

**SUPPLIER SELECTION PRACTICES AND PROCUREMENT
PERFORMANCE IN NAIROBI CITY COUNTY**

BY

VIOLET AKINYI ODHIAMBO

**A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE
OF MASTER OF BUSINESS ADMINISTRATION,
UNIVERSITY OF NAIROBI**

November, 2015

DECLARATION

I declare that this research project is my original work and has never been submitted to any other University for assessment or award of a degree.

Signature.....Date.....

VIOLET AKINYI ODHIAMBO

D61/60597/2013

This project has been submitted with my authority as the university supervisor.

Signature..... Date.....

ERNEST AKELO

DEDICATION

To you, my beloved Parents; Dave Odhiambo and Margaret Odhiambo, parents in law:
Mr. Sam Konditi and Dr. Jane Konditi, my daughter; Susan, my brothers and sisters for
cheering me on and offering your monetary support.

ACKNOWLEDGEMENT

Nothing comes easy. Many are better than one. I am grateful to my supervisor, Mr. Ernest Akelo, for he's guided advice through the journey. I am also grateful to the management, lecturers and other members of staff of University of Nairobi for their unwavering support.

Finally, my class-mates and all those who participated in one way or the other towards the successful completion of this project, I salute you all.

ABSTRACT

Supplier selection has become one of the elementary roles of supply chain managers since it virtually affects an organization's competitiveness. A huge chunk of the organization's capital resources is spent on inventory hence it suffices to say; supply chain managers are expected to contract with suppliers who provide value for their money. Given the advent of long term supplier relationships that are viewed as business partnerships, it is also paramount to select suppliers who match the organization's managerial alignment as they contribute to the overall performance of an organization. The dynamic rise in market volatility, dynamism and sophistication, has made managers quickly realize that regardless of their firms' strength or product brand in the market they cannot succeed unless they partner up with quality suppliers whose ultimate focus is to fulfill the customer's needs. This study discusses the supplier selection criteria, Principles of supplier selection plus the relationship between supplier selection and procurement performance. The research adopted a descriptive survey design to find out the criteria used by Nairobi County to select suppliers. A sample size of 150 respondents was drawn from a list of 500 respondents. Data was collected from the field through use of questionnaires and then analyzed using SPSS and Excel and presented in tables and figures. The primary data was collected through use of questionnaires. A five Point Likert scale that measures the level of agreement or disagreement with selection criteria was adopted. The study revealed that majority of the respondents was in agreement with the selection criteria adopted at Nairobi County. The study also revealed that among the numerous criteria adopted, cost was the most important. Additionally, the findings also revealed that there was a significant relationship between supplier selection criteria and procurement performance as the independent variables: quality assessment, service levels, organizational and supplier profile, as well as cost, were statistically significant at the 95% confidence i.e. $p\text{-value} < 0.05$. Based on the findings the study recommends that policy makers, need to pay closer attention to technological capacity of suppliers as a selection criterion which registered the lowest mean of 2.08 compared to other selection criteria. The role of technology in improvement of procurement performance helps in providing real time information and reducing lead time.

TABLE OF CONTENT

DECLARATION.....	II
DEDICATION.....	111
ACKNOWLEDGEMENT.....	IV
ABSTRACT.....	V
LIST OF TABLES.....	VI
LIST OF FIGURES	VII
ABBREVIATIONS AND ACRONYMS.....	VIII
CHAPTER ONE: INTRODUCTION.....	1
1.1 Background of the Study.....	1
1.1.1 Supplier Selection Criteria.....	2
1.1.2 Procurement Performance.....	3
1.1.3 Nairobi City County.....	4
1.2 Statement of the Problem.....	5
1.3 Objectives.....	7
1.4 Value of the Study.....	7
CHAPTER TWO: LITERATURE REVIEW.....	9
2.1 Introduction.....	9
2.2 Theoretical Foundation.....	9
2.2.1 Technology Diffusion Theory.....	9
2.2.2 Internal Control Theory.....	10
2.2.3 Human Capital Theory.....	10
2.2.4 Stakeholder Theory.....	11
2.3 Empirical Review.....	11
2.3.1 Principles of supplier Selection Process.....	11
2.4 Supplier Selection Criteria.....	14
2.5 Procurement Performance Measurement.....	16
2.6 The Conceptual Framework.....	17

CHAPTER THREE: RESEARCH METHODOLOGY.....	19
3.1 Introduction	19
3.2 Research Design.....	19
3.3 Population of the Study.....	19
3.4 Sampling Design	19
3.5 Data Collection.....	20
3.6 Data Analysis.....	20
CHAPTER FOUR: DATA ANALYSIS, FINDINGS AND DISCUSSIONS...	24
4.2 Response Rate.....	24
4.3 Demographic Information.....	25
4.4 Supplier Selection.....	28
4.5 Principles of Supplier Selection.....	30
4.6 Supplier Selection Criteria.....	34
4.7 Relationship between Supplier Selection and Procurement Performance.....	35
CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS	38
5.1 Introduction.....	38
5.2 Summary	38
5.3 Conclusion.....	39
5.4 Recommendations.....	40
5.5 Suggestions for Further Research.....	41
REFERENCES.....	42
APPENDIX I: Research Questionnaire	54

LIST OF TABLES

Table 4.1 County Departments.....	26
Table 4.2 Frequency of County Departments.....	26
Table 4.3 Supplier Selection levels.....	29
Table 4.4 Importance of Supplier Selection.....	29
Table 4.5 Players in supplier selection process.....	30
Table 4.6 Supplier Selection Principles.....	31
Table 4.7 Honesty and Accountability	36
Table 4.8 Code of Ethics.....	36
Table 4.9 Supplier Selection Criteria.....	37
Table 4.10 Regression Model Summary.....	39
Table 4.11 Analysis of Variance in Regression Model.....	40
Table 4.12 Supplier Selection Coefficients.....	41

LIST OF FIGURES

Figure 2.1 Conceptual Framework.....	18
Figure 3.1 Sample Size.....	20
Figure 4.1 Gender Respondents.....	25
Figure 4.2 Respondents Designation.....	26
Figure 4.3 Education Level.....	27
Figure 4.4 Resource Allocation.....	30
Figure 4.5 Selection is Competitive and Fair.....	31
Figure 4.6 Value for Money.....	32
Figure 4.7 Transparency in Supplier Selection.....	32

ABBREVIATIONS AND ACRONYMS

PPDA	Public Procurement Disposable Act
PPOA	Public Procurement Oversight Authority
NCC	Nairobi City County
EACC	Ethics and Anti-Corruption Commission
PDEs	Procurement and Disposal Entities
EDI	Electronic Data Interchange
RFID	Radio Frequency Identification
E.O.I	Expression of Interest
ISO	International Organization for Standardization
CIPS	Chartered Institute of Procurement & Supply

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Supplier selection, a sub function of procurement, has become one of the elementary roles of procurement managers since it virtually affects an organization's competitiveness. The Kenyan economy was and still is experiencing growth with the public and private sectors being engaged in numerous development projects amid expected socioeconomic and governance impacts due to Vision 2030 which on its own, has enlisted over 120 flagship projects in order to put the country in a new socio-economic and political pedestal. However, it is vital to note that despite this growth, a huge chunk of Kenya's public sector which includes County Governments is marred with spending staggering millions of tax payers' money on purchase of goods and services albeit having pitiable service delivery. Hence it suffices to say; procurement managers are expected to contract with suppliers who provide value for their money.

According to KIPPRA (2006) sound public procurement policies and practices are among the essential elements of good governance and accountability. Otieno (2004) notes that irregular procurement activities like poor supplier selection criteria and procedures in public institutions provide the biggest loophole through which public resources are misappropriated. Kipchilat (2006) quoting a Comesa report (2004) noted that procurement absorbs 60% of government expenditure. This therefore means that supplier selection process needs to be taken very seriously if at all stakeholders are to derive value for their money.

Public Procurement Reforms have occupied a centre stage in broad public sector reforms in Africa since the late 1990s (Ogot et al., 2009). The pressures to cut costs in public sector operations, the increased demand for accountability and transparency from the tax payers, the increased link between public procurement; trade and investment and the overall desire for efficiency among others combined to generate a renewed interest in the area of public procurement which inter twines with supplier selection. Hunja (2001) notes that in the previous years, many developing countries did not see public procurement as having a strategic importance in the management of public resources. It was largely treated as a process oriented ‘back office’ support function undertaken by non professional staff of the buying agency. However, this has been changing recently in the face of shrinking budgets, the need to fight corruption and the realization that significant savings can be gained by a well organized procurement system.

1.1.1 Supplier Selection

Supplier Selection basically involves scanning, analyzing, examining and filtering the basic background and bio data of suppliers within the market with the aim of choosing the best one that will propel the performance of the organization to a better direction (Stormy, 2005). The dynamic business environment owing to technological advancements and sophisticated market demands has forced procuring entities to earnestly source for new suppliers who will meet their business needs hence; the importance of supplier selection under the purchasing function cannot be stressed enough.

In practice, the organizational buyer has to identify the important vendor performance attributes he/she must have in order to qualify as a supplier. Much as the choice of a particular vendor over another is largely a function of numerous determinants as each and

every organization has its own set of criterion they adhere to (Ogot et al., 2009), it cannot be denied that the procurement manager's key role is to choose a vendor who will ultimately enhance the organizations performance (Otieno, 2004). Garfamy (2005) indicates that the criterion for choosing suppliers is determined by such variables like: the buyers own characteristics, interpersonal attributes of other organizational members, environmental factors like business constraints and price. Therefore, in order to keep the promises to stakeholders an effective supplier selection system becomes necessary beside the improved production methods and technology.

While firms differ in the specific determinants of selecting suppliers, certain trends can be observed. Quantifiable criteria like price, delivery and quality are routinely used for supplier selection. In addition, 'soft'- difficult to quantify factors such as compatibility and strategic direction of the supplier have also proven to be important (Krause et al., 2000). Hence, there is a general agreement that Supplier Selection ought to contribute to the procurement performance of a firm regardless of the overall selection criteria (Harju, 2010).

