



DETERMINANTS OF PROCUREMENT PROCESS ENHANCEMENT IN STATE CORPORATIONS IN KENYA: A CASE OF KENYA POWER LIMITED

AGNES N. MUTISYA, DR. MAKORI MORONGE

DETERMINANTS OF PROCUREMENT PROCESS ENHANCEMENT IN STATE CORPORATIONS IN KENYA: A CASE OF KENYA POWER LIMITED

Agnes N. Mutisya^{*1}, Dr. Makori Moronge²

^{*1}Msc Candidate, Jomo Kenyatta University of Agriculture & Technology [JKUAT], Nairobi, Kenya

²Lecturer, Jomo Kenyatta University of Agriculture & Technology [JKUAT], Nairobi, Kenya

Accepted: August 23, 2017

ABSTRACT

The study sought to examine the determinants of procurement process enhancement in state corporations in Kenya, a case study of Kenya power Ltd as its general objective. The specific objectives of the study were:- to analyze the effect of ICT Integration on procurement process enhancement in state corporations in Kenya and to establish the effect of procurement training on procurement process enhancement in state corporations in Kenya. Kenya power Ltd was selected because as one of the state corporations' government affected by non-compliance to public procurement regulations and hence a general decline in procurement performance. The study was conducted through a descriptive survey research design. The study involved 88 employees of Kenya Power Ltd, and that it was guided by research questions based on the objectives aforementioned. Questionnaires were used as the main data collection. Descriptive statistics were aided by Statistical Package for Social Scientists (SPSS) to compute percentages of respondents' answers. It is notable that there existed strong positive relationship between the independent variables and dependent variable. The study indicated that ICT integration and procurement training were important factors that need to be enhanced to boost procurement process enhancement in the organization. Based on the study findings, the study concluded that procurement process enhancement in state corporations was affected by ICT integration followed by procurement training. The study was a milestone for further research in the field of procurement process enhancement in state corporations in Africa and particularly in Kenya. The findings demonstrated the important factors to procurement process enhancement to include; ICT integration and procurement training. The current study should therefore be expanded further in future in order to determine the effect of public procurement legal framework on effective implementation of procurement practices in the public sector. Existing literature indicated that as a future avenue of research, there is need to undertake similar research in other government institutions and public sector organizations in Kenya and other countries in order to establish whether the explored factors can be generalized to affect procurement performance in other government institutions.

Key Words: Procurement Training, ICT Integration, Procurement Process, Kenya Power

INTRODUCTION

According to Taplin (2012) procurement encompasses the whole process of acquiring property and/or services. It usually starts when an organization identifies a need and makes decisions on its procurement priorities. It goes through the processes of risk assessment, seeking and evaluating alternative solutions, contract award, delivery of and payment for the property and/or services and, where relevant, the ongoing management of a contract and consideration of options related to the contract. Procurement also extends to the ultimate disposal of property at the end of its useful life (Mahmood, 2010).

Globally, for the decades now the procurement process in the public sector has been attracting great attention from practitioners, academicians and researchers due to poor its performance in the state corporations (KPPRA, 2013). In many countries, this has led to the adoption of e-procurement systems which have rapidly increased since 1990s; yet public entities still face hindrances associated with its advent and use especially in the developing countries (Champux, 2011). Analysis by OECD (2013) showed that in the United States of America about 30% of companies surveyed use e-procurement systems for request for quotations (RFQ), online auctions (25%) and e-markets (33%) to enhance supply chain performance.

According to Basheka and Bisangabasaija (2010) in the developing countries, public procurement is increasingly recognized as essential in service delivery, and it accounts for a high proportion of total expenditure in the developing countries. For instance, public procurement accounts for 60% in Kenya, 58% in Angola, 40% in Malawi and 70% of Uganda's public spending (Basheka & Bisangabasaija, 2010). This results that this is very high when compared with a global average of 12-20 % (Frøystad *et al.*, 2010). As the colossal amount of money involved in government procurement process and such money comes from the public, there is need for accountability

and transparency of the procurement process in the public entities (Hui *et al.*, 2011).

In Kenya, for the last one decade a wave of procurement performance process that began in the year 2000 has seen procurement process in the public sector, culminated into the enactment of the Public Procurement and Disposal of Public Assets (PPDA) Act 2013, and regulations 2006. However, many public entities are yet and have since then not followed prescribed practices in the procurement process. The procurement audits carried out and reports by PPOA have revealed that out of 322 contracts audited at the end of 2015, only 7 (2%) were assessed as compliant in the procurement process in the public entities. Other successive audit checks reveal that compliance in public procurement in public entities in Kenya is still inadequate (Raymond, 2008, 2015; Mburu & Mwangangi, 2014). This is also supported by the African Peer Review Mechanism Country Review (APRM) Report (2009), which indicates that non – compliance with the regulations is very high in Kenya in the public entities.

Kenya's Vision 2030 which is the country's development blueprint points to energy as an enabler. The Nuclear Electricity Project Committee was established under the aegis of the Ministry of Energy through The Kenya Gazette Notice No. 14188 of 19th November 2010. NEPC has since been transformed into a statutory body under the State Corporations Act (Cap 446) through Legal Notice No. 131 dated 16th November 2012. It was hereinafter renamed Kenya Nuclear Electricity Board (KNEB). It's prudent to realize Kenya's Vision 2030 by fast tracking the development of nuclear power in order to enhance the production of affordable and reliable electricity

Statement of the Problem

According to Roodhooft and Abbeele (2016), public bodies have always been big purchasers, dealing with huge budgets. Mahmood, (2010) also

reiterated that public procurement represents 18.42% of the world GDP. In Kenya, the central government spends about Kshs. 234 billion per year on procurement. However, on annual bases, the government losses close to Ksh. 121 billion about 17 per cent of the national budget due to poor procurement enhancement (KNBS 2015). According to Public Procurement Oversight Authority (PPOA 2009), most of the tendered products/services in many public institutions have a mark-up of 60 per cent on the market prices. In the year 2010, the Ministry of Education lost 4.2 billion Kenyan shillings. For example government parastatals operations had become inefficient and non-profitable, partly due to multiplicity of objectives, stifled private sector initiatives and failing of joint ventures requiring the government to shoulder major procurement burdens due to inefficient procurement enhancement process in the public entities (Mburu & Mwangangi, 2014).

