: Research Data

Findings indicated that 11.1% of the Participants agreed to the fact that contract management as a procurement management practice had been implemented in construction firms in Nairobi. 54% of the Participants marked that it had been implemented to a large extent and 34.9% of the Participants marked that contract management practice had been implemented in construction firms in Nairobi. The findings are as indicated in the table below:

4.4 Summary of the Mean Values of the Procurement Management Practices

The table below indicates the summary of all the five procurement practices investigated under this study.

Table 4.13 Summary of the mean values of the procurement management practices

Independent Variables	N	Mean	Std. Deviation	Variance
Information Technology	63	4.4286	.71198	.507
Supplier Relationship Management	63	4.2857	.88770	.788
Inventory Management	63	4.2381	.66513	.442
Information Sharing	63	3.9365	.82056	.673
Contract Management	63	3.8889	.74295	.552

Source: Research Data

Findings showed that to a large extent, all the procurement management practices had been implemented in the construction firms in Nairobi. This was indicated by positive mean values greater than 3 values whereby, information technology indicated a mean value of 4.42, information sharing indicated a mean value of 3.93, inventory management indicated a mean value of 4.2, contract management indicated a mean value of 3.88 and supplier relationship management indicated a mean value of 4.28.

These findings are related to the study carried out by Karanja and Kiarie (2015) who conducted research on Guaranty Trust Bank to indicate the effect of procurement practices on organizational performance in private industry. Their purpose was to what extent procurement practices had been adopted in the banks and to demonstrate effect of procurement practices on an organization performance in the private sector in Kenya. The study concluded that to a great extent procurement management practices had been implemented in the private industry. Mokogi, Mairura, and Ombui

(2015) surveyed the state-owned businesses in Nairobi to demonstrate the impact of procurement practices on performance. Their main objective was to establish to what extent the procurement management practices had been adopted by the state-owned businesses and the impact of procurement practices on the performance of public enterprises in Nairobi. They concluded that various enterprises employed procurement practices. The study confirmed that procurement practices had been adopted by state-owned businesses to a great extent.

4.5 Procurement Management Practices and Performance

The next objective study was to ascertain the relationship between procurement management practices and performance of construction firms in Nairobi. To accomplish this, regression analysis was used where performance was regressed against procurement management practices implemented in construction firms in Nairobi. Performance was measured by use of quality, profitability and customer satisfaction. Besides correlation was conducted to indicate the impact of the various procurement management practices and performance.

4.6 Correlation Analysis

The table below shows the relationship between the procurement management practices and performance of construction firms in Nairobi. Relationship, regression analysis and correlation analysis was carried out.

Table 4.14 Correlation analysis

Organizational Performance		Organizational Performance	Inventory management	Supplier relationship management	Information sharing	Information technology	Contract management
Organizational Performance	Pearson Correlation	1	.528	.592	.220	.667	.031
Inventory management	Pearson Correlation		1	-.300*	.022	-.094	-.141
Supplier relationship management	Pearson Correlation			1	-.217	.008	-.089
Information sharing	Pearson Correlation				1	-.262*	.010
Information technology	Pearson Correlation					1	.085
Contract management	Pearson Correlation						1

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

From the above findings, it was ascertained that procurement management practices have a positive impact on performance whereby: inventory management had a correlation of 0.528, supplier relationship management had a correlation of 0.592,

information sharing had a correlation of 0.22, information technology had a correlation of 0.667 and contract management had a correlation value of 0.031. Hence all the procurement management practices in the study affect performance in the construction firms in Nairobi.

4.7 Model Summary

The table below represents the model summary of the regression between procurement management practices and performance.

Table 4.15: Model Fitness

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
	.738 ^a	.545	.513	.31219

a. Predictors: (Constant), Information sharing, supplier relationship management, inventory management practices information technology, contract management

The findings indicated a correlation coefficient value of 0.738 /73.8% and R-value of 54.5%. From this, we can conclude that procurement management practices are a representative of 54.5% of variations in performance in construction firms in Kenya, which show this is a good model. The unexplained variance is 45.5 % which implies that factors not covered by this study are responsible for explaining the remaining variance. Besides the significance level is at 0.00 which is less than the critical value of 0.05 hence this model was statistically significant at 95% confidence level. These

findings are similar to a study carried out by Karanja (2004) where he ascertained that procurement practices have a significant effect on performance.