1.1.2 Procurement Performance

Kariuki (2013) quoting Chitkara (2005) describes performance as the degree of achievement of a certain undertaking. It relates to the prearranged goals or objectives which form the task parameters. Mutava (2012) asserts that the performance of Kenya's public procurement is highly dependent on the efficacy and efficiency of the tendering procedures. The essence of performance is the creation of value. So long as the value created by the use of the contributed assets is equal to or greater than the value expected by those contributing the assets, the assets will continue to be made available to the

organization and the organization will continue to exist. Therefore, value creation, as defined by the resource provider, is the essential overall performance criteria for any organization (Carton 2004).

Chimwani *et al.* (2014) quoting Smith and Conway (1993) observe that there are eight key success factors which influence procurement performance namely; a clear procurement strategy, effective management information and control systems, development of expertise, a role in corporate management, an entrepreneurial and proactive approach, co-ordination and focused efforts. An eighth is fundamental; communicate the key success factors to all levels of the organization and set out a procurement strategy to achieve continuous improvement in value for money. This should be based on total cost, quality, and enhancement of competitiveness of suppliers using best procurement practice.

According to Basheka (2008) procurement performance is an outcome of the effectiveness and efficiency of policies and procedures adopted by the firm during supplier selection. Leenders and Fearon (2002) observe that decisions to buy instead of make so as to improve quality, lower inventories, integrate supplier and buyer systems, and create co-operative relations underline need for good supplier performance. Performance provides the foundation for an organization to gauge how well it is rolling towards its predetermined objectives, identifies areas of improvement and decides on potential initiatives with the goal of how to initiate performance improvements. Van Weele (2006) and Ogubala *et al.* (2014) concur that there is a link between procurement process, efficiency, effectiveness and performance. Procurement performance starts from purchasing efficiency and effectiveness in the procurement function in order to change from being reactive to being proactive to attain set performance levels in an entity.

With that said Lardenoije, Van Raaij and Van Weele (2005) assert that basing on financial performance and neglecting non-financial performance cannot improve the procurement operations because only partial performance is considered. They continue to add that procurement performance is an interaction between various elements; professionalism, staffing levels and budget resources. Organizations which do not have performance means in their processes, procedures and plans experience lower performance, higher customer dissatisfaction and employee turnover.

1.1.3 Nairobi City County

Nairobi City County was founded in 2013 on the same boundaries as Nairobi Province, after Kenya's 8 provinces were subdivided into 47 counties. It is one of County governments envisioned by the 2010 Constitution of Kenya as the units of devolved government. It is governed by the County Government of Nairobi, under the leadership of the governor. The county is composed of 17 Parliamentary constituencies (NCC, 2013). The promulgation of the 2010 Kenyan Constitution paved way for the enactment of the devolved system of governance that birthed the genesis of County Governments that co-exist with the National Government. This system was meant to decentralize authority by bringing power to the people and promote self governance through effective capacity building. In essence the whole idea was to address the challenges of poor service delivery, unaccountability and lack of transparency in public procurement.

The City of Nairobi, Kenya's capital is located at an altitude of 1795m and derives its name from a Maasai phrase Enkare Nyirobi meaning "the place of cool water". Originally founded on empty swampland in 1899, it is now a major diplomatic, commercial and culture centre that is home to many international organizations. According to the 2009

Census in the administrative area of Nairobi 3,138,295 inhabitants live within 696 km² (269 sq mi). Nairobi is currently the 12th largest City in Africa including the population of its suburbs. Due to Nairobi County's huge population it got an allocation of Sh15.1 billion given to the County governments (Odhiambo & Kamau, 2003).

Recent reports in the media show that effective and efficient governance has been a point of concern in County Governments. The demand for faster response and better service delivery to citizens has been at an all time high given the staggering millions of tax payers' money used in the purchase of goods, services and contract works within this sector. According to Ethics and Anti-Corruption Commission (EACC), 2010, Kenya loses Kshs. 200 Billion annually, as a result of flaws in public procurement processes.

Operationalization of the Public Procurement and Disposal Act, 2005 and its attendant regulations of 2006 in 2007, set a legal framework that enabled the finance minister to make and gazette the Public Procurement and Disposal (County Governments) Regulations, 2013 through a Legal Notice No. 60 whose sole intention was to operationalize the application of the Procurement Act, 2005 in Nairobi city county so as to promote local industry and support socio-economic development in the Counties. The Regulation requires Nairobi city county to appoint a tender committee consisting of The Chairperson, Deputy Chairperson, 5 chief officers (head of departments) appointed by chief county secretary and the County Secretary who is a procurement Professional heading the Procurement unit of the County Government (PPOA, 2012).

1.2 Research Problem

Beil and Ross (2009) argue that poor supplier selection criteria can cost the firm millions of loses due to recalls, warranty costs, and associated inventory adjustments, and have inflicted untold damage on their reputations and future sales potential. To avoid such dire consequences, it is paramount to have effective screening processes that help to identify top notch suppliers before awarding of contracts. Stormy (2005) argues that from the onset it is important to note that the background and traditions of the supplier are assessed and blend with the clients “three Ps” — personnel, policies and procedures — otherwise if the supplier firm and the client don’t walk and talk the same language, the relationship is destined for failure.

Odhiambo and Kamau (2011) noted that Compliance levels in procurement were low in public entities in Kenya compared to South Africa despite efforts by the PPOA to put in place measures to improve compliance. Eyaa and Oluka (2011) quoting the Public Procurement Disposal Act (PPDA) Capacity Building Strategy Report (2011-2014) revealed that the overall compliance areas where both National and Local Government as well as Procurement and Disposal Entities (PDEs) in developing countries scored lowest were in record keeping, contract award and contract management thus negatively impacting on procurement performance.

Furthermore, Mutava (2012) observed that despite landmark reforms following the enactment of the PPDA 2005 whose objective among others was to promote competition and to ensure that competitors are treated fairly, recent reports have established that procurement malpractices during supplier selection like overpricing (buying at inflated prices), unstructured authorization of expenditure levels and lack of fairness and

transparency amongst bidders are still rampant leaving the masses decrying poor service delivery. Kariuki (2013) asserts that the obligation for invitation to tender requires procuring entities to uphold transparency of the procedures used in awarding contracts however, supplier canvassing, favoritism and corruption is rampant in Kenya's public procurement (Anyona, 2011).

Ntayi (2009) observes that millions of dollars gets wasted due to inefficient and ineffective procurement structures, policies and procedures as well as failure to impose sanctions for violation of procurement rules thus resulting in poor service delivery. Interestingly, most empirical studies in Kenya vaguely mention supplier selection criteria as a sub function of procurement procedures but don't discuss it into massive detail.

Ngugi and Mugo (2007) in their study on internal factors affecting procurement process of supplies in the public sector found that high amounts of discretion without adequate controls can create opportunities for corruption. Eyaa and Oluca (2011) in their study on explaining non-compliance in public procurement in Uganda found that public entities should work together to improve on the familiarity of staff with public procurement procedures so as to enhance procurement performance.

Notably, the findings did not mention how suppliers of public entities can enhance procurement performance in counties. Also, local studies have not focused on the impact of supplier selection criteria in enhancing procurement performance in county governments. It is against this background that the study seeks to examine how supplier selection criteria will improve procurement performance within Nairobi City County by

answering the following key questions: What is the criteria for selecting suppliers? What is the relationship between supplier selection criteria and procurement performance?

1.2 Research Objectives

The main objective of the study was to ascertain the link supplier selection has on procurement performance in Nairobi County

The research sought to achieve the following specific objectives:

- i. To determine supplier selection criteria used by Nairobi County
- ii. To determine the core principles used in supplier selection by Nairobi County
- iii. To establish the relationship between supplier selection criteria and procurement performance at Nairobi City County.

1.3 Value of the Study

While this study may be of value to any person interested in delivering goods/services to the Kenyan Counties, it is hoped that the study will specifically benefit:

The Government and the policy makers stand to benefit from the findings of the study as they will gain more insight on determinants/ factors to consider while sourcing for suppliers of goods, services and contract works. Also, the study will be of significance to citizens of county governments in the sense that service delivery and self sustainability will be greatly improved hence validating the taxes paid to government.

Moreover, the study is expected to contribute to the existing literature in the field of procurement and more specifically on supplier selection processes and criterion. Other researchers and institutions may follow the areas recommended for further research as a means of increasing knowledge on link between supplier selection criteria and public

sector performance. The study will educate the existing and potential suppliers on selection criteria and the crucial role they play on the success/failure of public sector performance. Quality goods, reasonable prices, timely deliveries among others add on public sector performance.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter reviewed some of the studies that have been conducted in the area of Supplier Selection and Procurement Performance. It sought to discuss: Theoretical review, Supplier Selection Process, Criteria for Supplier Selection, Procurement Performance measures as well as the conceptual framework.

2.2 Theoretical Foundation

This section comprises review of theories that are relevant to the study and inform the theoretical background of the study.

2.2.1 Technology Diffusion Theory

Technology Diffusion Theory is the common lens through which theorists study the adoption and development of new ideas. Diffusion is defined basically as the process by which an innovation is adopted and gains acceptance by individuals or members of a community.

Rogers (1955) also came up with the perceived attributes theory that assumes that innovation bears the following characteristics: 1) Relative advantage: degree in which an advantage is perceived as better than the idea it supersedes. 2) Compatibility: degree that an innovation is seen to be consistent with existing values and norms. 3) Complexity: the degree in which an innovation is seen to be difficult or easy to understand and use. 4) Trial ability: is the degree in which an innovation may be experienced on a limited basis. 5) Observability: the degree to which the results of innovation are visible to others. The easier it is for individuals to see results of an innovation, the more likely they are to adopt

it (Rogers, 1955). Although the process is not limited to these perceived attributes, the elements are helpful in formulating questions for potential adopters in better understanding what factors make adoption possible or desirable.

This theory is relevant to the study because one element depends on another to be effective hence for effective procurement performance the organization needs to adopt competitive supplier selection criteria in a bid to sustain performance of the procurement department.

2.2.2 Internal Control Theory

Internal control is a process executed by the relevant authorities within an organization to ensure effectiveness in such areas like proper financial reporting, efficient operations, quality control as well as compliance with applicable laws and regulations. It is the first line of defense that aims at guarding against scams and detecting errors. A strong system will not only ensure that the goals and objectives of the organization are met but will also assist in elevating its image.

