APPLICATION OF ICT IN PROCUREMENT: CASE OF NAIROBI CITY WATER AND SEWERAGE COMPANY

BY

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DECLARATION

This research proposal is my original work and has not been presented for an academic award in any other institution of higher learning.

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

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DEDICATION

I dedicate this project to my wife Winnie and my son Garvin for the support and encouragement they accorded to me while undertaking this project. Regards also go to my mum, dad, brothers (Peter and Job) and my sister Mercy and not forgetting my friends who were very instrumental towards completion of the research project. The very significant role played by my Supervisor, Mr. Chirchir is highly appreciated and especially so the patience he exhibited as he guided me to ensure I came up with a good research report. The input of my moderator, Mr. Lelei cannot go unmentioned and so is Mr. Nyamwange's input recognized as he assisted in correcting the document.

ABSTRACT

The research was a case study of NCWSC which was in the process of implementing Enterprise Resource Planning (ERP). The current procurement system, the Stores Procurement Management System (SPMS) undergoes very lengthy manual processes and lacks integration with other core systems in the company. Anderson, K. V., Juul, N.C and Pedersen, J. K. (2003) stated that an organization is able to realize the full benefits of ICT in procurement only when its internal financial system is interconnected with the procurement system.

The research aimed at establishing the extent to which NCWSC used ICT in procurement system and the strengths and weaknesses of the system. Data was mainly collected through questionnaires and also using secondary data. It was established that whereas response from open ended questions was appealing, the level of neutral responses for closed ended questions was very high. The data was analyzed using the statistical Package for Social Sciences (SPSS) and Microsoft Excel.

The study revealed gaps such as lack of enough procurement professionals, problems adhering to the annual budget since the budget module in SPMS is inactive and also underutilization of Oracle Financials. To utilize the good knowledge base of Information and Communication Technology (ICT) in the company, the research recommended the implementation of the basics of ICT in procurement such as advertisement of tenders via websites. This concept was used by government ministries in Kenya, according to Nyandimo (2011).

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LIST OF ACRONYMS AND ABBREVIATIONS

ADB-   African Development Bank

ERP-   Enterprise Resource Planning

GDP-   Gross Domestic Product

GNP-   Gross National Product

ICT-   Information and Communication Technology (ICT)

KISM-   Kenya Institute of Supplies Management

MD   -   Managing Director

NSE   -   Nairobi Stock Exchange

NCWSC-   Nairobi City Water and Sewerage Company

OCIO-   Office of the Chief Information Officer

OECD-   Organization of Economic Cooperation Development

PPDA (2005)-   Public Procurement Disposal Act 2005

PPOA-   Public Procurement Oversight Authority

SCM-   Supply Chain Management

SPMS-   Stores Procurement Management System

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

There is no community that can exist without interacting with its neighbours. Even in the era of barter trade, communities used to exchange what they had in excess for what they did not have. It was very hard to determine who had valuable products and hence imbalances resulted due to the fact that there was no standard unit of measurement. The introduction of money reduced the problem somehow since it provided a standard unit of measurement. Consequently, goods and services which were deemed more essential than others had more value in terms of money. However, the challenge that has forever existed is how to determine the seller with the best product and the one who can exchange it at a customer friendly price. Lysons and Farrington (2006) defined procurement as the process of obtaining goods and services in any way including borrowing, leasing, force or pillage.

Organizations strive to minimize costs and thereby improving on their returns. This is achieved through procurement by sourcing for the best goods and services from suppliers at the right price, quantity, quality and delivered at the right time (Baily, Jessop and Jones, 1994). Information and Communication Technology (ICT) has helped organizations to broaden their markets through the concept of globalization. Through globalization the division created by diversity in locations is bridged mainly through internet technologies. As a result, people world over are able to communicate irrespective of physical locations. This idea can be very critical in procurement since it would help organizations broaden their markets hence bring forth competition. Ombaka (2009) depict procurement as a multifaceted range of operational, business, ICT, safety, risk management and legal systems that serve to fulfill the needs of organizations.

The purchase of goods, services and works by public authorities from the private sector constitute public procurement. Owegi & Aligula (2006) defined public procurement as procurement by or on behalf of ministries, departments of central government, organs of local government and state corporations. Nairobi City Water and Sewerage Company (NCWSC) is an organ of local government and also procures on behalf of Ministry of Water and Irrigation and

thus its procurement activities constitute public procurement. Public authorities are the departments whose budget is financed by tax payers' money. Such authorities include but not limited to the national government and the local authorities and bodies that depend on the local authorities. Consequently, public interest demand due diligence be conducted to enhance transparency and fairness. The UN Practitioners Handbook (2006) outlines the guiding principles of procurement as fairness, integrity, transparency, economy, effectiveness and value for money.

In Kenya, reforms in public procurement were initiated through an Act of Parliament that established the Public Procurement and Disposal Act 2005 (PPDA (2005), hence the creation of the Public Procurement Oversight Authority (PPOA) in 2007. PPDA (2005) established procedures for efficient procurement and for disposal of unserviceable, obsolete or surplus stores, assets and equipment by public entities. It spelt out the main objectives of the Act, the procedures for tendering, general procurement rules, debarment procedures among others. A report by the Kenya Anticorruption Authority (year 2009-2011), showed that at least 80 percent of the cases it handled had a procurement element. Corruption in procurement increases the cost of doing business and also brings forth substandard goods, services and works hence inefficiencies. Research will seek to establish the role ICT can play to ensure there is value for money in procurement.

1.1.1 Procurement

A general definition of Supply chain management (SCM) is the oversight of materials, information, and finances as they move in a process from supplier to manufacturer to wholesaler to retailer to consumer. One of the major goals of SCM is to reduce inventories. The products ought to be provided for consumption only when needed. Ram and Harrison (1985) categorized procurement as a critical element within the supply chain. Other functions of the supply chain are transformation of the materials into intermediate and finished goods and also the ultimate distribution of the finished products to the customer. Fleischmann et al. (2002) classified supply chain into four processes namely: procurement, production, distribution and sales. Procurement is thus a major sub branch of SCM. A basic definition of procurement is the process of

purchasing goods and services from various suppliers by either paying on the spot or negotiating for discounts. Bailey, K. and Francis, M. (2008) defined procurement as the function responsible for acquiring materials needed by operations.

The primary concept of procurement is to enhance savings on costs. Plans must be put in place to ensure that there is competitive bidding when tenders are floated. However, it is important for firms to ensure value for money and sometimes the lowest bidder need not be selected if the selection will compromise on quality. Speed in which the bids are processed is also a major concern in procurement. Hawking et al. (2004) argue that traditionally, procurement processes have been very slow due to increased use of manual processes in the procurement system.

Novack and Simco (1991) established that procurement processes are complex and involve the completion of a series of activities such as procuring different types of inputs ,qualifying new suppliers, and monitoring supplier performance, that cut across both functional boundaries (intra-firm) and organizational boundaries (inter-firm). Organizations usually thrive on mutual relationships and hence the key to success is determined by establishing critical success factors upon which they outperform their competitors.

The Kenya Institute of Supplies Management (KISM) aims at promoting best practices in Supply Chain Management and Procurement. It has published code of ethics with an aim of instilling professionalism and also ensuring that only supplies professionals participate in public procurement processes. To keep the professionals acquainted with developments in supply chain management, KISM organizes training forums.

1.1.2 Procurement and ICT

Many governments in the world now appreciate the important role played by ICT. The advent of internet technology has made it possible for governments to offer some key traditional processes online. By promoting information sharing; Maniam, Halimah and Hazman (2006) argue that the governments have been able to improve service delivery. In Kenya, for example, all government ministries have websites which contain very critical information which in the past could only be accessed by physically walking into the government offices and the process was not only tedious

but also marred by corruption. Maniam et al. claim that some governments have moved to use ICT in an effort to streamline the procurement process within the public sector. The key processes could range from identification of requirements, through payments to contract management.