4.8: Analysis of Variance

The table below represents the findings that ascertain the variance of procurement practices on performance of construction firms in Nairobi.

Table 4.16 Analysis of Variance

Variation	Sum of Squares	Df	Mean Square	F	Sig.
Regression	6.760	4	1.690	17.340	.000 ^b
Residual	5.653	58	.097		
Total	12.413	62			

Source: Research Data

Analysis of variance was conducted to represent the significance of the regression model. The results in the table above indicated that the model was significant, $F(4, 58) = 17.34, P = .000$.

4.9 Unstandardized Coefficients

The table below represents the coefficients of the regression model used in determining the relationship between procurement management practices and performance of construction firms in Nairobi.

Table 4.17: Unstandardized coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	Sig.	
		B	Std. Error	Beta		T
1	(Constant)	2.157	.421		5.121	.000
	Information sharing	.104	.049	.148	1.653	.081
	Contract management	.128	.057	.212	2.248	.028
	Inventory management	.219	.060	.326	3.661	.001
	Supplier relationship management	.331	.060	.527	5.554	.000
	Information technology	.341	.058	.515	5.343	.000

Dependent: performance

Independent variables: information sharing, supplier relationship management, inventory management practices, information technology and contract management.

The findings above indicate that the various procurement management practices have a positive impact on performance. Information sharing is not statistically significant. Information technology has the highest impact indicated by 0.341 which 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 (p=0.000) test value an indication that information technology is statistically significant at 0.05 critical value since it is less than 0.05 supplier relationship management has a coefficient value of 0.331 which is an indication that an increase in the supplier relationship management by one unit, results in a related increase in performance by 0.331. Besides the p-value value attained was (p=0.00). (p= 0.001) is lower than 0.05 and hence supplier relationship management is statistically significant

indicator of performance in construction firms in Nairobi. An increase in a unit of inventory management results in an increase in performance of construction firms in Nairobi by 0.291.

The p-value associated with inventory management practices was ($p=0.001$) which is an indication that inventory management practice is statistically significant to performance since it is below the critical p-value of 0.05 at 95% confidence level. A unit increase in contract management practices results in a related increase in performance by 0.128, and the related p-value is ($p= 0.28$). This indicates that contract management is statistically significant indicator of performance in construction firms in Nairobi given that the p-value of 0.28 is lower than the critical value of 0.05 at 95% confidence level. Information sharing indicated a coefficient of determination value of 0.104 and a ($p=0.081$) an indication that a unit increase in the level of information sharing as a procurement management practice results in an increase in the level of performance by 0.104. In addition, the ($p= 0.081$) an indication that it is statistically insignificant given the p-value is greater than 0.05 as the critical value.

Based on the results of these study indicated in the table above, $Y = 2.157 + 0.104X_1 + 0.128X_2 + 0.219X_3 + 0.331X_4 + 0.341X_5$

X_1 =information sharing

X_2 =contract management practices

X_3 =information sharing

X_4 =supplier relationship management

X_5 =information technology

4.10 Challenges Facing Implementation of Procurement Management Practices

The table below explains some of the challenges faced by the construction firms in Nairobi County. To establish this, the study used descriptive statistics to indicate the extent to which the Participants agreed that various challenges indicated by the researcher to a great extent affect performance.

Table 4.18: Challenges

Challenges Faced	Mean	Std. Deviation
Lack of understanding of the procurement management practices by employees	4.6984	.46263
The organization does not have sustainable procurement	4.5714	.49885
Lack of information sharing	4.0476	.27989
Inability of the firm to handle change	4.0317	.69487
Lack of adequate funding	3.8438	.71755

Source: Research Data

The findings indicated that to large extent, the construction firms in Nairobi face a number of challenges . This is indicated by positive mean values greater than 3 on a Likert scale of 1-5 where 5 is strongly agree while 1 stands for no extent. Lack of adequate funding is to a moderate a challenge facing construction firms in Nairobi indicated by a mean value of 3.84. In addition , inability of the form to handle change is a challenge to a large extent indicated by a mean value of 4.03. Lack of adequate understanding of the practices is also a big challenge to the construction firms abdicated by a mean value of 4.69. Besides, the effect or the organization not having a sustainable procurement is indicated by a mean value of 4.57. In addition construction

firms in Nairobi to great extent are faced with the challenge of lack of information sharing indicated by a mean value of 4.047.