The necessity of control is not a new variable in business environment; Arad et al (2009) argues that the emergence and development of logical thoughts in recent decade required a new attention to control over business wealth with the hot topic being analyzing the cost-benefit of each control. Thus internal control helps managers achieve desired results through effective stewardship of resources.

The theory is relevant to the study because it outlines the internal control policies, procedures and rules to be followed in the procurement department.

2.2.3 Human Capital Theory

Human Capital theory was proposed by Schultz (1961) and developed extensively by Becker (1964). Schultz (1961) in an article entitled “Investment in Human Capital” introduces his theory of Human Capital by arguing that both knowledge and skill are a form of capital, and that this capital is a product of deliberate organizational growth. The concept of human capital implies an investment in people through education and training. Schultz compares the acquisition of knowledge and skills to acquiring the means of production.

The difference in earnings between people relates to the differences in access to education and health. Schultz argues that investment in education and training leads to an increase in human productivity, which in turn leads to a positive rate of return and hence of growth of businesses as well as achievement of organizational objectives. In this theory people are regarded as assets and stresses that investments by organizations in people will generate worthwhile returns. Previous empirical research have emphasized that human capital is one of the key factor in explaining achievement of organizational objectives (Emiliani, 2006) This kind of specific human capital also includes general knowledge on firm administration, specific knowledge relating to procurement and supply as well as technical knowledge relating to products and processes of business (Lyson & Brewer, 2003)

The human capital theory is relevant to the study because it guides decision maker on the importance of training and development of the staff so that they have knowledge of the important criteria and assessment tools to use during supplier selection if at all procurement performance is to improve.

2.2.4 Stakeholder Theory

Stakeholder theory is a theory of organizational management and business ethics that addresses morals and values in managing an organization. It was originally detailed by Freeman (1984) and identifies and models the groups which are stakeholders of a corporation and both describes and recommends methods by which management can give due regard to the interests of those groups. In short, it attempts to address the “Principle of Who or What Really Counts”.

In the traditional view of the firm, the stakeholders of a company are the owners of the company, and the firm has a binding fiduciary to put their needs first, to increase value for them. However, stakeholder theory argues that there are other parties involved, including governmental bodies, political groups, trade associations, trade unions, communities, financiers, suppliers, employees, and customers. Sometimes even competitors are counted as stakeholders -their status being derived from their capacity to affect the firm and its other morally legitimate stakeholders (Gesteland, 2005).

This theory is relevant to the study because one stakeholder who is the County Government delegates work to its employees to ensure that the selected suppliers work in the best interest of the general public and supply goods which create value for money.

2.3 Empirical Review

This study also looked at various empirical studies in the area of supplier selection process, criteria and procurement performance as discussed below.

2.3.1 Principles of Supplier Selection Process

The dynamic business environment has transformed the Supplier Selection Process from the traditional technical and operational function to a more strategic role hence the technical team that evaluates and selects the supplier ought to cut across various organizational functions like Accounting, Operations, Procurement, Marketing, IT, if at all the firms competitiveness is to be enhanced. The ultimate choice on the selected supplier should not merely consider the price of say goods and services but also incorporate the Total Costs involved.

Competitive selection initiatives if adopted can help in achieving efficiency and effectiveness in procurement thereby increasing its performance (Demio, Moore & Badolato, 2002). Lysons & Farrington (2006) and Morllachi *et al* (2001) concur that the selection process typically involves the following phases namely: identify or re-evaluate needs; define or evaluate users' requirements; decide to make or buy; identify type of purchase; conduct market analysis; identify possible suppliers; pre screen possible suppliers; evaluate the remaining supplier base; choose supplier; deliver product/service; post purchase/ make performance evaluation. These stages have great similarity with the selection procedure at Nairobi City County.

Munyua (2012) observes that in order for selection to work as an advantage to an organization, there is the use of competitive sourcing initiatives which include: tenders, bidding, supplier analysis, and supplier firm collaboration. These initiatives works best at ensuring the best supplier is selected which in return help improve the supply chain performance.

It is important however to note that supplier selection practices need to take into account crucial principles if at all the organization is to derive improved procurement performance from this exercise. Ogot et al (2008) observe that the principles of transparency, accountability as well as value for money need to be greatly considered. Farrington (2006) and CIPS (2005) also add that honesty, fair competition and general observation of ethical standards go a long way in affecting the organizations overall supply chain performance.

2.4 Criteria for Supplier Selection

There seems to be an overwhelming consensus all through the empirical studies on the qualitative determinants that qualify suppliers. The ultimate concern when selecting suppliers is on satisfaction of the end customer and enhancing organizational performance by making it competitive. Kotabe & Murray (2001) concur that there are massive benefits to the organizational buyer when the supplier is fully aware of what selection factors are important to the buyer since it helps them customize their strategy to meet the buyers' needs. Garmfy (2004) and Mwikali et al, (2012) identify a set of generic determinants that are important during supplier selection regardless of the industry the firm subscribes to. It's vital to note that they are interrelated and have been used in previous studies across the board.

Quality Assessment: Tracey & Tan (2001) describe quality in relation to durability and ultimate products lifespan while Dzever and Saives (2001) look at quality in terms of simplicity and flexibility of operation. User friendly products are always better and it is always good to include a manual to ease operation of the product. Empirical studies agree that quality should be defined through the eyes of the end customer if at all organizations are to remain competitive. Beamon (1999) adds that the rejection rate of the product is

defined in the number of parts rejected by the customers in fixed time period because of some quality problems. It also includes the defective parts detected in the incoming products. This show whether or not the frequent quality assessment of the parts has been done by the Supplier.

Service Levels: Different scholars perceive supplier service in different light for instance Bharadway (2004) looks at service in the ability of the supplier to provide after sales service in terms of claims policies. In Anyona's project (2011) warranties are also a way of extending service to the buyer. According to Tan (2003) provision of technical support, product customization and rate of reaction to demand also define the level of service provision by the supplier. Moreover, Mwikali et al (2012) quoting Beamon (1999) adds that a supplier with shorter lead time, timely delivery and ease of communication channels is better placed to work with.

Organization Profile: When choosing a supplier it is paramount for the procuring firm to check the supplier's organization as this affects issues like risk and lead times. Issues like quality performance e.g. ISO 9000 accreditation, supplier innovation and technological levels need to be ascertained (Shahadat, 2003). Moreover, Petroni (2002) as many other scholars points out that the suppliers geographical location, capabilities and facilities need to be checked before their selection as this has great impact on whether or not they can deliver thus wade off unwarranted delays. Good suppliers should have: achievement of sales and marketing goals, high financial performance, achievement of current organizational goals and strategy for technology age.

Technological capacity: The business community has transformed and cut across borders due to the emergent rise of globalization. Organizational buyers are not merely inclined to source products from local suppliers but foreign ones as well. This trend has come with the challenge of quick and effective communication to reduce lead time and as such procuring entities need to identify supplier who have proper communication channels in order to strengthen the supply chain. With that said, Tan (2003) argues that it is important to choose suppliers based on the level of technological integration like EDI, RFID, ability of the supplier to identify a need as this enhances firms competitiveness as well as level of flexibility in terms of payment, freight charges, , discounts and order frequency. Kelebu (2013) adds that supplier selection ought to be determined by the level of supplier availability and ability to maintain relations.

Supplier profile: The performance and past history of the suppliers help in taking decisions for its selection. Attention is paid to the suppliers: Financial Status (Awino, 2002); Response of Customers - Numbers don't lie -where customers are many the deals is good; and Performance History based on business references (Kibe, 2000).

Risk factor: Numerous exogenous factors make global sourcing riskier than domestic sourcing. Factors like political stability and geographical location ought to be considered as they have an impact on the lead time.

Cost criteria: The aim of this criterion is to identify vital element of cost associated with purchase. The most common cost related with a product is purchase price, transportation cost and taxes (Stanley and Gregory, 2001). Operational costs are also being considered during the supplier selection and profits cannot be maximized without cost minimization.

Mwikali et al (2012) quoting Beamon (1999) adds that Price and Distribution Cost should be taken into consideration when using this criterion to choose suppliers.

2.5 Procurement Performance Measures

Traditionally, performance measurement involved management accountants with budgetary control and the development of indicators such as return on investment (Chenhall, 2000). Nonetheless, today's work environment has increased trends of public sector reliance on non-financial measures to assess the performance which include fulfilling the objectives of speed, quality, dependability, cost and flexibility (Slack, 2007). Munyua (2012) while quoting Handfield et al (2009) also observes that procurement performance can be measured through price performance, cost effectiveness, revenue, responsiveness, technology or innovation, supplier performance, strategic performance, administration and efficiency.

CIPS Australia (2005) presents the differences between efficiency and effectiveness. Efficiency reflects that the organization is "doing things right" whereas effectiveness relates to the organization "doing the right thing". This means an organization can be effective and fail to be efficient, the challenge being to balance between the two. Whatever is not measured cannot be managed; Performance measures provide the information necessary for decision makers to plan, control and direct the activities of the organization and by identifying deviations from standards. Carton (2004) adds that there is no authoritative list of performance measures in the prior literature; nonetheless, the overall agreement is that performance is an end result of given activities.

Knowing what exactly to measure and how to measure it helps to critically gauge the procurement performance level. USAID (2013) report and Marr (2013) identify performance scorecards that assist in measuring procurement performance namely: timely delivery, quality, customer service, Procurement cycle time, payment processing time, transparent price information, overall equipment effectiveness and machine downtime level.

Today organizations are competing in multi faceted environments hence an accurate understanding of their goals and methods for attaining their goals are paramount. Knowing what to measure provides managers with the instruments they need to navigate to future competitive success. The balance scorecard for example measures organization performance across four balanced perspective: financials, customers, internal business processes and learning and growth (Kaplan& Norton, 1996).This study will focus more on qualitative measures of procurement performance.