It has been established 31% of state corporations rely on old records in selecting their suppliers, while 69% research through internet catalogue in selecting suppliers (Ndumbi & Okello, 2015). Due to the colossal amount of money involved in government procurement and the fact that such money comes from the public, there is need for accountability and transparency by the adoption of E-optimization (Hui *et al.*, 2011). A study by Rotich (2011) found that organizations which adopted e-procurement strategies have reduced costs through transactional and process efficiencies and thereby promoting their procurement performance. KNBS, (2014), in Singapore, previous research on the survey of the role of e-procurement adoption strategy shows that global state corporation use of the internet is high, while in Kenya, previous research by Mburu and Mwangangi, (2014) on usage, obstacles and policies on e-procurement show that only 33% of state corporations have implemented e-procurement as a strategy to improving services. The big question is the use of e-procurement optimization as a strategy to enhance of the

performance of the procurement function, but none of the existing research explores further the determinants of procurement process enhancement in state corporations in Kenya. It is on this premise the study sought to establish the determinants of procurement process enhancement in state corporations in Kenya specifically Kenya Power Ltd.

Objectives of the Study

The general objective of this study was to examine the determinants of procurement process enhancement in state corporations in Kenya. The specific objectives of the study were to:

- Establish how procurement training affects procurement process enhancement in state corporations in Kenya.
- Assess how ICT Integration affect procurement process enhancement in state corporations in Kenya

LITERATURE REVIEW

Theoretical Review

Adaptive Structuration Theory - ICT Integration

According to Thite, Mohan and Sandh (2010) on the foundation of adaptive structuration theory, the study intends to determine the effects of information communication technology on procurement process enhancement in state corporations. Anthony Giddens in his *Constitution of Society* in 1984 addresses issues of human behaviour in the context of technology based on social structure. Thomas and Bostrom states that the theory looks into the process of human usage of computer systems and at the nature of group-computer interaction in an organization. The main focus of communication using information technology is the appropriation and structuration of functions in an organization (Maruping & Agarwal, 2004).

Thite, Mohan and Sandh (2010) on AST is a viable approach in studying how information technology affects procurement process enhancement leads the change from distinct perspectives. The theory is relevant in today's procurement management practice due to the expanding influence that advancing technologies have had with regard to the human computer interaction aspect and its implications on socio-biologically inspired structuration in security software application (Greenhalgh & Stones, 2010). In conclusion AST's appropriation process is a good model to analyze the utilization and penetration of new technologies in organizations. It presents specific advances in information technology that are driving organization changes in the areas of business alignment, IT planning and development that show how is being used as a driving force of effective procurement management within organization (Maruping & Agarwal, 2004).

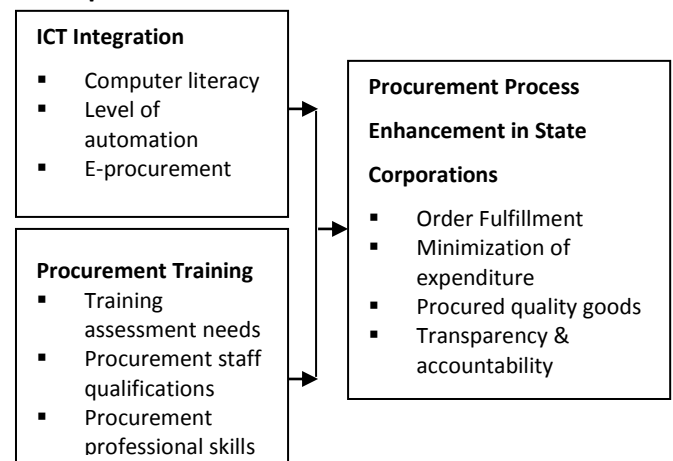
Blooms Taxonomy of Learning Theory-Procurement Training

As stated by Nishet and Mathews (2011) on the Blooms Taxonomy of Learning Theory, Bloom (1956) produced taxonomy of learning theory which is helpful in identifying different cognitive skills of individuals at the workplace. Bloom identified six levels in this scheme; knowledge, comprehension, application, analysis, synthesis and evaluation. Movement from level 1 to level 6 represents an increase in the level of sophistication of cognitive ability of an individual. From strategic thinking perspective, higher demands is be made of the skills associated with analysis, synthesis and evaluation of an individual (Milinga, 2014)

Chivwara (2013) indicates that at the operational and tactical level; knowledge, comprehension and application may be more heavily utilised by an individual. They indicate that implications with this theory for the ability to learn; from the point of view of attributes in relation to personnel issues with regard to training and education in an

organization. They further states that the sophisticated levels take on greater importance when analysing situations in terms of relevant factors and the relationships as a whole as a result of the inter-dependency of its parts (Nishet & Mathews, 2011). For example, in procurement is the ability to understand each stage of activity in the process, as one side of the coin, but also to appreciate how the stages interrelate and to consider the performance of the system as a whole. Learning is not attempting to transfer a body of knowledge as if it were an inert commodity to be regurgitated in an exam and then promptly forgotten. It should serve more useful purpose to enhance procurement process enhancement through embracing best practice (Chivwara, 2013).