4.11 Discussion

This study's main purpose was to establish the extent of adoption of procurement management practices in construction firms in Nairobi and its effect on performance. The findings of the study as indicated above ascertained that to a large extent, construction firms in Nairobi have adopted procurement management practices in their operations. This was indicated as per the results whereby frothed descriptive analysis carried out on each and every variable, indicated that all the five procurement management practices had a positive mean value an indication that they had been implemented in the construction firms in Nairobi.

From the findings, information technology indicated a mean value of 4.42; information sharing indicated a mean value of 3.93, inventory management indicated a mean value of 4.2, contract management indicated a mean value of 3.88 and supplier relationship management indicated a mean value of 4.28. From these findings, it was an indication that the procurement management practices had been implemented in the construction firms in Nairobi Kenya. Due to the positive values of the mean results that was obtained from the descriptive statistics.

The next objective of the study was to establish the impact of procurement management to get this the study used correlation to indicate the effect of the various procurement, management practices and performance in construction firms in

Nairobi. From the outcome of correlation analysis done on the services against service delivery, the results indicated a positive relationship between the procurement management practices and performance of construction firms in Nairobi. Performance in this study was measured by use of profitability, quality and customer satisfaction. From the findings, it was ascertained that procurement management practices have a positive impact on performance whereby: inventory management had a correlation of 0.528, supplier relationship management had a correlation of 0.592, information sharing had a correlation of 0.22, information technology had a correlation of 0.667 and contract management had a correlation value of 0.031. Hence all the procurement management practices in their study affect performance in the construction firms in Nairobi.

The findings on the extent to which the various procurement practices had been implemented in construction firms in Nairobi indicated that most of the Participants indicated that to a large extent all the procurement management practices were adopted. Contract management had been implemented to a very large extent indicated by 54.1% of the responses. Besides information sharing was adopted by these firms as indicated by the results where 49.2 of the responses indicated that it had been implemented to a large extent as a procurement management practice. Inventory management had been implemented to a large extent indicated by a frequency of 54% of the response indicating that it had been implemented to a great extent. Supplier relationship management had been implemented to a great extent.

Besides the regression analysis was carried out where the various procurement management practices were regressed against performance. The regression analysis established that 54.5% of the performance of construction firms in Nairobi is affected by contract management, information sharing, information technology, supplier relationship management. This indicated that the procurement 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.

The third objective was to identify the various challenges that face construction firms in Nairobi in implementing the procurement management practices. The findings indicated that lack of adequate funding, resistance to change, lack of an understanding of procurement management practices, and inadequate information sharing are the major challenges that affect the various construction firms in Nairobi. The study matched with a study carried out by Chong (2008) whereby he proved that implementation of procurement management practices has positive impact on performance. Mokogo (2015) established that implementation of procurement management practices in state-owned enterprises in Nairobi County.

CHAPTER FIVE

SUMMARY, CONCLUSION, AND RECOMMENDATIONS

5.1 Introduction

This section goes further to discuss the various limitations of the study as well as summary and recommendations. The study objectives was to ascertain the extent to which the procurement management practices had been implemented in construction firms in Nairobi, to relay the relationship between procurement management practices and performance of construction firms in Nairobi, challenges faced by construction firms in Nairobi in the adoption of procurement management practices

5.2 Summary

A total of eighty-four questionnaires were administered to Participants who were the procurement managers in the construction firms to provide information on procurement management practices. Out of eighty-four questionnaires that were administered, sixty-three were completed an indication of a seventy-six percent response rate. The questions asked addressed the research objectives. Questionnaires gathered were coded and analysis done through SPSS. Correlation, descriptive, and regression analysis was used to do data analysis to meet the three objectives study.