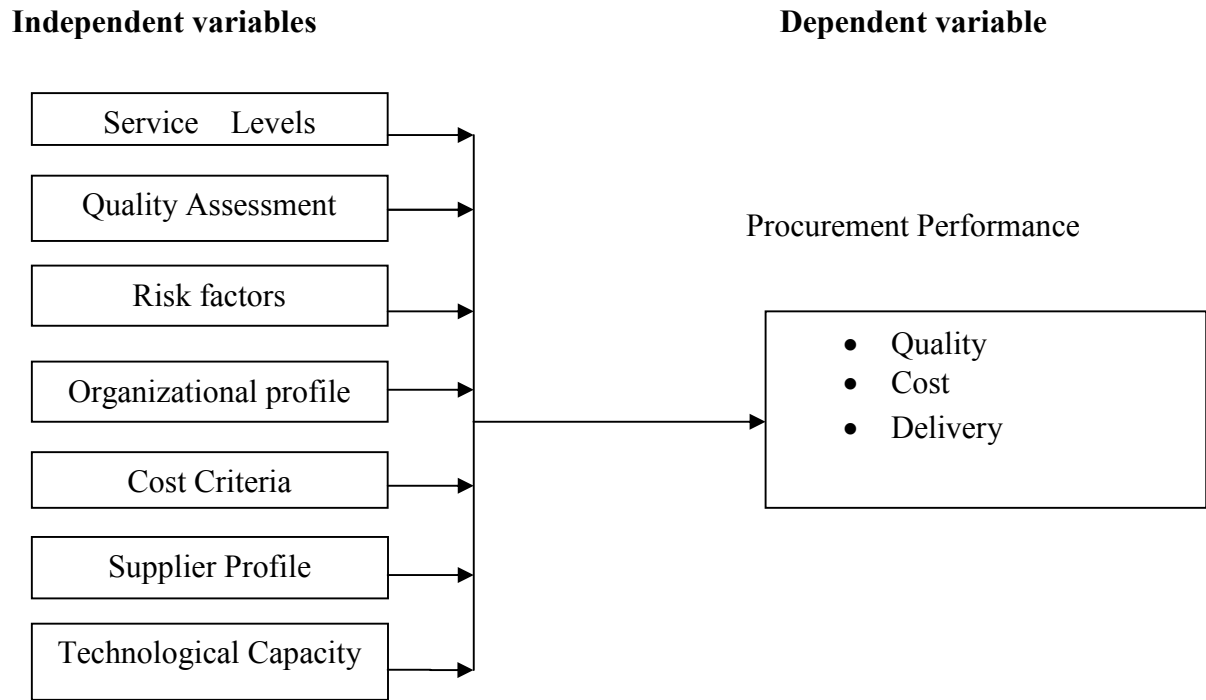
Measuring procurement performance yields benefits to organizations such as cost reduction, enhanced profitability, assured supplies, quality improvements and competitive advantage (Christopher, 2005).

2.6 Conceptual Framework

The conceptual framework explains the relationship between independent and dependent variables in the study as presented in figure 2.1. In this study Supplier Selection criteria is the independent variable which determines the competitiveness of the organization hence; procurement performance is the dependent variable. This study identified supplier

selection criteria to include service levels, quality, risk factors, total cost, Supplier profile and Technological capacity.

Figure 2.1: The Conceptual Framework



Source: Researcher (2015)

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter outlines the methodology that was used in conducting the study. The issues discussed included the research design, the target population, the sampling design, data collection methods and data analysis plus data presentation method.

3.2 Research Design

The research problem was studied through descriptive research design. Descriptive research helps to demonstrate associations or relationships between phenomena. Sekaran and Bougie (2011) add that descriptive study is undertaken in order to establish and describe the characteristics of the variable of interest in a situation. This research design was used in the study since the researcher intended to describe the how and what of a phenomenon. The design was used to describe the supplier selection process and the criteria used to select suppliers.

3.3.1 Population of the Study

Bryman and Bell (2007) observe that target population consists of all members of an actual or hypothetical set of people, events or objects to which a study wishes to generalize the results of the research study. Procurement department and all other user departments like Supply chain; Finance; Administration, Operations, and IT formed the target population. The respondents included: senior and middle level managers as well as support staff in these departments.

3.4. Sampling Design

This population sampling employed stratified random sampling method to select the study sample size. The study grouped the population into three strata, that is, top level management, medium management and support. From each stratum the study took a 30% sample. The researcher then selected respondents randomly; in this case each unit had a fair chance of being selected. Kerlinger (1986) indicates that a sample size of 10% of the target population is large enough so long as it allows for reliable data analysis and allows testing for significance of differences between estimates. The sample size depends on what one wants to know, the purpose of the inquiry, what is at stake, what was useful, what had credibility and what can be done with available time and resources (Patton, 2002)

Additionally, Mugenda and Mugenda (2003), asserts that a good population sample is between 10% and 30% of the entire population. Therefore the sample size for this study was 150 respondents as shown in Table 3.1

Table 3.1: Sample Size

Category	Number	Sampling	Sample Size
Top management	70	30%	21
Middle level management	180	30%	54
Support staff	250	30%	75
Total	500		150

Source: Researcher (2015)

3.5 Data Collection

The study used primary data which was collected through use of questionnaires. A five Point Likert scale that measures the level of agreement or disagreement was used. The scales are simple to administer and good in measuring perception, attitude, values and behavior. Moreover, the scale can assist in converting the qualitative responses into quantitative values (Mugenda & Mugenda, 2003). The administration of the questionnaires was through drop and pick later method. The respondents' for this study were either, senior managers, middle - level managers or support staff who were the most competent to answer the questions on supplier selection practices within the County.

3.6. Data Analysis

Objective one of the study was analyzed using descriptive statistics which includes frequency tables, percentages, mean scores and standard deviation as well as statistical tools like MS Excel and statistical package for social sciences (SPSS) which are used to analyze quantitative data.

Objective two was analyzed using a multivariate regression model normally used to link up various variables. The analyzed data will be presented using tables, graphs and bar charts.

Statistical software that has a regression model that was used to link the independent variables to the dependent variable is as follows:

$$S=a + b1 x1 +b2 x2 + b3 x3 + b4 x4 + b5 x5+ b6 x6 + b7 x7+ e$$

Where:

S= Procurement performance; a= the Y intercept when x is zero; b1, b2, b3, and b4, to b7 are regression weights attached to the variables; **x1** =service levels; **x2** = quality assessments; **x3** =risk assessments; **x4**=organizational profile; **x5**= cost criteria; **x6**= supplier profile; **x7**= technological capacity; **a** and **b** are regression constants, **e** is the error term.

CHAPTER FOUR

DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

This chapter presents the results and findings as analyzed from the data collected. The main objective of this study was to ascertain the role supplier selection has on procurement performance in Nairobi City County. Particular objectives were: To determine supplier selection criteria used by Nairobi City County and to establish the relationship between Supplier Selection Criteria and Procurement Performance at Nairobi City County. The responses were analyzed using descriptive statistics and results were presented in tables and figures.

4.2 Response Rate

The study targeted 150 respondents who included the Supply Chain managers, Procurement managers, IT managers, Finance managers, Store managers and the respective support staff in all the mentioned departments since they are the main users of procurement at Nairobi City County. A total of 106 questionnaires were successfully filled in time for data analysis. This represented 71% of the total respondents.

Furthermore, Babbie (2007) suggested that any return rate over 50% can be reported, that over 60% is good, and that over 70% is excellent. The response rate of 71% was therefore considered appropriate to derive the inferences regarding the objectives of the research.

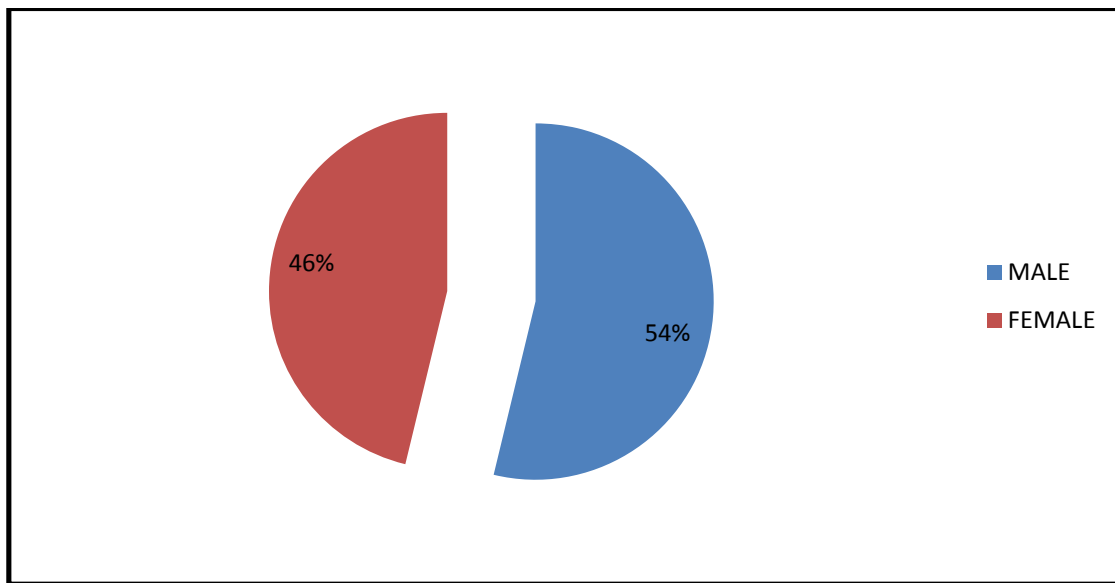
4.3 Demographic Information

The researcher found it imperative to find out the general information of the respondents since it forms the foundation under which the study can duly access the relevant

information. The general information presented respondents issues such as gender, department within the County, education level and respective designation.

The researcher wanted to establish the gender of the respondents at Nairobi County as indicated in the Figure 4.1:

Figure 4.1: Gender of respondents



Source: Research Data (2015)

The study shows that 54% of the respondents were male while 46% of the respondents were female.

The research study sought response from various departments with Nairobi City County. Participants from Finance, Administration, Procurement, Supply Chain, Stores and IT departments were selected since they were the most qualified to respond to the questionnaire as they are frequent procurement users.