Conceptual Framework



Independent Variables **Dependent variable**

Figure 1: Conceptual Framework

ICT Integration

According to Amayi (2012), technology is the change or integration of means of processing a product or service from what is perceived not be a good version to a better one. It is also change of system or way of operation from inefficient or manual to automatic operations. Private sector procurement activities have evolved from orders, systems to nowadays E-procurement. If you always remember that technology is a tool and

that you need to know how to use it, for it to be productive, the money that you spend will never appear to be wasted. The emergence of Internet Technologies has changed the way that governments and organizations operate. The majority of organizational spending consists of purchasing. In order to decrease the total costs spent on purchasing process, internet technologies are used and E-Procurement has become popular to implement in the latest era by both governments and enterprises. Several researchers studying in this area says E-Procurement is named as the “Revolution” due to its potential to reduce the total costs of acquisitions (Raymond, 2008).

Government officials and elected leaders have increasingly come to realize that public agencies must utilize ICT in order to enhance the procurement processes in the public sector. Faced with tight budgets and a retiring workforce, today’s government agencies are operating in an environment defined by the need to ‘do more with less’. Public authorities are expected to provide excellent service to their constituents in an effective and transparent manner, all the while working under constant resource constraints by adopting ICT (Amemba, Nyaboke, Osoro & Mburu, 2013).

In order to meet today’s operating challenges, regional and local governments are turning to ICT to enhance the services for residents, businesses and visitors, and improve internal efficiencies by lowering costs and increasing productivity. Public authorities are implementing scalable communication infrastructures to promote economic development, attract new businesses and residents, and above all, provide excellent service to constituents (Amemba, Nyaboke, Osoro & Mburu, 2013). From a business perspective, implementing scalable communication infrastructures such as wide area networks (WANs) accommodates the various types of services government agencies require on a day to day basis, including provision of broadband

internet access for online services and internal collaboration, handling administrative data.

Procurement Training

Bashuna (2013) suggests that effective execution of organization procurement procedures greatly depends on the level of employees’ training since lack of professional trained staff on procurement functions limits the ability of the organizations to embrace procurement best practices through benchmarking. He contends that lack of professional training is a key impediment to maintenance of high level of professionalism in the execution of procurement procedures in many government parastatals organizations.

According to Ndumbi and Okello (2015), new training ideas are developed because trends are towards making training more practical, realistic and pertaining to employees’ jobs. Training must give employees broader knowledge to enable them to effectively use new technology and integrate it into the workplace. Lower costs, better quality, faster return on investment, increased productivity and long-term growth are all achieved once employees adapt to changes and are trained accordingly. In the past, training was very classroom/instructor-oriented; this has recently proved ineffective compared to modern developments. More recent trends show training going beyond “job specific” to “continuous learning”, in which the focus is on other areas of expertise within the company. In continuous learning, employees are encouraged to learn and understand the jobs and skills needed of those around them and more often perform them on a regular basis. Semi-autonomous work teams are most conducive in the continuous learning environment because each employee trains others in their group. This way, employees know one another’s jobs and can perform them in case of an employee absence (Arrowsmith, 2008).

According to Mahmood (2010) contends that from management viewpoint, procurement training is associated with higher organizational

productivity, it can improve the adaptability and flexibility of their employees and their responsiveness to innovation, it can be regarded as a means of engaging the commitment of employees to the organization and training programmes specific to the organization are of paramount importance not least because they bind the employee and cannot be used by rival organizations. A study by Emmanuel (2007) showed that in Africa, training of procurement personnel could greatly support effective implementation of procurement practices in many public training institutions.

A study by Mose, Njihia and Peterson (2013) found that in many African government institutions, many procurement managers are not trained on implementation of effective procurement practices and this contributes to wastage of procurement funds. According to The many procurement managers in government parastatals in Kenya lack competitive knowledge and skills on how to effectively embrace effective procurement practices and this hampers minimization of procurement expenditure. The many government parastatals have succeeded in embracing effective procurement practices as a result of continuous training of procurement staff and employment of professionally trained procurement staff.

Empirical Review

ICT Integration

In Kenya, the concept of effective procurement has only attracted attention in private sector organizations while in government parastatals no measures have been made to promote implementation of effective procurement practices. A study by Matunga, Nyanamba and Okibo (2013) on the effect of e-procurement on efficient of procurement in public hospitals established that Kisii Level 5 hospital uses e-tendering, e-quotations and e-sourcing as the main e-procurement applications and that the greatest challenges faced when using e-market

provider were inadequate funding, organization's inability to handle change management and lack of training of employees on how to use the system.

Procurement Training

The evaluation or measurement of procurement performance has always been a vexing problem for procurement professionals. He asserts that traditionally; firms concentrate on analyzing their own internal trends which does not portray the true picture on how they compare well with competitors. Such an approach ignores what the competitors are doing. According to Kakwezi and Nyeko (2010) a firm does not wish to make known to its competitors how or what it is doing for obvious competitive reasons. This has been the case in the government parastatals where procuring entities have not been making available their procurement data due to the sensitive nature of the data (Rotich, 2011).

RESEARCH METHODOLOGY

This study adopted a descriptive research design. The target populations were 88 employees of Kenya power Ltd drawn from procurement and related departments who were engaged in supply chain management activities as tabulated below. In this study the major procurement related matters were carried out by the targeted population since they were seen as most appropriate to give out the required information for the purpose of this study. The study used structured questionnaires to obtain information from study respondents. The study gathered both qualitative and quantitative data. The qualitative data was analyzed by the use of the content analysis while quantitative data was coded and analyzed using Statistical Package for Social Sciences (SPSS) computer software version 22.

FINDINGS AND DISCUSSION

A response rate of 70.00% was established with 62 respondents reached, out of the 88 targeted.

The research established the gender of the respondents. Majority, (60%) were male respondents while the rest (40%) were female respondents. The study went further to establish the distribution of the respondents' ages. Majority (35%) indicated that they ranged between 40-49 years, followed by those who indicated that they are 30-39 years at 30% with few (20%) and (15%) and indicating that they were 20-29 years and 50 and above years respectively. The respondents were requested to indicate their highest level of academic qualifications. The study established that majority (40.00%) indicated that they had degree certificate, followed by those who indicated that they had diploma certificate (30%), diploma holders comprised 30% of the respondents. This implied that respondents were well educated and that they were in a position to respond to research questions with ease.