The demographic information indicated that most of the Participants indicated by fifty-five percent were male and forty-four of the Participants were female. An indication that construction firms in Nairobi had equality in offering employment to their staff in that both male and female are employed in procurement departments. Besides, the study further established, fifty five percent of the Participants were

degree holder, twenty eight percent of the Participants had master's education level, and fifteen of the Participants had college education. An indication that most of the Participants had adverse education that enabled them to effectively carry out their duties and they had knowledge on the data sought on procurement management practices in Nairobi. In relation to the experience of the Participants indicated that more than fifty percent of the Participants had five to ten years. These results indicated that the study could be well carried out based on the fact that most of the Participants had adequate experience and hence understood the various procurement management practices in construction firms in Nairobi.

The main intent study was to establish the level of procurement management practices implementation in construction firms in Nairobi. Besides the other objective was to ascertain the impact of procurement management practices on service delivery of construction firms in Nairobi. Findings of the study established that construction firms in Nairobi had adopted procurement management practices to a large extent which were information technology, information sharing, contract management, inventory management practices and supplier relationship management. This was indicated by a positive mean value for procurement management practices. Besides the results of descriptive results indicated that to a large extent, procurement management practices had been implemented in construction firms in Nairobi indicated by positive mean value above 3.0. Besides the results from the Participants showed that to a large extent, all the procurement management practices had been implemented in construction firms in Nairobi to a greatly marked by over fifty percent of the Participants indicating that it had been implemented to a greatly in these firms.

The second objective of research was to determine the impact of procurement management practices on performance of construction firms in Nairobi. The results ascertained that procurement management practices had a positive impact on performance. This was marked by a +ve correlation of the procurement management practices and customer satisfaction, quality, and profitability. Besides the regression analysis findings indicated that a substantial; fifty-six percent of the independent variable which was performance well explained by the procurement management practices implemented in construction firms in Nairobi which were: information sharing, information technology, supplier relationship management, and contract management and inventory management practices.

The third objective of the research looked at challenges affecting construction firms in their adoption of procurement management practices in construction firms in Nairobi. The results indicated that to great extent the Participants agreed that the various challenges indicated were facing construction firms in Nairobi. They agreed that lack of adequate funding, resistance to change, lack of an understanding of procurement management practices, and inadequate information sharing are the major challenges that affect the various construction firms in Nairobi.

5.3 Conclusion

In conclusion, the research sought to establish the level with which procurement management had been implemented in the construction firms in Nairobi, its relation to performance and the challenges faced in the implementation of these practices. The

findings indicated that to a large extent, all the procurement management practices had been implemented in the construction firms in Nairobi as per the indicated 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 Participants agreed largely, the various procurement management practices had been implemented in the construction firms where over fifty of the Participants marked that they had been implemented greatly.

The findings from the regression analysis indicated that procurement management practices to a moderate extent have effect on performance in the construction firms in Nairobi. The results of the study ascertained a positive correlation between the various procurement management practices and performance of construction firms in Nairobi. The value of coefficient of Multiple Determination (R^2) of fifty-four percent implied that the changes in the level of performance of the construction firms in Nairobi is attributed to by the various procurement management practices. In addition to that the p-value indicated a 0.000 value which was an indication that the various procurement management practices implemented at construction firms in Nairobi are statistically significant based on the fact that the value is less than the 0.05 level at 95% confidence level. The study sought to identify challenges facing implementation of procurement management practices in Nairobi Kenya. The study also ascertained that to a great extent the construction firms in Nairobi are faced with a number of challenges in the implementation of procurement management practices. The research proved that to a great extent, lack of adequate funding, resistance to change, lack of an

understanding of procurement management practices, and inadequate information sharing are the major challenges that affect the various construction firms in Nairobi.

5.4 Recommendations to Policy and Practice

From this study findings, it was established that most of the construction firms in Nairobi had implemented procurement management practices. However a few have not implemented the various procurement management practices, there is a need for the management to incorporate the practices into their system in order to improve their performance and competitiveness.

A substantial number of procurement 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 all other industries to increase investment in current procurement management and improvement to build their core competencies. Based on the third objective of the study on the various challenges affecting the construction firms in Nairobi, the study ascertained that there is a need for adequate training on the importance of these practices in a firm. Besides the top management needs to lead from the top in ensuring that there are adequate resources in the facilitating the implementation of procurement management practices in firms.

5.5 Limitations of the Study

The research aimed to establish the extent of implementation of procurement management practices in construction firms in Nairobi. Relationship of practices and performance was the main reason for conducting the study.