Table 4.1 County Departments

Department	Frequency	Percent
Supply chain	22	21
Finance	24	23
Procurement	22	21
IT	16	15
Stores	12	11
Administration	10	9
total	106	100

Source: Research Data (2015)

Table 4.2 Frequency of respondents at county departments

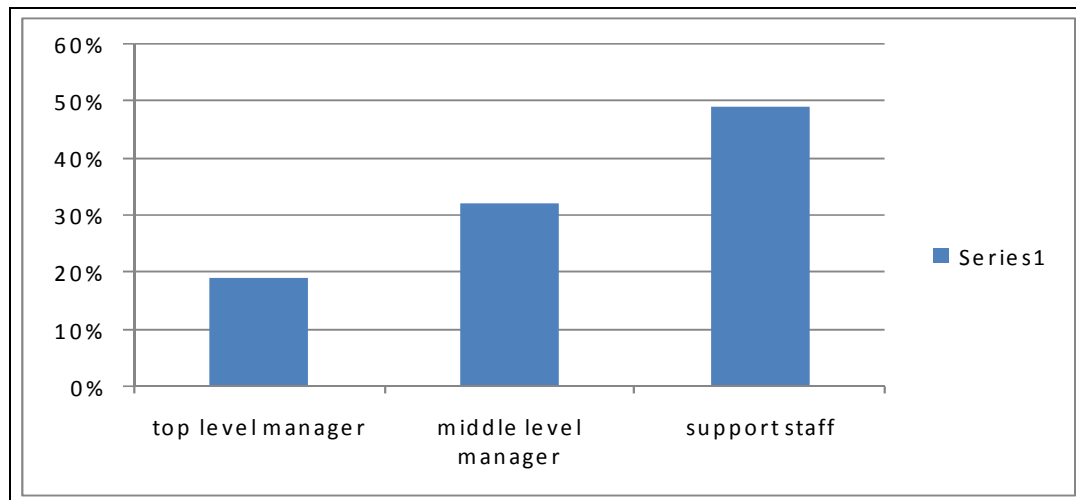
Department	Frequency	Percent
Supply chain	22	20.8
Finance	24	22.6
Procurement	22	20.8
IT	16	15.1
Stores	12	11.3
Administration	10	9.4
Total	106	100.0

Source: Research Data (2015)

The findings in Table 4.2 and 4.3 were analyzed through Excel and SPSS software respectively. The tables show that majority of the respondents (23%) were from finance department while 21% were from procurement and supply chain departments respectively. On the other hand, 15% of the respondents were from IT and the remaining 11% and 9% were from Stores and Administration departments respectively. Findings were in line with Garmfy (2005) who indicates that supplier selection criterion ought to be determined by interpersonal attributes of other organizational members if at all the process is to be successful.

The researcher sought to establish the designation of the respondents in a bid to determine whether top and middle level management support was evident in supplier section process as shown on the table below:

Figure 4.2: Designation of respondents

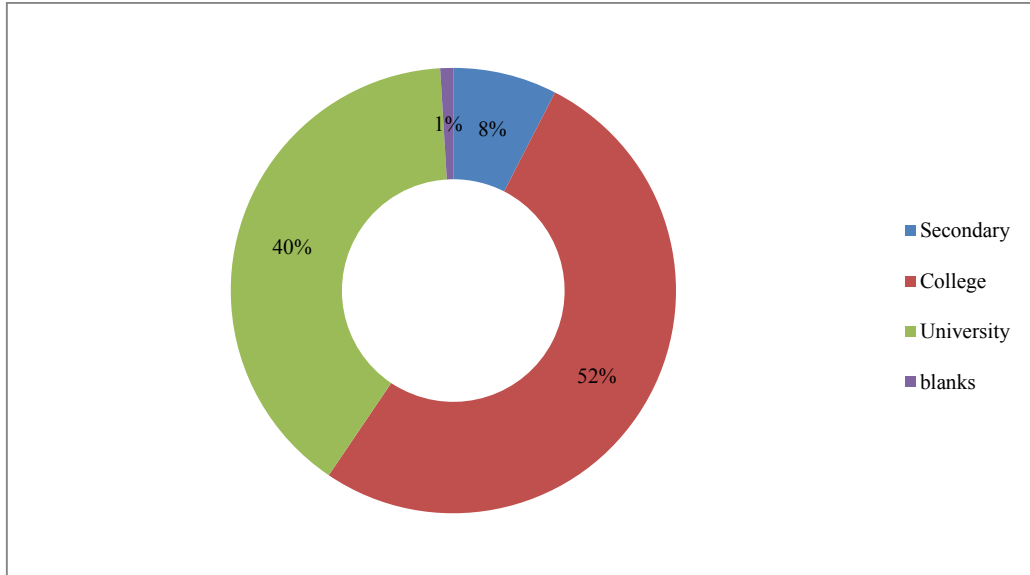


Source: Research Data (2015)

The findings in Table 4.2 shows that majority of the respondents (49%) were support staff while 32% were middle level managers. On the other hand, 19% of the respondents were top level managers. The findings reveal that top and middle level management support in supplier selection processes at Nairobi City County is evident thus findings were in line with Hunja (2001) who observes that supplier selection has moved from the traditional role of being a back-office role to a more strategic role that enhances a firm's competitiveness.

Respondent's level of education was also established as shown in the figure 4.3:

Figure 4.3: Education Level



Source: Research Data (2015)

The findings in Figure 4.3 shows that majority (52%) of the respondents indicated that they had attained a college diploma; 40% indicated that they had attained a university degree while 8% revealed that they had attained at least secondary education. However, 1% of the respondent did not respond to this question.

4.4 Supplier Selection

The researcher found it imperative to find out the supplier selection practices at Nairobi City County. The respondents were asked to rate their views on the importance of supplier selection procedures, the participants in supplier selection and whether or not they themselves had participated in the exercise.

Table 4.3 Supplier Selection Participation

Response	Frequency	Percent
Yes	68	64.2
No	37	34.9
Total	105	99.1

Source: Research Data (2015)

The findings on table 4.4 above show that 64.2 % of the respondents had been involved in supplier selection process at the county implying that the County’s selection process was indeed an all inclusive exercise across various departments. The findings were in line with Ogot *et al* (2009) who argue that all inclusive participation in supplier selection practices educates the respective stakeholders on the importance of selection hence curbs against poor selection criteria which in turn lead to resource misappropriation. However, 35% of respondents had not participated in the process while another 1% did not respond.

4.4.2 Importance of Supplier Selection at Nairobi City County

The researcher wanted to find out whether or not respondents viewed supplier selection process as an important exercise.

Table 4.4 Supplier Selection Importance

Response	Frequency	Percent
Yes	100	94.3
Not sure	5	4.7
Total	105	99.1

Source: Research Data (2015)

As per the table 94.3% of the respondents thought that the exercise was important however, 5% of the respondents were not sure. These results concur with Basheka (2008) that supplier

selection is one of the primary functions of procurement with a potential to contribute to the success of government operations and improve service delivery.

4.4.3 Who are involved in Supplier Selection at the County?

The researcher sought to find out the players involved in supplier selection exercise as depicted in table 4.5

Table 4.5 Players involved in supplier selection process

Players	Frequency	Percent
All managers in all departments	89	84.0
Senior managers in all departments	7	6.6
Senior managers in procurement department	1	.9
Senior & junior managers in procurement department	1	.9
Total	98	92.5

Source: Research Data (2015)

Majority of the respondents (84.0%) indicated that all managers and support staff in all user departments of procurement participated in supplier selection procedures. The results agree with CIPS (2002) which states that it is important to involve as many people as possible from all departments so as to incorporate the needs of each department. Another 6.6% indicated that it is only senior managers in all departments who take part in selection while another 1% indicated that its only senior managers in procurement who took part in selection. Additionally, another 1% of the respondent indicated that supplier selection is only done by the senior and junior managers in procurement department however, 7.5% of the respondents did not respond to this query.

4.5 Principles of Supplier Selection

The table below is a summary of responses the researcher got in regard to ethical issues considered during supplier selection process. As the table indicates, majority of the responses lie between the decision criteria of very great extent and great extent which implies that the County follows a code of ethics in its supplier selection processes.

Table 4.6 Supplier Selection Principles

principles	very great extent	great extent	moderate	small extent	blanks	total
selection helps in resource allocation	2%	75%	8%	3%	12%	100%
selection is competitive and fair	15%	47%	5%	0%	33%	100%
selection obtains value for money	15%	53%	4%	0%	28%	100%
transparency in supplier selection	24%	35%	3%	0%	39%	100%
selection has honesty and accountability	25%	37%	2%	0%	37%	100%
selection follows code of ethics	17%	60%	2%	0%	21%	100%

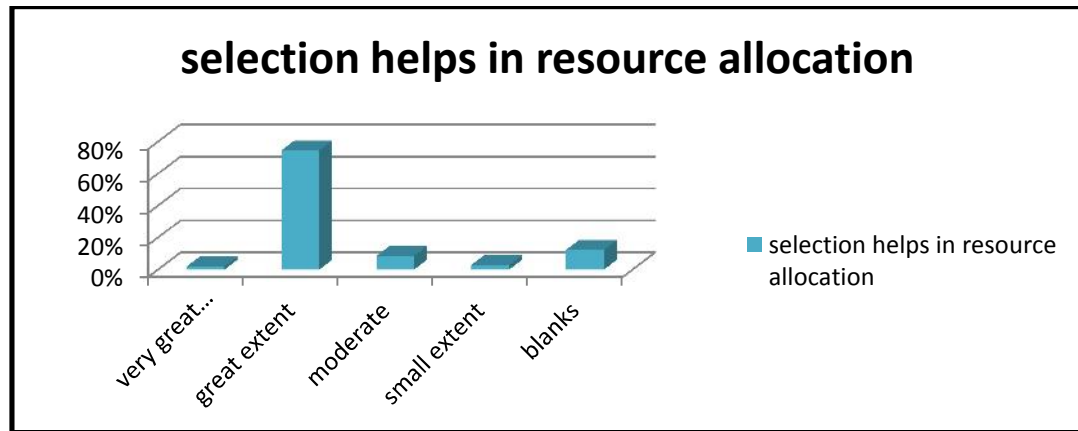
Source: Research Data (2015)