Procurement Training

The first objective of the study was to establish the influence of procurement training on procurement process enhancement in state corporations in Kenya. Respondents were thus asked to indicate the extent to which they agreed with various statements relating to procurement training and its influence on procurement process enhancement in state corporations. The respondents were asked how many times the organization had their procurement staff taken for refresher courses annually, 0% of the organization never took procurement staff for refresher courses. This implied that all organization had them taken at least once a year. 3%, had 1 to 2 times annually, 65% of the respondents had 3 to 4 times, 11% of them had 5 to 6 times and 11%, had over 6 times of rejections. The modal class is of the respondents who had taken their staff for refresher courses 3 to 4 times. The median was found to be 3 which imply that on average the respondents take their

procurement staff for refresher courses at least 3 to 4 times annually.

Additionally, the study inquired from the respondents the percentage of procurement staff who had not achieved at least an undergraduate degree, 46% of the respondents had no employee in this category, 3% had 1-20% in this category, 14%, 21 to 40 in this category, 11%, 10 to 60 in this category, 3% , had over 60% in this category. The modal class of the respondents who had 0% of employees in the category of those had not achieved a first degree. The median was found to be 1 which implies that on average the organization have 0% of employees who haven't achieved an undergraduate degree. This further implies that on average organization employ procurement staff with at least a first degree.

Finally, the study looked at the quality of reports that were produced, the respondents were to state the level of quality of the procurement reports produced. 0% of the respondents had 0-20%, 3%, had 21-40%, 3% of the respondents had 41-60%, 9% of them had 61-80% and 65%, had over 80% score in the quality of the procurement reports produced. The modal class of the respondents who had over 80% score in the quality of the procurement reports produced. The median was found to be 5 which implied that on average the institutions had over 80 score in the quality of the procurement reports produced. The second indicator inquired the percentage of procurement employees that have professional skills in procurement, 0% of the respondents had 0-20%, 3% had 20-30%, 11% had 30-40%, 37% had 40-50% and 46% had over 50% of employees with professional skills in procurement. The modal class of the respondents had over 50% employees. The median was found to be 5 which imply that on average the respondents had over 50% of procurement employees with professional skills in procurement. Training is the process of identifying and developing the necessary knowledge and skills required for doing a job. Training is learning provided in order to improve

performance on the present job (Armstrong 2008).

Table 1: Procurement Training

	Never time	1-2 times	3-4 times	5-6 times	Over 6 times	Median
How many times are your procurement staffs taken for refresher courses annually?	0	29%	65.7%	11.40%	2.90%	5
	0%	10%	20%	40%	Over 40%	
Percentages of employees with a first degree.	45.70%	2.90%	14.30%	11.40%	2.90%	4
Percentage quality of procurement records produced.	0	2.90%	2.90%	25.70%	65.70%	4
What percentage of employees has professional skills in procurement?	0	2.90%	2.90%	37.10%	45.70%	5

ICT Integration

On the extent to which ICT integration affected the procurement process enhancement in state corporations in Kenya, the findings are presented in the Table 2. The data was collected from the different indicators of the ICT variable which was ordinally categorical. The data was therefore presented in frequency tables with the median being used as the appropriate measure of central tendency. Information Communication technology had the first indicator that required the institutions to state the percentage of employees in the firm who are computer literate, 53.30% of the respondents had 0-20% , 2.90% had 20-30% , 14.30% had 30-40% had 8.70%, 40-50% and 5.10% had over 50% The modal class is of the respondents who had between 0 to 20% literacy. The mode was found to be 1 which implies that on average the

respondents 0 to 20% of employees in the firm that are computer literacy.

When the respondents were asked in the second question what the firms level of automation was, 2.90% of the respondents had 0-20%, 2.90% had 20-30%, 5.70% had 30-40%, 31.10% had 40-50% and 45.60% had over 50%. The mode was found to be 4 which implies that on average the firms have over 40%-50% level of Automation. The next indicator asked the respondents what the level of procurement systems usage was in the institution, 0% of the respondents had 0-20%, 2.90% had 20-30% , 5.70% had 30-40% , 37% had 40-50%, 45.70% had over 50%. The median class is of the respondents who had over 50% level of procurement usage. The median was found to be 4 which implies that on average the firms had over 50% level of procurement systems usage.

When the respondents were asked what the level of ICT infrastructure was, 2.90% of the

respondents had 0-20%, 2.90% had 20-30% 5.70% had 30-40% , 37.10% had 40%-50%, 51% had over 50% " The modal class is of the respondents who had over 50% level. Themode was found to be 5 which implies that on average the firms had over 50% level of ICT infrastructure. The last indicator for the variable ICT inquired what the firms level of embracement of E-procurement was. 0% of the respondents 0-20%, 3% had 20-30% , 3% had 30-40% , 31% had 40-50% and 60% had over 50% " The modal class is of the respondents who had over 50%. The median was found to be 5 which implies that on average the firms have over 50% level of embracement of E-procurement.

Information Communication Technology (IT) is a technology that involves use of computers, software and internet connections infrastructure for supporting information processing and communication functions (Crompton 2007). The

use of information technology in public sector has not been effectively implemented since most of the procurement functions are subjected to manual procedures that are slow, inaccurate and infective. This has negative impact on procurement procedures since the public sector organizations cannot effectively monitor and coordinate procurement procedures of all road construction projects, there is lack of computerized procurement procedures and this subjects much of procurement functions to manual operations which are slow and ineffective. The use of computerized procurement systems demonstrates efficient use of information technology but in cases where the organization subjects all it's procurement functions to manual procedures, the benefits of information technology are not experienced and a high level of inefficiency is experienced during execution of procurement procedures.