Access of information in a timely and reliable manner is very critical to suppliers who depend on the function of procurement. ICT ensures that this critical role is achieved and access to information is also ensured at a cost effective manner and access is devoid of geographical location and people can thus access information in whichever corner of the world they are in. This provision further enhances competitive bidding thereby promoting the principles of procurement; accountability, transparency and integrity as advocated for by Transparency International. Novack and Simco (1991) emphasizes that for procurement process to be effective, the correct information must be collected and the main concern should be customer satisfaction. ICT provides for dynamism in operations and also allows customization to meet specific user needs and specifications. In procurement, ICT can play a critical role due to its ability to handle and analyze massive amount of data within a short period.

1.1.3 Public Procurement
The three pillars of public procurement are; accountability, integrity and transparency. The Transparency International report always emphasize some key methods in supporting the three pillars such as public disclosure of the bid evaluation process, debarring of corrupt suppliers, nondisclosure of confidential information to the bidder and to promote fairness in each element in the procurement process. According to Thai & Grimm (2000), public sector procurement is large and complex, accounting for between 20 and 30 percent of Gross Domestic Product (GDP). Callender &Mathews (2000) also argued that in almost all countries in the world, estimates of the financial activities of government procurement managers are believed to be in the order of between ten and thirty percent Gross National Product (GNP).

Unlike the private sector which would want to limit the number of suppliers based on trusted relationships aimed at minimizing operating risks, the trend in the public sector may be different. According to Office of the Chief Information Officer (OCIO) (2000) in Miami, the government

should aim at having as many sellers as possible in order to broaden competition and maximize opportunities for value for money. The use of pre-qualified suppliers as is the case in the private sector is highly discouraged in public procurement. Such practices would be seen as creating impunity thus unhealthy competition.

In Kenya, the first signs of reforms in procurement were in 1997 courtesy of a World Bank sponsored study (Country Procurement Assessment Review). The study revealed reduced effectiveness on management of public finances, government inability to deliver services effectively and the rules that were set lacked legal framework and could not promote fair competition and transparency. Kenya undertook reforms in public procurement through the Public Procurement and Disposal Act 2005 (PPDA (2005)), hence the creation of the Public Procurement Oversight Authority (PPOA) in 2007.

The PPDA (2005) serves to maximize economy and efficiency, promote competition and ensure that competitors are treated fairly, promote the integrity, transparency, accountability and fairness of the procedures in the Act through public confidence and also to facilitate the promotion of local industry and economic development. The PPDA (2005) has borrowed heavily from the Exchequer and Audit (Public Procurement) Regulations, 2001 and has advocated for changes in the public procurement system. The Act was meant to curb loopholes that resulted in corrupt practices. For example, conflict of interest existed whereby public officers participated in tendering while still in office.

1.2 Procurement in Nairobi City Water and Sewerage Company (NCWSC)

NCWSC was incorporated in December 2003 under the Company's Act Cap 486; it is a wholly owned subsidiary of the City Council of Nairobi (CCN). It took over the provision of water and sewerage services within Nairobi and its environs from the Water and Sewerage Department of CCN. In NCWSC, procurement falls under the department of Supply Chain which is in the directorate of the Managing Director. NCWSC has strived to make procurement fully autonomous as opposed to the past whereby all procurement activities were controlled from the head office. The composition of procurement committees is drawn from all departments. Further, to eradicate corruption, adherence to PPDA (2005) has been advocated with an aim of

safeguarding its annual turnover. The six committees involved in the process of procurement are: Acceptance and Inspection, Disposal, Opening and evaluation, opening of tenders and quotations, tender and procurement.

1.3 Statement of the Problem

The procurement process in the public sector has revealed some practices that compromise transparency and end up prolonging the process. The Transparency International annual report (2008) on Kenya, highlighted liberalization and privatization as major factors that exposed the public procurement to grand corruption. The Anglo Leasing scandal (2004) was one of the 18 sham contracts entered with different companies majority of which did not exist and the government lose at least Sh. 50 billion. Thereafter, in 2008, Laico Regency was sold to Libyans in a deal clouded in secrecy at Sh2.9 billion, about a third of earlier estimates of the property.

NCWSC is in the process of implementing Enterprise Resource Planning (ERP). The Stores and Procurement Management System (SPMS) is the current procurement system. An organization is able to realize the full benefits of ICT in procurement only when its internal financial system is interconnected with the procurement system (Anderson, Juul and Pedersen, 2003). The current system is not able to fulfill this need and preliminary studies conducted by the researcher show that the procurement process involves a lot of paperwork and is very lengthy, the system is only available to a few people, and have no provision of ensuring competitive bidding due to limited or even lack of access to information regarding a multiplicity of suppliers.

Rwoti (2005) established that the use manual systems in procurement have resulted into poor data management. The researcher will investigate whether the use of ICT has made the scenario different. Kiburi (2008) established that most firms that had not implemented electronic procurement which is usually online based could improve on efficiency in their business transactions if they adopted ICT in procurement. She proposed for studies on the relationship of ICT adoption and service delivery in the public procurement. She also proposed establishing the levels of ICT adoption the public sector has achieved.

Nyandimo (2011) established that government ministries lacked enough computers. She also established that some ministries applied ICT in procurement processes such as information gathering, need identification and advertisement of tenders. However, the ministries were slow in using ICT in processes such as award of contract and covering catalogue information for the purposes of communicating with suppliers. The researcher will seek to establish the situation in NCWSC which is also in the public sector and will seek to answer the following questions:

i. To what extent does NCWSC use ICT in procurement?

ii. Which are the strengths and weaknesses of the current procurement system in NCWSC?

1.4 Research Objectives

i. To establish the extent to which ICT is used in procurement in NCWSC.

ii. To determine the strengths and weaknesses of the current procurement system with an aim of building on the strengths and improving on the weaknesses.

1.5 Value of the Study

The government and the law makers can assess the value of the reforms they have initiated. Consequently, areas which require improvements can be addressed. The study will also give insights on how to overcome challenges which are still faced even while using ICT in procurement.

NCWSC will benefit from the research as a public institution. Public procurement is a major concern to international donors since if properly managed will result to economic growth.

Scholars and researchers will find an opportunity to critique the study. By so doing, basis for further research will be established and the study will also have built on existing theories and practice thereby contributing to the body of knowledge.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

Literature will be sought to give a thorough understanding of the procurement and how ICT is transforming procurement in comparison to traditional manual systems. Public procurement will be differentiated from private procurement and preference given to the former. Public procurement in Kenya has undergone some tremendous reforms which will be highlighted together with the current trends in public procurement. The research will further focus on the challenges that have been faced while applying ICT in procurement and what needs to be done in order to leap full benefits based on experiences from other public sectors in the world. The researcher will borrow heavily from Malaysia which in the 1970s was a developing country like Kenya but today is classified as the fifth Asian Tiger. The other four tigers are Hongkong, Singapore, South Korea and Taiwan and are among the fastest growing economies in the world.

2.2 Procurement

SCM is the process involved in the transformation of goods right from raw materials to the finished products including the flow of information. Quinn (1997) stated that supply chain involves the activities that move goods from raw material to the end user. Such activities include: sourcing, procurement, production scheduling, order entry and order management, warehousing and inventory management, transportation, distribution across all channels, customer service, and information systems to monitor all these activities. Supply Chain Management as a concept has been widely accredited to a Booz Allen consultant named Keith Oliver who in 1982 added into the SCM, the concepts of planning, implementing and controlling the above activities with an aim of satisfying the customers.

Handfield & Nichols Jr (1999) highlighted competitive advantage as a major element in SCM. Firms are thus meant to ensure that the processes used in acquisition of goods are cost effective and efficient enough to ensure that they outshine their business rivals. Fleischmann et.al (2002) classified supply chain into four processes namely: procurement, production, distribution and sales. Fleischmann defined procurement as the process that involves the operations directed

towards providing for raw materials and resources needed for production. However, a general definition of procurement used by most authors is simply the process in which users purchase items from sellers.

According to Baily et al. (1994), procurement is meant to facilitate sourcing of items. While sourcing however, the items should be acquired at the right price, quality and quantity and delivered at the right time from the right source. In order to score in all these areas, transparency is of essence as advocated for in the PPDA (2005). Ram, G. & Harrison, T.P. (1985) categorized procurement as a critical element within the supply chain. Other functions of the supply chain are transformation of the materials into intermediate and finished goods and also the ultimate distribution of the finished products to the customer.