77% of the respondents agreed that selection criteria helps in resource allocation; 62% of respondents agreed that the process is competitive and fair; 68% agreed that the process obtains value for money; 59% agreed that there was transparency; 62% agreed there was accountability. Generally, 77% were in consensus that ethics was observed in supplier selection processes. As such, the findings are in line with Ogot *et al* (2009) that good governance and ethics ought to be the pillars in selection processes in order to create value for money and better services to the taxpayers. The responses have been discussed in detail below:

4.5 1 Resource Allocation

Procurement is one of the fundamental roles that take up a huge chunk of public resources within the county. Hence, the study sought to find out if supplier selection practices assist in resource allocation as presented in figure 4.4:

Fig 4.4 Selection helps in resource allocation



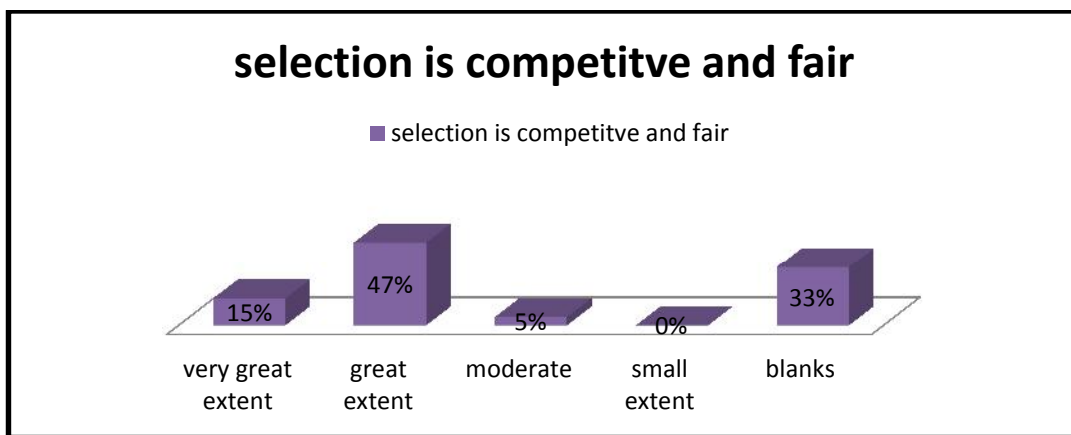
Source: Research Data. (2015)

Majority of respondents 75% indicated that supplier selection helped in resource allocation to a great extent while respectively, only 2%, 8% and 3 % indicated that supplier selection helped in resource allocation to a very great extent, moderately and small extent. However, 12% of respondents did not respond to this query. The findings correspond with those of Burt et al (2004), who further add that, supplier selection is vital due to considerable amounts of money spent annually in the public sector. Hence, the procurement department should observe procedural transactions for the good of the population given the fact that expenditure incurred is the taxpayer's money.

4.5.2 Supplier Selection Competitive and Fair

The Procurement Act (2005) calls for a selection process that is competitive and fair in order to enhance equitable opportunities and also curb against corruption which has led to poor service delivery. The researcher sought to find out whether there was fairness in supplier selection procedures at the county as shown in figure 4.5:

Fig 4.5 Selection is competitive and fair



Source: Research Data (2015)

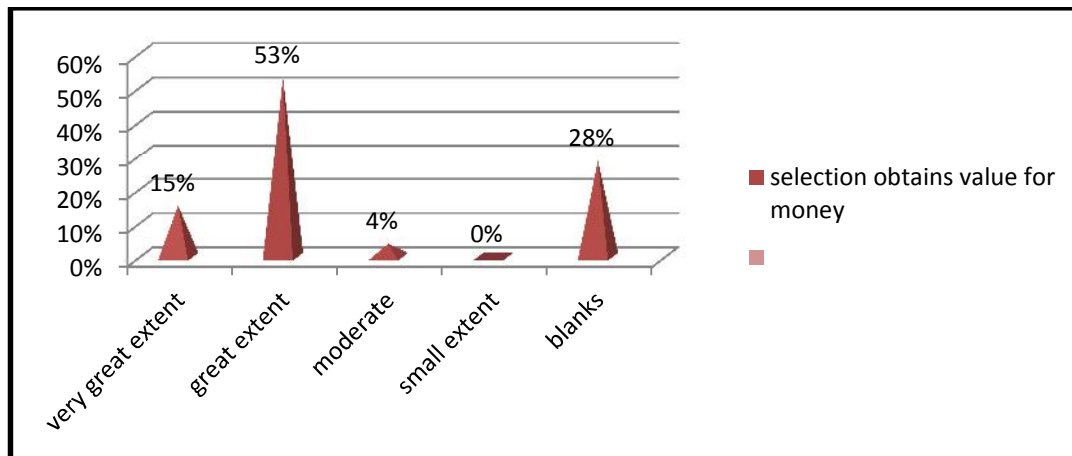
Majority of the respondents (62%) agreed that the supplier selection process is competitive and fair giving a response of either very great extent or great extent while 5% slightly agreed on the same. However, some respondents 33% did not respond to this query. From the findings, one can therefore infer that the selection procedures at the County encourage competition which is one of the pillars advocated for in the Procurement Act.

4.5.3 Value for money

Time and again the public sector has been faulted with spending millions of tax payer's money on procurement of goods and services albeit having poor service delivery. The

researcher sought to find out whether procured goods and services at Nairobi City County provide value for money. The results are indicated in figure 4.6:

Fig: 4.6 Supplier selections obtains value for money



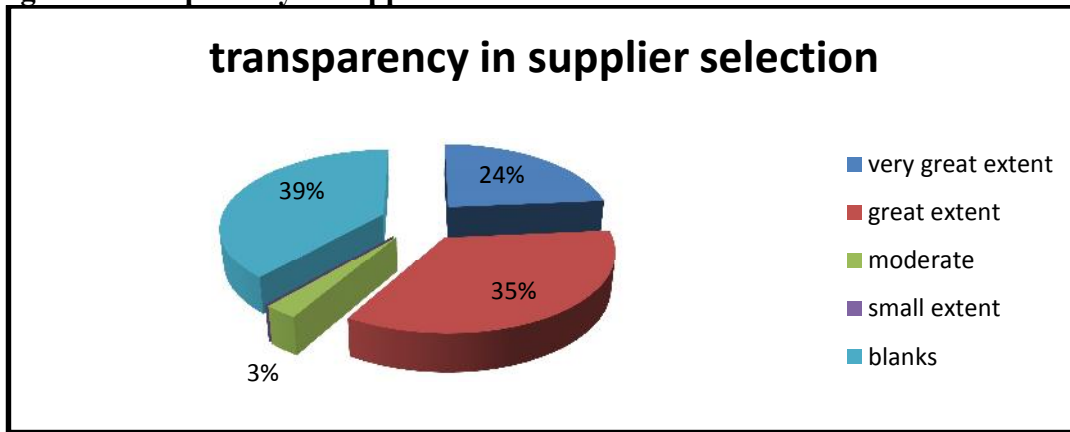
Source: Research Data (2015)

Majority of respondents- great extent and very great extent- 68% agreed that indeed the selected suppliers obtained value for money however, 28% of respondents did not respond to this query. Just like Kennard (2006) one can therefore infer that procurement planning plays a major role in budget controls, and economies of scale are again if planning is coordinated in the entire organization/ institution.

4.5.4 Transparency

Transparency is one of the procurement pillars advocated for by Ogot et al (2009) and Procurement Act (2005) as it plays a role in enhancing quality service delivery. The researcher sought to find out whether transparency was upheld at Nairobi County, The results are indicated in figure 4.7:

Fig: 4.7 Transparency in supplier selection



Source: Research Data (2015)

Majority of respondents- great extent and very great extent- 59% agree that there is transparency in supplier selection process albeit 3 % who indicated that transparency levels were moderate. On the other hand 39% of the respondents did not respond to the query. The findings are in line with CIPS (2005) which indicate that transparency builds a fair middle ground for competition among suppliers thus enabling the firm to choose suppliers who will meet their needs and also enhance the overall organizational performance.

4.5.5 Honesty and Accountability

Honesty and accountability are procurement pillars advocated for by Ogot *et al* (2009) and Procurement Act (2005) as they play a role in enhancing frugal use of public resources and curb against abuse of office. The researcher sought to find out whether these principles are upheld at Nairobi City County, The results are indicated in table 4.7:

Table: 4.7 The County’s Selection process exhibit Honesty and Accountability

Decision criteria	Frequency	Percent
Very great extent	26	24.5
Great extent	39	36.8
Moderate	2	1.9
Total	67	63.2

Source: Research Data (2015)

From the findings majority of the respondents - great extent and very great extent- 62% indicated that the county’s selection process was honest and propelled accountability to a very great extent and great extent respectively. However, 1.9% of respondents indicated that honesty and accountability was moderate while 36.8% did not respond to this query.

4.5.6 Code of Ethics

The researcher sought to find out whether code of ethics is upheld at Nairobi County during supplier selection process. The results are indicated in table 4.8:

Table 4.8 county follows code of ethics during supplier selection activities:

Decision criteria	Frequency	Percent
Very great extent	18	17.0
Great extent	64	60.4
Moderate	2	1.9
Total	84	79.2

Source: Research Data (2015)

From the findings majority of the respondents indicated that the county’s selection process observed ethics to a very great extent and great extent respectively. However, 1.9% of respondents indicated that honesty and accountability was moderate while 20.8% did not respond to this query. This is in line with CIPS (2005) and Ogot et al (2008)

observation that companies need to be strict when it comes to ethical observations during supplier selection processes since a huge chunk of resources is either wasted or misappropriated during supplier selection thus negatively impacting on service delivery and overall competitiveness of the organization.