Due to the fact that the period of doing research was limited the researcher was under a lot of pressure to collect data. This proved to be a big hindrance as the researcher had to ensure that the process was not blocked.

The study was narrowly focused on the construction firms in Nairobi, and hence the results could not be generalized to a wider population area like for example, the whole Kenyan country. Besides some of the Participants did not accept the questionnaires thus making it a challenge to carry out the study effectively. However irrespective of the challenges faced the outcome was not compromised.

5.6 Suggestions for further Research

The research aimed to determine the level to which procurement management practices had been implemented in construction firms in Nairobi. Despite the fact the objectives of the study were obtained, the study recommends that this was a cross-sectional study of construction firms in Nairobi only. Further research needs to be done on other firms other than construction firms, a study to be done on construction firms in Kenya in general rather than in Nairobi alone.

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APPENDICES

APPENDIX I: INTRODUCTION LETTER

Winfred Mwendu Munene,
P.O Box 42281-00100,
Nairobi-Kenya.
Date: July 28, 2017

Dear Respondent,

**RE: REQUEST FOR DATA COLLECTION FOR COMPLETION OF AN
MBA DEGREE.**

I am an MBA student pursuing a Master's Degree school of business at the University of Nairobi and doing a research on **PROCUREMENT MANAGEMENT PRACTICES AND PERFORMANCE OF CONSTRUCTION FIRMS IN NAIROBI COUNTY.**

Random selection has been done for you to be able to engage in this research through your responses. The questionnaire requires you to fill in accurately and with integrity. Your answers will be confidential and employed only in this study.

God bless you for participating.

Yours Sincerely,

Winfred Mwendu Munene.

APPENDIX II
RESEARCH QUESTIONNAIRE

Introduction

The following questionnaire is formed to collect information on the impact of procurement management practices on performance of construction firms in Kenya. Confidentiality will be strictly adhered to and the information gathered will be for academic purposes only. Please answer the questions by brief statement or ticking the boxes provided as will be applicable.

Instructions: Please tick your responses appropriately.

Confidentiality: Answers provided will be strictly confidential and won't be used for other reasons apart from research.

PART A: BIO-DATA.

1. State the name of your company.....?

2. Gender

Male { } **Female** { }

3. In which education level do you belong?

Master's { } **Undergraduate** { } **College** { } **other** { }

4. What period have you worked for this firm in years?

0-5 **5-10** **over 10**

PART B: Procurement Practices employed by your organization

What's the measure of employment of the following practices with roman V being the largest extent

	i	ii	iii	iv	v
Supplier Relationship Management					
Monitoring materials and suppliers					
Information flow between organization and suppliers					
Suppliers are included in continuous improvement programs					
Main suppliers are part of planning and objective setting					
Inventory Management Practices					
Practicing just in time					
Minimizing stock to save costs					
Maintaining inventory only for long lead time					
Information Sharing					
Existence of feedback loops					
Informing suppliers in advance about changing needs					
Sharing core objectives within the organization					
Information Technology					
IT system is automated within the procurement unit					
Intranet and extranet is used in the procurement operations					
Electronic Data Interchange is used to manage procurement practices					
Contract Management					
Negotiations are conducted to determine the final contract					
Both parties hold their end of the agreements					
Day to day procurement activities follow the sections of the contract					

SECTION C: ORGANISATIONAL PERFORMANCE

How far would you agree to the statements below with roman V being the highest agreement condition?

PROCUREMENT MANAGEMENT PRACTICES & PERFORMANCE	i	ii	iii	iv	v
Quality Aspects					
Quality management plan exists in your firm					
There is the issue of material inspection before receiving materials					
Work in process is inspected over time					
Work rejection from clients is limited					
Profitability Aspects					
Number of investments increases over time					
The construction expense and cost is limited					
Revenue increases over time					
Return on value added is high					
Customer Satisfaction Aspects					
Projects are completed within the stipulated time					
Number of clients complaints has reduced over time					
There is evidence of customer loyalty in terms of repeat business					
Involving customers in demand forecasting and product development					
Customer and supplies feedback is obtained on services adequacy through customer and supplier management systems					

**SECTION D: CHALLENGES FACED IN THE IMPLEMENTATION OF
PROCUREMENT PRACTICES**

State the challenges faced when implementing the practices with roman V being a very high extent.