Gebauer & Segav (2001) defined procurement as entailing all of the activities involved in obtaining material and services and managing their inflow into an organization toward the end user. At least one third of organization's income is spent on purchasing goods and services. This shows that procurement has a significant business value and vital role in an organization. Lysons & Farrington (2006) argue that procurement is a wider term than purchasing. Purchasing implies acquisition of goods or services in return for monetary or equivalent payment. However, procurement is the process of obtaining goods and services in any way including borrowing, leasing and even force or pillage. Stewart (1994) perceives the unglamorous nature of individuals who manage procurement activities. These individuals rarely engage in any strategic management activities like reforms and in the long run end up messing the procurement process.

2.3 Public Procurement

The purchase of goods, services and works by public authorities from the private sector constitute public procurement. Owegi and Aligula (2006) defined public procurement as procurement by or on behalf of ministries, departments of central government, organs of local government and state corporations. According to Nash, Schooner, O'Brien-DeBakey, & Edwards (2007) procurement and contracting are commonly used and mean the process of acquiring property or services right from determination of the requirements to end of contract. However,

contracting is a subset of procurement. It thus follows that the process can be very lengthy especially due to the massive resources involved in government's contracts.

Developing countries spend about 20% of Gross Domestic Product (GDP) on public procurement (Callendar and Mathews, 2000). In developing countries the scenario is different as they spend up to 50% (Schiavo-Campo and Sundaram, 2000). Unlike the private sector which would want to limit the number of suppliers based on trusted relationships aimed at minimizing operating risks, the trend in the public sector may be different.

According to Office of the Chief Information Officer (OCIO) (2000) in Miami, the government should aim at having as many sellers as possible in order to broaden competition and maximize opportunities for value for money. Use of pre-qualified suppliers which is popular in the private sector is highly discouraged in public sector. Such practices would be seen as creating impunity thus unhealthy competition. Cohen and Eimicke (2008) established the ambiguity of goals in public procurement and vagueness of the public interest. Public interest advocates for values such as honesty, integrity, equal treatment, due processes, and transparency. Fry and Nigro (1998) note the element of bureaucratic management in public procurement. *JPAE 18*(2), 337.

Public procurement is faced by many challenges owing to the fact that public sector procurement is large and complex. Balancing between achieving social and political responsibilities is a challenge governments have to cope with. Rasheed (2004) further states that governments should serve to preserve accountability and transparency of services by using a complex contractual system designed to protect public interest.

Jorge (2010) identified 11 steps in ideal public procurement. They include: requirement identification, determining the procurement method, procurement planning and strategy development and the fourth step is procurement requisition processing. Step number five is Solicitation documents preparation and publication. Thereafter pre-bid/proposal meeting and site visit followed by bid/proposal submission and opening. Step eight is bid/proposal evaluation while the next step is contract award recommendation. The last two steps are contract negotiations and contract Award (signing) respectively. However, though the 11 steps could

constitute best practice, it is not unusual for governments to either over concentrate in one of the steps and / or skip some steps. Such moves lead to loss of accountability, transparency and integrity.

Organization for Economic Cooperation Development (OECD) has principles that seek to enhance integrity in public procurement. The principles revolve around transparency, good management, prevention of misconduct compliance and monitoring and finally accountability and control. The principles auger well with the legal instruments of organizations such as the United Nations, World Trade Organization and the European Union.

2.4 Legislation in Public Procurement

In Kenya, the first signs of reforms in procurement were in 1997 courtesy of a World Bank sponsored study (Country Procurement Assessment Review). The study revealed reduced effectiveness on management of public finances, government inability to deliver services effectively and the rules that were set lacked legal framework and could not promote fair competition and transparency. It is against this backdrop that the World Bank in conjunction with the African Development Bank (ADB) initiated reforms that led to the launch of the Public Procurement Programme in 1998. The reforms were meant to ensure increase in transparency, delegation of authority and compliance with International Procurement Laws and Standards. However, the programme was faced by limitations such as overpricing, lack of transparent competition, excessive delays in procurement, poor documentation of material, conflict of interest in procurement and lack of legal structure to guide and control the procurement system.

With an aim of coping with the challenges above and streamline the legal framework, the public procurement law was enacted in 2005 and was operationized in 2007. The government then set up PPOA whose principal function is the oversight of the public procurement regulations hence the genesis of PPDA (2005). The PPDA (2005) is an Act of Parliament to establish procedures for efficient public procurement and for the disposal of unserviceable, obsolete or surplus stores, assets and equipment by public entities and to provide for other related matters. Currently, the enactment of the bill is a requirement under Economic Recovery Strategy Assistance. The Act

borrows from best practice worldwide and has created an opportunity through which professionalism could be instilled in procurement.

The PPDA (2005) serves to maximize economy and efficiency, promote transparency, fairness, accountability and integrity in order to increase public confidence and consequently ensure economic development. PPOA should assist public entities in not only implementing the Act but also ensuring that the Act is complied with. The Act strongly disallows splitting of tenders for the purposes of avoiding the procurement process. The Act also has provisions for debarring suppliers who violate the Act and are also engaged in corrupt practices. For purposes of promoting fairness and competition, public entities must advertise tenders for the public to declare interest.

2.5 ICT and Public Procurement

Information is very critical guide in decision making. However, it is the availability, speed of access, reliability, timeliness and accuracy of information that actually ensures that information aids in making informed decisions. Riley (2012) adds three important elements not mentioned by many others, they are ease of understanding, worth the cost and able to meet the needs of the users. Riley emphasizes that in order to achieve the above elements, objectives for which information is sought be defined in advance. Of importance also is to ensure use of current information systems and involvement of users in development of strategies. Finally, use of authoritative sources, a concept emphasized by academic research hence the need for quoting the source of information.

According to Calarco (2003), government procurement should strive to implement e-procurement systems. They facilitate transparency, accountability and access through an open system. Reduction of non-value added activities such as telephoning and postage are eliminated thereby making processes faster. Organizations that are able to reduce cost of doing business end up being more competitive and therefore grow faster than others. Morrison (2009) depicted three types of e-procurement: The first is, Enterprise Resource Planning (ERP) which facilitates the creation and approval of purchasing using web technologies. The second is e-tendering which

conveys information on pricing to suppliers via the internet. Finally, e-sourcing whose primary role is to identify suppliers by using ICT.

Di Maio (2001) envisages use of ICT in public procurement in e-government. E-government transforms both internal and external relations of public administration through ICT. ICT in procurement aims at optimizing service delivery, increase involvement of citizens in governance and also building more capacity in governance. The Kenya government strategy paper March (2004) stipulated a medium term initiative, e-procurement, which was envisaged to have been implemented by June 2007. The government through e-government aimed at enhancing efficiency and effectiveness in the delivery of services, promoting accountability by ensuring easier access to information and also allowing the citizens to participate in the delivery of services thus enhancing good governance, empowerment and transparency. All these could only be achieved through ICT.

A Ministerial Declaration which was unanimously approved in Manchester in November 2005 stated that the European Union member state agreed that they would embrace e-government by 2010. The benefits they sought were higher user satisfaction with public services, reduced administrative burden on citizens and efficiency through the use of ICT. To achieve the objectives of procurement which are transparency and accountability, the innovative use of ICT was to be considered.

Hawking et al. (2004) argue that traditionally, procurement processes have been very slow due to increased use of manual processes in the procurement system. The manual processes are further more prone to errors, slow, limited in terms of information sharing hence limiting competition. This does not auger well in achieving the principles of procurement as outlined in the UN Practitioners Handbook (2006). According to Bailey et al. (2008), companies are very concerned on adopting effective means of ensuring information flow. Consequently, companies have continually searched for strategies that can improve their flexibility, responsiveness and thus their competitiveness. They have envisaged the use of Information Communication Technology (ICT) as a plus and the way forward towards success in the field of supply chain management.

Croom and Brandon (2004) emphasize the critical role played by ICT in the stages of procurement; searching, sourcing, negotiation, ordering, receipt, and post-purchase review. According to Kalakota & Robison (1999) ICT can be used in procurement in activities such as selecting suppliers, purchasing, negotiating, agreeing with terms, monitoring the supplier performance among others. This further ensures efficiency and effectiveness of procurement and especially so in public procurement where public scrutiny therefore public interest takes centre stage in all processes. Rodovilsky & Hedge (2004) emphasized that use of ICT in procurement leads to improved operational performance.