4.6 Supplier Selection Criteria

Poor selection criteria can cause the firm millions of losses due to recalls and associated inventory adjustments. Regardless of the selection criteria adopted by the firm, the performance of the firm should not be negatively affected. The researcher sought to find out the selection criteria adopted by Nairobi City County during supplier selection process. The results are indicated in table 4.9:

Table 4.9 Supplier Selection Criteria

Criteria		Mean	Std deviation
Quality assessment	The procured products meet necessary quality assessments and register's low no. of product defects	1.86	0.532
	The County prefers supplier organizations with high quality performance accreditation	1.86	0.546
Service levels	The County suppliers offer better service levels (warranties, after sales service)	1.95	0.481
Organizational profile	The County's suppliers have shorter lead time	2.06	0.570
Financial performance	The County values supplier's with high financial performance	1.60	0.520
Technological capacity	The County pays attention to supplier's who have invested in IT	2.08	0.722
Supplier profile	The performance and litigation history on supplier's profile is a determinant factor in selection	1.75	0.603
Cost criteria	The suppliers overall price (product & distribution cost) has an impact on selection	1.38	0.487
Risk factor	The county's selection criteria assists in streamlining procurement processes	1.89	0.581

Source: Research Data (2015)

The means in the table below range between 2 and 1. These are more skewed to the first and second responses by the respondents. This means that most of the respondents agree with the selection criteria to a great extent. The standard deviation shows to what extent the values spread away from the mean. The results above (in table 4.9) show that the standard deviations in all the selection criteria are quite low. This means that most of the values in response are less spread giving strength to the mean results that most values are within the first two responses, hence agreeing with the selection criteria.

From the findings it is quite clear that the most significant cost criteria are cost which had a standard deviation of 0.487 and a mean of 1.38; followed by financial performance of the supplier which had a mean of 1.60 and standard deviation of 0.52. Having cost as the most important criteria is in line with World Banks' selection criteria guidelines which uses the quality cost based method (QCBS) to select its suppliers among other factors.

4.7 Relationship between Supplier Selection and Procurement Performance

The researcher also sought to establish the impact of supplier selection on procurement performance at Nairobi City County. Correlation and regression analysis was used to determine the relationship between procurement performance and supplier selection. The study adopted the following linear multiple regression to establish the relationship between the variables;

$S = a + b_1 x_1 + b_2 x_2 + b_3 x_3 + b_4 x_4 + b_5 x_5 + b_6 x_6 + e$ Where: S= Procurement performance; a= the S intercept when x is zero; b₁, b₂, b₃, b₄, b₅, b₆ and b₇ are regression weights attached to the variables; x₁ = Service Levels; x₂ = Quality Assessment; x₃ = risk

factor; x4=organizational profile; x5= cost criteria; x6= supplier profile; x7=technological capacity; a and b are regression constants, e is the error term.

Table 4.10 Regression model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.74 ^a	.682	.559	2.785

Source: Research Data (2015)

The R value in the model summary represents the multiple correlation coefficients, which is the measure of the quality of the prediction of the dependent variable. From the regression model summary, the variation in predictor variables combined accounts for 68.2 % variation in the procurement performance (R Square = 0.682). The remaining 31.8% variation in the procurement performance is as a result of other factors not considered in the model. From the results in the above table, the correlation between the dependent variable was high; R (0.74) while R² 0. 682. The model implies that 68.2 % change in procurement performance (S) using the independent variables of Quality assessment; service levels; organizational profile; financial performance; technological capacity; supplier profile; cost criteria and risk factor.

The results are significant at 4 %(P =0.04) as shown in table 4.12. This implies that there is a very strong relationship between supplier selection criteria and procurement performance. Hence, from these results it can be concluded that the model is good and can be used for the estimation of procurement performance.

The study used ANOVA to establish the significance of the regression model from which an f-significance value of $p=0.040$ was established. This shows that the regression model has a 0.04 (4%) likelihood or probability of giving a wrong prediction. This therefore means that the regression model has a confidence level of over 95% hence high reliability of the results as indicated in the table 4.11:

Table 4.11: Analysis of Variances in the Regression model

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	11.766	9	1.307	2.122	.040 ^a
	Residual	40.655	66	.616		
	Total	52.421	75			

Source: Research Data (2015)

The significance tests for the overall model; Using p-value, the regression model is significant since $0.040 < 0.05$. Pearson correlation matrix was used to check on the existence of a strong correlation between the predictor variables. Predictor variables are said to be related to each other if the correlation coefficient between them is greater than 0.05. The findings are as presented in Table 4.12.

From the tests of statistical significance of supplier selection criteria in the model done, the findings indicate that the general form of the equation to predict performance of procurement in Nairobi City County based on the selection criteria it adopts is as follows:

Nairobi City County Procurement Performance = $1.371 + 0.073$ quality assessment+ 0.083 service levels + 0.591 financial performance+ 0.136 supplier profile + 0.076 cost criteria. The regression coefficients were tested for significance at $\alpha=0.05$ as shown on table 4.12 significance occurs at p-values less than 0.05.

Table 4.12: Supplier Selection Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.371	.717		1.911	.060
Quality assessment	.073	.240	.042	.306	.001
Service levels	.083	.199	.056	.417	.028
Organizational profile	-.334	.210	-.196	-1.594	.016
Financial performance	.591	.230	.422	2.568	.033
Technological performance	-.072	.151	-.063	-.477	.095
Supplier profile	.136	.163	.113	.832	.048
Cost criteria	.076	.203	-.050	-.375	.039
Risk factor	.026	.180	.020	.142	.087

Source: Research Data (2015)

The corresponding p -value, indicates that the relationship between quality assessment, service levels, financial performance, supplier profile, as well as cost are statistically significant at the 95% confidence i.e. p -value <0.05 . This means that there exists a significant relationship between these independent variables and procurement performance in Nairobi County (the dependent variable). These findings are in agreement with Christopher (2005) who observes that selection criteria can improve procurement performance by yielding benefits to organizations such as cost reduction; quality improvements and competitive advantage.

On the other hand, the relationship between technological performance and risk factor as independent variables to procurement performance in Nairobi County as the dependent variable is not significant.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter provides a summary of findings, conclusions and recommendations of the study based on the objectives of the study. It entails a fusion of key issues of the objectives of the study as deduced from the entire research.

5.2 Summary of the Findings

In the supplier selection principles being implemented, the findings on how the county practices this principles in its selection activities revealed that the decision criteria's of very great extent and great extent were the most used to gauge the use of principles in supplier selection. Findings show that the county enhances its resource allocation during selection.

This is in agreement with the findings by Comesa report which noted that procurement absorbs sixty percent of government expenditure. In addition, there was an overwhelming consensus that the county observed a code of ethics during supplier selection. On whether selection enhances value for money, the county registered sixty eight percent while competition and fairness as well as honesty and accountability registered sixty two percent.

The findings on whether the county uses a given set of criteria during supplier selection revealed that cost criterion was the most considered. Supplier's financial performance followed suit followed by the organizational profile (litigation history); service levels and lastly technological integration. The results showed the standard deviation from each

criterion to be quite low implying that they did not digress as much from the mean hence implying that the county indeed agrees to the selection criteria.

On whether there is a relationship between supplier selection process and procurement performance: the study shows that most of the independent variables are statistically significant hence there was a significant relationship between procurement performance and supplier selection criteria such as: quality assessment, service levels, Financial performance, Supplier profile and Cost criteria. However, the study found an insignificant relationship between procurement performance and Technological performance and Risk factor.

5.3 Conclusion

Following the study findings it is possible to conclude that Nairobi County uses a given set of procurement principles in its supplier selection process. This is true from the number of respondents who said the county uses a code of ethics. The study also concludes that cost is the most important criteria during supplier selection as it greatly impacts on the overall resource allocation given the fact that procurement uses a great margin of the county's financial resources.

It is also evident that the selection process is not a one man show but an all inclusive exercise which involves managers and support staff of all the relevant user departments. This is because procurement is by extension the department that meets the needs of other users and thus it is advisable to incorporate the real 'buyers' during selection to clearly identify the need that has to be met. This was clearly indicated by majority of the respondents who agreed that selection process is done by managers of all user

departments.

The study concludes that there was a positive and significant relationship between supplier selection process and procurement performance as the Significance levels of independent variables occurred at p-values less than 0.05.

In addition, the element of ethics during supplier selection helps to cut down corruption costs and also enhance resource allocation as indicated by majority of respondents. Also, the element of quality assessment as a selection criteria helps to improve procurement performance by registering low no. of product defects as indicated by majority of respondents.

5.4 Recommendations of the Study

The County needs to pay closer attention to technological capacity of suppliers as a selection criterion which registered the lowest mean compared to other selection criteria. The role of technology in improvement of procurement performance cannot be denied. Some of the benefits accrued from technology is the availability of real time information which has helped in improving procurement performance by providing real time information and reducing lead time.

The organizational profile of the supplier is also another criterion that registered a low mean. This implies that it is a factor rarely considered during selection compared to other criteria. However, the organizational profile of the supplier helps to establish the existence of the suppliers business hence guard against 'brief case' companies which have been known to land procurement officers in trouble especially when the supplier fails to deliver. It also informs the County of the risks involved for instance in case of suppliers

with great geographical distances thus reduce transportation risks and improve lead times.

5.5 Suggestion for Further Research

This study sought to establish the relationship that exists between supplier selection practices and procurement performance of Nairobi County, Kenya. The researcher suggests that a similar study be conducted in other counties in different regions for comparison of results. The study should also cover a larger scope as this study only concentrated on Nairobi County only.

There is need for another research study to be conducted to seek and establish the challenges that affects Nairobi County while adopting particular selection criteria in their procurement. This would help other counties that seek to adopt such criteria to be aware of the challenges and the mitigation strategies they can adopt to ensure successful implementation of the particular selection criteria thus enhance their procurement performance.

REFERENCES

- Awino, Z. B. (2002). *“Purchasing and Supply Chain Strategy: Benefits, Barriers and Bridges”* An Independent Conceptual Study Paper in Strategic Management, School of Business, University of Nairobi.
- Barratt, M. (2004). Understanding the Meaning of Collaboration in the Supply Chain; *Supply Chain Management: An International Journal* Volume 9 Number 1-2004 pp 30-42.
- Beamon, B. (1999). Measuring Supply Chain Performance. *International Journal of Operations and Production Management* 19 (3), 275–292
- Bharadway, N. (2004). ‘Investigating the Decision Criteria used in Electronic Components Procurement’ *Industrial Marketing Management*, Vol 33, No. 4, pg. 317-323.
- Boer, L. D, Labro, E. & Morlacchi, P. (2001). A Review of Methods Supporting Supplier Selection; *European Journal of Purchasing & Supply Chain Management* 7, 2, 75-89.
- Bogdan, R. C., & Biklen, S. K. (2007). *Qualitative Research for Education; An Introduction to Theories and Methods* (4th ed.). New York: Pearson Education Group.
- Burns, A. & Groove, B. (2003). *The Practice of Nursing Research: Conduct, critique & utilization*. 4th edition. W. B. Saunders Company
- Chattered Institute of Purchasing & Supply, Inc. (2013) ‘Monitoring the Performance of Suppliers’, CIPS
- Daft, R.L. (1998). *Organisation Theory and Design*, South-Western College Publishing, International Thompson.