Statement	i	ii	iii	iv	v
Lack of adequate funding					
Inability of the organization to handle change					
The procurement management practices are not understood by the employees					
The organization does not have a sustainable procurement policy					
Lack of information sharing					

END-THANK YOU

APPENDIX III

LIST OF CONSTRUCTION FIRMS IN NAIROBI.

1. Forest House (k) Contractor Limited
2. Milface General Supplies Limited
3. Nanchang Foreign Engineering Company (k) Ltd
4. Bomco Building Contractors Ltd.
5. Castle Engineering and Construction Company Ltd.
6. Crescent Construction Company.
7. D. Manji Construction Ltd.
8. Don-Woods Company Ltd
9. Jaswant Singh and Brothers Ltd.
10. Jipsy Civil and Building Contractors Limited
11. Kariuki Construction Company.
12. LaljiMeghji Patel and Company Ltd.
13. Laxmanbhai Construction Ltd.
14. Masosa Construction Ltd.
15. N. K. Brothers limited.
16. Northern Construction Company Ltd
17. Ongata Works Ltd.
18. Seyani Brothers and Company (k) Limited
19. Sinohydro Corporation Ltd.
20. Twiga Construction Company.
21. Vakkep Building Contractors Limited
22. Victory Construction Company Ltd.
23. Dinesh Construction Ltd
24. Njuca Consolidated Co. Ltd
25. Italbuild Imports Limited
26. China Jiangxi International (K) Limited
27. Ray Engineering and Construction International Ltd
28. Portco Construction(Africa)
29. Centurion Engineers and Builders Ltd.
30. Nyoro Construction Company Ltd
31. China Zhongxing Construction Company Ltd
32. Atlas Plumbers and Builders(K) Limited
33. Afcons Africa Limited.
34. Lemna International Inc
35. Coastal Kenya Enterprises.
36. Columbia Developers (K) Ltd.
37. Dickways Construction.
38. Faburex Construction.
39. Kaguanjai Builders.
40. Spion Construction Company
41. Tulsi Construction Limited
42. Vinayak Builders Ltd.
43. Team Construction Limited
44. Ace Builders Limited
45. Mile-ed Enterprises and Company Ltd
46. C.M. Construction (E.A) Limited

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|--|---------|--|
| 48. H.K.Buildersand
Contractors Ltd. | General | 74. Wil Developers and Construction
Ltd |
| 49. Kanti Construction Limited | | 75. Geokarma Construction Ltd |
| 50. Seo And sons Limited | | 76. Vinbel International Limited |
| 51. Kitho Civil and Engineering
Contractors | | 77. Mick Builders and Civil Engineering
Contractors |
| 52. Kenya Builders and Concrete
Company Limited | | 78. Lee Construction Ltd. |
| 53. Thwama Building Services Ltd | | 79. Polical International Company |
| 54. Buildmore Construction Company
Ltd. | | 80. Cowford General Contractors
Limited |
| 55. Citizen Plaza Building Constructions
Ltd. | | 81. Sivad Construction Ltd. |
| 56. Kalz Mann and Company. | | 82. Jedy General Contractors. |
| 57. Laton Engineering Limited | | 83. Beta Engineering Company Ltd |
| 58. Icall Projects (A) Limited | | 84. Billdock Enterprises and Contractors |
| 59. Rajwa Company limited | | |
| 60. Marimo Construction Limited | | |
| 61. Bi-Mach Engineers Ltd. | | |
| 62. Nicona Construction Company | | |
| 63. Bill Engineering Works Ltd | | |
| 64. Biltony General Contractors Ltd. | | |
| 65. GracanConstructio Company | | |
| 66. Gravity Contractors Ltd. | | |
| 67. D.M. Mwamba Construction
Company Ltd | | |
| 68. Pyramid Construction Ltd. | | |
| 69. Richardson Company Limited | | |
| 70. Sacci Civil Engineering Works Ltd | | |
| 71. Sim Building Contractors Limited | | |
| 72. Solstice Construction Co. Ltd | | |
| 73. Concept Construction Company | | |

SOURCE: Ministry of Public Works (2017)