Table 2: ICT Integration

	0%-20%	20%-30%	30%-40%	40%-50%	Over 50%	Mode
What percentage of employees in the firm is computer literate?	53.30%	2.90%	14.30%	8.70%	5.10%	5
What is the firm's level of automation?	2.90%	2.90%	5.70%	31.70%	48.60%	4
What is the level of procurement systems usage?	0%	2.90%	5.70%	37.10%	45.70%	4
What is the level of ICT infrastructure?	2.90%	2.90%	5.70%	37.10%	48.60%	5
What is the firm's level of embracement of E-procurement?	0%	2.90%	2.90%	31.40%	60%	5

Procurement Process Enhancement

On the extent to which procurement process enhancement in the organization, respondents were asked to indicate the extent to which the factors determined the aspects of procurement process enhancement. The data was collected

from the different indicators of the variable procurement process enhancement which was ordinal categorical. The data was therefore presented in frequency tables with the median being used as the appropriate measure of central tendency. The results were presented in Table 3.

The first indicator for the dependent variable required to know what the organizations level procurement process enhancement was order fulfillment in the organization was, 0% of the respondents had 0-20%, 3% had 20-30%, 11% had 30-40%, 17% had 40-50%, 69% had had over 50%. The modal class is of the respondents who had over 50% compliance. The median was found to be 5 which imply that on average the organizations level of compliance with procurement regulations is over 50%.

The next indicator required the respondents to state the level of compliance with procurement regulation in the organization, 3% of the respondents had 0-20%, 3% had 20-30%, 14% had 30-40%, 26% had 40-50%, 49% had over 50%. The modal class is of the respondents who had over 50%. The median was found to be 5 which imply that on average firm's compliance with

procurement regulation was by over 50%. When the respondents were asked what the level of transparency and accountability of procurement funds was, 0% of the respondents 0-20%, 3% had 20-30%, 3% had 30-40%, 34% had 40-50%, 60% had over 50%. The modal class is of the respondents who had over 50% transparency. The median was found to be 5 which imply that on average the level of transparency and accountability of procurement funds in organizations is over 50%. Finally, the respondents were asked what the level of quality of procured goods and services offered was, 0% of the respondents 0-20%, 3% had 20-30%, 20% had 30-40%, 43% had 40-50%, 34% had over 50%. The modal class is of the respondents who had between 40-50% quality level. The median was found to be 4 which imply that on average the level of quality of procured goods and services offered is between 40-50%.

Table 3: Procurement Process Enhancement

Statement	0%	10%	20%	40%	Over 60%	Mode
What is the level of order fulfillment in the organization?	0	3	11	17	69	5
What is the level of compliance with procurement regulations?	3	3	14	26	49	5
What is the level of transparency and accountability of procurement funds	0	3	3	34	60	5
What is the level of quality of procured goods and services offered?	0	3	20	43	34	4

SUMMARY, CONCLUSION AND RECOMMENDATIONS

The study sought to examine the determinants of procurement process enhancement in state corporations in Kenya. The present study targeted staff of Kenya Power Ltd. Also targeted were top and middle level management in the organization. A total of 88 respondents drawn from the various

categories of the organization were used for the study. The summary of the study findings presented herein followed the research objectives formulated in chapter one of the study.

The first objective of the study was to establish the influence of procurement training on procurement process enhancement in state

corporations in Kenya. The study established that the organization had their procurement staff taken for refresher courses annually. Additionally, on average the organization employ procurement staff with at least a first degree. Finally, the study looked at the quality of reports that were produced. The large percentage of procurement employees had professional skills in procurement. Training was taken serious as the process of identifying and developing the necessary knowledge and skills required for doing a job.

On the extent to which ICT integration affected the procurement process enhancement in Kenya. Study established that employees to some extent were computer literate ,the firms level of automation was fair,the procurement systems usage in the organization was average and ICT infrastructure was average. The the firms level of embracement of E-procurement involved use of computers, software and internet connections infrastructure for supporting information processing and communication functions. The use of computerized procurement systems demonstrates efficient use of information technology but in cases where the organization subjected all it's procurement functions to manual procedures, the benefits of information technology were not experienced and a high level of inefficiency was experienced during execution of procurement procedures.

The study sought to examine the determinants of procurement process enhancement in state corporations with reference to Kenya Power Ltd, attributed to the influence of ICT integration and procurement training. A positive correlation is seen between each determinant variable and procurement process enhancement. Both independent variables were found to have a statistically significance association with the dependent variable at ninety-five level of confidence. Analysis of variance was further done to show that there was a significant mean.

Conclusions of the Study

Based on the study findings, the study concluded that procurement process enhancement in state corporations was affected by ICT integration and procurement training being the major factors that mostly affected procurement process enhancement in state corporations in Kenya.

ICT integration was the first important factor that affected procurement process enhancement in state corporations. The regression coefficients of the study showed that ICT integration had a significant influence on procurement process enhancement in state corporations. This implied that increasing levels of ICT integration would increase the levels of procurement process enhancement in state corporations. This showed that ICT integration had a positive influence on procurement process enhancement in state corporations.

Procurement training was the second important factor that affecting procurement process enhancement in state corporations. The regression coefficients of the study showed that procurement training had a significant influence on procurement process enhancement in state corporations. This implied that increasing levels of procurement training would increase the levels of procurement process enhancement in state corporations.

Recommendations of the Study

The study recommends for the procurement staff to take refresher courses frequently, quality of reports that are produced. The procurement employees had professional skills in procurement. Training should be taken serious as the process of identifying and developing the necessary knowledge and skills required for doing a job. The management of state corporations should embrace effective procurement training in order to support procurement process enhancement in state corporations in Kenya. Effective procurement training should be adopted, better

supplier selection strategies should be used, effective supplier selection process should be employed, better supplier performance methods should be applied, effective supplier relationship management techniques should be adopted and supplier development and supplier collaboration should be employed.