In procurement markets, according to Corsi, Gumina and Ciriaci (2006) corruption involves a different process of allocation of contracts than would have been obtained through a competitive process. The contract could be awarded to lowest bidder and in some cases has offered a bribe or in other cases the number of bidders would be reduced hence hindering competition. By hindering competition, the cost of doing business increases and the public is at a loss. ICT has the advantage of ensuring transparency by relaying information globally and this in essence gives the public the powers to question some transactions which would have gone unnoticed in manual processes which hinder information sharing.

In general, as brought out by different authors in this research, the use of ICT in procurement processes may lead to reduced costs and time for managing information, to integration, comparability and rapid update of data coming from different sources (e.g., enhanced monitoring), and, finally, to disintermediation and reduction of discretion, hence to more transparent information, limiting opportunities for bribery.

A forum organized by OECD in 2005 on "Improving Transparency in Public Procurement" emphasized the important roles ICT can play in enhancing public confidence in procurement. To ensure there is transparency, information ought to be accessible and in an understandable format and language. The concept of timeliness of information as brought out via ICT restricts the timeliness with which to submit bids. The uniformity in information which is a very hard concept to implement in manual processes ensures fairness since bidders are subjected to similar processes and rules throughout the procurement cycle. Since ICT has a facility for handling

enormous data, this consequently means that as many bidders as possible are involved in the procurement process, sometimes going beyond the national boundaries due to globalization. The end result is that objectivity through creation of a competitive environment is ensured.

2.6 Summary and Knowledge Gap

Based on the literature review, there is a gap brought about by lack of continuous reforms in public sector. The PPDA (2005) is at least seven years old but has neither been widely publicized nor amended to accommodate developments that have emerged in ICT, key among them being use of wireless technology and cloud computing. The research will aim at analyzing the current procurement system in NCWSC with an aim of establishing its strengths and weaknesses. The results can be a pointer to how ICT can be used to enhance fairness, integrity, transparency, economy, effectiveness and value for money.

The challenge of ensuring information security is bound to be the severest in any electronic environment; Karim and Khalid (2003) and Croom and Brandon-Jones (2007). To overcome the challenge, the government may be forced to channel lots of resources in ICT notwithstanding the fact that at least 10 percent of GDP is usually allocated to procurement. However, the success of e-procurement in Italy and Brazil as noted by Tridapalli (2008) reveals that e-procurement can be a reality.

Information is a critical aid in making informed decision. When people are armed with information with qualities such as accuracy, reliable, timely, conscious of user needs and at an affordable cost, such information becomes power. The OECD summarized by showing how the qualities mentioned above would lead to ensuring public confidence and thus fulfillment of the principles of procurement as per the UN Practitioners Handbook (2006).

2.7 Conceptual Framework

Independent variables   **Dependent Variables**

System
- Supplier Database
- Access to Procurement System

Infrastructure
- Availability of computers
- Reliable Network
- Training

Environment
- Transparency and Integrity
- Top Management Support
- Legal Framework

- Competitive Advantage

- Faster Procurement Process

- Faster Adoption of Procurement Budget

- User Friendly Platforms to Input Data

- Continued Improvement

- Reduced errors

- Reduced Corruption

- Adherence to PPDA(2005)

CHAPTER THREE: RESEARCH METHODOLOGY

The section highlights the following aspects: research design, the population, data collection and data analysis.

3.1 Research Design

The research was a case study of NCWSC, a public institution which was in the process of implementing ERP. The objectives of the research were to establish extent to which ICT is used in procurement and also to determine the strengths and weaknesses of SPMS. The findings would be prospects for viability of electronic procurement.

3.2 Population and Sample

According to Kothari (2004), it may not be practical to study all elements in a population. Since the population in NCWSC was large, (about 2,200 staff), a sample was used. The sample was drawn from seven directorates by stratified sampling technique. However, given that lower level staffs were not directly involved in procurement, only staff between grade 1 and 6 constituted the sample and thus reduce the population to 495. The researcher had a sample of at least 10 percent of the target population which is a suitable method of selecting samples in such a study whereby the population is large, Stanley and Gregory (2001). Awino (2009) selected a sample of 52 manufacturing firms from a population of 500 firms. The researcher administered 54 questionnaires. The sample of 54 was selected using random sample within each stratum. The sample size was selected proportionately as per table 3.1.

3.3 Data Collection

The researcher used both primary and secondary data. The primary data consisted of questionnaires. Section A of the questionnaire sought to collect the bio data of the respondents. Section B of the questionnaire sought to establish the extent to which NCWSC use ICT in procurement. Section C focused on the strengths and weaknesses of the current system relative to the position in an ideal situation where ICT was used in procurement. The secondary data was mainly in the form of government publications like PPDA (2005), journals, books, magazines, newspapers, reports and minutes from conferences.

Table 3.3: Sample Design

Directorate	Population	%of Population	Sample size
Managing Director	30	6%	3
Commercial	176	36%	20
Technical	120	24%	13
Legal	22	4%	2
Finance	102	21%	11
Audit & Risk	5	1%	1
Human Resources	40	8%	4
TOTAL	**495**	**100%**	**54**

3.4 Data Analysis

The data collected was presented in form of tables, bar graphs and pie charts and subjected to statistical methods with the aim of drawing conclusions. The information was interpreted using Likert-scale on a scale of one to five. The open ended questions provided for more freedom while discussing results of data analysis. Moreover, the open ended questions aided in establishing limitations of the study which was the basis for recommending further research in application of ICT in procurement. The data analysis tools and techniques included Microsoft Excel and Statistical Package for Social Sciences. Section A established the general characteristics of the respondents. Section B covered the first research question while Section C sought to answer the second research question.

CHAPTER FOUR: DATA ANALYSIS, FINDINGS AN DISCUSSIONS

4.1 Introduction

This chapter focuses on findings and discussions derived from data that was collected and analyzed. Out of the 54 questionnaires distributed, 31 were responded to. This represented a response rate of 57%. The researcher anticipated a response rate of at least 70% given the convenience of official emails which was the medium used to send questionnaires to respondents and also the several reminders. However, the 57% represented a good mix as shown in the profile of respondents and was thus considered a good representative for the population.

4.2 Profile of the Respondents

The section gives an analysis of the characteristics of respondents. Features such as gender, length of service, level of education, literacy in computers among others were analyzed as follows:

4.2.1 Directorate

The respondents came from six of the seven directorates since there was no response from the legal directorate. Majority of the respondents came from commercial directorate at 55% of total respondents which represented 10% of the population in commercial directorate and 85% of the targeted sample. The finance directorate which has the department of supply chain represented 26% of total respondents and consequently 8% of the population. However, this was considered suitable for analysis.

Table 4.2.1 Directorate

	Commercial	Technical	Finance	Human Resources	Managing Director	Audit & Risk
Number of respondents	17	3	8	1	1	1
Percentage of total	**55%**	**10%**	**26%**	**3%**	**3%**	**3%**

Source (Research Data: 2013)

4.2.2 Gender

The representation in terms of gender was as shown below and was considered appropriate for study. In the Kenyan constitution, 30% female representation is considered a fair representation.

Figure 4.2.2 Gender
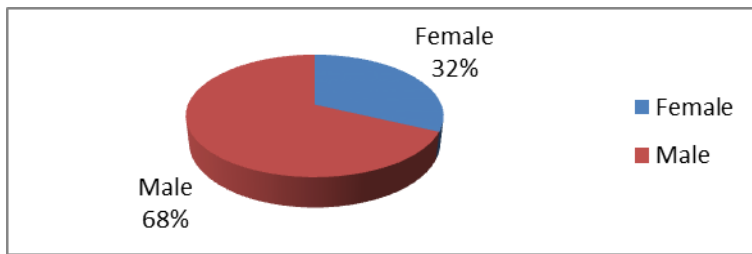
Source (Research Data: 2013)

4.2.3 Age Bracket

At least 81% of the respondents were between 30 and 45 years and only 16% were below 30 years and a further 3% of the respondents were above 45 years. The representation from various clusters of age was thus deemed a fair representation of the entire population.