- Donaldson, L. (2001). *The Contingency Theory of Organizations*. Thousand Oaks, CA:
- Dzever, S., Merdji, M. & Saives, A. (2001). 'Purchase Decision Making and Buyer –Seller Relationship Development in the French Food Processing Industry' *Supply Chain Management: An international Journal, Vol6. No.5* pg 216-229 PDF.
- Estache, A., Limi, A., Ruzzier, C. (2009). *Procurement in Infrastructure: What Does Theory Tell Us*. Washington DC, World Bank.
- Fisher, C. (2007). *Researching and Writing a Dissertation, A Guide book for Business Students (2nd Edition)* Harlow, England: Prentice Hall
- Government of Kenya (2001). "*The Public Procurement Bill 2001*", Government Printers, Nairobi.
- Kelebu M. (2013). *The Impact of Inventory Management and Performance of Private Organizations in Uganda: A case study of Coca Cola Mbarara Plant in Mbarara Municipality, Mbarara, Uganda*
- Kibe J. M. (2000). *Application of Inventory Manufacturing Practices. A Survey in Large Manufacturing Firms in Kenya*. Unpublished MBA Project University of Nairobi.
- Kirst P. (2008). "*Supplier Switching Management: an Empirical Analysis of supplier switching* Cuvillier Verlag.
- Kombo, D. K., & Tromp, D. L. (2006). *Proposal and Thesis Writing; An Introduction*. Nairobi, Kenya
- Kotabe, M. & Murray, J.Y. (2001). 'Outsourcing Services Activities', *Journal of marketing management*, vol. 10, No.1, pg 40-45

- Krause, D.R., Scannell, T. V., and R. J. Calantone. (2000). "A structural analysis of the effectiveness of Buying Firms' strategies to Improve Supplier Performance," *Decision Sciences* , (31.1), pp35-36
- Kumar S., Bragg R. and Creinin D. (2003). "Managing supplier relationships", *Quality Progress*, Vol. 36 No. 1, pp. 9-16.
- Lysons, K. F. (2006). *Purchasing and Supply Chain Management*. London: Prentice Hall
- Makori, W.C. (2013). *Real time information processing and supply chain optimization among supermarkets in Kenya*. Unpublished MBA project, University of Nairobi.
- Mugenda, O. M., & Mugenda , A. G. (2003). *Research Methods*. Nairobi: Acts Press Oxford University Press.
- Muturi, O., (2007). *Procurement Practices in the Public Sector: A survey of Kenya' Pipeline company*: Unpublished MBA project, University of Nairobi.
- Mwikali, R. & Kavale, S. (2012). "Factors affecting the selection of optimal suppliers in Procurement Management" *International Journal of Humanities and Social Science* Vol. 2 No. 14
- Ndumbi, C.W. & Okello, B. (2015) Effect of Staff Training on level of Compliance to Public Procurement System in Parastatals in Kenya, *International Journal of economics, Commerce and management*. Vol.iii, Issue 6
- Ntayi, J. M., Gerrit, R., and Eyaa, S. (2009). Supply Chain Swiftness in a Developing Country: The Case of Uganda Small and Medium Sized Enterprises, *E-Journal of Business and Economic Issues*, Vol. IV, No. I.

- Nyagah, S. M. & Mugambi, F., (2014). The effects of Public Procurement Laws on Effective Project Implementation: A case study of Kisauni Constituency Development Fund. *International Journal of Social Sciences and Entrepreneurship*, 1(13), 69-92.
- Nyambati Eric Anyona (2011). *Suppliers Selection & Quality Performance In Organisation Case Study: Mukwano Industries*. Unpublished Dissertation, Makerere University
- Odhiambo, A.N, (2005). *Procurement Practices in the Public Sector: A case of Kenya's Ministry of Agriculture*: Unpublished MBA project, University of Nairobi.
- Odhiambo, A. (2013). Poor Management and Corruption threaten Future of Devolved Funds. Nairobi: National Tax Payers Association.
- Odhiambo, W., and Kamau, P. (2011), Public Procurement: Lessons from Kenya, Tanzania and Uganda, OECD Development Centre Working Paper No. 208
- Ogubala, A.R., & Kiarie, M.D. (2014). "Factors affecting procurement planning in county governments in Kenya; A case study of Nairobi City County". *International Journal of Economics, Commerce & management*. Vol. II, No. 11.
- Petroni, A. & Braglia, M. (2000), 'vendor selection using principle component analysis', *Journal of Supply Chain Management*, Vol 36, No.2, pg 63-69, pdf
- Phillippart M., Verstraete C. & Wynen S. (2005), *Collaborative Sourcing: strategic value creation through collaborative Supplier relationship mgt*. Sage Publications.
- Shahadat, K. (2003), 'Supplier choice criteria of executing agencies in

developing countries', international journal of operations & production management, vol 16, no.4, pg 261-286

Stormy, F. (February,2005). Avoiding Culture Clash When Selecting Providers of Outsourced Services. Building Operating Management. From <http://www.facilitiesnet.com/facilitiesmanagement/>

Swift, C.O & Gruben, K.H (2000), 'Gender Differences in Weighing of Supplier Selection Criteria', Journal of Managerial Issues, 12, 4, 502-512

Thai K. V. (2004), Journal of Public Procurement, volume 4, issue 3, 312-318 <http://www.emeraldinsight.com> retrieved on 02/02/2015.

Tracey, M. & Tan, C.L.(2001), 'empirical analysis of supplier selection and involvement, Customer satisfaction and firm performance' supply chain management: an international journal vol 6, No. 4, pg. 174-188 pdf

Van Weele, A. J. (2006). Purchasing & Supply Chain Management: Analysis, Strategy, Planning and Practice, 4th Ed. Australia: Thomson.

Weber, C.A, Current, J.R & Desai, A. (2000a), 'An Optimization Approach to Determine the Number of Vendors to Employ', Supply Chain Management: An International Journal, 5.2, 90-98

World Bank (1995a), Guidelines: Procurement under IBRD Loans and IDA Credits, World Bank, Washington, D.C.

APPENDIX I

Research Questionnaire

Introduction

This questionnaire is designed to collect data on Supplier Selection Criteria at Nairobi City County, Kenya. Kindly answer these questions. The information collected will be treated with the highest degree of confidentiality.

SECTION A: GENERAL INFORMATION

1. Gender: **(Kindly tick as appropriate)**

Female ()

Male ()

2. Education Level: (Kindly tick as appropriate)

Secondary ()

College ()

()

University ()

3. Indicate your department

Supply Chain ()

Finance ()

Procurement ()

IT ()

Other (specify) _____

4. What is your designation in the county?

Senior Manager () middle level manager () Support staff ()

SECTION B: SUPPLIER SELECTION

5. Have you ever been involved in Supplier Selection Procedures before?

Yes ()

No ()

6. Do you think Supplier Selection is important to Nairobi County? Please tick where appropriate.

Yes ()

No ()

Not sure ()

7. Who are involved in Supplier Selection at the County? **(Kindly tick as appropriate)**

Only the senior managers in procurement Department ()

Senior managers in all departments ()

Senior managers and Middle-level managers in procurement ()

All levels in procurement user departments (senior managers, middle-level managers and support staff) ()

Others stakeholders (please specify) _____ ()

8. What is your level of agreement with the following statements that relate to Supplier Selection process?

For the following questions use the scale of:

1= very great extent 2= great extent 3= moderate 4= small extent 5=very small extent

NO	SUPPLIER SELECTION PRINCIPLES	1	2	3	4	5
1.	Supplier Selection Processes helps in resource allocation					
2.	The County's Selection process is competitive and fair					
3.	The County's Selection process is able to obtain the best value for money in its supplies					
4.	The County practices transparency in supplier selection					
5.	The County's Selection process exhibit honesty and accountability					
6.	The County follows a code of ethics when it comes to its Supplier Selection activities					
	SUPPLIER SELECTION CRITERIA					
7.	The procured products meet necessary quality assessments and register's low no. of product defects					
8.	The County suppliers offer better service levels (warranties, after sales service)					
9.	The County's suppliers have shorter lead time					

10.	The County prefers supplier organizations with high quality performance accreditation					
11.	The County values supplier's with high financial performance					
12.	The County pays attention to supplier's who have invested in IT					
13.	The performance and litigation history on supplier's profile is a determinant factor in selection					
14.	The suppliers overall price (product & distribution cost) has an impact on selection sourcing					
15.	The county's selection criteria assists in streamlining procurement processes					

SECTIONC: PROCUREMENT PERFORMANCE

1. What is your level of agreement with the following statements that relate to procurement performance?

For the following questions use the scale of:
 1= very great extent 2= great extent 3= moderate 4= small extent 5=very small extent

PERFORMANCE SCORECARD MEASUREMENT	PROCUREMENT PERFORMANCE OUTCOME					
QUALITY	Total value of purchased products have acceptable shelf life period					
	Percentage of stakeholders satisfied with supplier products/services					
	Percentage of Products with recall and rework rate					
	Supply base has demonstrated continuous improvement in defect rates					
	Percentage of Litigation costs resulting from defects and non contract compliance					
	Procurement department procure materials and services that fulfill/exceed expectations					
DELIVERY	On time delivery performance against agreed delivery lead times					
	Supplier delivery time helps to lower business operations risks					
	Supplier delivery time helps to improve inventory management					
	Frequency of Purchase order accuracy per delivery					
	Percentage of procurements completed within standard time guidelines					
	Actual average cycle time was acceptable					
COST	Selection criteria has enhanced transparency hence reduction in corruption related costs					
	Selection criteria has reduced transport costs					
	Selection criteria has significantly reduced failure costs; suppliers deliver more quality and customized goods					