The study established that ICT integration affect procurement process enhancement and employees need to be computer literate. The firms level of automation, procurement systems usage and ICT infrastructure should be improved. The the firms level of embracement of E-procurement should involve the use of computers, software and internet connections infrastructure for supporting information processing and communication functions. There is need to use computerized procurement systems demonstrates efficient use of information technology in procurement functions to manual procedures. There is need to embrace ICT

integration to increase efficiency during execution of procurement procedures.

Areas of Further Research

The study is a milestone for further research in the field of procurement process enhancement in state corporations in Africa and particularly in Kenya. The findings demonstrated the important factors to procurement process enhancement to include; ICT integration and procurement training. The current study should therefore be expanded further in future in order to determine the effect of public procurement legal framework on effective implementation of procurement practices in the public sector. Existing literature indicated that as a future avenue of research, there is need to undertake similar research in other government institutions and public sector organizations in Kenya and other countries in order to establish whether the explored factors can be generalized to affect procurement performance in other government institutions.

REFERENCES

Adam, A. (2007). *Implementing electronic document and record management systems*. CRC Press.

African Peer Review Mechanism Country Review (APRM) Report (2009), *Economic Development in Kenya*, 6(1), 242-261.

Amayi, F. K. (2011). Factors Affecting Procurement in the Public Service: a Case Study of the State Law Office. *Eldoret: Moi University*.

Ambe, I. M., & Badenhorst-Weiss, J. A. (2012). Procurement challenges in the South African public sector. *Journal of transport and supply chain management*, 6(1), 242-261.

Amemba, C. S., Nyaboke, P. G., Osoro, A., & Mburu, N. (2013). Challenges affecting public procurement performance process in Kenya. *International Journal of Research in Management. Issue, 3*.

Amy Carlson, James Manktelow, *Business SWOT Analysis, "Discover New Opportunities, Manage and eliminate Threats," 2012*

Arain, M., Campbell, M. J., Cooper, C. L., & Lancaster, G. A. (2010). What is a pilot or feasibility study? A review of current practice and editorial policy. *BMC medical research methodology*, 10(1), 67.

Arrowsmith, S. (2008). "National and International Perspectives on the Regulation of Public Procurement: Harmony or Conflict?" In Arrowsmith, S. & Davies, A. (Eds.), *Public Procurement: Global Revolution* (3-26). London, UK: Kluwer Law International.

- Babbie, E. R. (2013). *The basics of social research*. Cengage Learning.
- Barney, J. B. (2008), *Gaining and Sustaining Competitive Advantage*. Addison – Wesley Publishing Company, New York
- Basheka, B. C. (2008). Procurement Planning and Accountability of Local Government Procurement Systems in Developing Countries: Evidence from Uganda. *Journal of Public Procurement* , 8 (3), 379-406.
- Basheka, B. C., & Bisangabasaija, E. (2010). Determinants of unethical public procurement in local government systems of Uganda: a case study. *International Journal of Procurement Management*, 3(1), 91-104.
- Bashuna, A. (2013). Factors affecting effective management of the procurement function at Nakuru North sub-county. *International journal of business & management*, 1(7), 262-291.
- Berman, Saul, Strategic Direction: Don't Reengineer Without It; Scanning the Horizon for Turbulence, *Planning Review*, November 1994; 18
- Berrett-Koehler & Barney, J.B., (2011), Firms resources and Sustained Competitive Advantage. *Journal of Management*, 17(1), 99-120
- Bititci, U.S., Turner, T. and Begemann, C. (2000), ``Dynamics of performance measurement
- Blair F. 2004. Developing Sustainable procurement as a shared priority – vision to reality. IdeA, Sustainable Development Commission and Global to Local.
- Bledow, R., Schmitt, A., Frese, M. and Kühnel, J. (2011), “The affective shift model of work engagement”, *Journal of Applied Psychology*, (96) 6, pp. 1246-1257.
- Bourne, M., Mills, J., Wilcox, M., Neely, A. and Platts, K. (2000), ``Designing, implementing and updating performance measurement systems’’, *International Journal of Operations & Production Management*, Vol. 20 No. 7, pp. 754-71
- Business Daily Kenya; “Trend in corporate strategies,” 2012.
- Champoux, J, E. (2011) *Organizational Behavior: Integrating Individuals, Groups, and Organizations Fourth (4th) Edition*.
- Chew, Angie, How Insurance Firms Can Reengineer for Success, *Business Times*, June 20, 1994; Pg. 11
- Chateleine (2014) *Competent Government: Theory and Practice*, Chatelaine Press, Burk, VA, 2013. 3-19.
- Chiang, J. K. (2014). *Reducing government proposal procurement process complexity* (Doctoral dissertation, Massachusetts Institute of Technology).
- Cox, A., Chicksand, D., and Ireland, P. (2005) Sub-Optimality in NHS Sourcing in the UK: Demand-Side Constraints on Supply-Side Improvement, *Public Administration*, 83(2), 367-392