Figure 4.2.3 Age Bracket
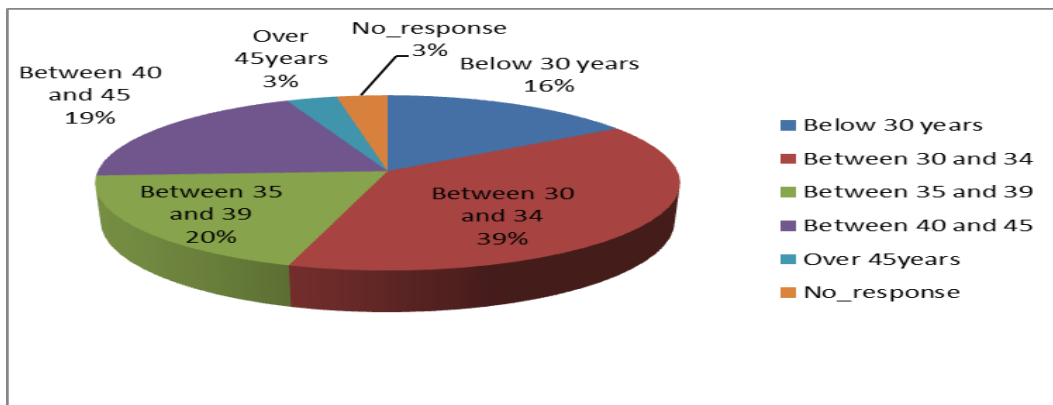
Source (Research Data: 2013)

4.2.4 Grade of Employment

The senior management constituted 7%, middle management (72%) and lower management constituted 19% thus good representation of decision makers.

Figure 4.2.4 Grade of Employment
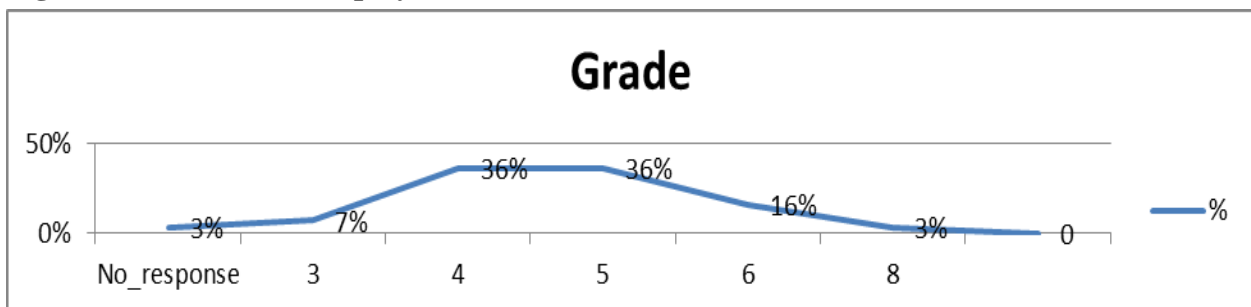
Source (Research Data: 2013)

4.2.5 Mean of Years of Service Since Inception of NCWSC (2004)

The respondent who had worked for the least number of years since inception of NCWSC in 2004 had worked for 3 months (0.25 years) while there were a number of respondents who had worked for at least 8 years. On average though, the respondents had worked for 5.091 years.

Table 4.2.5 Years of Work Service

Descriptive Statistics					
	N=total	Minimum	Maximum	Mean	Std. Deviation
Length of service after year 2004 in (Years)	31	0.25	8	5.091	2.14589

Source (Research Data: 2013)

4.2.6 Member of Procurement Committee

The response was rather disappointing since it was expected that since majority of the sample were based on the criterion that they were members of procurement committee, majority of respondents were expected to be members of procurement committee.

Figure 4.2.6 Members of Procurement Committee
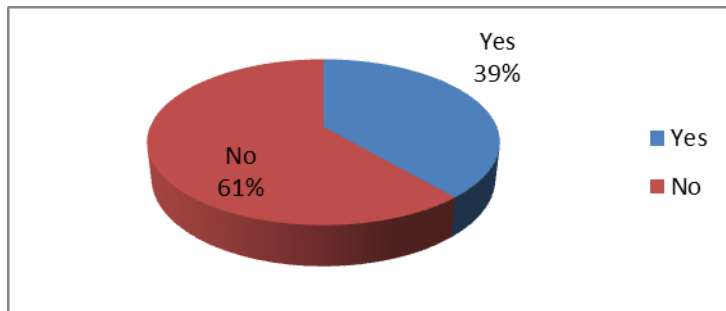
Source (Research Data: 2013)

4.2.7 Use of Computer on a Daily Basis

All of the 31 respondents answered to the affirmative to the question whether they used computers on a daily basis. The response was very encouraging since every respondent was expected to understand the basics of ICT.

4.2.7.1 Access of Internet

All of the 31 respondents claimed to have access to the internet and thus the respondents were expected to be knowledgeable on ICT issues.

4.2.7.2 Speed of Internet

The speed of internet was considered fast by only 7% of the respondents with 19% considering it as slow. Majority of the respondents, at 74% considered it moderate. In the current digital divide where fibre optics has brought in super-fast internet speeds, organizations should endeavor to have very fast internet speed so that they can take advantage of timely information.

Figure 4.2.7.2 Speed of Internet
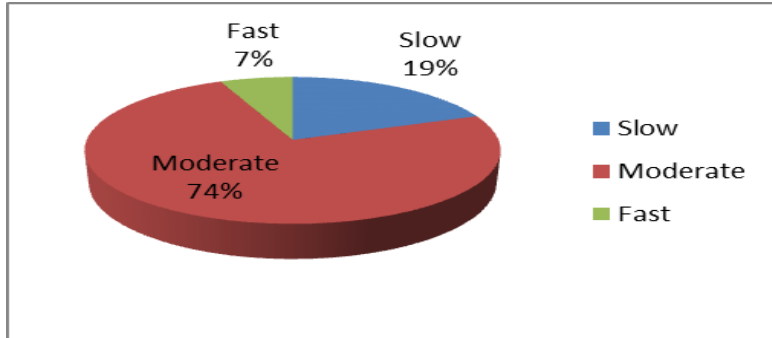
Source (Research Data: 2013)

4.2.7.3 Availability of Internet

The mean of availability of internet for an 8 hours working day was 7.1 hours. It was encouraging to note that there were no responses from the two categories (for at most 1 hour and at most 2 hours) respectively.

Figure 4.2.7.3 Mean of Hours ICT is Available Per Day

Descriptive Statistics					
	N	Minimum	Maximum	Mean	
In a normal working day of 8 hrs. How many hrs is IT available	31	At most 4 hrs	At most 8hrs	7.1hrs	

Source (Research Data: 2013)

4.2.8 Highest Level of ICT training

The level of ICT training was considered very appropriate with at least 52% of respondents possessing at least a diploma and above while at least 32% possessed a certificate. However, the respondent who answered in the category 'others' studied ICT while undertaking his Master degree in Economics.

Figure 4.2.8 ICT Training
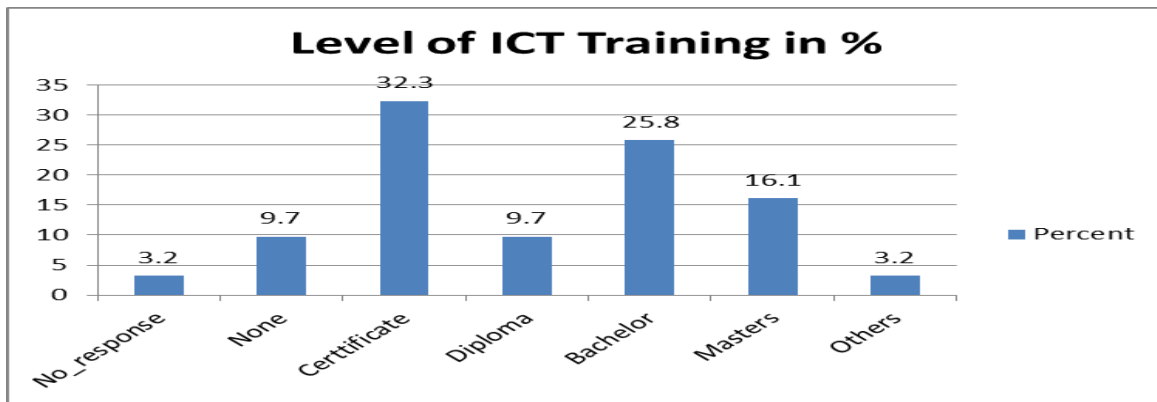
Source (Research Data: 2013)

4.2.9 Certification in Procurement

Responses on whether the respondents had professional certification in procurement were wanting since only 10% possessed certification and this was considered inappropriate for the respondents to have mastered enough grasp of the concept of procurement.