- Chivwara, N. (2013). An analysis of the governance of higher education access in Malawi.
- David, Fred R. (2003). *Strategic Management*, 4th Ed. New York: Macmillan Publishing Company
- DCD/DAC. (2003). *Strengthening Procurement Capacities in Developing Countries*. Paris: OECD/DAC-World Bank Round Table.
- De Kleine, R. (2009). *Life cycle optimization of residential air conditioner replacement* (Doctoral dissertation, University of Michigan).
- Eisenhardt, K.M. & Martin, J.A. (2010), Dynamic Capabilities: What Are They? *Strategic Management Journal*, 21(10/11), 1105-1121
- European Commission Directorate-General For Research Directorate — investment in research and links with other policies unit m1, political aspects, private investments, relations to EIB: *public procurement for research and innovation* (2011)
- Frøystad, M., Heggstad, K. K., & Fjeldstad, O. H. (2010). Linking procurement and political economy. *UK Department for International Development and the World Bank Institute*.
- Giddens, A. (1984). *The constitution of society: Outline of the theory of structuration*. Univ of California Press.
- Gitari, M. W., & Kabare, K. (2014). Factors affecting access to procurement opportunities in public secondary schools by small and medium enterprises in Kenya: A survey of Limuru Sub-county. *International Journal of Current Business and Social Sciences*, 1(2), 220-250.
- Greenhalgh, T., & Stones, R. (2010). Theorising big IT programmes in healthcare: strong structuration theory meets actor-network theory. *Social science & medicine*, 70(9), 1285-1294.
- Harris, L. R., & Brown, G. T. (2010). Mixing interview and questionnaire methods: Practical problems in aligning data.
- Hui,W.S.,Othman,RO.,Normah,O.,Rahman,R.A.& Haron,N.H(2014).Procurement issues in Malaysia. *International Journal of Government Parastatals Management*,24(6),567-593.
- Institute of economic affairs (2014); Budget for 2014/2015: *Balancing financing concerns while responding to spending inefficiencies*.
- Intaher Ambe (2012); Procurement Challenges In The South African Government parastatals; Department of Business Management; University of South Africa (Unisa)*International Journal of Operations and Production Management*, (19) 2, 205-28.
- Jonker, J., & Pennink, B. (2010). *The essence of research methodology: A concise guide for master and PhD students in management science*. Springer Science & Business Media.
- Johnson P.F. and Leenders M.R. Building A Corporate Supply Function [Journal] // *Journal of Supply Chain Management*. 2008. (3) 44, 39-52.
- Kakwezi, P., & Nyeko, S. (2010). Procurement processes and performance: Efficiency and effectiveness of the procurement function. Retrieved April, 3, 2011.

- Kelman, S. (2010). *Procurement and Public Management: The Fear of Discretion and the Quality of Government Performance*. Washington, DC: The AEI Press.
- Kerkhoff, G., Hofmann, E., & Stölzle, W. (2014). *Professional Supply Management*.
- Kemoni, H. N., Ngulube, P., & Stilwell, C. (2007). Public records and archives as tools for good governance: reflections within the recordkeeping scholarly and practitioner communities. *ESARBICA Journal*, 26, 3.
- Kenya Institute of Public Policy Research and Analysis (2013). *Kenya Economic Report: Creating an Enabling Environment for Stimulating Investment for Competitive and Sustainable Counties*
- KNBS, (2015). Kenya Manufacturing Firms Survey. Nairobi
- Kenya law reports (2015). www.klr.org accessed 20th February 2015
- Kirkpatrick, D. (1994). *Evaluating Training Programs*.
- Koul, L. (2009). *Methodology of Educational Research*, 4th Edition. Vikas Publishing House Pvt Ltd.
- Lardenoije, E. J., Van Raaij, E. M., & Van Weele, A. J. (2005). Performance Management Models and Purchasing: Relevance Still Lost. *Researches in Purchasing and Supply Management, the 14th IPSERA Conference*, (687-97). Archamps.
- Lars Bedey (2008), *Purchasing Management*; Chalmers Department of Technology Management and Economics; *Published by Elpida Memory Inc.*
- Lunenburg, A.,O. (2008), *Educational Administration-Concept and Practices*.
- Luttrell, W. (Ed.). (2010). *Qualitative educational research: Readings in reflexive methodology and transformative practice*. Routledge.
- Mahmood, S.A.I. 2010. Public procurement and corruption in Bangladesh: confronting the challenges and opportunities. *Journal of Public Administration and Policy Research* 2(6):103–11.
- Maira, S. (2012). *Desis in the house: Indian American youth culture in NYC*. Temple University Press.
- Maruping, L. M., & Agarwal, R. (2004). Managing team interpersonal processes through technology: a task-technology fit perspective. *Journal of Applied Psychology*, 89(6), 975.
- Matunga, D., Nyanamba, S., & Okibo, W. (2013). Effect of E-Procurement Practices Effective Procurement in Public Hospitals: A Case of Kisii Level 5 Hospital. *Unpublished MBA Report, Jomo Kenyatta University of Agriculture and Technology, Kenya*.
- Mburu, D. M., & Mwangangi, P. (2014). Issues affecting implementation of procurement policies in government institutions in Kenya: Case of Ministry of East African, Affairs Commerce and Tourism. *International Journal of Social Sciences and Entrepreneurship*, 1(13), 400-424.
- Meyer, M.W. and Gupta, V. (2014), "The performance paradox", in Straw, B.M. and Cummings, L.L. (Eds), *Research in Organizational Behaviour*, 16, 309-69

- Millar, L. A. (2017). *Archives: principles and practices*. Facet Publishing.
- Millinga, T. B. (2014). *The Effectiveness of School-Based In-Service Training for Primary School Teachers (INSET-PST) in Enhancing Teacher Professional Development: A Case study of Bagamoyo District* (Doctoral dissertation, The Open University of Tanzania).
- Mose, J. M., Njihia, J. M., & Peterson, O. M. (2013). The critical success factors and challenges in e-procurement adoption among large scale manufacturing firms in Nairobi, Kenya. *European Scientific Journal*, 9(13).
- Mugenda, O.O. & Mugenda A.G. (2008). *Research Methods Qualitative d Quantitative Approaches*. African Center for Technology Studies, ACTS press, Nairobi an Kenya.
- Mugenda, O. M., & Mugenda, A. G. (2012). *Research methods dictionary*.
- Mugo, H. (2013). Determinants of procurement regulatory compliance by Kenya Electricity Generating Company. *International Journal of Social Science and Entrepreneurship*, 1(7), 267-25.
- Neely, A.D. (1999), "The performance measurement revolution: why now and where next", *systems*", *International Journal of Operations & Production Management*, (20)6,
- 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*, 3(6).
- Ngugi, J. K., & Mugo, H. W. (2012). Internal factors affecting procurement process of supplies in the public sector; a survey of Kenya government ministries. In *5th International Public Procurement Conference was held on August 17th*.
- Nisbet, H., & Matthews, S. (2011). The educational theory underpinning a clinical workbook for VERT. *Radiography*, 17(1), 72-75.
- Odhiambo, W. & Kamau, P. 2013. *Public procurement: Lessons from Kenya, Tanzania and Uganda*. OECD Development Centre Working Paper No. 208.
- Organisation for Economic Co-operation and Development (2009); *Regulatory Policy and the Road to Sustainable Growth*
- Orodho, A. J. (2012). *Techniques of Writing Proposals and Research Reports in Education and Social Science Research Methods: Maseno. Kenya: Kanezja Publishers*.
- Owusu, R. A., & Vaaland, T. (2012). What is a responsible supply chain? *International Journal of Business and Management*, 7(4), 154-171.
- Patrick Kakwezi & Sonny Nyeko (2010): *Procurement Processes and Performance: Efficiency And Effectiveness of The Procurement Function*. Department of Procurement and Logistics Management, Makerere University Business School *Performance measurement systems: an interdisciplinary review*", *International Journal of Production Economics*, 60-61
- Porter, Michael E., "Competitive Advantage". 1985, Ch. 1, pp 11-15. The Free Press. New York. 692-704.