Figure 4.2.9 Certification in Procurement
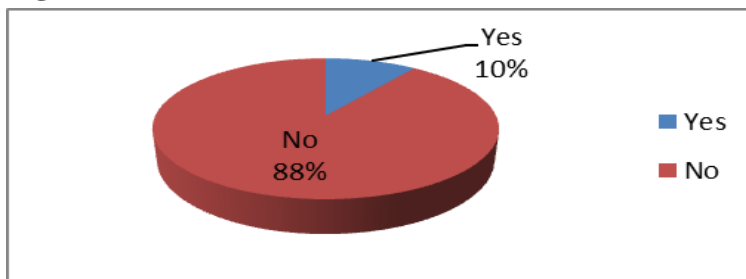
Source (Research Data: 2013)

4.2.10 Awareness of PPDA (2005)

The respondents who were aware of PPDA (2005) stood at 74% but it was expected that at least all respondents ought to have been aware of the legislation.

4.2.10.1 Advantages of PPDA (2005)

The guidelines were deemed to have standardized procurement and disposal in public entities thus enhancing accountability, competitiveness, fairness, objectivity and transparency both within and without the public entities. By eliminating corruption, PPDA (2005) was considered to have ensured value for money. Transparency was highlighted to be evident since the Act

stipulates that there should at least exist quotations from 3 suppliers for the process to be considered as fair and transparent. Protection from unscrupulous suppliers was also cited as a major plus for PPDA (2005).More than 50% of the respondents made use of the terms accountability, transparency, competition, objectivity or fairness.

Figure 4.2.10 Awareness of PPDA (2005)
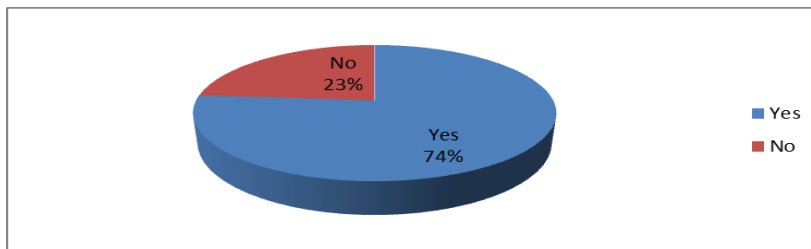
Source (Research Data: 2013)

4.2.10.2 Disadvantages of PPDA (2005)

The time spent in various procurement committees was viewed as a major deterrent of PPDA (2005) since it made the procurement process long and cumbersome. Furthermore, the Act was considered bureaucratic and especially so while procuring goods and services which are not expensive. Lack of proper awareness of the Act in the public sector was cited and so was restriction of the legislation to the annual budget of the public entities. At least 80% of the respondents to the question made wide use of four main terms: bureaucratic, time wasting, narrowly circulated, and long.

4.3 Application of ICT in Procurement

The application of ICT in procurement formed the 13 questions in Section B. Question 3 (on whether one can enter technical specifications in SPMS), had the lowest spread of data. The standard deviation stood at 0.7288; furthermore, out of the six possible selections in the six likert scale, responses came from three as follows: 42% agreed, 42% had neutral responses while 16% disagreed. There was neither no response, strongly agreed nor strongly disagreed. However, the highest spread of data was in question 11 (Whether ICT has made workers strategists and not clerical workers). The standard deviation was 1.4933 with responses from all the six selections. The non-responses were the highest in this section, at 13%, strongly agreed (10%), Agree (29%), neutral (13%), disagree (26%) and strongly disagree (10%).This could be an indicator that there was no unanimous answer to the latter question but unanimous answer existed in question 3.

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Table 4.3 Application of ICT in Procurement

	Descriptive Statistics: N=31 : (Data sorted by mean ascending)						
	Min=Minimum , Max =Maximum , Std_Dev=standard deviation, Var =Variance	Min	Max	Mean	Mean_ Respon se	Std_ Dev	Var
1	Are you well acquainted with SPMS	1	5	2.0645	Agree	0.9978	0.9957
2	SPMS is easy to use: with limited IT skills	1	4	2.4839	Agree	0.8896	0.7914
3	Existence of a database for pre-qualified suppliers	1	5	2.4839	Agree	1.0915	1.1914
4	Transactions with suppliers visible via an interface	0	4	2.4839	Agree	1.0286	1.0581
5	Non procurement members are not users in SPMS	0	5	2.5484	Neutral	1.2607	1.5892
6	SPMS used for both internal and external procurement	1	5	2.6452	Neutral	1.0503	1.1032
7	ICT has converted workers from clerical officers to strategists	0	5	2.6667	Neutral	1.4933	2.2299
8	You can enter technical Specifications in SPMS	2	4	2.7419	Neutral	0.7288	0.5312
9	NCWSC -suppliers relationship is long term thus transparent negotiations	0	5	2.7419	Neutral	1.0945	1.1978
10	Use of SPMS has led to increased customer satisfaction	0	4	2.8387	Neutral	0.9694	0.9398
11	All members of procurement committees users in SPMS	0	5	2.9355	Neutral	1.0935	1.1957
12	Procurement process is highly computerized	1	5	3.0968	Neutral	1.2208	1.4903
13	Tenders advertised via website	0	5	3.2903	Neutral	0.9727	0.9462
Key	**0=No_response, 1= Strongly Agree ,**	**2=Agree , 3=Neutral , 4=Disagree , 5=Strongly Disagree**					

Source (Research Data: 2013)

On average, there were four questions whose mean response was 'Agree' and their standard deviation was as shown in figure 4.3. For the remaining 9 questions the mean response was 'Neutral'. The neutral mean response was thus evident in 69% of the questions.

Figure 4.3 Std_Deviation for mean response 'Agree'
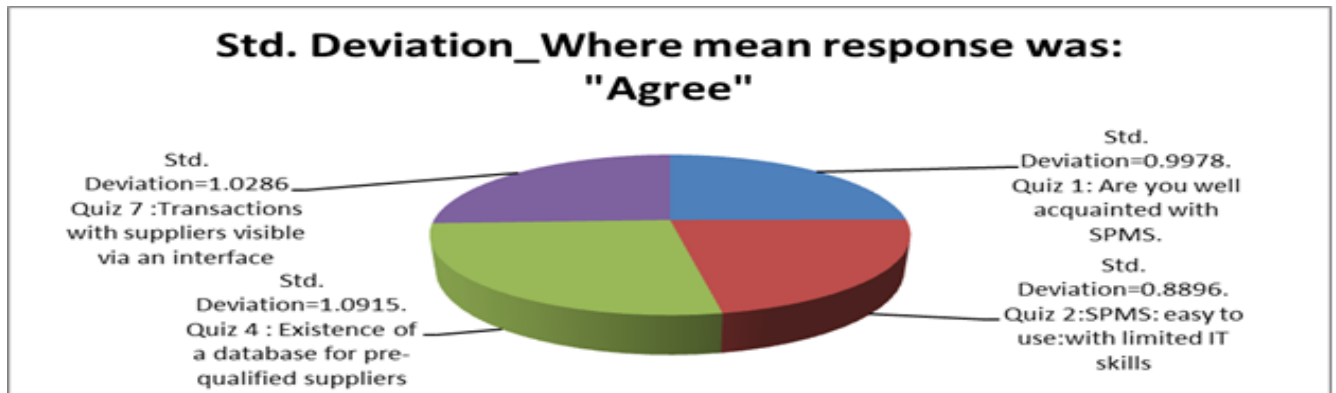
Source (Research Data: 2013)

4.4 Other Aspects of ICT in Procurement:

Responses revealed that the budget module in SPMS was not activated and thus making it hard to control costs effectively and efficiently while procuring. Consequently, this meant procurement was not dependent on the budget which should be a very key consideration as per the PPDA (2005). The lack of integration of procurement with finance via Oracle financials was cited as an aspect that would have been covered. Other concerns raised as not covered is how procurement related to issues of data security, time saving and boosting the morale of employees. The final aspect that respondents thought would havebeen worth mentioning was the issue of monitoring stock levels.

4.5 Strengths and Weaknesses of SPMS

In Section C, the question on whether pre-qualified suppliers would be rejected in future if they offered poor services had the least dispersion of data with a standard deviation of 0.73. The no response stood at 3% , 15% Strongly agreed , 58% Agreed 23% took a neutral stand. There were no respondents who neither disagreed nor strongly disagreed. The question on whether staff are sentisized on procurement through regular trainings had the highest spread of data with a standard deviation of 1.303.The non response (6%), Strongly agreed (3%), Agree (26%), Neutral (16%), Disagree (42%) while 6% strongly disagreed.

Table 4.5 Strengths and Weaknesses of SPMS

	Descriptive Statistics: N=31 (Data sorted by mean, ascending)						
	Min=Minimum , Max =Maximum , Std_Dev=standard deviation	Min	Max	Mean	Mean-Response	Std_Dev	Var
1	Reject prequalified suppliers in future for poor services	0	3	2.0000	Agree	0.7303	0.5333
2	Goods &services are vetted to check compliance with set standards	0	4	2.0968	Agree	0.9783	0.9570
3	Cheapest tender not awarded if quality will be compromised	0	4	2.1290	Agree	0.8848	0.7828
4	Procurement has received utmost top management support	0	4	2.1613	Agree	0.8980	0.8065
5	SPMS can handle many suppliers and is competitive	0	4	2.2903	Agree	0.9727	0.9462
6	Procurement adheres to accountability and transparency	0	4	2.3548	Agree	0.7549	0.5699
7	Decentralization of the procurement process has more benefits than centralization	0	5	2.5161	Neutral	1.0915	1.1914
8	Procurement system has provision for customized reports	0	4	2.5484	Neutral	0.8500	0.7226
9	There are enough computers: access to SPMS isnt limited	0	5	2.5484	Neutral	1.1787	1.3892
10	Use prequalified suppliers as per PPDA 2005 Act	0	5	2.5806	Neutral	0.8860	0.7849
11	There is enough capacity to analyze all tenders on time	0	5	2.6129	Neutral	1.0544	1.1118

		Min	Max	Mean	Mean-Response	Std_Dev	Var
12	Procurement adheres with PPDA 2005	0	5	2.6452	Neutral	1.1416	1.3032
13	NCWSC has information on debarred suppliers &has blacklisted them	0	5	2.7097	Neutral	0.8638	0.7462
14	SCM Dept was under Finance but now under MD and its better	0	5	2.7742	Neutral	1.2030	1.4473
15	Viability of electronic transactions to be questioned thus prefer manual	0	4	2.7742	Neutral	1.0234	1.0473
16	Relatives to staff (NCWSC) do not engage in procurement	0	5	2.8387	Neutral	0.9694	0.9398
17	Imprest only used for goods and services below Sh.10,000	0	5	2.9677	Neutral	1.2776	1.6323
18	Procurement is prone to unauthorized network access, viruses&worms	0	4	3.0000	Neutral	0.8563	0.7333
19	Regular trainings to sensitize staff on procurement system	0	5	3.0323	Neutral	1.3034	1.6989
20	Procurement in NCWSC strictly adheres to the annual budget	0	5	3.2258	Neutral	1.1463	1.3140

Key

0=No_response, 1= Strongly Agree , 2 =Agree , 3=Neutral,   4=Disagree , 5=Strongly Disagree

Source (Research Data: 2013)

Figure 4.5 Standard Deviation of Questions With Response, 'Agree'
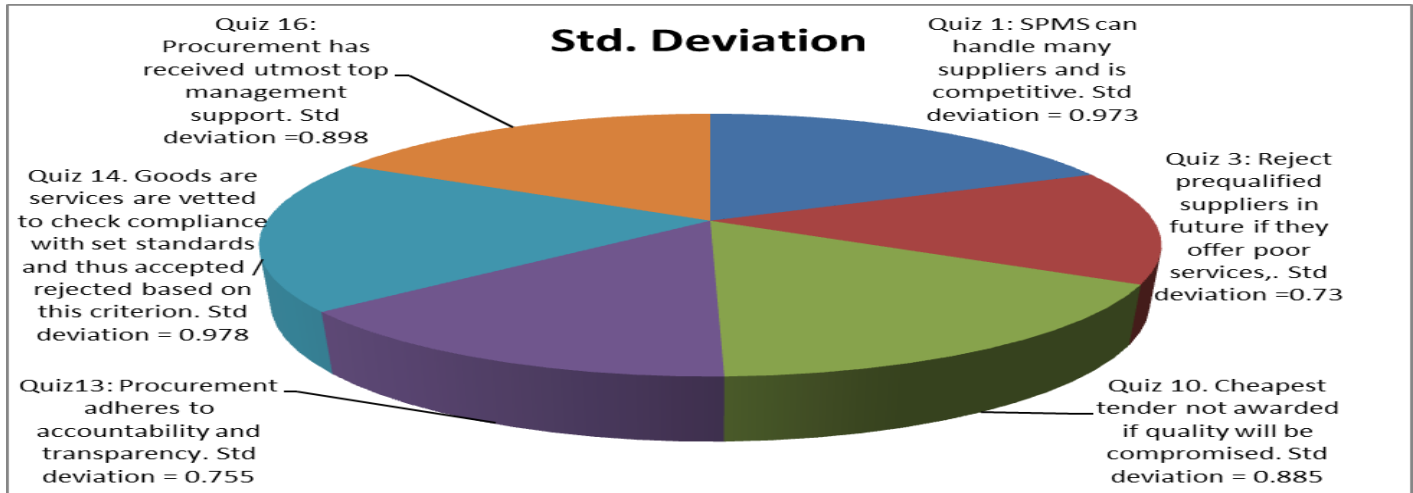
Source (Research Data: 2013)

CHAPTER FIVE: SUMMARY, FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The chapter will focus on summarizing the findings in Chapter four with an aim of aligning them to the objectives of the study. One of the objectives of the study was to establish the extent to which NCWSC used ICT in procurement (Section B of questionnaire). The last objective sought to establish the strengths and weaknesses of SPMS (Section C of questionnaire).

5.2 Summary of Findings

The research aimed to establish the extent to which ICT is used in procurement and also highlight the strengths and weaknesses of SPMS. It was established that procurement enjoyed the support of top management and that NCWSC had information on debarred suppliers. The majority felt that SPMS was a system which is easy to use but were non-committal on whether SPMS has led to more customer satisfaction and highlighted the fact that NCWSC was not taking advantage of advertising tenders via the website. A controversial question that stated that SCM was under MD's directorate made respondents take it like an open ended question since most were aware that SCM was under the directorate of finance.

The staff had access to computers on a daily basis and could access the internet. However, majority of the staff felt that the speed of the internet was just moderate. Furthermore, NCWSC was not taking advantage of Oracle Financials which offers solutions such as financial controls like budgets, risk management, procurement and disposal controls. The manual approach to procurement was consequently viewed as a detriment towards issues such as adhering to the procurement budget and also managing stock levels. The research found out that though SPMS has a module for budget, it is not activated thus the company can easily find itself failing to maintain good supplier relationships especially so should the company transact outside the set budget.

NCWSC decentralized procurement and constituted procurement committees from other sections in the company. However, very few respondents claimed to have certification in procurement whereas more than half of the respondents had at least a diploma in ICT. Moreover, more than half of the respondents claimed that they were not regularly sensitized on matters procurement

through training. Whereas the research found out that PPDA (2005) had advantages such as accountability, transparency, competition and fairness, there was a strong feeling that the Act was very bureaucratic, time wasting, prolonged procurement and was not widely circulated. The disadvantages listed were likely to hinder NCWSC from deriving full benefits from PPDA (2005).