Polit, D. F., Beck, C. T., & Owen, S. V. (2007). Is the CVI an acceptable indicator of content validity? Appraisal and recommendations. *Research in nursing & health*, 30(4), 459-467.

Public Procurement Oversight Authority (2013); Public Procurement and Disposal General Manual. Government Press, Nairobi Kenya

Puja Mondal, Environmental Components, "Your Articles Library" 2012

Quayle M. *Purchasing and Supply Chain Management: Strategies and Realities*: Idea Group Publishing, 2006.

Raymond, J. (2008). Benchmarking in public procurement. *Benchmarking: An International Journal*, 15(6), 782-793.

Raustialla, K. (2010). The piracy paradox: Innovation and intellectual property in fashion design. *Virginia Law Review*, 92 (8), 1688–1777

Rich, M. K., Baker, D., Negassa, A., & Ross, R. B. (2009), Concepts, applications & extensions of value chain analysis to livestock systems in developing countries. Conference Proceedings, IAAEC, Beijing, China, August 16-22, 2009.

Rotich, L. M. (2011). Influence of Planning on Procurement Performance in the Kenya Public Financial Sector.

Roodhooft, F., Stouthuysen, K., Van den Abbeele, A. G., & Slabbinck, H. (2016). Management Control System Imitation in Supply Chains.

Rubin, A., & Babbie, E. R. (2013). *Brooks/Cole empowerment series: Research methods for social work*. Cengage Learning.

Sarita Harbour ;What Are the Benefits and Detriments of SWOT Analysis?; Demand Media; University of Guelph 2009

Saunders, J., & Elkan, N. (2004). *U.S. Patent Application No. 10/986,056*.

Service Delivery and Performance Commission (2009); *Report on the Review of Purchasing and Logistics in the Queensland Government*; Published by Aberdeen Group

Shevchenko A.A. and Shevchenko O.O. B2B e-hubs in emerging landscape of knowledge based economy [Journal] // *Electronic Commerce Research and Applications*. 2005. Vol. 4. pp. 113-123.

Shuttleworth, M. (2008). Qualitative and quantitative research design. Michigan University Press

Simms, N. (2005). Procuring for the future. Sustainable Procurement National Action Plan: Cambridge Education Press, UK

Stieger, S., & Reips, U. D. (2010). What are participants doing while filling in an online questionnaire: A paradata collection tool and an empirical study. *Computers in Human Behavior*, 26(6), 1488-1495.

Tabish, S. Z. S., and Kumar Neeraj Jha. "Analyses and evaluation of irregularities in public procurement in India." *Construction Management and Economics* 29, no. 3 (2011): 261-274.

Thomas, D. M., & Bostrom, R. P. (2010). Vital signs for virtual teams: An empirically developed trigger model for technology adaptation interventions. *MIS quarterly*, 34(1), 115-142.

Taplin, H. C. (2012). *Theory of Change: A Primer on Theory of Change*. New York: The Rockefeller Foundation
Government of Kenya (2014). *Reduction in Public Procurement and Expenditure*. Nairobi: Kenya Gazette.

Taplin, H. C. (2012). *Theory of Change: A Primer on Theory of Change*. New York: The Rockefeller Foundation

Teece, D.J. (2007), Explicating Dynamic Capabilities: the nature and micro foundations of (sustainable) enterprise performance. *Strategic Management Journal* 28: 1319 -1350.

Teece, D.J. (2010), Technological innovation and the Theory of the Firm: The Role of Enterprise – level Knowledge *Journal of Business & Industrial Marketing*.2005, Complimetaries and Dynamic capabilities. In N. Rosenberg and B.Hall (eds). *Handbook of the Economics of Innovation*,

Teece, D.J. (2010), Technological innovation and the Theory of the Firm: The Role of Enterprise – level Knowledge, Complimetaries and Dynamic capabilities. In N. Rosenberg and B.Hall (eds). *Handbook of the Economics of Innovation*,

Thai, K. V., & Grimm, R. (2009). "Government Procurement: Past and Current Developments." *Journal of Public Budgeting, Accounting & Financial Management*, 12(2); 231-247.

Thite, M., & Sandhu, K. (2014). Where is My Pay? Critical Success Factors of a Payroll System—A System Life Cycle Approach. *Australasian Journal of Information Systems*, 18(2).

Tsabedze, V., Mutula, S. M., & Jacobs, D. (2012). Records management in the government of Swaziland. *ESARBICA Journal*, 31, 48.

The (former) Office of Government Commerce (OGC) Queensland Australia, *Market Creation, Procurement Documents*, 2012, p. 6.

Walter, A., Ritter, T., Gemunden, H. G., "Value Creation in Buyer-Seller Relationships", (2001), p366