It was noted that whereas respondents were very willing to answer open-ended questions, majority selected the 'neutral' option for the close-ended questions. However, the rate of non-response was rather low and very few questions were left unanswered. All questionnaires were received via email and this was a pointer that the staffs were comfortable with ICT. With regards to use of SPMS, it was established that many members of procurement committees were not created as users in SPMS.

5.3 Conclusions

The study concludes that NCWSC needs to invest heavily on areas such as regular training to sensitize the staff in procurement. Furthermore, NCWSC should also consider equipping the procurement department with enough personnel and possibly put it as a requirement that for one to be a member of procurement committee they should at least possess a professional certification in procurement. Publicizing PPDA (2005) would also go a long way towards making members of procurement committees strict adherers of the Act. It was however appreciated that majority of the staffs were ICT savvy. NCWSC needs to improve on the speed of the internet by taking advantage of current trends such as use of fibre optics. Moreover, to take advantage of the internet technologies by advertising tenders through it and thus have more competitive advantage by accessing more suppliers both within and without Kenya.

PPDA (2005) clearly stipulates that the annual budget would be the only guide to procurement. This is particularly so that institutions can maintain good supplier relationships and also to avoid corruption through collusion with unscrupulous suppliers. Consequently, since SPMS has a budget module, it ought to be activated and also take advantage of Oracle Financials which integrates various systems with finance modules and thus ensure that annual budget is adhered to. To take care of the high rate of neutral responses, the researcher proposes use of interviews so that one can understand whether the neutral responses are as a result of lack of knowledge in

procurement issues. It could be a good test case since incidentally, responses from open ended questions was remarkable.

5.4 Limitation of the Study

The main limitation of the study was the high rate of neutral responses. Other limiting factors were time factor and the high rate of neutral responses could be a pointer to lack of enough knowledge on procurement issues. The low level of training in procurement was also identified as a gap which would otherwise have given more insights in the field of procurement.

5.5 Recommendations for Further Research

Nyandimo (2011) established that some ministries applied ICT in procurement processes such as advertisement of tenders, NCWSC would require to borrow a leaf from such institutions and probably inform the staff of the development. Kiburi (2008) findings correspond to NCWSC's especially with regards to stock control module. Kiburi who researched on companies listed in the Nairobi Stock Exchange (NSE) found out that majority of the companies do not manage the stock control module. This is a gap that was also established in NCWSC. Several researchers including Obiero (2008) have proposed for institutions to invest heavily in hiring procurement professionals and same case would apply to NCWSC.

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APPENDICES

APPENDIX I: COVER LETTER

Charles Mwai Gathumbi,

University of Nairobi,

School of Business,

P.O Box, 30197-00100

Nairobi.

June 2012

Dear Sir/Madam,

RE: AUTHORITY TO COLLECT DATA

I am a postgraduate student undertaking a Master of Business Administration (MBA) degree program and majoring in Operations Management. I am currently pursuing the MBA thesis which upon completion I will graduate. Authority is hereby sought to collect data from Nairobi City Water and Sewerage Company (NCWSC). The data will only be used for academic purposes.

A copy of the thesis will be available to you upon request once the thesis has been marked and approved by the university. The research thesis is titled, "Application of ICT in procurement in the public sector: A case study of Nairobi City Water and Sewerage Company.
Thank you.

Yours faithfully,   **Michael K. Chirchir**

Charles Mwai Gathumbi   **Academic Supervisor**

Reg no: D61/73043//2009   **………………………**

Mobile: 0721 238386

Email:gathumbic@yahoo.com

APPENDIX II: QUESTIONNAIRE

This questionnaire is designed to collect information from the staff of Nairobi City and Sewerage Company (NCWSC) with an aim of establishing the application of ICT in procurement. Please complete each section as requested.

The information will be treated with confidence.

Section A:

Please put the mark (X) alongside the selection that satisfies each question.

I. Name (Optional) …………………………………………

II. Your directorate: Managing Director's ( )   Commercial ( )   Technical ( )
Legal Affairs and Security services ( )   Human Resources ( )   Finance ( )

III. Gender   Male ( )   Female ( )

IV. Age bracket: Over 45 years ( )   Between 40 and 45 years ( )
Between 35 and 39 years ( )   Between 30 and 34 years ( )   Below 30 years ( )

V. Workers are classified into grades (from 1 to 9). Which grade are you? ………..

VI. How long have you worked for NCWSC since it was incorporated in the year 2004?
…………………………………………

VII. Are you a member of the Procurement Committees in NCWSC?
        Yes ( )   No ( )

VIII. Do you use a computer in your day to day activities? Yes ( )   No ( )

  - If yes, do you have access to the internet?   Yes ( )   No ( )
  - Comment on the speed of the internet.

Very slow ( )   Slow ( )   Moderate ( )   Fast ( )   Very fast ( )

  - On a normal working day of 8 hours, internet will be available for,

At most 1 hour ( )   At most 2 hours ( )   At most 4 hours ( )
At most 6 hours ( )   Available for the 8 hours ( )

IX. Which is the highest level of training in Information and Communication Technology that you have attained?   None ( )   Certificate Level ( )   Diploma Level ( )
Bachelor Degree Level ( )   Masters Level ( )

X. Do you possess any professional qualification in Procurement with certification?
Yes ( )   No ( )

X. The procurement process in Kenya is legislated under the Public Procurement and Disposal Act of 2005 (PPDA 2005). Are you aware of the legislation?
Yes ( )   No ( )

-If yes, please comment briefly on its major advantage

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Its major disadvantage

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Section B:

To understand the current the extent to which ICT is used in procurement in NCWSC .

Please put the mark (X) once from among the five choices below for each question.

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1. I am acquainted with the procurement system, Stores & Procurement Management System (SPMS).					
2. SPMS is an easy to use system such that users with limited ICT skills can use it.					
3. There is enough provision for entering technical specifications. The printed copy captures all of them as were captured					
4. A database of prequalified suppliers exists and the prequalified suppliers are known and the database is available to all members of the procurement committees.					
5. Currently, advertisement of tenders is via the website					
6. SPMS is used for both internal and external procurement					
7. Transactions conducted by suppliers can be viewed via an interface in SPMS					
8. All members of the procurement committees are created as users in SPMS					
9. Users **who are not** members of procurement committees are created as users of SPMS					
10. The procurement process is by and large computerized with very little manual processes.					
11. Use of ICT has led to workers to cease from being clerical officers thus spending more time drawing strategies.					
12. NCWSC is able to engage suppliers in long term and transparent negotiations and consequently broaden bargaining powers.					
13. Has led to increased customer satisfaction					

Please state any other application of ICT in procurement not covered above

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SECTION C:

To establish the strengths and weaknesses of the procurement system in NCWSC , please put the

mark (X) once from among the five choices below for each question.

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1. The procurement system has a provision for handling large numbers of suppliers with an aim of promoting competition.					
2. Prequalified suppliers are only used only for tenders whereby the threshold is below that specified by PPDA (2005)					
3. Pre-qualified suppliers may be rejected in future if they do not offer quality services.					
4. Imprest is only used for purchase of goods and services not exceeding Sh. 10,000. Purchases beyond this limit are subjected to tendering					
5. Regular trainings are organized to acquaint the staff on the procurement system					
6. There are enough computers and thus access to SPMS is not limited					
7. The procurement department has enough capacity to analyze all tenders and respond to all tenderers on time					
8. The relatives to the staff of NCWSC are not allowed to be engaged in the procurement process					
9. NCWSC knows debarred suppliers in advance and thus do not transact with them					
10.Even if the cheapest tenderer should be awarded the contract, this is not always the case and especially if quality will be compromised					
11. Supply Chain is currently under MD's directorate. It was previously under Finance. It is now better.					
12. Procurement strictly adheres to PPDA (2005).					
13. Procurement meets the basics of public procurement: accountability and transparency.					

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
14. Goods and services are vetted to ensure conformity with the specified set specifications. They are thus accepted or rejected based on this criterion.					
15. Decentralization of the procurement process has offered more benefits than centralization would offer.					
16. procurement has received utmost top management support					
17. procurement is exposed to the risk of unauthorized network access and proneness to virus and worms					
18. Procurement system has provision for generating customized reports					
19. People will question the viability of Electronic transactions and fear to use them					
20. NCWSC **is only** involved in procurement of items provided for in the annual budget					

THANK YOU.